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Theories of Anaphora and Aspects of Japanese Syntax

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Chapter One

Linguistic Theory and the Grammar of Japanese

1. Introduction

At the center of linguistic inquiry is knowledge that is essential in relating sound and meaning. A grammar of a language is an explicit characterization of this knowledge. Linguistic theory is a set of principles and conditions based on which this grammar is arrived at, or out of which this grammar develops in the process of so-called language acquisition. The innate linguistic knowledge that a human is born with, i.e., what has been called Universal Grammar is hence linguistic theory itself. A major task for the generative grammarian is to construct a theory as an approximation of this innate knowledge.¹

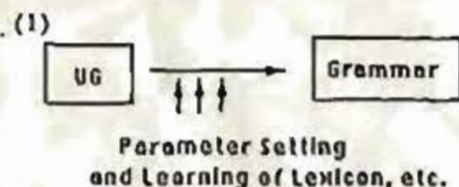
The relationship between the grammar of a specific language and linguistic theory is nicely expressed in Kayne (1975).

"A linguist working in the context of a specific linguistic theory undertakes two tasks simultaneously. On the one hand, he attempts to demonstrate the theory's ability to provide insight into the language studied, and if successful he helps to confirm the significance of that theory. On the other hand, he uses the languages studied to obtain evidence bearing on issues that arise within the theory. Particular principles or analyses can be supported or brought into question, and modifications suggested, through precise argument." Kayne (1975, p. xv)

The present study is intended as a demonstration of how proposed concepts in syntactic theory enable us to obtain a clearer grasp of the structure of a particular language and how detailed grammatical analyses of a particular language contribute to the modification and refinement of syntactic theory.

2. An Introduction to Syntactic Theory

Fundamental in the generative grammatical studies that this work is a part of is the conception of "language acquisition" as schematized in (1).²



Universal Grammar (UG) contains a finite number of parameters, and the core aspects of the grammar of a particular language will be obtained by fixing the value of those parameters and by learning the properties of the lexical items in the given language. The three basic questions in the study of generative grammar are often stated as in (2).

- (2) (Chomsky (1986a, p. 3))
- What constitutes knowledge of language?
 - How is knowledge of language acquired?
 - How is knowledge of language put to use?

Of the three questions in (2) the present study is primarily, but not exclusively, concerned with (a) and (b).

The answer to (2a) must directly involve the elucidation of the organization and the properties of the grammar of a particular language. The answer to (2b) must involve the discovery of the possible parameters. The possible parameters must thus be motivated essentially based on what cross-linguistic variations they account for and how the values of the parameters can be fixed by primary linguistic evidence available to the child.

Let us illustrate one parameter that has been widely discussed. This parameter has to do with the so-called X-bar module. As stated in Emonds (1986, p.1):

Within the framework of generative grammar, the central morpheme categories "X" have been determined to be the noun, verb, adjective, and preposition (X=N, V, A, P). All phrasal categories used inside sentences are hypothesized to be "projections" of the lexical categories X (j=a small integer), where each X_j has one and only one X as its "lexical head."

Consider the structures of VP, PP, NP and AP in English given in (3), taking XP to be the maximal projection of X.

- (3)
- [VP eat [NP the fish]]
 - [PP from [NP New York]]
 - [NP the fish [S' (that) John ate]]
 - [AP proud [of John]]

As is well known, the structures in (3) conform to the general pattern of (4).

- (4) [XP X ...]

English has been identified as a head-initial language, in light of the fact that the head of a phrase is placed at the left-most position of the phrase.

Japanese, on the other hand, has typically been identified as a head-final language, based on the patterns given in (5).

- (5)
- [NP [S' John-ga tabeta] sakana]
John-NOM ate fish
'(the) fish that John ate'
 - [PP [NP Tokyo] kara]
Tokyo from
'from Tokyo'

If the VP node is motivated, then it too will conform to the head-final pattern.

- (6)
- [VP sushi-o tabe]
sushi-ACC eat

The head-initial v.s. final contrast is observed also in the so-called S', taken as a projection of C, one of the Functional Categories.

- (7)
- a. [CP [Cthat] [S John ate sushi]]
 - b. [CP [S John-ga susi-o tabeta] [C to]]
'that John ate sushi'

If S' is taken as PP and COMP as P, as argued in Emonds (1985, Ch. 7), then the patterns in (7) would be rewritten as in (8); cf. Fukui (1986, Ch. x).

- (8)
- a. [PP [Pthat] [S John ate sushi]]
 - b. [PP [S John-ga susi-o tabeta] [P to]]
'that John ate sushi'

In this case, the pattern in (9) generalizes to (9).

- (9)
- a. [PP [P since] [S John ate sushi]]
 - b. [PP [S John-ga susi-o tabeta] [P kara]]
'since John ate sushi'

The placement of the head in (5) to (9) thus conforms to the pattern in (10).

- (10) [XP ... X]

Thus, English and Japanese represents a head-final language and a head-initial language, respectively.

In terms of the acquisition model schematized in (1) above, the child being exposed to English fixes the value of the relevant parameter as [head-initial], based on the linguistic evidence available to her/him, i.e. any structure like (3). As the result of this parameter setting, core property of the combinatory principle for the language is determined. The child being exposed to Japanese proceeds in accordance with the evidence available to her/him.³

In addition to the X-bar module, a central property of which I have just sketched above, there are other components of UG, and hence of the grammar of a specific language, which have been

identified as having independent properties and yet interact crucially with one another. Included among them are:

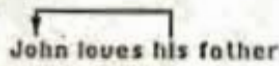
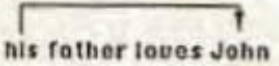
- (11)
- a. Bounding Module
 - b. Government Module
 - c. Binding Module
 - e. Case Module
 - f. Theta Module.

Cf. Chomsky (1981, Ch. 1) for a brief illustration of the different modules, as well as the notion "levels of representations."

I share the general approach to the human linguistic faculty pursued in the so-called Government and Binding or, in the more recent practice of terminology, the Principles and Parameters framework. Among the several core areas of the language faculty, this work is concerned mainly with that which deals with referential association among nominal expressions. The relevant module has often been identified as the Binding module and the referential association between *John* and *his* in (12) is represented, in the standard version of this theory (Chomsky (1981)), by means of coindexation, as indicated below.

- (12)
- a. John_i loves his_i father.
 - b. His_i father loves John_i.

An alternative to the phenomena of referential association is found in the works by Higginbotham (1980, 1983, 1985), known as linking theory, in which the notion "antecedence" is taken as a primitive in linguistics theory and the relevant association in the sentences in (12) is expressed by means of linking as in (13).

- (13)
- a. 
 - b. 

What is shared by these two approaches is the assumption that the relevant module in linguistics theory deals with coreference. Reinhart (1983, 1986) and Grodzinsky and Reinhart (1990), on the other hand, argue that it should deal only with bound-variable anaphora and that the restriction on coreference is to be accounted for by some system of inference, based on the syntactic module that deals with the former.

In this work, I will argue for the essentials of the Reinhartian approach (1983, 1986) although I will depart from it in several important respects.

3. An Introduction to Issues in Japanese Syntax

Consider the Japanese sentence in (14).

(14)
John-ga Mary-o hometa
John-NOM Mary-ACC praised
'John praised Mary.'

How should a Japanese sentence like this be represented, by means of the primitives in the syntactic theory adopted here? This general question comprises a number of independent but often interrelated questions.

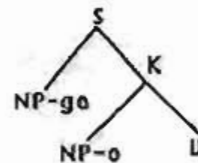
A question with respect to the Case module has to do with the particles *ga* and *o*. How are these morphemes, often called "case-markers", related to the abstract Case? If they are manifestations of the abstract Cases, how are these abstract Cases assigned to them? I will not discuss these questions in detail in this work.⁴ While it is perhaps the case that these "morphological cases" are not realized yet at the level of D-structure, I will not try to strictly adhere to this assumption in the ensuing exposition. I will thus often represent the D-structure representation with these "case markers" to facilitate the exposition.

In terms of the X-bar module, one could raise a number of questions. For example, what maximal projections there are in this "sentence". Is *ta* a morphological realization of a form of INFL(lection)? Is the Japanese sentence headed by Verb? Cf. Fukui (1986), Kitagawa (1986) and Kuroda (1987) for recent proposals on the Japanese instantiation of the X-theory. Is there V_{max} that is distinct from S or IP in Japanese?

Another crucial issue has to do with the question whether (14) represents the "basic", i.e. the D-structure, order of the two argument NP's. I will assume in the ensuing discussion that (14) indeed represents the D-structure order of the two arguments and that *Mary-o John-ga hometa* is derived from (14) by syntactic movement. The relevant arguments for this claim have been advanced in Harada (1977), Haig (1980), Kuroda (1980), Hoji (1985, 1987) Saito (1983, 1985, 1987), among others.

Having left aside certain issues and having made certain assumptions, let us now consider another basic question in Japanese syntax, namely, whether (14) must be represented as in (15a) or as in (15b).⁵

(15) a.



b.



The node K in the structure in (15a) is what has traditionally been called the VP node.

In principle, three types of arguments for the existence of the node K are conceivable. They would involve the demonstration of (16) below.

(16)

- K behaves like a constituent, in terms of movement deletion, or the pro-form substitution.
- K acts as a "barrier" for some syntactic relation between a category X that is outside K and a category Y that is inside K.
- K creates an asymmetrical relation between the *ga*-marked phrase and the *o*-marked phrase with respect to phenomena that are sensitive to hierarchical relationship among different categories on the tree, such as anaphora, scope, and so on.

The demonstration of (16a) would mean that the \bar{Q} -marked phrase and the Verb form a constituent, but it does not necessarily argue that this constituent is a V^{max} , unless it is established that the relevant operations are allowed solely on maximal projections. If one (16b) can be demonstrated, it would, presumably, constitute a strong argument that the \bar{Q} -marked phrase and the Verb form a maximal projection. The establishment of (16c) would constitute evidence for branching as indicated in (15a), but not necessarily evidence that the node K is a maximal projection. That is, to the extent that the syntactic domain is determined in terms of "c-command" rather than "m-command", (16c) cannot be evidence for the node K being a maximal projection.⁶

Arguments of all of these types have been constructed for the VP node in English. The arguments of the type (16a) include VP-preposing, VP-deletion and the do so substitution, as indicated by the examples in (17).

(17)

- a. We thought that John would eat the tuna raw; and [vp eat the tuna raw], he really did.
- b. We thought that John would eat the tuna raw but he did not [vp do].
- c. We thought that John would eat the tuna raw and he actually did so.

It has been argued in xxx that the preposing, deletion, and substitution operations in (17) are confined to the constituents that have been identified as VP. Because of such "constituency tests" as these and others, the existence of the VP node has been widely assumed in the study of English syntax even before the generative grammar.

Now let us briefly look at the other two types of arguments. The arguments of the type in (16b) are more theory-internal than those of the type indicated in (16a), having to do with claims such as "the subject position is not governed by the verb" or "the object position is not governed by INFL". The empirical manifestations of such theoretical statements are the asymmetries between the subject and the object with respect to (i) the restrictions on syntactic and LF movement, (ii) Case assignment, and most theory-internally, (iii) the distribution of the empty nominal expression that is both pronominal and anaphoric, PRO. For example, the well known subject/object asymmetry in (18) and (19) has been attributed partially to the inability for the verb to govern the subject position; cf. xx, xxx among many others.

(18)

- a. Who bought what?
- b. *What did who buy?

(19)

- a. What did you think that Bill ate?
- b. *Who did you think that ate the tuna?

Sentences such as (20) below are assumed in the standard GB approach to have an empty nominal category in the embedded subject position, as indicated below.⁷

(20)

- a. John_i promised Mary [S' PRO_i to go]
- b. John persuaded Mary_i [S' PRO_i to go]

The distribution of such a phonetically unrealized subject (PRO in (20)), which is restricted to the subject position of the non-tensed clause, has been related to the assumptions that the subject of the infinitive, for example, is not governed and that PRO is a pronominal anaphor and hence should not be governed (the so-called PRO theorem).⁸ In order for such an analysis to hold, it must be the case that the verb does not govern the subject NP; hence the analysis renders it necessary that there is a VP node in English.

Let us now turn to (16). The most notable phenomenon that are used to demonstrate (16c) are that of referential association among nominal expressions. The examples in (21) illustrate one such argument, based on definite NP anaphora.

(21)

- a. John loves his_i father.
- b. John_i's father loves him_i.
- c. His_i father loves John_i.
- d. *He loves John_i's father.

Suppose that the relevant condition that is responsible for the contrast in (21) is as in (22); we will see in Ch. 2 how this condition has been motivated in English.

- (22) A pronoun cannot c-command its antecedent.

The definition of "c-command" is given in (23) in its "standard" form; cf. Reinhart (1976).⁹

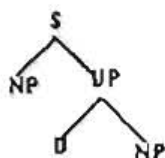
(23)

X c-commands Y iff the first branching node dominating X also dominates Y.

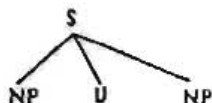
Leaving aside the precise definition of "pronouns" and "antecedents" for the time being, it is clear that the sentential structure in (24a), but not in (24b), gives the correct results. (I am disregarding the INFL (i.e. categories such as Tense, Auxiliaries and Aspects) in these tree diagrams.)

(24)

a.



b.



If (24b) were the sentential structure in English, the subject NP and the object NP would c-command each other, hence making the wrong prediction that (21b) and (21d) are both unacceptable. Notice that, under this assumption, him would c-command John in (21b). This would violate the condition in (22); hence it would wrongly be predicted that (21b) disallowed the coreference as indicated. If (24a) is the structure of the English sentence, on the other hand, the subject NP asymmetrically c-commands the object NP, hence yielding the correct result. Under this assumption, it is only in (21d) that a pronoun c-commands its antecedent, thereby correctly predicting that the coreference is disallowed only in (21d).

Notice that the arguments of the types (16b) and (16c) are not necessary for the establishment of the VP node in English as long as the arguments of the type (16a) are valid, which they in fact are. On the other hand, if there were not compelling evidence based on

(16a), then the arguments of the types in (16b) and (16c) would be crucial. As we will see, the situation in Japanese is precisely that.

In Japanese, unlike in English, the evidence for the existence of the node K based on language-internal grounds has been difficult to identify. Arguments that the node K is a maximal projection of V that is distinct from S have been even harder to construct.

Most of the works until the early 1980's hence seem to assume that the VP node does not exist in this language (e.g. Inoue (1976), most papers contained in Shibatani (1976), except for Kuroda's and Kuno's). The VP node, or its equivalent, is assumed in works such as Kuno (1973); but arguments for it are not given.¹⁰

An argument of the sort indicated in (16a) is attempted in Nakau's (1973, pp.44-48), in which "the pro-form soo su" is taken as "the Japanese counterpart of the English expression "do so" (p.45). "The separation of Predicate Phrases (i.e. VP-III) from subject Noun Phrases and Auxiliaries is motivated by the rule of Soo Su Predicate Phrase Pro-formation." (p.44) Consider the examples in (25) from Nakau (1973, p.45).¹¹

(25) Nakau (1973, p.45)

a. Taroo-wa, terebi-o mi-ta; Ziroo-mo soo si-ta
 Taroo-TOP TV-ACC see-PAST Ziroo-ALSO so do-PAST
 'Taroo watched the TV; Ziroo also did so.'

b. *Taroo-wa, terebi-o mi-ta; Ziroo-mo terebi-o soo si-ta
 Taroo-TOP TV-ACC see-PAST Ziroo-ALSO TV-ACC so do-PAST
 'Taroo watched the TV; Ziroo also did so the TV.'

Nakau claims that "the contrast between [(25a)] and [(25b)] in grammaticality suggests that the pro-form may not substitute for any part of a [VP]." (p.45) Hinds (1973, p.xx), on the other hand, challenges Nakau's claim that soo su always substitutes the VP node. He notes that soo su need not correspond to a single VP.

(26) (Hinds' (1973))

Taroo-wa Kankoku-e itta; sorekara Osaka-e kaetta;
 Taroo-TOP Korea-to went then Osaka-e return-d
 sosite hikooki-de Amerika-e itta; Hanako-mo soo si-ta
 then airplane-by America-to went Hanako-ALSO so do-PAST
 'Taroo went to Korea, then (he) returned to Osaka, then (he) went to America by airplane; Hanako also did so.'

Soo su in this example is much like English do so, as indicated by the English translation in (26). This then means that do so need not correspond to a single VP in the preceding linguistic context. In this sense, soo su resembles do the same. In (27), do the same "replaces" a sequence of actions "denoted by" different VPs; cf. Sag (1976, p. xx).

(27)

John ate an apple; then he drank beer; then he went back around 3:00; and Bill did the same.

Just as the "substitution" of more than one VP by do the same does not warrant the claim that do the same is NOT a VP, so the "substitution" of more than one VP by soo su does not warrant the claim that soo su is NOT a VP.

To argue against the claim that soo su is a VP, one must present evidence that it co-occurs with an internal argument of a verb, e.g. the object NP, for example. The example in (28) from Hinds (1973, p.24) and the one in (29) from Inoue (1976, p.44) are meant to be such evidence. (The glossary is supplemented by III.)

(28) (Hinds (1973, p.24))

Taroo-wa teinei-ni hon-o kaita; ronbun-mo soo si-ta
Taroo-TOP carefully book-ACC wrote; thesis-ALSO so did
'Taro wrote a book carefully; (he) did so too a thesis.'

(29) (Inoue (1976, p.44))

Watasi-wa naironburau-su-o te-de araimasu.
I-TOP Nylon blouse-ACC hand-by wash
'I wash nylon blouses by hand'

Watasi-wa ke-no seetaa-mo soo simasu.
I-TOP wool-GEN sweater-ALSO so do
(Lit.) 'I do so wool sweater as well.'

However, Hasegawa (1980, p.xx), arguing for the existence of the VP node in Japanese, points out that what appears to be the direct object appearing outside the scope of soo su is typically marked with particles such as mo 'also' and the contrastive marker wa. She claims that without such particles, the relevant sentences become unacceptable. Hasegawa (1980, p.117) cites the following example. (The judgments are hers.)

(30) (Hasegawa (1980))

Taroo-wa teinei-ni hon-o kak-u ga ronbun-o soo si-ta koto-wa nai
Taroo-TOP carefully book-ACC write but report-ACC so did has not (done)
'Taro writes books carefully but (he) hasn't done so articles.'

Hasegawa argues that the status of (30), as compared to Hinds' (28), indicates that the Q-marked NP complement of the Verb X cannot co-occur with soo su that "substitutes" the VP headed by X. Assuming that the mo-marked NP and the wa-marked NP can be generated outside the VP node, Hasegawa (1980) concludes that Hinds' (28) does not constitute evidence against the claim that soo su 'substitutes' the VP node.

Koizumi (1990, p.11) seems to accept Hasegawa's argument and uses it as support for his claim that "the scope of [soo su] is limited to V' or VP. (p. 12) While the syntactic properties of soo su, as well as those of do so, are not entirely clear, it is not impossible for the Q-marked NP to co-occur with soo su, as indicated below.¹²

(31)

Kiini-no seetaa-o soo suru no wa katteda ga boku-no-o
you-GEN sweater-ACC so do it-is-okay but I-GEN-ACC
(sonna huuni) asi-de arawaretarisite-wa kanawanai naa
(like that) leg-with if-you-wash-it it-will-be-a-problem
(Lit.) 'It is okay if you do so your sweater, but it would be a different matter if you wash my sweater with your legs in that way.'

(32)

John-ga kooriame-o (tiisaku) kamikuwaku to
John-NOM ice candy-ACC (into small pieces) crunch when
Bill-wa kurumi-o soo sita
Bill-TOP walnut-ACC so did
(Lit.) 'When John crunched an ice candy (into small pieces), Bill did so a walnut.'

Examples like these show that the Q-marked NP can indeed appear with soo su.

One could argue that the Q-marked NP can in fact be base-generated outside the VP node, as in the sentences in (33); cf. Kuno's (1973) and Saito's discussion of the Japanese analogues of the "subject-to-object" raising, which has sometimes been identified as an instance of exceptional case marking in Japanese (Kitagawa (1986)).

(33)

a. Mary-wa Johni-o [s' karej-ga mukasi puroresuraa datta to]
Mary-TOP John-ACC he-NOM before professional wrestler was that
omotte iru
thinks
'Mary thinks of John; that he; was once a professional wrestler.'

b. Watasitai-wa Yamada-sensei-o [s' sensei-ga mukasi
We-TOP Prof. Yamada-ACC prof-NOM before
kagekiha-no gakusei datta-ni-tigainai to] omotte ita
radical sect-GEN student must-have-been that thought
'We believed of Prof. Yamada that the professor was once a radical
student.'

The existence of sentences like (33) makes it plausible that Japanese allows in principle the structure of the form (34).

(34) NP-ga NP-o [vp [s' ...]--]

Let us assume that the NP-o (which one might call a "major object") in (34) is VP adjoined.

Given the availability of the structure in (34), and given the assumption that the more general form in (35) is allowed in Japanese, the examples in (31) would not be inconsistent with the view that soo su is a VP.

(35) NP-ga NP-o VP

However, examples like (36) below forces such an analysis to postulate that the structure in (37) (in addition to (35)) is well-formed in Japanese.¹³

(36)

Kimi-no kuruma-ni soo suru no wa katta daga,
you-GEN car-DAT so do it-is-okay but
bokuno-ni sonnna kitana! stekkaa-o hararete-wa komaru naa
mine-DAT such a dirty sticker-ACC if-you-put-on it-will-be-a problem
(Roughly) 'It is okay if you do so your car, but it would be a different matter if you put such a dirty sticker on my car.'

(37) NP-ga NP-ni VP

The phrase structure in (37) must be independently motivated. One might, for example argue that the NP-ni is another instance of a major object, reserved to express "affectee".

As an attempt to circumvent problems like this, let us assume that the generalization regarding the use of soo su is that it "substitutes" any projection of V as long as the action that it denotes involves "sufficient amount" of "distinctiveness" with respect to its "manner". Notice that the soo is in fact one of several forms that take the "demonstrative" paradigms ko so a do; cf. koo soo aa doo; cf. the discussion in Ch. 4. Thus the intuitive sense of soo su is in fact something like 'do (something) in that way'. Note that in (32) tiisaku 'into small pieces' is not necessary. By contrast, as in Hasegawa's example in (30), (38) does not seem to be acceptable without the adverbial nagai zikan kakete yukkuri to 'very slowly, by taking a long time'.¹⁴

(38)

John-ga susi-o *(nagai zikan kakete yukkuri to) taberu to
John-NOM sushi-ACC (very slowly, taking a long time) eat when
Bill-wa tempura-o soo sita
Bill-TOP tempura-ACC so did
(Lit.) 'When John ate sushi (very slowly, by taking a long time), Bill did so tempura.'

The crucial difference between (32) and (38), obviously, lies in their predicates. While kamikudaku, which is formed by compounding kam 'bite' and kudak 'break up' implies a certain degree of "manner" in itself, tabe 'eat' does not. Hence tabe 'eat' by itself cannot be replaced by soo su, while kamikudak 'bite and break into small pieces' can.

If this intuitive characterization of the use of soo su is correct, then soo su should be able to "substitute" a verb that takes both the ni-marked NP and the o-marked NP, and co-occur with these two NP's, as long as this verb "contains a certain amount of distinctive manner." This seems correct, as indicated by the following sentence.¹⁵

(39)

¹John-ga Mary-no tukue-no hikidasi-ni zeri-o nagasikomu to
 John-NOM Mary-GEN desk-GEN drawer-in jello-ACC put in when
 kondo-wa Mary-ga kare-no tansu-no hikidasi-ni purin-o soo sita
 then Mary-NOM he-GEN bureau-GEN drawer-in pudding-ACC so did
 (Lit.) 'When John poured jello into the drawer of Mary's desk, Mary in
 turn did so into the drawer of his bureau.'

Notice that the analysis of the sort that incorporates the structures in (35) and (37) would be hard put, in light of examples like (39). It seems extremely difficult, if not impossible, to establish the structure in (40), on independent grounds.

(40) NP-ga NP-ni NP-o VP

In (40) both the *ga*-marked NP and the *ni*-marked NP are generated outside the VP.

Examples presented above thus indicate that *soo su* need not be a "substitution" of VP or V, i.e., it need not be dominated by VP or by V, and that it may be dominated simply by a V.

This does not mean that *soo su* cannot be dominated by VP. But, of course, the point of contention in works such as Nakau (1976) and Hasegawa (1980) was that the VP node exists in Japanese. The preceding discussion, however, indicates that the phenomena of *soo su* does not constitute positive evidence for the VP node in Japanese.

As noted above, *soo* in *soo su* is a member of the *so* system, which is part of the *ko/so/na/do* demonstrative paradigm. We can in fact substitute *koo* 'this way' for *soo* in a structure parallel to the second conjunct of (39), as shown in (41).¹⁶

(41) (Showing the manner by gesture.)

a. Mary-no tansu-no hikidasi-ni purin-o koo site kudasai
 Mary-GEN bureau-GEN drawer-in pudding-ACC this way do please
 (Lit.) 'Please do this way the pudding into the drawer of Mary's bureau.'

b. Bill-wa Mary-no tansu-no hikidasi-ni purin-o koo sitan desu
 Bill-TOP Mary-GEN bureau-GEN drawer-in pudding-ACC this way did
 (Lit.) 'Bill did this way the pudding into the drawer of Mary's bureau.'

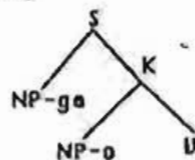
I thus assume it to be established that *soo* in Japanese can be a demonstrative manner expression, analogous to something like '(in)

that way' or 'to that effect'. We may then account for the fact that while, as pointed out in Ross (1972, p.118 fn 5), *mutter so* is not acceptable, *soo tubuyaita* 'mutter so' is perfectly acceptable.^{17, 18}

Until the 1980's, Nakau's argument was the only attempt to empirically motivate the node K in (15a). Hence Hinds' argument against it, as Miyagawa (1990, pp. 9-10) puts it, seems to have led many in the field to the conclusion that Japanese does not have the node K and its phrase structure is as in (15b). In fact, most of the works in Japanese syntax in the 1970's either explicitly claim or implicitly assume that Japanese does not have a VP node. Kuroda (all his works) and Kuno (1973, for example) are two notable exceptions to this general trend.¹⁹

An argument of the type in (16b) is attempted in Kuroda's (1983). He argues, based on the availability of "arbitrary interpretation" for the subject empty category in Japanese, the subject position is ungoverned; cf. also Saito (1982, pp. 30-31).²⁰ This argument is hence for the claim that the node K in (15a), repeated below, is in fact a maximal projection.

(15a)



Consider the paradigm in (42) and (43) from Kuroda (1983).²¹

(42) (Kuroda's (1983) (xx))

a. [ccARB *taima-o* ka-u no]-wa kinzi-raret-i-ru
 marijuana-ACC buy-PRES -TOP forbid-PASS-PRES
 '[PRO_{ARB} to buy marijuana] is forbidden'

b. [ccARB *senzai-ni* a-u no]-wa muzukasi i
 teacher-DAT meet-PRES -TOP difficult-PRES
 '[PRO_{ARB} to meet teachers] is difficult'

(43) (Kuroda's (1983) (xx))

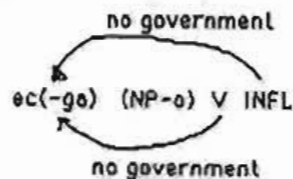
a. *{Kodomo-ga ccARB ka-u no]-wa kinzi-raret-i-ru
 child-NOM buy-PRES -TOP forbid-PASS-PRES
 '[For children to buy PRO_{ARB}] is forbidden'

- b. **[gakusei-ga ccARB a-u no]-wa muzukasi-i*
 student-NOM meet-PRES -TOP difficult-PRES
 '[For students to meet PRO_{ARB}] is difficult'

Based on the parallelism as indicated above between the distribution of the so-called PRO_{ARB} in English and that of the empty nominal with the arbitrary interpretation in Japanese, Kuroda argues that the empty nominals in the embedded subject position in (42) is also PRO_{ARB}. Given the standard assumption (the so-called PRO theorem) and the assumption that the empty categories in the embedded subject position in (42) is indeed PRO_{ARB}, this in turn indicates the ungoverned status of the subject position in the tensed clauses in Japanese.²²

Given the conclusion that the subject position in Japanese is ungoverned, Kuroda (1983) argues that the so-called Nominative case marker *ga* is NOT assigned under government. Notice that the ungoverned status of the subject position must result not only from the absence of government from INFL (the lack of Agr presumably disqualifies INFL to govern) but also from the absence of government from V, as indicated in (44).

(44)



To ensure that the verb does not govern the subject position, we must assume that there is a barrier for government, most likely, the maximal projection of V, as indicated in (45); cf. Kuroda (1983) and Saito (1982, pp. xx) (?).

(45)

[cc(-ga) [v^{Max} (NP-o) V] INFL]

Hence, the data in (42) and (43) with respect to the arbitrary interpretation for the subject empty category can be regarded as evidence for the existence of the maximal projection of V that does

not dominate the subject position, hence the evidence for the VP node.

Takezawa (1987; pp. 79-83) points out, however, that the relevant data in (42) and (43) do not establish that the subject position of the tensed clause in Japanese is ungoverned. Takezawa first points out what Chomsky (1986a, p. 117) notes as "a potential problem" for the standard "explanation of properties of PRO in terms of government or Case." Chomsky (op. cit.) that "some of the properties of PRO are shared by pronouns with arbitrary reference such as *one* in English, or more narrowly, *man* in German or *on* in French." Among the examples he provides are (46).

(46) (Chomsky's (1986a, p. 117) (121))

- a. one shouldn't do such things
 b. *they ought to meet one

An overt category, in a governed position, may have an arbitrary interpretation, as indicated in (46a). Hence, arbitrary interpretation is not limited to PRO. The contrast between (a) and (b) in (46) further indicates that the relevant position for this interpretation is limited to the subject position. If arbitrary interpretation is possible for categories other than PRO, Takezawa argues, the relevant empty categories in (42) need not be PRO. They can be empty pronouns, *pro*, which as been argued to exist in Japanese since Kuroda (1965); cf. also Hoji (1985, 1987) and Saito (1985) and many subsequent works. If they can be *pro*, then the data in (42) and (43) are no longer evidence for the hypothesis that the subject position in Japanese is ungoverned; hence they do not constitute evidence for the maximal projection of V.

Finally, an argument of the type in (16c) is first presented in Whitman (1982) and Saito (1983). It has to do with definite NP anaphora. This topic will be discussed extensively in Ch. 2; and I will not review their argument here. (The argument is essentially the same as the one that is given for English above, and the relevant Japanese data can be obtained simply by changing the English data in (21) into Japanese.)

Note that this pronominal coreference argument (and for that matter weak crossover argument as well (Saito and Hoji (1983), Hoji (1985, 1987) and Saito (1985)) for (16c) goes through, only under the assumption that the syntactic domain is determined by c-command, without recourse to precedence. Notice that the relevant condition given in (22) is stated in terms of "c-command", not referring to the precedence relation. It is, in other words, based on

the arguments in Reinhart (1983) for the irrelevance of precedence for the determination of the syntactic domain that the relevant Japanese pronominal coreference data have been considered as evidence for the "configurational" nature of the Japanese language in most of the recent works within the GB framework.²³

However, the situation in which the relevant definite NP anaphora in Japanese can be described either by the syntactic domain defined in terms of c-command alone or by the one defined in terms of precedence as well as some configurational notion, such as kommand or c-command, has prompted some linguists such as Kuno (1985) and Whitman (1987) to conclude, erroneously in my view, that the adoption of the c-command account, coupled with the proposal, following Kayne (1983) and Huang (1982), that Japanese phrase structure is strictly binary (Hoji (1985, 1987)), is not motivated. To put in somewhat abstract terms, their argument is as follows. All the relevant data can be described with the syntactic domain being defined by "precede and kommand", as proposed in Lasnik (1976), (or "precede and c-command"; cf. Lasnik and Barss (1986)) without assuming that the Japanese phrase structure is strictly binary. Whitman (1987, p. 368), for example, seems to argue that the c-command account is not justified when "[s]uch an account simply translates a linear precedence relation into a hierarchical dominance relation." His argument in this connection seems to be based on certain misguided assumptions; but the logic of his argument is clear. Since the c-command account, coupled with binary branching, is descriptively equivalent to the account that incorporates precedence as well as some hierarchical notion, and since the account that is based in part on precedence does not need binary branching, the account that incorporates "precedence" is to be preferred over the c-command account.

Recall that mere precedence cannot describe the relevant data, as it is clear from the fact that coreference is possible in (47).

- (47)
- a. [NP the woman who met him_i at the party] fell in love with John_i
 - b. his_j teacher recommended John_i

If a pronoun cannot precede its antecedent, the coreference in (47) must be impossible. This much, all of us agree.

Thus the two relevant options amount to the following.

- (48)
- | | |
|-------------------|-----------|
| domain defined by | branching |
|-------------------|-----------|

option 1	c-command	binary
option 2	precedence plus	non-binary
	alpha	

To the extent that the syntactic domain is defined by "precedence" as well as some hierarchical notion in option 2 while it is defined simply by "c-command", the conceptual advantage of adopting option 1 is clear.²⁴ It is precisely for preserving this conceptual advantage that Larson (1988) proposes an account of the double object construction in English that makes the observations noted in Lasnik and Barss (1986) and Kuno (1986) compatible with option 1.

Notice that option 1 in (48) entails that any syntactic domain is a constituent, which clearly is another conceptual advantage.²⁵ Thus if both options have exactly the same empirical coverage, these conceptual considerations should definitely lead one to adopt option 1 over option 2.

So far, the only compelling evidence of type (3c) for the "configurationality of the Japanese phrase structure" comes from definite NP anaphora.²⁶ Thus a closer look seems in order of the relevant conditions on definite NP anaphora and how they are motivated based on the grammar of Japanese, as well as based on theoretical considerations. One of the purposes of Ch. 2 thus is to reinforce the only empirical language-internal argument, to my knowledge, for the irrelevance of precedence for definite NP anaphora in Japanese, originally given in Saito (1985, Ch. 2). To the extent that this argument is valid, we will have empirical as well as conceptual reasons to adopt option 1 over option 2. To set the stage for this task, however, I first need to illustrate how the relevant condition on definite NP anaphora applies in Japanese.

4. Outline of the Book

The content of each chapter is summarized below.

Chapter 2: Definite NP Anaphora and Japanese Phrase Structure

This chapter provides evidence supporting Lasnik's (1986) proposal to divide binding condition C into two parts. Social titles in Japanese such as *sensei* 'professor' are brought into the discussion of the phenomena of disjoint reference and argued to provide reinforcement of Saito's (1985) Japanese-internal argument for the irrelevance for the precedence relation for the syntactically

controlled aspects of definite NP anaphora.

Based on the observation in Japanese that all the non-anaphoric nominal expressions are subject to the local disjointness condition that is identical to condition B, it is proposed that binding condition B be reformulated as a condition on [-a]. Arguments for this claim will be given not only both on grounds of empirical coverage but also on grounds of language acquisition.

Chapter 3: On the Nature of Condition D

The relevant disjoint reference condition discussed in Ch. 2, called condition D, is argued to be a condition on linking. This is in contrast to condition B, which is a condition on binding. This distinction is motivated by the fact that condition D effects may be "suspended" in certain environments, those of B may not. Some consequences of the proposal will be considered with respect to other related issues in Japanese syntax, such as the landing site of scrambling.

Chapter 4: Bound Variable Anaphora in Japanese

This chapter is concerned with the elucidation of how bound variable anaphora is expressed in Japanese. It deals not only with the question of what counts as quantifiers but with what may function as bound variables in this language. The well known observation that the so-called Japanese overt pronoun *kare* cannot function as a bound variable is related to the relation that *kare* holds with one of the demonstrative paradigms in the language.

It will also be demonstrated that condition B effects, which are sometimes rather weak in Japanese in the case of coreference, are quite sharp when we consider structures that must involve bound variable anaphora, thereby providing support for the Reinhartian view of binding conditions. In an Appendix to this chapter, I will relate the discussion on *kare* to the so-called Korean overt pronoun *ku*.

Chapter 5: Sloppy Identity in Japanese

In this chapter, I will demonstrate that the phenomena of sloppy identity provides confirmation for the generalization made in Ch. 4 with respect to the ability of various nominal expressions to be construed as bound variables, given the assumption that sloppy identity involves bound variable construal.

The first task in the chapter is identify how (e.g. in what constructions) sloppy identity is expressed in Japanese. It is first shown that the *gou su* 'do so' construction cannot be used to test the availability of sloppy readings. The stripping construction is then identified as the construction in Japanese that yields sloppy identity (i.e. bound variable interpretation) precisely in the configuration, in which we expect to observe bound variable anaphora. The properties of the Japanese stripping construction will then be carefully examined, being compared to the topic and cleft constructions, drawing from Saito (1985) and Itoji (1987).

By using the sloppy identity test, it will be confirmed that condition B effects are most clearly observed in the case of bound variable anaphora, but not in the case of coreference.

Chapter 6: Coreference, Bound Variable Anaphora and Language Acquisition

The synthesis of Chs. 2-5 is the purpose of this chapter. First, the results from the earlier chapters will be summarized in terms of the effects of conditions B, C and D for coreference (6.2) and for bound variable anaphora (6.3). The core aspects of arguments for the main claims of the book, summarized in (49) (mainly (a) and (c)), will be illustrated through the discussion here.

(49)

- a. Binding condition B regulates [-a] categories. (Ch. 2)
- b. Binding condition D is a condition on linking while condition B is a condition on binding. (Ch. 3)
- c. Binding conditions regulates bound variable anaphora but not coreference. (Chs. 4 and 5)

Condition C will be argued not to be a grammatical principle, as indicated in Reinhart (1983, Ch. 7), based on the absence of its effects in the case of coreference as well as in the case of bound variable anaphora.

The problems with the conclusions in (49) (in particular (a) and (b)) will be identified. One major problem has to do with the condition B effects for coreference. The relevant phenomena include the fact that while *John recommended him* in English strongly disallows the coreferential reading on it, its counterpart in Japanese more or less allows the coreferential reading. After introducing Reinhart's (1983) pragmatic account of them, I will relate this observation to the experimental result in child language acquisition

studies (e.g. Wexler and Chien (1989)) that the children acquiring English tend to allow Mama bear washed her but not Every bear washed her. I will here depart from Reinhart (1983) by rejecting her pragmatic account of condition B effects for coreference, although I still maintain her claim that binding conditions regulate only bound variable anaphora (and not coreference).

A proposal will be made to account for the array of data that cover Adults' English, Children's English and Japanese. The proposal is also intended to accommodate the properties of the so-called overt pronouns in Korean. The cases of apparent disjointness effects that do not fall under this proposal will then be discussed and will be argued to be a consequence of considerations independent of binding conditions.

5. Notes to Chapter One

1 See Chomsky (1976, Ch.1), for example, for more on the general nature of the linguistic enterprise that this work is a part of.

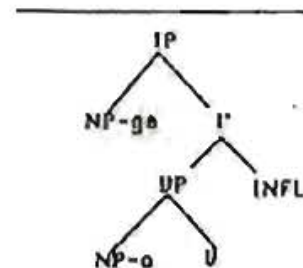
2 Cf. introductory remarks in most of Chomsky's books. Chomsky (1971, Ch.1) and Chomsky (19775, Chs. 1 and 2) contains particularly illuminating discussion of the object of inquiry in generative grammar, the former being somewhat more accessible than the latter. More technical introduction is given in Chs. 1 and 2 of Chomsky (1981).

3 It has also been pointed out, however, that such variations may exist among different categories within a single language. See Huang (1982) Li (1985, 1989) for example.

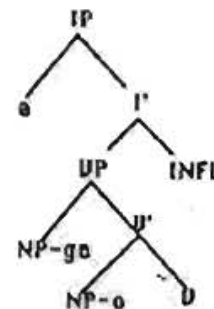
4 The readers are referred to Takezawa (1987), Saito (1983) and most notably the series of works by Kuroda (1983, 1986, 1987, among others) on the issues of case marking in Japanese. The works that discuss Japanese case marking from different perspectives include Shibatani (197x), Kuno (1973) and xx.

5 If Inflection (INFL) has its own projection, the choice of the appropriate phrase structure for (14) will be more complicated accordingly. For example, the structure in (15a) would have to be as in (i) (Saito (1982), Takezawa (1987)) or as in (ii) (Kuroda (1988)), with K in (15a) being taken as VP.

(i)

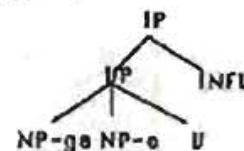


(ii)



Whether the GA-phrase stays in the "VP-internal" position or not at the level of S-structure might also have certain consequences. At this point, however, I am not concerned with this question or with the choice between (ia) and (ib).

Similarly, the phrase structure in (15b) would be modified as in (iii), under the assumption that there is INFL and it projects to INFL_{max}.



6 The notion "m-command" of Chomsky (1982, p. x) is equivalent to Aoun and Sportiche's (1980) definition of "c-command", as defined in (i).

(l) X m-command Y iff every maximal projection that dominates X also dominates Y.

7 But see Brame (19xx) and xx for arguments against this position; cf. also Koster and May (19xx).

8 The essence of the PRO theorem is that PRO, being both [+anaphoric] and [+pronominal], must satisfy two mutually incompatible requirements; i.e. it must be (i) bound in its minimal governing category and (ii) it must not be bound in its minimal governing category. In order to satisfy these requirements, it must be the case that there does not exist a minimal governing category for it. This means, due to the definition of "minimal governing category" that is in turn based on the notion of "government", that PRO is not governed. According to the logic of the PRO theorem, if PRO is not governed, then the requirements in (i) and (ii) are vacuously satisfied, just as $p \rightarrow q$ is true if p is false in the first order logic.

9 As will be noted below, the "standard" definition of "c-command" in (23) is different from that given in Reinhart (1976, 1983).

10 Iwakura (1974) assumes the VP node in his analysis of negation in Japanese. If his analysis of negation is successful and if it crucially requires the VP node for it to work, that would constitute evidence for the VP node in Japanese. I do not attempt to provide an assessment of his analysis here.

11 Throughout this manuscript, I take liberty to supply glossary and/or to modify the translations of the Japanese examples taken from the other linguists, AS LONG AS such modifications do not affect the crucial points that the examples are intended to illustrate.

12 The word by word glossary given in (31) is extremely rough.

13 The word by word glossary given in (36), as in (31), is extremely rough.

14 The distinction between the so-called topic wa and the contrastive wa is not clearly indicated in gloss, when it does not affect the discussion.

15 The discussion in Lakoff and Ross (1976) "Why You Can't Do So Into the Sink," and Ross (1969) are of much relevance in this regard. I will return these works in Ch. 5.

16 Doo 'which way' does not seem to fit well in these environments.

(l) ??Bill-wa Mary-no tansu-no hikidasi-ni purin-o doo
sian desu ka?

Bill-TOP Mary-GEN bureau-GEN drawer-in pudding-ACC how
did Q

'How did Bill do the pudding into the drawer of Mary's bureau?'

17 I suspect that mutter that way is basically acceptable.

18 One might relate the use of koo-su 'do this way' here to the use of doo-su 'do which way, do how' in the following example.

(i) kore-(o/wa) doo [suru/sitarai] ka (wakaranai)

'(I don't know) what to do with this'

'(I don't know) how to [handle/do] this'

As indicated in the first English translation, in which this is not a direct object of do but rather a complement of P, examples of this sort also make it plausible that the \bar{a} -marked NP is generable as a "major object", representing something like "regarding NP". Cf. Kuroda (1990) for much relevant discussion, in which he proposes that NP's, as well as S's contain a topic (a mini topic).

19 Itoji (1989) argues for the existence of V_{max} that is distinct from S, claiming that there is VP-preposing in Japanese as an instance of scrambling, i.e., adjunction to the S node (IP).

20 As Takezawa (1987, p. 79) notes, this argument of Kuroda's is made in the context of trying to show that Case-marking in Japanese is independent of abstract Case assignment and also in the context of motivating his "government-free" Linear Case-marking system." Takezawa (1987) argues for a "configurational" account of the Japanese Case-marking system.

21 Kuroda (1983) also provides data that indicate that the arbitrary interpretation is possible for the subject empty category even in sentences with the so-called PAST Tense marker ta (or arguably, the Aspectual Marker; cf. xx).

22 The relevant data are also compatible with the conclusion that the subject of the Japanese tensed clause is optionally governed. This possibility is in fact explored in Hasegawa (1985) (an earlier version of Hasegawa (1984/85)). Cf. Epstein (1984) and xx for discussion of the arbitrary interpretation for pro.

23 Notice that adoption of this conclusion is independent of whether there is a node, e.g. VP, that is distinct from S. This point has been pointed out in Itoji (1985, xx) and Whitman (1982, 1987).

24 Given the conception of the level of LF provided in

Higginbotham (1983?), the precedence relation must be irrelevant at that level. (to be completed)

25 The reason why the definition of "c-command" in Reinhart (1983, p. xx), unlike the "standard" (i.e. what is often cited as "Reinhart's first branching definition of c-command"), does not contain the clause "neither X nor Y dominates the other is precisely because binary branching is not assumed in that work.

26 The other arguments such as those based on quantifier scope interaction as given in Hoji (1985, 1986) have the same form as the pronominal coreference argument.

Chapter Two

Definite NP Anaphora and Japanese Phrase Structure

2.1. Introduction: Binding Condition C and the VP Node in Japanese

As noted in chapter one, a phenomenon of referential association has been used to motivate the configurational structure of the Japanese language in Whitman (1982) and Saito (1983). More specifically, the facts that *kare* and *John* in (1) can be coreferential with each other has been taken as evidence that *kare* does not c-command *John*, given the assumption that the relevant condition is stated as in (2).¹

- (1) John_i-no sensei-ga kare_j-o semeta
John-GEN teacher-NOM he-ACC criticized
'John's teacher criticized him_j.'
- (2) Chomsky's (1981, p. 1088) Binding Condition C:²
An R-expression is free.

The possible coreference in (1) indicates that there is a node that dominates *kare* but not *John*; cf. Whitman (1982), Saito (1983). Otherwise, *kare* would c-command *John*, violating the condition in (2). This node has been assumed in some works to be VP (e.g. Saito (1983, p.80) Saito (1985), Hoji (1985) and Takezawa (1987)); its status as a maximal projection, however, has not been firmly established, as pointed out in several works such as Whitman (1987) and discussed in chapter one; cf. xxx.

Notice that the existence of the node that dominates *kare* but not *John* in (1) is motivated only under the assumption that the relevant condition, and the syntactic domain in general, is stated in terms of c-command, i.e., without reference to "precedence". The argument for the existence of such a node based on the weak

crossover phenomenon in Japanese presented in Saito and Hoji (1983), Hoji (1985) and Saito (1985) also relies on this assumption. While the relevance of "c-command" and the irrelevance of "precedence" for the determination of the syntactic domain have been independently argued for and widely adopted over the past decade (xxxxxx), one would still want to find language-internal empirical evidence in Japanese for this assumption. Saito (1985, Ch. 2) presents a piece of evidence for this assumption that is analogous in structure to the Malagasy data reported in Reinhart (1981, 1983). This, in my view, is the only empirical argument based on Japanese that "precedence" is not relevant in the determination of syntactic domains. One of the purposes of this chapter is to reinforce this argument of Saito's (1985, Ch. 2). Before we discuss the issue directly, however, I want to review what has motivated the condition in (2). To this end, I will first present a brief history of binding condition C in 2.2 and how it is used to argue for the configurational structure in Japanese in 2.3. In 2.4, I will introduce Lasnik's (1986) proposal to divide condition C into two parts. One part is as in (1) and the other, which I will refer to as condition D, following Huang (1987), states that a less referential expression may not bind a more referential one. Confirming evidence from Japanese will then be presented for condition D. Section 2.5 introduces and reinforces Saito's (1985, Ch. 2) argument for the irrelevance of precedence for the determination of the syntactic domain, based on the condition D phenomenon in Japanese.

2.2. A Brief History of Binding Condition C

The contrast in (3) is observed in Langacker (1969, pp. 164-165); cf. Ross (1967a, b).⁴

- (3) a. *She_i hates the man who wronged this woman_i.
 b. This woman_i hates the man who wronged her_i.
 c. The man who wronged her_i is hated by this woman_i.
 d. The man who wronged this woman_i is hated by her_i.

Langacker (1969, p.167) provides a restriction on pronominal coreference, given in (4) to account for the contrast in (3).^{5, 6}

- (4) NP^a may pronominalize NPP unless (i) NPP precedes NP^a; and (ii) NPP commands NP^a.

Langacker (1969, p. 167) gives the definition of command as in (5).

- (5) A commands B if (i) neither A nor B dominates the other; and (ii) the S-node that most directly dominates A also dominates B.

Within a transformational theory of pronominalization, the underlying structures in (6b) can be mapped onto either (3c) or (3d); and the underlying structure in (6a) to (3b), but not to (3a).⁷

- (6) a. This woman_i hates the man who wronged this woman_i.
 b. The man who wronged this woman_i is hated by this woman_i.

In (6b), the first occurrence of this woman can be "pronominalized by the second" since it does not command the latter, and the second occurrence of this woman can be "pronominalized" since it neither precedes nor c-commands the first. In (6a), the second occurrence of this woman can be "pronominalized by the first" since it does not precede the latter. However, the first occurrence of this woman in (6a) cannot be "pronominalized by the second" since it both precedes and commands the latter. Hence (3a) cannot be derived from (6a). The condition in (4) thus accounts for the data in (3).

If restated in the terms of an interpretive approach as in (7), the condition in (4) would be like (7).^{8, 9}

- (7) A pronoun cannot both precede and command its antecedent.

The condition in (7) has been modified in Lasnik (1976, p.102) as in (8); cf. also Jackendoff (1972, Ch. 4).¹⁰

- (8) If NP₁ precedes and commands NP₂ and NP₂ is not a pronoun, then NP₁ and NP₂ are disjoint in reference.

The definition of command given in Lasnik (1976, p.101) is (9).

- (9) A commands B if the minimal cyclic node dominating A also dominates B. (Cyclic nodes: S and NP -- III)

Lasnik's condition in (8) differs from Langacker's in the following respects. First, it dispenses with "directionality" of referential dependency, which is indicated by "pronominalize" in (4) and "antecedent" in (6). In other words, while Langacker's restriction in (4)/(6) prohibits a pronoun from being in a certain structural relation with its antecedent, Lasnik's in (8) prohibits a non-

pronominal NP from being in a certain structural relation with ANY NP that is not disjoint from it. The following paradigms are intended to illustrate that Lasnik's condition in (8) is more general than Langacker's in (4) or (7).

- (10) (Lasnik's (32) with the judgments reported there¹¹)
a. *John_i loves John_i's mother.
b. *The Smith_i speak well of the Smith_i's maid
c. *Mary gave Mary's friends a going away present.
- (11) (Lasnik's (30)--from Wasow (1972)?)
a. *He_i loves John_i's mother.
b. *They_i speak well of the Smith_i's maid.
c. *She_i gave Mary_i's friends a going away-present.

Since the non-pronominal NP (John, the Smith, and Mary) is both preceded and kommanded by another NP in (10) and (11), the coreference is not possible in any of the sentences in (10) and (11), according to Lasnik's condition in (8). Notice that while the pronoun both precedes and commands its antecedent in (11), such is not the case in (10). In fact there are no pronouns in (10). Thus, although it rules out (11), Langacker's condition in (4)/(6) does not rule out (10).¹²

Second, Lasnik's condition uses the notion "kommand" instead of "command." The introduction of kommand is motivated in Lasnik (1976, p. 100-101) by the fact that (12) and (13) are better than (11) and (10), respectively. The sentences in (12) are from Wasow (1972) but the judgments on them are Lasnik's. (Wasow (1972, p. xx) gives (12) a question mark while marking (11) ungrammatical.)

- (12) a. His_i mother loves John_i.
b. Their_i maid speaks well of the Smith_i.
c. Her_i friends gave Mary_i a going away present.
- (13) a. John_i's mother loves John_i.
b. The Smith_i's maid speaks well of the Smith_i.
c. Mary_i's friends gave Mary_i a going away present.

Notice that the coreference in (12) and (13) are allowed by Lasnik's condition in (8) since, unlike (10) and (11), the Name is not kommanded by a coindexed NP. Langacker's condition, on the other hand, disallows coreference in (12) since the pronoun both precedes

and command its antecedent.¹³

Being reformulated in terms of c-command (cf. Reinhart (1976)), which is essentially identical to (the reverse of) Klima's (1964) in construction with, the relevant condition is stated as (14) in Chomsky (1981).¹⁴ (Cf. Reinhart (1983, pp. 18-19) as well as footnote 11 below in this connection.)

- (14) Binding Condition C (Cf. Chomsky (1981, p. 188).)
An R-expression (i.e., a fully lexical NP) must be free.¹⁵
- (15) a. X is bound by Y iff X is both c-commanded by and coindexed with Y.
b. X is free iff X is not bound.
- (16) X c-commands Y iff the branching node most immediately dominating X also dominates Y and neither dominates the other.¹⁶

The condition in (14) can be restated as in (17), under a reasonable assumption about the semantic import of coindexation to the effect that, if two NP's are coindexed, they cannot be disjoint in reference.¹⁷

- (17) If NP₁ c-commands NP₂ and NP₂ is an R-expression, then NP₁ and NP₂ are disjoint in reference.

In this section, I have presented a brief history of binding condition C up to Chomsky (1981). Condition C in Chomsky (1981) remains essentially unmodified in the standard GB approach through Chomsky (1986), except for the inclusion of "in the domain of the head of its chain" to accommodate the constructions that are analyzed to involve empty operator movement. Notice that I have not reviewed or provided arguments for the irrelevance of precedence for the phenomenon of definite NP anaphora. In the next section, I will introduce and then reinforce Saito's (1985) argument for the irrelevance of "precedence" in the phenomena of definite NP anaphora.

2.3. Condition C In Japanese

Since condition C crucially refers to the structural relation of "c-command," one expects that the phenomenon of definite NP anaphora in Japanese provides us with some insight into the structural

representation of the Japanese sentences.

In fact, it is by means of the phenomenon of pronominal coreference that the first piece of evidence for the so-called configurational nature of the Japanese phrase structure has been put forth within the extended standard theory; cf. Whitman (1982) and Saito (1983).¹⁸ The following argument is from Whitman (1982) and Saito (1983).

Let us assume that binding condition C in (18) holds in Japanese.

(18) Binding Condition C

An R-expression (i.e., a fully lexical NP) must be free.

The condition in (18) immediately accounts for the contrast in (19).

- (19) a. *kanozyo_i-ga [NP [cc Mary_i-o butta] hito]-o uttaeta (koto)
 she-NOM Mary-ACC hit person-ACC sued
 'she_i sued the person who had hit Mary_i'
- b. [NP [cc kanozyo_i-o butta] hito]-ga Mary_i-ni uttaerareta (koto)
 she-ACC hit person-NOM Mary-by was sued
 'the person who had hit her_i was sued by Mary_i'
- c. [NP [cc kanozyo_i-o butta]-hito]-ga Mary_i-ni ayamatta (koto)
 she-ACC hit person-NOM Mary-dat apologized
 'the person who had hit her_i apologized to Mary_i'
- d. Mary_i-ga [NP [cc kanozyo_i-o butta] hito]-o uttaeta (koto)
 Mary-NOM she-ACC hit person-ACC sued
 'Mary_i sued the person who had hit her_i'

Only in (19a) is Mary bound by kanozyo 'she'.^{19, 20} In (b) (c) and (d), kanozyo 'she' is embedded in an relative clause and it clearly does not c-command Mary. A similar paradigm is given in (20).

- (20) a. *kare_i-ga [S' Mary-ga John_i-o semeta to] omotteiru
 he-NOM Mary-NOM John-ACC criticized that thinks
 'he_i thinks that Mary criticized John_i'

- b. [kare_i-no tomodati]-ga [S' Mary-ga John_i-o semeta to] omotteiru
 he-gen friend-NOM Mary-NOM John-ACC criticized that thinks
 'his_i friends think that Mary criticized John_i'

- c. John_i-ga [S' Mary-ga kare_i-o semeta to] omotteiru
 John-NOM Mary-NOM he-ACC criticized that thinks
 'John_i thinks that Mary criticized him_i'

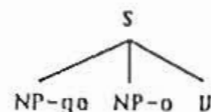
In the (b) example, kare 'he' is embedded in an NP, hence the condition in (18) is not violated. Similarly, in (21) below, the coreference is possible in (a) and (b), in which John is not c-commanded by kare; but it is not in (c), in which John is c-commanded by kare.

- (21) a. John_i-ga [kare_i-no hahaoya]-o semeta (koto)
 -NOM he-GEN mother-ACC criticized
 'John_i criticized his_i mother.'
- b. [Kare_i-no hahaoya]-ga John_i-o semeta (koto)
 he-GEN mother-NOM -ACC criticized
 'His_i mother criticized John_i.'
- c. *kare_i-ga [John_i-no hahaoya]-o semeta (koto)
 he-NOM John-GEN mother-ACC criticized
 'John_i criticized his_i mother.'

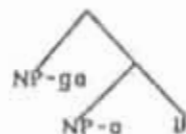
In the data in (19) to (21), coreference is not possible when kare itself is in the subject position and hence c-commands the rest of the sentence, which John is a part of. On the other hand, in all the other structures in (19) to (21) kare is embedded in a larger phrase and not in a position to c-command John, regardless of the position of the phrase that contains kare.

The contrast can be accounted for either by the structure in (22) or (23).

(22)



(23)



The subject NP c-commands the object NP in (22) as well as in (23). This means that, regardless of whether we adopt (22) or (23), it must be the case that a Name, which is contained in the object in (19a), (20a) and (21c), is bound, yielding the desired result that coreference is not possible in these examples. Since the pronoun is embedded in an larger NP in the other examples in (19), (20) and (21), on the other hand, a Name is not bound in those examples, thus yielding the desired result that coreference is possible there. This holds true regardless of the choice between (22) and (23). The structure in (22) and that in (23) are therefore both compatible with the preceding data.

The crucial observation made in the works in Whitman (1982) and Saito (1983) in distinguishing (22) from (23) is the fact that the coreference is possible in examples like (24) and (25).²¹

(24) a. [NP] _S _{ga} Mary_i-o butta hito_k]-ga kanozoyoi-ni uttaerareta (koto)
 Mary-ACC hit person-NOM her-by was sued
 'the person who had hit Mary_i was sued by her_i'

b. [NP] _S _{ga} Mary_i-o butta hito_k]-ga kanozoyoi-ni ayamatta (koto)
 Mary-ACC hit person-NOM her-dat apologized
 'the person who had hit Mary_i apologized to her_i'

(25) [John_i-no hahaoya]-ga kare_i-o semeta (koto)
 John-gen mother-nom him-acc criticized
 'John_i's mother criticized him_i.'

Suppose that the Japanese sentence had the basic structure as given in (22). Then the object NP would c-command the subject NP. This means that in (24) and (25) the Name would be bound by a pronoun, predicting, incorrectly, that the relevant coreference is not possible in these sentences. The fact that the coreference is possible in (24) and (25) indicates, as Whitman (1982) and Saito (1983) argue, that

the object NP does not c-command the subject NP in these sentences. Hence the Japanese sentence must be represented as in (23) rather than as in (22). This is the pronominal coreference argument for the configurational structure of the Japanese sentence, generally known as the condition C argument. This argument has subsequently been adopted rather widely as establishing the existence of the node that dominates the object NP but not the subject NP; cf. Hoji (1985, Ch. 1), Takezawa (1987, Ch. 1), Miyagawa (1990, Ch. 1) and Morikawa (1989, Ch. 1), for example.

Recall that binding condition C, which is crucial in this argument, is stated as in (18).

(18) Binding Condition C

An R-expression (i.e., a fully lexical NP) must be free.

It is, however, well known that condition C as stated in (18) is too strong in Japanese. As noted in Oshima (1979), for example, sentences such as (25) in Japanese are acceptable, unlike their English counterparts, which are typically considered to be unacceptable, due to the violation of condition C.

(26) (based on Oshima (1979, p. 431))

a. John_i-ga [S' Mary_i-ga John_i-o nikundo-iru to] omot-te-i-ru (koto)
 John-NOM Mary-NOM John-ACC hates that thinks
 'John_i thinks that Mary hates John_i.'

b. John_i-ga John_i-no hon-o mottekita (koto)
 John-NOM John-GEN book-ACC brought
 'John_i brought John_i's book.'

Thus, when condition C is employed to rule out (19), (20a) and (21c) in literature such as Saito (1983, 1985) and Hoji (1985), the formulation of this condition has been given as in (27) rather than as in Chomsky's (1981) (28), which is the same as (18).

(27) Binding Condition C for Japanese²²

A pronoun cannot bind a Name.

(28) Binding Condition C

An R-expression (i.e., a fully lexical NP) must be free.

The fact that Japanese obeys (27) but need not obey (28) suggests

that (27) and (28) may be two distinct conditions. It is in fact proposed in Lasnik (1986) that condition C be divided into two parts: one is as in (28) (i.e. the standard condition C) and the other is a condition that has the effect of (27). In the next section, we will consider Lasnik's (1986) proposal and provide confirming evidence for it from Japanese.

2.4. Condition D

To review the effects of condition C, consider the following.

- (29) a. John_i loves his_i father.
 b. *John_i loves John_i's father.
 c. He_i loves his_i father.
 d. *He_i loves John_i's father.
 e. John_i's father loves John_i.
 f. His_i father loves John_i.

Only in the (b) and (d) sentences, is John bound, i.e., c-commanded by an NP that is coindexed with it. Hence, the coreference is disallowed by binding condition C only in the (b) and (d) sentences but not in the other examples in (29). Disregarding conjoined structures and the structures that seem to involve syntactic preposing, the paradigm in (29) is the representative data that binding condition C is intended to account for.²³ Notice that binding condition C rules out the two examples in (30) (i.e. (29b) and (29d) above) on a par with each other.

- (30) a. *John_i loves John_i's father.
 b. *He_i loves John's father.

There is, however, some difference in the degree of unacceptability between the two. Namely, (30b) is worse than (30a); cf. xx and Hoji (1985, p. 96 n.16). With the pair in (31), which is based on Langacker's examples in (19), the relevant contrast seems to become sharper since (31a) seems to many people to be more acceptable (or less offensive) than (30a).^{24, 25}

- (31) a. ??(This woman/Mary)_i hates the man who wronged [this woman/Mary]_i.
 b. *She_i hates the man who wronged this woman_i/Mary_i.

Based in part on the contrast such as in (31) (and on data from languages such as Thai, Vietnamese, Japanese and Korean), Lasnik (1986) proposes to divide binding condition C into two parts. One is the same as (28) (the standard condition C) and the other is a condition given in (32), which Huang (1988) calls binding condition D.^{26, 27}

(32) Condition D

A less referential expression may not bind a more referential one.

Lasnik (1986, pp.12-13)

Consider (33) and (34) below, which have been given before as (xx) and (xx) respectively. The grammaticality distinction noted here was not made in the previous discussion.

(33)

- a. *John_i loves John_i's mother.
 b. *The Smiths_i speak well of the Smith_i's maid.
 c. *Mary_i gave Mary_i's friends a going away present.

(34)

- a. **He_i loves John_i's mother.
 b. **They_i speak well of the Smith_i's maid.
 c. **She_i gave Mary_i's friends a going away present.

Condition C is violated both in (33) and in (34); i.e., a Name is bound by another NP. Condition D, on the other hand, is violated in (34) but not in (33) since only in (34) is a Name bound by a pronoun. Thus (34) violates both condition C and condition D while (33) violates only condition C, resulting in (34) being more offensive than (33).

In retrospect, then, it is based on the effects of condition D that the first piece of evidence for the configurational nature of the Japanese phrase structure has been put forth in Wiltsman (1982) and Saito (1983a). Consider again the example in (26a), repeated below.

- (26a) John_i-ga John_i-no hon-o mottekita (koto)
 John-NOM John-GEN book-ACC brought
 'John_i brought John_i's book.'

As noted in the previous section, while (26a) is acceptable, (35) is not.

- (35) **kare*_i-ga John_i-no hon-o mottekita (koto)
 he-NOM John-GEN book-ACC brought
 'he_i brought John_i's book.'

Assuming that *kare* is less referential than *John*, condition D straightforwardly rules out (35). By contrast, (26a) does not violate condition D. If we assume that Japanese does not have the effects of condition C, we can account for the contrast between (26a) and (35).²⁸

Recall that binding condition D does not specifically refer to a pronoun/Name pair. In addition to the pronoun/Name pair, Lasnik (1986) discusses other pairs of nominal expressions, such as a pair that consists of an anaphoric epithet and a Name. Among the data that Lasnik (1986) discusses is the contrast in (36) in Japanese.²⁹

(36) (based on Lasnik's (1986, footnote 5))

- a. John_i-ga [_S Mary-ga aitui-o sonkeisite iru to] omotteiru
 John-NOM Mary-NOM that guy-ACC respects that thinks
 'John_i thinks Mary respects the idiot_i'
- b. *aitui-ga [_S Mary-ga John_i-o sonkeisite iru to] omotteiru
 that guy-NOM Mary-NOM John-ACC respects that thinks
 'The guy_i thinks Mary respects John_i'
- c. aitui-ga [_S Mary-ga aitui-o sonkeisite iru to] omotteiru
 that guy-NOM Mary-NOM that guy-ACC respects that thinks
 'That guy_i thinks Mary respects that guy_i'
- d. [_{NP} aitui-no tomodati]-ga [_S Mary-ga John_i-o sonkeisite iru to]
 that guy-GEN friend-NOM Mary-NOM John-ACC respect that
 omotteiru
 think
 'that guy_i's friends think that Mary respects John_i'

Condition D also accounts for the contrast in (37) and (38) in English to the extent that the contrast is detected.

- (37) a. ??John_i thinks that everyone hates John_i's work.
 b. *He_i thinks that everyone hates John_i's work.
- (38) a. *John_i thinks that everyone hates the bastard_i's work.
 b. **The bastard_i thinks that everyone hates John_i's work.

Speakers' judgments seem to vary with respect to how offensive (37a) is. It is invariably the case, however, that (37a) is judged more acceptable than (37b).

2.4.1. Further Evidence for Condition D

It will be argued in this subsection that Japanese provides further confirmation for condition D. It is well-known that the so-called Japanese overt pronouns such as *kare* 'he' and *kanozyo* 'she' are quite different from English personal pronouns such as *he* and *she*. In addition to not being part of the natural lexicon for those who have not been exposed to a certain style of speech, e.g. educated speech, *kare* and *kanozyo* are unable to function as bound variables.³⁰ As noted in Martin (1975/1988, p. 1075), the function of the pronoun in Japanese is often carried out by the zero form pronoun as well as by the repeated use of Names.³¹ As noted also by Martin, another group of nominal expressions that assume the function of the pronoun is a number of social titles such as given in (39).

(39) SOCIAL TITLES

- a. *sensei* 'doctor, professor, teacher, novelist, etc.'
 b. *kyoozyu* 'professor'
 c. *syaiyoo* 'president of a company.'
 d. *kakarityoo* 'section chief'
 e. *hikoku* 'defendant.'

Martin (1975/1988; p.1058) notes, "[o]nce a person has been mentioned by name and title, later references may use just the title, as if a pronoun." These social titles can thus be used in places where the English personal pronouns would be used, except that they do not seem to be bindable by quantifiers. For example, in the Japanese counterparts to (40), *sensei/kyoozyu* could appear in place of *he*, as illustrated in (41).

- (40) a. What time will Prof. Yamada come? *He* will come at three.
 b. Prof. Yamada thinks that Bill criticized *him*.

- (41) a. Yamada-sensei-wa nanzi-ni irassyaimasu ka
 Prof. Yamada-TOP what time-at will come Q
 'What time will Prof. Yamada come?'

sensei-wa sanzi-ni irassyaimasu
prof.-TOP 3:00-at will come
'he (prof) will come at 3:00'

- b. Yamada-kyoozyu-wa [s Bill-ga kyoojyu-o lihansita to]
Yamada-prof-TOP Bill-NOM prof-ACC criticized that
omotteirassyaimasu
thinks
'Prof. Yamada thinks that Bill criticized him (prof.)'

It also seems to be the case that titles can be used "referentially," as illustrated in (42), just like English *he*.³²

- (42) sensei-ga irassyaimasita
prof-NOM came
'The professor. came.'

Given that titles function like "pronouns," and given the referential hierarchy between pronouns and Names (i.e. Names > pronouns), we would predict, in accordance with condition D, that while Names can bind titles, the latter cannot bind the former. This prediction is in fact borne out, as illustrated in (43).³³

- (43)
a. Yamada sensei-ga [s Mary-ga sensei-o semeta to]
omotteiru
Prof. Yamada-NOM Mary-NOM prof.-ACC criticized that thinks
'Prof. Yamada; thinks that Mary criticized prof.i'
b. *sensei-ga [s Mary-ga [Yamada sensei]i-o semeta to]
omotteiru
Prof.-NOM Mary-NOM Prof. Yamada-ACC criticized that thinks
'prof.i thinks that Mary criticized Prof. Yamada;'

Notice that in (43a) Yamada sensei 'Prof. Yamada' binds sensei 'prof' but the binding relation is reversed in (43b). Hence (43b) is ruled out by condition D while (43a) is not. When Yamada sensei in (43b) is replaced by sensei, as in (44), the sentence is acceptable.

- (44) sensei-ga [s Mary-ga sensei-o semeta to] omotteiru
prof.-NOM M-NOM prof-ACC criticized that thinks
'prof.i thinks that Mary criticized prof.i'

Furthermore, if sensei does not c-command Yamada sensei, as in (45), the coreference is possible.

- (45)
sensei-j-no okusan-ga [s Mary-ga [Yamada sensei]i-o semeta to]
prof.-NOM wife-NOM Mary-NOM Prof. Yamada-ACC criticized that
omotteiru (koto)
thinks
'prof.i's wife thinks that Mary criticized Prof. Yamada;'

The pattern in (43)-(45) is identical to the patterns that illustrate coreference possibilities involving karu 'he' and Names and those involving aitu 'that guy' and Names, observed earlier. The pattern in (43)-(45) can be reproduced with other social titles as well.

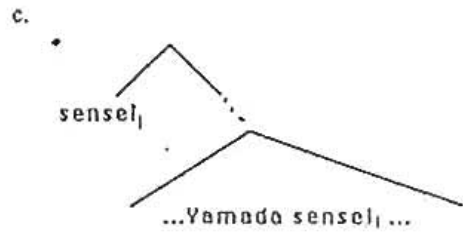
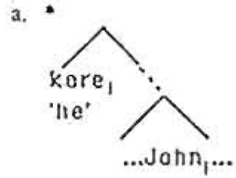
One such paradigm with butyoo 'section chief' is given in (46).

- (46)
a. Yamada butyoo-ga butyoo-no buka-o sikatta (koto)
Chief Yamada-NOM chief-GEN subordinates-ACC scolded
'Chief Yamada; scolded the section chief's subordinates.'
b. *butyoo-ga Yamada butyoo-no buka-o sikatta (koto)
chief-NOM Chief Yamada-GEN subordinates-ACC scolded
'the section chief scolded Chief Yamada's subordinates'
c. ?butyoo-no buka-ga Yamada butyoo-no hokokusyo-o
chief-GEN subordinate-NOM Chief Yamada-GEN report-ACC
nakusita (koto)
lost
'the section chief's subordinate lost Chief Yamada; report'

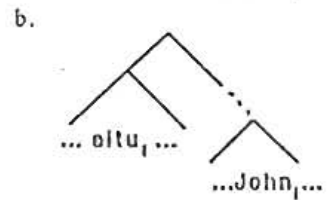
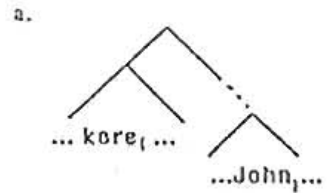
Social titles in Japanese, taken as less referential than Names, thus provide confirming evidence for Lasnik's (1986) condition D.

To summarize, condition D, together with the configurational representation of the Japanese phrase structure given below, accounts for data as schematized in (47) below.³⁴

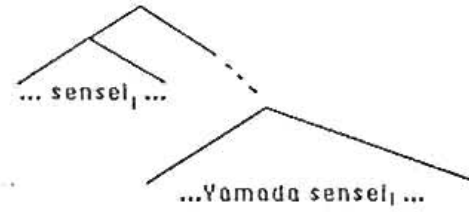
(47)



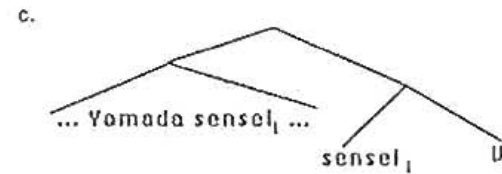
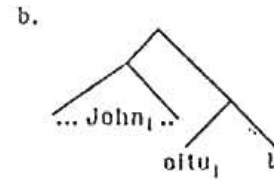
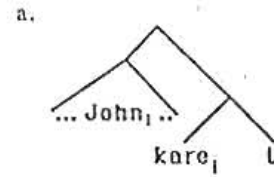
(48)



c.



(49)



The relevant data thus confirm that given two NP's, X and Y, where Y is more referential than X, the only structure that is ruled out by condition D is the one given in (50).

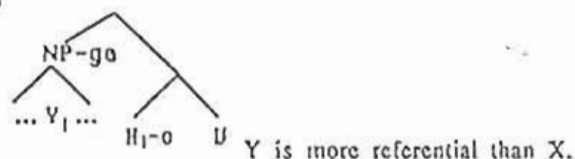
(50)



Y is more referential than X.

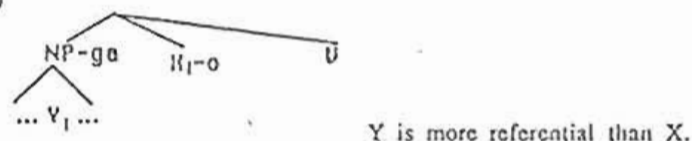
The structures in (47) are of this type. It is indicated in (48) that unless X binds Y, the coreference is allowed even when the former precedes the latter. Recall that the coreference is allowed also in (51), which represents the cases in (49), in which the more referential Y precedes but does not c-command the less referential X.

(51)



As noted earlier in discussing the pair of a pronoun and a Name, if the GA O pattern were represented as in (52), X would bind Y.

(52)



Insofar as condition D is formulated in terms of c-command, as proposed in Lasnik (1986), (52) would violate condition D. The fact that the sentences that correspond to (53) allow coreference, therefore, indicates that the structures in (52) should be rejected.

(53) [... Y_i ...]-ga X_i-o Verb

Hence the data involving the pair of aitu 'that guy' and John, given in Lasnik (1986), and those involving the pair of sensei 'prof' and Yamada sensei 'Prof. Yamada' discussed above reinforce Whitman's (1982) and Saito's (1983) argument for the hierarchical structure of the Japanese sentence.

2.5. Condition D and C-Command Domains

We have observed some phenomena of referential association in Japanese that provide confirmation for binding condition D as well

as for the hierarchical structure for the GA O sentence pattern in this language. Notice, however, that the argument for the hierarchical structure for the Japanese sentence presented above relies crucially on the assumption that condition D is not sensitive to "precedence." Suppose that condition D were formulated in terms of "precede and kommand," as in (54) rather than as in Lasnik's (1986) (55).

(54) A less referential expression may not bind a more referential one, where X binds Y iff (i) X both precedes and kommands Y and (ii) X and Y are coindexed.³⁵

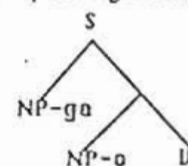
(55) Condition D (Cf. x.)

A less referential expression may not bind a more referential one, where X binds Y iff (i) X c-commands Y and (ii) X and Y are coindexed.

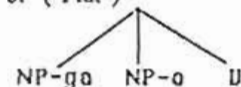
Given (54), the less referential expression X no longer binds Y in (52) since the former does not precede the latter. Thus, if "precedence" were relevant in the definition of "bind", and hence in the formulation of condition D, the argument for the configurational structure for Japanese that we have seen above could not be upheld.³⁶

Note that on a conceptual ground, the "c-command" formulation must be adopted over the "precede and kommand" formulation, if they have the same data coverage, because of the obvious consideration of simplicity. Given the GA O sentence pattern, there are two logically possible structures for it, as given in (56).

(56) a. ("Configurational")



b. ("Flat")



As noted above, there are also two possible formulations for

condition D, which are as in (54) (or its variant that uses "precede and c-command") or as in (55). Thus there are four logically possible combinations for the "sentential structure" and "condition D", as indicated in (57).

- (57)
- a. (56a) and (54) (configurational and "c-command")
 - b. (56a) and (55) (configurational and "precede and ..")
 - c. (56b) and (54) (flat and "c-command")
 - d. (56b) and (55) (flat and "precede and ..")

Recall that the data regarding condition D indicate that the \underline{Q} -phrase does not bind the \underline{QA} -phrase in the GA O pattern. Since the flat structure (56b) allows the \underline{Q} -phrase to c-command the \underline{QA} -phrase, (57c) would fail to accommodate the data regarding condition D, which means that, given the "c-command" formulation of condition D, we must reject the flat structure and adopt the configurational structure instead. This IS the argument presented in Whitman (1982) and Saito (1983) for the configurational structure in Japanese. If condition D is formulated in terms of "precede" in addition to some configurational notion such as "kommand" or "c-command", however, both (56a) and (56b) are compatible with the binding facts. Note that the \underline{Q} -phrase does not precede the \underline{QA} -phrase in either (56a) or (56b); hence the \underline{Q} -phrase does not bind the \underline{QA} -phrase in either of these structures. It is, therefore, crucial for Whitman's (1982) and Saito's (1983) argument that that "precedence" is irrelevant for the condition D phenomenon.³⁷

As noted in Reinhart (1983, p. 46), the irrelevance of "precedence" and the relevance of "c-command" for the determination of syntactic domains in general (and for the condition D phenomenon, in particular) should be testable, by examining the structures in which X c-commands but does not precede Y as in (58).³⁸

- (58)
-
- X is less referential than Y.

Since Japanese is a strictly head-final language, the structure in (58) is realized only in structures like the relative clause construction.

Given the "c-command" formulation of condition D, we predict that (59a) is ruled out while (40b) is ruled in.

- (59)
- a.
-
- Y is more referential than X.

- b.
-
- Y is more referential than X.

By contrast, the condition D that is formulated in terms of "precede and kommand" (or in terms of "precede and c-command") allows coreference in both (59a) and (59b) since X does not precede Y in either structure.

Saito (1985, pp. 44-47) provides the examples in (60) and argues for the irrelevance of "precedence."

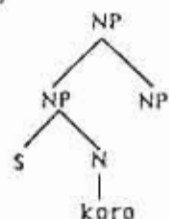
(60) (Saito's (29a) and (29c) with the judgments reported there)³⁹

- a. [NP[NP[S' kare_i-no okaasan-ga genki-datta] koro]-no John_i]
 he-GEN mother-NOM well-was time-GEN John
 'Lit. John_i of the time when his_i mother was well = John_i as he_i
 was when his_i mother was well'

- b. *[NP[NP[S' John_i-no okaasan-ga genki-datta] koro]-no kare_i]
 John-GEN mother-NOM well-was time-GEN he
 'Lit. him_i, at the time when John_i's mother was well'

While it is not clear that the examples in (60) can be analyzed as involving relative clauses, it is fairly clear that they are of the structure in (61).⁴⁰

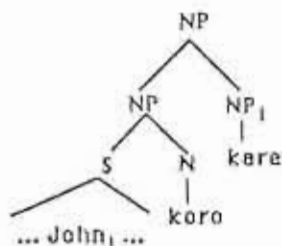
(61)



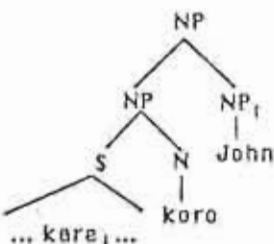
The contrast in (60) therefore can be attributed to condition D ruling out (62a) while ruling in (62b).

(62)

a. *



b.



If "precedence" were a crucial structural relation in the condition D phenomenon, (62a) should allow coreference since *kare* 'he' does not precede *John*.

The acceptability of phrases such as (63) shows that the status of (62a) cannot be attributed to *kare*'s inability to occur in the head position of the entire NP.⁴¹

(63)

a. (Saito's (1985, p. 45, (29b) with the judgments reported there)⁴²
[?][NP[NP[S'kare_i-no okaasan-ga genki-datta] koro]-no kare_i]
 he-GEN mother-NOM well-was time-GEN he
 'Lit. him_i, at the time when his_i mother was well'

b. [NP[NP[S' Mary-ga genki-datta] koro]-no kare]
 Mary-NOM well-was time-GEN he
 'him, at the time when Mary was well'

Notice that, unlike English *he*, Japanese *kare* allows an appositive modification. This is perhaps related to the well-known observation that *kare* is related to a demonstrative paradigm and is analogous to *ano hito* 'that person'; cf. C. Kitagawa (1979, 1981), Kuno (1978) and Hoji (1989).⁴³ The examples in (64) illustrate that the pronouns in English cannot be modified by appositive relatives while the demonstratives can; cf. xx.

- (64) a. *It, which I got in New York last year, is a fantastic book.
- b. This, which I got in New York last year, is a fantastic book.
- c. *He, who I met in New York last year, is a fantastic person.
- d. That man, who I met in New York last year, is a fantastic person.

The examples in (65), on the other hand, illustrate that *kare* can be modified by an appositive relative.⁴⁴

- (65) a. [NP [S' Mary-ga _{ci} butta] kare]
 Mary-NOM hit that man
 'that man, who Mary hit'
- b. [NP [S' _{ci} Mary-o butta] kare]
 Mary-ACC hit that man
 'that man, who hit Mary'

Saito's (1985)'s contrast in (60) can be reconstructed by using the relative clause construction, as indicated in (66).⁵

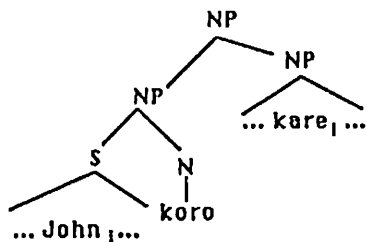
- (66) a. *[NP [S' John_i-no gakusei-ga minna _{ci} kira teiru] kare_i]
 John-GEN student-NOM all hate that man
 'that man_i, who John_i's students all hate'

b. [NP [S' kare_i-no gakusei-ga minna e_i kiratteiru] John_i]
 that man-GEN student-NOM all hate John
 'John_i, who that man_i's students all hate'

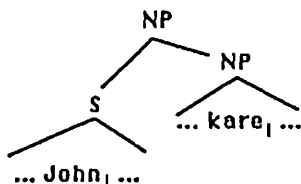
Not only does the "c-command" formulation of condition C account for the contrast in (60) and (66) but it also predicts, correctly, as will be shown below, that once kare in (60a) and (66a) is embedded as in (67), the coreference becomes possible.

(67)

a.



b.



The example in (68) from Saito (1985, p.xx) confirms that the structure in (67a) allows coreference.

(68) [NP[NP[S'John_i-no okaasan-ga genki datta] koro]-no [kare_i-no musuko]]
 John-GEN mother-NOM well was time-GEN he-GEN son
 'his_i son, at the time when John_i's mother was well'

The example in (69) illustrates that the structure in (67b) allows coreference.⁴⁶

(69)

[NP[S' John_i-no gakusei-ga mazimeni e_i yondeiru] [NPkare_i-no ronbun]]
 John-GEN student-NOM carefully are reading he-GEN paper
 'his_i paper, which John_i's students are reading carefully'
 'his_i paper that John_i's students are reading carefully'

Thus the contrast illustrated in (60) to (69) provides a crucial piece of evidence for the relevance for "c-command" and the irrelevance of "precedence" for condition D.

One might object to this argument on the basis that the use of kare is somewhat marked, in the sense noted earlier, and that this perhaps contributes to the possible murkiness of the data that is alluded to in Saito (1985).⁴⁷ Saito (1985, p. 46) notes that (63a) above (his (29b)) "is somewhat marginal, probably due to the fact that a pronoun is modified." Since phrases like (63b) and (70) are quite acceptable, it is not clear that the "marginality" of (63a) is indeed due to kare being modified.

(70) (Kuroda (1965, p. 105)⁴⁸

tiisai kare
 small he

Be that as it may, it is, nonetheless, clearly desirable if we can strengthen Saito's argument with examples that involve lexical items that are not "marked".⁴⁹

Notice that we now have a number of other nominal expressions that appear to be less referential than Names, i.e. social titles and epithets. Since social titles such as sensei 'prof, teacher', for example, are used very frequently in Japanese in place of personal pronouns, the use of such titles would not create the complication of "unnaturalness" that the use of kare might induce.

The contrast obtains with sensei and Yamada sensei 'Prof. Yamada.', for example. This is illustrated in (71).⁵⁰

(71)

a. * [NP[S' Yamada sensei_i-no gakusei-ga minna e_i sonkeisiteiru] sensei_j]
 Prof. Yamada-GEN student-NOM all respect prof
 'prof_i, who Prof. Yamada_i's students all respect'

b. [NP[S' sensei-no gakusei-ga minna ec_i sonkeisiteiru] Yamada sensei]
 prof-GEN student-NOM all respect Prof.
 Yamada
 'Prof. Yamada_i, who prof_i's students all respect'

c. [NP[S' Yamada sensei-no gakusei-ga minna ec_k sonkeisiteiru]
 Prof. Yamada-GEN student-NOM all respect
 [sensei-no okusan]_k]
 prof-GEN wife
 'prof_i's wife, who Prof. Yamada_i's students all respect'

d. [NP[S' Yamada sensei-no gakusei-ga minna ec_k yondeiru]
 Prof. Yamada-GEN student-NOM all are reading
 [sensei-no ronbun]_k]
 prof-GEN paper
 'prof_i's paper, who Prof. Yamada_i's students are all reading'

While (71c) has a potential complication due to the fact that the relative may be taken to be modifying sensei 'prof' rather than sensei-no okusan 'prof's wife', such complication does not arise in (71d).

Similarly, the pair of John and aitu 'that guy' also yields the same contrast, as expected. This is illustrated in (72).

(72) a. * [NP[S' Johni-no buka-ga minna ec_i kiratteiru] aitu]_i
 John-GEN men-NOM all hate that guy
 'that guy_i, who John_i's subordinates all hate'

b. [NP[S' atitui-no buka-ga minna ec_i kiratteiru] John]_i
 that guy-GEN men-NOM all hate John
 'John_i, who that guy_i's subordinates all hate'

c. [NP[Johni-no buka-ga minna ec_i kiratteiru] [aitui-no hitori musuko]]
 John-GEN men-NOM all hate that guy-GEN the only son
 '[that guy_i's only son], who John_i's subordinates all hate'

d. [NP[Johni-no zyoosi-ga nakanaka ec_k saiyoosinakatta]
 John-GEN boss-NOM easily did not adopt
 [aitui-no teian]_k]
 that guy-GEN proposal

'[that guy_i's proposal]_k, who John_i's boss did not adopt ec_k easily'

It is shown in (73) that aitu may be the head of an appositive relative.

(73) [NP[S' Mary-ga ec_i kiratteiru] aitu]_i
 Mary-NOM hate that guy
 'that guy, who Mary hates'

One might argue that the contrast in (71) and (72) may not be directly due to condition D with respect to the relationship between Yamada sensei 'Prof. Yamada' and sensei 'prof' in (71) or that between John and aitu in (72). That is, one might pursue the possibility that the contrast is due to condition D with respect to two arguments that are both inside the relative clause itself. To assess this possibility, let us consider the D and S-structure representations of the relative clause construction in Japanese.

The exact nature of the Japanese relatives is not clear; cf. footnote above. I will argue, however, that regardless of the analysis of the Japanese relatives, we cannot derive the relevant contrast based on some properties within the relative clause itself. This conclusion in turn provides support for the view that the contrast under discussion is due to the violation of condition I' with respect to the relation between the head NP and the NP coindexed with it inside the relative clause.

First, let us suppose that the Japanese relatives involve syntactic movement. The syntactic movement can either be (i) the movement of an empty operator from the embedded object position into the COMP position or (ii) the movement of the lexical NP from the embedded object position to the head of the relative position. These possibilities do not yield any difference at the level of S-structure, as far as the relative clause-internal structure is concerned. Thus, at S-structure, the relative clause of (71a) and that of (71b) would be as in (74a) and (74b), respectively.

(74)
 a. Yamada sensei-no gakusei-ga minna _i sonkeisiteiru
 Prof. Yamada-GEN student-NOM all respect

b. sensei-no gakusei-ga minna _i sonkeisiteiru
 prof-GEN student-NOM all respect

Suppose that the t in (74) is to be treated as an R-expression, given the assumptions that it is a trace of A'-movement, and that variables (locally A'-bound empty categories in argument positions) are R-expressions as assumed in Chomsky (1981, p. xx). Even if we assume that the non-lexical R-expression, unlike lexical R-expressions, is subject to condition C and hence is subject to strong crossover, the t is not A-bound in (74). Thus neither (74a) nor (74b) violates any principles, as long as t is appropriately A'-bound.⁵¹ Thus (71a) and (71b) cannot be differentiated at the level of S-structure, under the movement analysis of the relative clause in Japanese.

We cannot differentiate (71a) from (71b) at the level of D-structure either. Consider (75) and (76) below.

(75)

a. Yamada sensei_i-no gakusei-ga minna OP_i sonkeisiteiru
Prof. Yamada-GEN student-NOM all respect

b. sensei_i-no gakusei-ga minna OP_i sonkeisiteiru
prof-GEN student-NOM all respect

(76)

a. Yamada sensei_i-no gakusei-ga minna sensei_i-o sonkeisiteiru
Prof. Yamada-GEN student-NOM all prof-ACC respect
'Prof. Yamada's students all respect prof_i'

b. sensei_i-no gakusei-ga minna Yamada sensei_i-o sonkeisiteiru
prof-GEN student-NOM all Prof. Yamada-ACC respect
'prof_i's students all respect Prof. Yamada_i'

In (75) the embedded object position is occupied by an empty operator and in (76) by lexical NP's. Examples in (a) correspond to (71a) and those in (b) in (71b). Here again, no principles are violated in either (a) examples or (b) examples; hence it is not possible to differentiate (71a) and (71b) at the level of D-structure.

Let us now assume that the Japanese relative clauses do not involve syntactic movement. The embedded object position must then be occupied by an empty pronoun (*pro*). We cannot differentiate (71a) from (71b) under this assumption either since there is no sharp contrast between (77a) and (77b).⁵²

(77) a. Yamada sensei_i-no gakusei-ga minna pro_i sonkeisiteiru
Prof. Yamada-GEN student-NOM all respect
'Prof. Yamada's students all respect pro_i'

b. sensei_i-no gakusei-ga minna pro_i sonkeisiteiru
prof-GEN student-NOM all respect
'prof_i's students all respect pro_i'

The surface acceptability of (77) might vary from speaker to speaker; cf. footnote above. But crucially, they are as acceptable as (78); and furthermore there is no significant difference between (77a) and (77b).

(78) a. John_i-no buka-ga minna pro_i kiratteiru
John-GEN men-NOM all hate
'that guy_i, who John's subordinates all hate'

b. atitui_i-no buka-ga minna pro_i kiratteiru
that guy-GEN men-NOM all hate
'John_i, who that guy's subordinates all hate'

The data in (74)-(78) thus indicate that the unacceptable coreference in (71a) and (72a) must be due to the relative head binding a more referential NP inside the relative clause.

The paradigms discussed in this section thus reinforce the argument presented in Saito (1985, pp. 44-47) against the relevance of "precedence" in the phenomenon of referential dependency subsumed under condition D. The Japanese data regarding binding condition D presented in this section constitute strong empirical evidence for adopting "c-command" rather than "precede and kommand" as the relevant structural notion that is to be used in the definition of the notion "bind" and hence of the notion "syntactic domain", as proposed in Reinhart (1976, 1983).

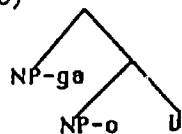
Consider again the sentence in (79) below.

(79) [John_i-no hahaoya]-ga kare_i-o semeta (koto)
John-gen mother-nom him-acc criticized
'John's mother criticized him_i.'

Given that the phenomenon of condition D is sensitive to "c-command" but not to "precedence", the fact that the coreference is possible in (79) cannot be because *kare* follows *John*. It must be because *kare* does not c-command *John* that the coreference is

possible in (79). This in turn means that the object NP does not command the subject NP in (79). Therefore the structure of the GA O sentence pattern must be as in (80), given at the beginning of this chapter.

(80)



2.6 More Hierarchies

In 2.4.1 we have seen additional evidence in support of Lasnik's (1986) condition D based on social titles in Japanese. The referential hierarchies that we have witnessed in these sections are given below.⁵³

- (81) a. Names > pronouns
 b. Names > epithets
 c. Names > social titles

One might wonder what the referential hierarchies are among pronouns, social titles and epithets. To the extent that these nominals exhibit condition D effects with respect to each other, we can differentiate them in terms of referential hierarchies among them. This will in turn render further support for condition D because of its wider range of descriptive coverage that it has. In this section, it will be demonstrated that we can indeed differentiate (i) pronouns from social titles and (ii) epithets and social titles.

2.6.1 Social Titles and Kare

Certain social titles and kare 'he' are not very compatible with each other because of somewhat disrespectful connotations that kare tends to have; cf. chapter. 4. Once we suppress such potential complications, the contrast in (82) and (83) seems clear.

- (82) a. kyoojyu;-ga kare;-no hon-o nakusita (node ...)
 prof-NOM he-gen book-ACC lost
 prof; lost his; book'

- b. *kare;-ga kyoojyu;-no hon-o nakusita (node ...)
 he-NOM prof.-NOM book-ACC lost
 'he; lost prof;'s book'

- c. kare;-no gakusei-ga kyoojyu;-no hon-o nakusita (node ...)
 he-GEN student-NOM prof-GEN book-ACC lost
 'his; student lost prof;'s book'

- (83) a. katyoo;-ga kare;-no buka-ni nanika itta (node ...)
 chief-NOM he-GEN men-DAT something said since
 '(since) the section chief; said something to his; men; ...'

- b. *kare;-ga katyoo;-no buka-ni nanika itta (node ...)
 he-NOM chief-GEN men-DAT something said since
 '(since) he; said something to the section chief;'s men; ...'

- c. kare;-no buka-ga katyoo;-ni nanika itta (node ...)
 he-GEN men-NOM chief-DAT something said since
 '(since) his; men said something to the section chief; ...'

The paradigms in (82) and (83) indicate the hierarchy in (84).

- (84) Social Titles > kare

One might object to this conclusion on the ground that kyoojyu 'prof' and katyoo 'section chief' in (82) and (83) can be complete descriptions, analogous to "the professor" and "the section chief". As noted in footnote 29 of Ch.2-1 (6/16), this is a reasonable objection since Japanese does not have clear candidates for determiners. According to this view, expressions such as kyoozyu may be ambiguous between the title "Prof" and the definite description "the professor".

Suppose that sensei can be analyzed either as a "pronoun-like" category, which we have been calling "titles" or as a definite description such as the professor, which might as well be as referential as Names. In case sensei in (82) is a definite description, the contrast in (82) is exactly as expected since we independently know that Names are more referential than kare. Hence, no new discovery is made in (82). In case sensei is a title, on the other hand, the contrast in (82) indicates that sensei is more referential than kare. Otherwise, (82b) should be acceptable. The unacceptable status of (82b) therefore means that sensei is more referential than

kare regardless of whether it is used as a Name or as a title. This in turn means that "titles" are more referential than kare.

2.6.2 Social Titles and Epithets

Many social titles are not fully compatible with epithets; but it is possible to construct examples with a social title and an epithet that are coreferential with each other within the same sentence. Consider the paradigm in (85).

(85)

a. butyooi-ga [NP[S Mary-ga aitui-ni ccjwatasita] syoruij]-o
 nakusita
 chief-NOM that guy-DAT passed document-ACC
 lost
 'the chief_i (of section) lost the document that Mary had given to that guy_i'

b. *aitui-ga [NP[S Mary-ga butyooi-ni ccjwatasita] syoruij]-o
 nakusita
 that guy-NOM chief-DAT passed document-ACC
 lost
 'that guy_i lost the document that Mary had given to the chief_i'

c. aitui-no hisyo-ga [NP[S Mary-ga butyooi-ni ccjwatasita] syoruij]-o
 that guy-GEN secretary-NOM chief-DAT passed document-ACC
 nakusita
 lost
 'that guy_i's secretary lost the document that he/she was supposed to give to the chief_i'

In (85) aitu 'that guy' c-commands butyoo and the sentence can be ruled out in accordance with condition D, given the hierarchy in (86).

(86) Social Titles > Epithets

2.7 Inside the NP

It is a straightforward task to reproduce the condition D effects inside the NP in Japanese, analogous to the familiar paradigms in English given in (87).

- (87) a. John_i's criticism of his_i student
 b. *his_i criticism of John_i's student
 c. [his_i student]'s criticism of John_i

First consider the following.⁵⁴

(88)

- a. John_i-no [kare_j-no gakusei]-no/ni taisuru hihan
 b. *kare_j-no [John_i-no gakusei]-no/ni taisuru hihan
 c. [kare_j-no gakusei]-no John_i-no/ni taisuru hihan
 d. [John_i-no gakusei]-no kare_j-no/nitaisuru hihan

As pointed out in Morikawa (1989, Ch. 6), the judgments in (88) exactly parallel the judgments on the sentential structure. The paradigm in (90), which contains a pair of a Name and an epithet, exhibits the same contrast.

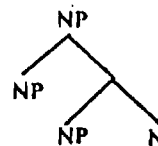
(89)

- a. butyooi-no [aitui-no buka]-no/ni taisuru hyooka
 b. *aitui-no [butyooi-no buka]-no/ni taisuru hyooka
 c. [aitui-no buka]-no butyooi-no/ni taisuru hihan
 d. [butyooi-no buka]-no aitui-no/nitaisuru hihan

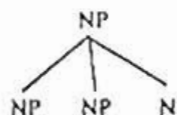
Such paradigms as (88) and (89) indicate that the internal structure of the NP is also configurational as in (90a) rather than as in (90b), at least in those cases in which X and Y in (90) receive theta roles by the head N.^{55, 56}

(90)

a.



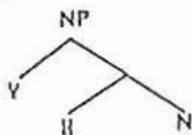
b.



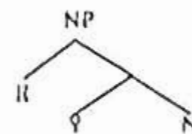
As expected, the contrast in (88) and (89) can be reproduced whenever we insert appropriate lexical categories in the places of X and Y in (91).

(91) where X is less referential than Y

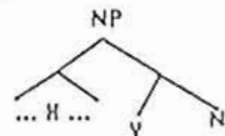
a.



b.



c.



More generally, as long as a less referential expression does not c-command a more referential one, the coreference is allowed. Hence, examples such as (92) allow coreference.

- (92) a. [butyoo_i-no jyoosi]_i-no [aitu_j-no buka]_j-no/nitaisuru hihan
 b. [aitu_j-no buka]_j-no [butyoo_i-no sigoto]_i-no/ni taisuru hihan

By the same logic that we have applied in the case of the sentence-internal structure, we can conclude that the relevant data constitute evidence for the configurational structure inside the NP. If the NP-internal structure were flat and if the two NP's inside the NP c-command each other, (88d) and (89d) would wrongly be predicted to

disallow coreference as instances of the violation of condition D. Recall that we are assuming, based on the evidence in 2.5 that "precedence" is irrelevant in the formulation of condition D, and in the determination of the syntactic domain in general.

To the extent that the NP-internal structure provides the expected contrast, this constitutes further confirmation both for condition D and the configurational structure inside the NP in Japanese.

In the next section, we will review the set of referential hierarchies that we have established and consider whether they can be related to binding theoretic features, as proposed in Lasnik (1986).

2.8 The Referential Hierarchy and Binding Theoretic Features

We have seen evidence for the following hierarchies.⁵⁷ As in the preceding discussion, "pronoun" include *kare* 'he', social titles *sensei* 'prof, teacher' and "epithets" *aitu* 'that guy'.

(93)

- a. Names > pronouns
- b. Names > social titles
- c. Names > epithets
- d. social titles > pronouns
- e. social titles > epithets

These can be collapsed into (94).

(94)

- a. Names > social titles > epithets
- b. Names > social titles > pronouns

Lasnik 's (1986) hierarchy is given in (95).

(95) Names > epithets > pronouns

Lasnik (1986) motivates this hierarchy based on the interactions with respect to condition D among Names, what appear to be epithets and what appear to be pronouns in languages like Thai, Vietnamese, Japanese and Korean. His crucial assumptions are that what appear to be pronouns and epithets are indeed pronouns and epithets in these languages and that these "types" of expressions have the same

features cross-linguistically. We have reviewed the relevant data from Japanese in this regard in 2.4. If we adopt these assumptions of Lasnik's (1986), we should be able to combine the hierarchies in (94) with the hierarchy in (95), which would give us the hierarchy in (96).

(96) Names > social titles > epithets > pronouns

While the Japanese data that contribute to extending Lasnik's (95) into (96) provide additional support for condition D, they cast some doubt over the relationship between the referential hierarchy and binding theoretic features, which Lasnik (1986) attempts to establish. To see why this is so, let us first consider how Lasnik (1986) relates his hierarchy in (95) to the binding theoretic features of the relevant nominals. He assigns binding theoretic features to Names, epithets and pronouns as indicated in (97).

- (97) a. Names [-a, -p, +r]
 b. epithets [-a, +p, +r]
 c. pronouns [-a, +p, -r]

The features [+/-a] and [+/-p] represent [+/-anaphoric] and [+/-pronominal] respectively, as in the standard binding theory of Chomsky (1981, 1986). Lasnik's (1986) conception of binding conditions differs from the standard view in that condition C regulates [+r] categories, with [+/-r] standing for [+/-referential]. Thus the binding conditions for Lasnik (1986) are as given in (98), disregarding the "Binding Theory-Compatibility" refinement made in Chomsky (1986).⁵⁸

- (98)
 a. Condition A: A [+a] category must be bound in its local domain.
 b. Condition B: A [+p] category must be free in its local domain.
 c. Condition C: A [+r] category must be free.

Names, epithets and pronouns are all [-a] and can be free in their local domain ((98a)). Names and epithets in English must be free since they are [+r]. Pronouns, on the other hand, may be bound outside their local domain since they are not [+r]. The relevant data are given in (99), taken from Lasnik (1986) (with the judgments recorded in Lasnik (1986)).

- (99)
 a. *John_i thinks that I admire John_i.
 b. *John_i thinks that I admire the idiot_i.
 c. John_i thinks that I admire him_i.

Names and epithets are assigned [+r] while the pronoun is assigned [-r]. The assignment of [+p] to epithets is motivated in Lasnik (1986) by the observation that epithets in Thai must be free in their local domain despite the fact that Names need not be.⁵⁹

- (100) (Lasnik's (20), (22), (25) and (28))
 a. c n khit waa c n chalaat
 John thinks that John is smart

 b. c n ch p c n
 John likes John

 c. c n khit waa ʔaybaa chalaat
 John thinks that the nut is smart

 d. *c n ch p ʔaybaa
 John likes the nut

Lasnik (1986) rules out (100d) by condition B, under the assumption that epithets are [+p].

When we combine the above considerations for the values of the three features [+/-a, +/-p, +/-r] for Names, epithets and pronouns, we have (101).⁶⁰

- (101)
 a. Names [-a, -p, +r]
 b. epithets [-a, +p, +r]
 c. pronouns [-a, +p, -r]

Lasnik (1986) relates the feature combinations in (101) with his referential hierarchy in (95), repeated below, and represents the hierarchy as in (102).

(95) Names > epithets > pronouns

(102) [-a, -p, +r] > [-a, +p, +r] > [-a, +p, -r]

The hierarchy in (96b) seems plausible to the extent that the

hierarchies in (103) are plausible.

- (103) a. [+r] > [-r]
b. [-p] > [+p]

The hierarchy in (96) is a direct consequence from (103) in that (103) is a function of (104). Among the [-a] categories, the [+r, -p] category is the most referential, the [-r, +p] category is the least referential and the [+p, +r] category is between the two. (90) and (96) are given together in (104).

- (104) Names > epithets > pronouns
[-a, -p, +r] > [-a, +p, +r] > [-a, +p, -r]

Consider again the hierarchy in (91), which is repeated below as (105).

- (105) Names > titles > epithets > pronouns

Consider in particular the position of social titles in this hierarchy. Since they are not anaphors, i.e., since they need not be bound in their local domain, they are [-a].⁶¹ Given the feature assignment to Names, pronouns and epithets in (104), the only remaining combination among the [-a] categories is [-a, -p, -r]. If the differentiation of "referentiality" is to be related to different feature combinations, as is attempted in Lasnik (1986), this means that social titles are [-a, -p, -r]. This in turn means that the four types of nominals must have the features as in (106) and the hierarchy in (105) is related to these features as indicated in (107).

- (106) a. Names [-a, -p, +r]
b. social titles [-a, -p, -r]
c. epithets [-a, +p, +r]
d. pronouns [-a, +p, -r]

- (107) a. [-a, -p, +r] > [-a, -p, -r] > [-a, +p, +r] > [-a, +p, -r]
b. Names > titles > epithets > pronouns

A significant portion of (107) is the relation between social titles and epithets. Their hierarchy and the feature assignments are singled out in (108).

- (108) a. social titles > epithets
b. [-p, -r] > [+p, +r]

In other words, if we relate the hierarchies established in 2.4 and 2.6, in particular, that in (108a), with distinct feature assignment for these two types of nominals (i.e. social titles and epithets), we must assign [-a, -r] to social titles and [+p, +r] to epithets.

There is, however, some reason to doubt that the hierarchy in (108a) is related to the feature assignment in (108b). First, while the hierarchy in (96) can presumably be motivated by the independent hierarchies in (103), the hierarchy in (108b) cannot. That is, it is not clear why the [-p, -r] category is more referential than the [+p, +r] category, given the hierarchies in (103). Notice that [-p] indicates more referentiality than [+p]; but [-r] indicates less referentiality than [+r]. Hence there is no clear reason why the combination of [-p] and [-r] is more referential than the combination of [+p] and [+r].

Thus the data on the referential hierarchy involving social titles, while they provide confirmation for the postulation of condition D in Lasnik (1986), indicate that, contra Lasnik (1986), it may not be possible to relate the referential hierarchy, to which condition D crucially refers, to binding theoretic features.

Recall furthermore that Lasnik's (1986) assignment of binding theoretic features to the nominals under discussion is based on the behavior of these nominals with respect to binding conditions B and C in particular. Suppose we pursue the possibility of relating the referential hierarchy in (107b) to the feature assignment in (106), as indicated in (107a). Suppose, in particular, that we wish to motivate the [-p, -r] feature assignment for social titles and the [+p, +r] for epithets, in the same way as Lasnik motivates (92), repeated below.

- (92) a. Names [-a, -p, +r]
b. epithets [-a, +p, +r]
c. pronouns [-a, +p, -r]

Then we would have to demonstrate simultaneously (i) that social titles are not subject either to condition B or to condition C and (ii) that epithets are subject to condition B but not to condition C. (Recall that we have seen earlier that Japanese Names are not subject to condition C, no matter how we may derive this effect.)

That epithets in Japanese are not subject to condition C is observed in Lasnik (1986); see section 2.4. If condition C is parameterized as proposed in Lasnik (1986) and if it incorporates a locality requirement in Japanese, the fact that neither social titles nor

epithets obey Lasnik's (1986) condition C stated in (93c), repeated below, does not pose any serious problem in itself.

(93c) Condition C: [+r] categories must be free.

A more serious question arises in regard to the behavior of social titles and epithets with respect to condition B. Given the feature assignments indicated in (106) and (108b) above, we predict that while social titles are not subject to condition B, epithets are. (Social titles have [-p] while epithets have [+p].) Whether or not this prediction will be borne out is significant since it has direct relevance to the status of condition D. Recall the formulation of this condition in Lasnik (1986), repeated in (109) below.

(109) Condition D

A less referential expression may not bind a more referential one, where X binds Y iff (i) X c-commands Y and (ii) X and Y are coindexed..

Note that this condition is stated in terms of "binding". Note further that this condition refers crucially to "referential hierarchies". If Lasnik's attempt to relate the "referential hierarchies" to binding theoretic features turns out to be successful, it would confirm that condition D belongs to Binding Theory, as is indicated in Lasnik (1986). On the other hand, if it turns out that the "referential hierarchies" cannot straightforwardly be related to binding theoretic features of the relevant nominal categories, the status of condition D as a member of Binding Theory should be questioned.

We have already seen that the more referential status of social titles (in terms of condition D phenomenon) as compared to epithets cannot straightforwardly be related to their feature assignments, i.e. [-p, -r] for social titles and [+p, +r] for epithets. (Recall that the hierarchy [-p, -r] > [+p, +r] is not obvious.) The verification of the present prediction regarding the different behaviors of social titles and epithets with respect to condition B will have a much more direct implication as to whether the binding theoretic features are to be related to "referential hierarchies", which in turn will bear on the status of condition D as a binding condition.

In order to answer the question whether and how social titles and epithets in Japanese are subject to condition B, however, it is necessary to consider binding condition B in Japanese; and this is the topic of the next section.

2.9 Binding Condition B

2.9.1. Pronouns

The so-called overt pronouns in Japanese have been argued in Oshima (1979) to be subject to binding condition B. This is expected, under the assumption that they are indeed pronouns.⁶² Condition B is given in (110).

(110) Binding Condition B

A pronoun, i.e. a [+p] category, is free in its local domain. (The local domain for a pronoun is a minimal NP or S that contains it.)

Oshima (1979) provides the following examples. (The judgements reported below are Oshima's.)

(111) (Oshima's (1979) (1), (3), (4) and (5))⁶³

- a. *John_i-wa kare_i-o bengosi-ta
'John defended him'
- b. *John_i-wa kare_i-ni iikikase-ta
'John told him (about something)'
- c. *John_i-wa kare_i-o seme-ta
'John criticized him'
- d. *John_i-wa kare_i-o nagusame-ta
'John consoled him'

If the anaphor zibun substitutes for kare 'he' in (11'), the resulting sentences are grammatical, as indicated in (112).⁶⁴

(112) (Oshima's (13), (15), (16) and (17))

- a. John_i-wa zibun_i-o bengosi-ta
'John defended himself'
- b. John_i-wa zibun_i-ni iikikase-ta
'John told himself (about something)'

c. John_i-wa zibun_i-o seme-ta
'John criticized himself'

d. John_i-wa zibun_i-o nagusame-ta
'John condoled himself'

Once *kare* 'he' is embedded in an NP or an S, the coreference becomes possible, as indicated in (113) and (114).

(113) (Cf. Oshima's (66) and (67).)

a. John_i-wa kare_i-no gakusei-o bengosi-ta
'John_i defended his_i student'

b. John_i-wa kare_i-no gakusei-ni iikikase-ta
'John_i told his_i student(about something)'

c. John_i-wa kare_i no gakusei-o seme-ta
'John_i criticized his_i student'

d. John_i-wa kare_i-no gakusei-o nagusame-ta
'John_i condoled his_i student'

(114)

a. John_i-ga [s' Mary-ga kare_i-o butta to] itta (koto)
John-NOM Mary-NOM he-ACC hit that said
'John_i said that Mary had hit him_i.'

b. John_i-ga [s' kare_i-ga Mary-o butta to] itta (koto)
John-NOM he-NOM Mary-ACC hit that said
'John_i said that he_i had hit Mary.'

c. (Oshima's (26), which he attributes to Nakai (1976))
John_i-wa [NP[s' kare_i-ga hirot-te kita] koinu]-o daizini sodate-ta
John-TOP he-NOM picked-up came puppy-ACC carefully brought-up
'John_i brought up carefully the puppy which he_i had picked up on the road.'

d. John_i-ga kinoo Mary_i-ni [s' pro_i/Bill-ga kare_i-no hon-o
John-NOM yesterday Mary-DAT Bill-NOM he-GEN
book-ACC
kaubekida to] iikikaseta (koto)
should buy that told
'John_i told Mary_i yesterday that she_i/Bill should buy his_i book'

As noted in 2.1, when *John* does not c-command *kare*, the latter can occur in the object position.

(115)

a. John_i-no sensei-ga kare_i-o bengosi-ta (koto)
'John_i's teacher defended him_i'

b. John_i-no sensei-ga kare_i-ni iikikase-ta
'John_i teacher told him_i (about something)'

c. John_i-no sensei-ga kare_i-o seme-ta
'John_i's teacher criticized him_i'

d. John_i-no sensei-ga kare_i-o nagusame-ta
'John_i's teacher condoled him_i'

The data given above thus indicate that *kare* is subject to condition B, which is as expected if it is a pronoun.

The examples below illustrate that the contrast noted above is observed regardless of what the antecedent of *kare* might be.⁶⁵

(116)

a. kare_i-*?ga/*wa kinoo kare_i-ni [s' musuko-ga Amerika-e
he-NOM/-TOP yesterday he-DAT son-NOiD America-to
ikubekida to] iikikaseta (koto)
should go that told
'he_i told him_i yesterday that (his) son should go to America'

b. *butyoo_i-ga/wa kinoo kare_i-ni [s' yappari kaisya-ga
Bill-o
chief-NOM/-TOP yesterday him-DAT after all company-NOM
Bill-ACC
kubinisubekida to] iikikaseta (koto)
should fire that told
'section chief_i told him_i yesterday that the company should fire Bill after all'

c. *John_i-ga/wa kinoo kare_i-ni [s' keikaku-ga/wa kanarazu
John-NOM/-TOP yesterday he-DAT plan-NOM/-TOP surely
seikoo suru to] iikikaseta
succeed that told
'John_i told him_i yesterday that the plan would succeed for sure'

(117)

- a. kare_i-⁷⁷ga/-^awa minna-ni kare_i-o syookaisita (koto)
he-NOM/-TOP all-DAT he-ACC introduced
'he_i introduced him_i to everyone'
- b. butyoo_i-⁷⁷ga/-^awa minna-ni kare_i-o syookaisita (koto)
chief-NOM/-TOP all-DAT he-ACC introduced
'section chief_i introduced him_i to everyone'
- c. John_i-⁷⁷ga/-^awa minna-ni kare_i-o syookaisita (koto)
John-NOM/-TOP all-DAT he-ACC introduced
'John_i introduced him_i to everyone'

(118)

- a. kare_i-⁷⁷ga/-⁷⁷wa sono posuto-ni kare_i-o osita (koto)
he-NOM/-TOP that post-to he-ACC recommended
'he_i recommended him_i to that post'
- b. butyoo_i-⁷⁷ga/-^awa sono posuto-ni kare_i-o osita (koto)
chief-NOM/-TOP that post-to he-ACC recommended
'section chief_i recommended him_i to that post'
- c. John_i-⁷⁷ga/-^awa sono posuto-ni kare_i-o osita (koto)
John-NOM/-TOP that post-to he-ACC recommended
'John_i recommended him_i to that post'

Again, when the locally bound NP is anaphor *zibun* in (116), (117) and (118), the resulting sentences are grammatical, as indicated in (119), (120) and (121).

(119)

- a. [NP kare/butyoo/John]_i-ga/-wa kinoo zibun-ni [S' musuko-ga
he/section chief/John-NOM/-TOP yesterday self-DAT son-NOM
Amerika-e ikubekida to] iikikaseta (koto)
America-to should go that told
'[he/the section chief/John]_i told himself_i yesterday that (his) son should go to America'

- b. [NP kare/butyoo/John]_i-ga/-wa kinoo zibun-ni [S' yappari
he/section chief/John-NOM/-TOP yesterday self-DAT after all
kaisya-ga Bill-o kubinisubekida to] iikikaseta (koto)
company-NOM Bill-ACC should fire that told
'[he/the section chief/John]_i told himself_i yesterday that the company should fire Bill after all'
- c. [NP kare/butyoo/John]_i-ga/-wa kinoo zibun-ni [S' keikaku-ga/wa
he/section chief/John-NOM/-TOP yesterday self-DAT plan-NOM/-TOP
kanarazu seikoo suru to] iikikaseta (koto)
surely succeed that told
'[he/the section chief/John]_i told himself_i yesterday that the plan would succeed for sure'

(120)

- [NP kare/butyoo/John]_i-ga/-wa minna-ni zibun-o syookaisita (koto)
he/section chief/John-NOM/-TOP all-DAT self-ACC introduced
'[he/the section chief/John]_i introduced himself_i to everyone'

(121)

- [NP kare/butyoo/John]_i-ga/-wa sono posuto ni zibun-o osita (koto)
he/section chief/John-NOM/-TOP that post-to self-ACC recommended
'[he/the section chief/John]_i recommended himself_i for that position'

Furthermore, when *kare* is not locally bound, the coreference is allowed, as illustrated below.

(122)

- a. [NP kare/butyoo/John]_i-ga/-wa kinoo kare-no tuma-ni [S' musuko-ga
he/section chief/John-NOM/-TOP yesterday him-GEN wife-DAT son-NOM
Amerika-e ikubekida to] iikikaseta (koto)
America-to should go that told
'[he/the section chief/John]_i told his_i wife yesterday that (their) son should go to America'

b. [NP kare/butyoo/John]_i-ga/-wa kinoo karej-no buka-ni
 he/section chief/John-NOM/-TOP yesterday he-GEN man-DAT
 [s' keikaku-ga/wa kanarazu seikoo suru to] iikikaseta (koto)
 plan-NOM/-TOP surely succeed that told
 '[he/the section chief/John]_i told his_i men yesterday that the plan
 would succeed for sure'

(123)

[NP kare/butyoo/John]_i-ga/-wa minna-ni karej-no buka-o
 he/section chief/John-NOM/-TOP all-DAT him-GEN men-ACC
 syookaisita (koto)
 introduced
 '[he/the section chief/John]_i introduced his_i subordinates to
 everyone'

(124)

[NP kare/butyoo/John]_i-ga/-wa sono posuto-ni karej-no
 yuuzin-o
 he/section chief/John-NOM/-TOP that post-to self-GEN friend-
 ACC
 osita (koto)
 recommended
 '[he/the section chief/John]_i recommended his_i friend for that
 position'

In (122), (123) and (124), the bindee is embedded in another NP,
 and hence it is no longer bound in its local domain.

In (125), (126) and (127) below, the "first NP" (or the
 "antecedent NP") is embedded in another NP, and as the result there
 is no c-command relation between the two NP's.

(125)

a. [NP [NP kare/butyoo/John]_i-no uwayaku]-ga/-wa kinoo
 karej-ni
 he/section chief/John-GEN boss-NOM/-TOP yesterday self-
 DAT
 [s' yappari kaisya-ga Bill-o kubinisubekida to] iikikaseta
 (koto)
 after all company-NOM Bill-ACC should fire that told(koto)
 '[he/the section chief/John]_i's boss told him_i yesterday that the
 company should fire Bill after all'

b. [NP [NP kare/butyoo/John]_i-no titioya]-ga/-wa kinoo
 karej-ni
 he/section chief/John-GEN father NOM/-TOP yesterday he-
 DAT
 [s' keikaku-ga/wa kanarazu seikoo suru to] iikikaseta (koto)
 plan-NOM/-TOP surely succeed that told
 '[he/the section chief/John]_i's father told him_i yesterday that the
 plan would succeed for sure'

(126)

[NP [NP kare/butyoo/John]_i-no uwayaku]-ga/-wa minna-ni
 karej-o
 he/section chief/John-GEN boss-NOM/-TOP all-DAT him-
 ACC syookaisita (koto)
 introduced
 '[he/the section chief/John]_i's boss introduced him_i to everyone'

(127)

[NP [NP kare/butyoo/John]_i-no sidookyookan]-ga/-wa sono
 posuto-ni
 he/section chief/John-GEN supervisor-NOM/-TOP that post-to
 karej-o suisensita (koto)
 him-ACC recommended
 '[he/the section chief/John]_i's supervisor recommended him_i for
 that post'

In (128) and (129), the bindee is embedded in an S complement and
 as the result it is not locally bound.

(128) (Cf. (114) above.)

[NP kare/butyoo/John]_i-ga/-wa [s' Mary-ga kar-i-o semeteiru
 to]
 he/section chief/John-NOM/TOP Mary-NOM he-ACC is criticizing
 that
 omotteiru (koto)
 thinks
 '[he/section chief/John]_i thinks that Mary is criticizing him_i'

(129)

[NP kare/butyoo/John]_i-ga/-wa kinoo Mary-ni
 he/section chief/John-NOM/TOP yesterday Mary-DAT
 [s' Bill-ga karej-no hon-o kaubekida to] iikikaseta (koto)
 Bill-NOM he-GEN book-ACC should buy that told

'[the/section chief/John]i told Mary yesterday that Bill should buy his book'

The data in this subsection thus seem to confirm Oshima's (1979) generalization that *KARE* cannot be bound in its local domain.⁶⁶

2.9.2. Names

Recall that effects of condition C are very weak in Japanese if there is any at all. As noted in Oshima (1979, p.431), however, the coreference in (130) and (131), in which John is locally bound, seems somewhat marginal.

(130) (Oshima's (57))-(60) with his judgments there)⁶⁷

a. *Johni-wa Johni-o bengosi-ta
'Johni defended Johni'

b. *Johni-wa Johni-ni hikikase-ta
'Johni told Johni (something)'

c. *Johni-wa Johni-o seme-ta
'Johni criticized Johni'

d. *Johni-wa Johni-ni yuusya-o ut-ta
'Johni gave a (medical) shot to Johni'

(131) a. *Johni-ga kinoo Johni-ni [s' Bill-ga Mary-no hon-o kaubekida to] John-NOM yesterday John-DAT [Bill-NOM Mary-GEN book-ACC should buy that hikikase]ta
told
Johni told Johni yesterday that Bill should buy Mary's book'

b. *John-ga sono posuto-ni John-o osita
John-NOM that post-to John-ACC recommended
'Johni recommended Johni to that post'

As is also noted in Oshima (1979), when John is not locally bound, as in (132) and (133), the coreference is possible.

(132) (Oshima's (63), (65) and (66) with the glossary being slightly modified)

a. Johni-wa [s' Johni-ga tenzai da to] omote-i-ru
John-TOP John-NOM genius is that think
'Johni thinks that Johni is a genius.'

b. Johni-wa [s' Mary-ga Johni-o nikun-de i-ru to] omote-i-ru
John-TOP Mary-NOM John-ACC hates that thinks
'Johni thinks that Mary hates Johni.'

c. Johni-wa Johni-no hon-o motte ki-ta
John-TOP John-GEN book-ACC brought
'Johni brought Johni's book over.'

(133)

a. Johni-ga Mary-ni [s' Bill-ga Johni-no hon-o John-NOM Mary-DAT Bill-NOM John-GEN book-ACC kaubekida to] hikikase]ta (koto)
should buy that told

'Johni told Mary that Bill should buy Johni's book'

b. Johni-ga kinoo Johni-no gakusei-ni [s' Bill-ga John-NOM yesterday John-GEN student-DAT Bill-NOM Mary-no hon-o kaubekida to] hikikase]ta (koto)
Mary-GEN book-ACC should buy that told
'Johni told Johni's student yesterday that Bill should buy Mary's book'

c. Johni-ga sono posuto-ni Johni-no buka-o osita (koto)
John-NOM that post-to John-GEN men-ACC recommended
'Johni recommended Johni's men to that post'

d. Johni-ga Johni-no buka-o sikatta
John-NOM John-GEN men-ACC scolded
'Johni scolded Johni's men'

e. Johni-no sensei-ga kinoo Johni-ni [s' Bill-ga John-NOM teacher-NOM yesterday John-DAT Bill-NOM Mary-no hon-o kaubekida to] hikikase]ta
Mary-GEN book-ACC should buy that told
'Johni's teacher told Johni yesterday that Bill should buy Mary's book'

f. Johni no uwayaku-ga sono posuto-ni Johni-o osita
 John-GEN superior-recommended Johni to that post'
 'John's superior recommended Johni to that post'

g. Johni-no hahaoya-ga minna-ni Johni-o syookaisita
 John-GEN mother-GEN all-DAT John-ACC introduced
 'John's mother introduced Johni to everyone'

As in the case of condition B violation with pronouns discussed in 2.9.1, if the locally bound NP is the anaphor zibun, the coreference is possible. Some of the relevant sentences are repeated below.

(134) Oshima's (13), (15) and (16)

a. Johni-wa zibun-o bengosi-ta
 'John defended himself'

b. Johni-wa zibun-ni iikkase-ta
 'John told himself (about something)'

c. Johni-wa zibun-o seme-ta
 'John criticized himself'

(135)

a. Johni-ga kinoo zibun-ni [s' Bill-ga Mary-no hon-o
 John-NOM yesterday self-DAT Bill-NOM Mary-GEN book-ACC
 kaubekida to] iikkase-ta (koto)
 should buy that told
 'John told himself yesterday that Bill should buy Mary's book'

b. Johni-ga sono posuto-ni zibun-o osita (koto)
 John-NOM that post-to self-ACC recommended
 'John recommended Johni to that post'

c. Johni-ga minna-ni zibun-o syookaisita (koto)
 John-NOM all-DAT self-ACC introduced
 'John introduced selfi to everyone'

Oshima (1979) thus concludes that condition B holds of Names as well as pronouns.⁶⁸

2.9.3. Epithets

The same patterns as observed in Oshima (1979) with respect to pronouns and Names can also be seen with epithets. The paradigms that are given below are obtained by replacing *Kate* in the examples cited in 2.9.1. In the examples below, the "intended binder" is *aitu* 'that guy' and the "intended binder" (or the "intended antecedent") varies among *aitu* 'that guy', *butyoo* 'section chief' and *John*.

First, the examples in (136), (137) and (138) illustrate that *aitu* 'that guy' cannot be locally bound.

(136)

a. * [NP *aitu/butyoo/John*]-ga kinoo *aitu*-ni
 that guy/section chief/John-NOM yesterday that guy-DAT
 [s' musuko-ga Amerika-e ikubekida to] iikkase-ta (koto)
 son-NOM America-to should go that told
 '[that guy/the section chief/John] told that guy yesterday that (his) son should go to America'

b. * [NP *aitu/butyoo/John*]-ga kinoo *aitu*-ni
 that guy/section chief/John-NOM yesterday that guy-DAT

[s' keikaku-ga/wa kanarazu seikoo suru to] iikkase-ta (koto)
 plan-NOM/-TOP surely succeed that told
 '[that guy/the section chief/John] told that guy yesterday that the plan would succeed for sure'

(137)

[NP **?aitu/butyoo/John*]-ga minna-ni : itur-o
 that guy/section chief/John-NOM all-DAT if at guy-ACC
 syookaisita (koto)
 introduced
 '[that guy/the section chief/John] introduced the guyi to everyone'

(138)

[NP **?aitu/butyoo/John*]-ga sono posuto-ni *aitu*-o
 that guy/section chief/John-NOM that post-to that guy-ACC
 suisensita (koto)
 recommended
 '[that guy/the section chief/John] recommended that guyi for that position'

The examples in (139), (140) and (141), to be compared with (136) - (137) and (138), indicate again that *zibun* can be bound locally

(139) a. [NP *aitu/butyoo/Johnj*-ga kinoo *zibun*-ni
that *guy*/section chief//*John*-NOM yesterday self-DAT
[s' *musuko*-ga Amerika-e *ikubekida toj* *ikikaseia* (koto)
son-NOM America-to should go that told
'that *guy*/the section chief//*Johnj* told that himself, yesterday that
(his) son should go to America'

b. [NP *aitu/butyoo/Johnj*-ga-wa kinoo *zibun*-ni
that *guy*/section chief//*John*-NOM yesterday self-DAT
[s' *keikaku*-ga-wa *kanarazu seikoo suru toj* *ikikaseia* (koto)
plan-NOM/-TOP surely succeed that told
'that *guy*/the section chief//*Johnj* told himself, yesterday that the
plan would succeed for sure'

(140) [NP *aitu/butyoo/Johnj*-ga *mina*-ni *zibun*-o *syookaisita* (koto)
that *guy*/section chief//*John*-NOM all-DAT self-ACC introduced
'that *guy*/the section chief//*Johnj* introduced himself, to everyone'
(141) [NP *aitu/butyoo/Johnj*-ga sono *posuto*-ni *zibun*-o *osita* (koto)
that *guy*/section chief//*John*-NOM that post-to self-ACC
recommended
'that *guy*/the section chief//*Johnj* recommended himself, for that
position'

As expected, when *aitu* is not locally bound, the coreference is allowed, as illustrated below.

(142) [NP *aitu/butyoo/Johnj*-ga kinoo *aitu*-no *tuma*-ni
that *guy*/section chief//*John*-NOM yesterday that *guy*-GEN wife-DAT
[s' *musuko*-ga Amerika-e *ikubekida toj* *ikikaseia* (koto)
son-NOM America-to should go that told
'that *guy*/the section chief//*Johnj* told that *guy*'s wife yesterday
that (their) son should go to America'

(143) [NP *aitu/butyoo/Johnj*-ga *mina*-ni *aitu*-no *buka*-o
that *guy*/section chief//*John*-NOM all-DAT that *guy*-GEN men-ACC
syookaisita (koto)
introduced
'that *guy*/the section chief//*Johnj* introduced that *guy*'s
subordinates to everyone'

(144) [NP *aitu/butyoo/Johnj*-ga sono *posuto*-ni *aitu*-no
yuuzin-o
that *guy*/section chief//*John*-NOM that post-to that *guy*-GEN
friend-ACC
osita (koto)
recommended
'that *guy*/the section chief//*Johnj* recommended that *guy*'s friend
for that position'

(145) [NP *aitu/butyoo/Johnj*-no *titoya*-ga kinoo *aitu*-ni
that *guy*/section chief//*John*-GEN father NOM yesterday that *guy*-DAT
[s' *keikaku*-ga *kanarazu seikoo suru toj* *ikikaseia* (koto)
plan-NOM surely succeed that told
'that *guy*/the section chief//*Johnj*'s father told that *guy*, yesterday
that the plan would succeed for sure'

(146) [NP *aitu/butyoo/Johnj*-no *uwayaku*-ga *mina*-ni *aitu*-o
that *guy*/section chief//*John*-GEN boss-NOM all-DAT that
guy-ACC *syookaisita* (koto)
introduced
'that *guy*/the section chief//*Johnj*'s boss introduced that *guy* to
everyone'

(147) [NP *aitu/butyoo/Johnj*-no *sidookyookan*-ga sono *posuto*-ni
that *guy*/section chief//*John*-GEN supervisor-NOM that post-to
aitu-o
that *guy*-ACC recommended

'[that guy/the section chief/John]_i's supervisor recommended that guy_i for that position'

(148)

[NP aitu/butyoo/John]_i-ga [s' Mary-ga aitu_i-o semeteiru that
guy/section chief/John-NOM Mary-NOM that guy-ACC is criticizing
to] omotteiru (koto)
that thinks
'[that guy/section chief/John]_i thinks that Mary is criticizing that
guy_i'

(149)

[NP aitu/butyoo/John]_i-ga-wa kinoo Mary-ni
that guy/section chief/John-NOM yesterday Mary-DAT
[s' Bill-ga aitu_i-no hon-o kaubekida to] iikikaseta (koto)
Bill-NOM that guy-GEN book-ACC should buy that told
'[that guy/section chief/John]_i told Mary yesterday that Bill should
buy that guy_i's book'

Notice that in (136), (137) and (138) a less referential expression does not bind a more referential one; and hence the unacceptability of these sentences cannot be due to the violation of condition D. On the other hand, if we assume, generalizing Oshima's proposal, that epithets as well as pronouns and Names are subject to condition B, the data in (136), (137) and (138) can be accounted for by condition B.⁶⁹

2.9.4. Social Titles

Now let us consider the case of social titles, the crucial case in assessing the plausibility of the relation between the referential hierarchy and binding theoretic features.

First, the sentences in (150) show that social titles are not subject to condition C, as noted earlier in 2.4.1.⁷⁰

(150)

a. [NP sensei/Yamada sensei]_i-ga kinoo Mary-ni
prof/Prof. Yamada-NOM yesterday Mary-DAT
[s' gakusei-ga sensei_i-no hon-o kaubekida to] iikikaseta (koto)
student-NOM prof-GEN book-ACC should buy that told
'[prof/Prof. Yamada]_i told Mary yesterday that the students should
buy prof_i's book'⁷¹

b. [NP sensei/Yamada sensei]_i-ga
prof/Prof. Yamada-NOM
[s' Mary-ga sensei_i-o sonkeisiteiru to] omotteita (koto)
Mary-NOM prof-ACC respect that thought
'[prof/Prof. Yamada]_i thought that Mary respects prof_i'

c. [NP sensei/Yamada sensei]_i-ga Mary-ni sensei-no hon-o kasita (koto)
prof/Prof. Yamada-NOM Mary-DAT prof-GEN book-ACC loaned
'[prof/Prof. Yamada]_i loaned prof_i's book to Mary'

d. [NP sensei/Yamada sensei]_i-ga sensei-no gakusei-o sikatta (koto)
prof/Prof. Yamada-NOM prof-GEN student-ACC scolded
'[prof/Prof. Yamada]_i scolded prof_i student'

A few more examples follow.

(151)

a. [syusyoo/Suzuki syusyoo]_i-ga kinoo syusyoo_i-no hisyo-ni
prime minister/PM Suzuki-NOM yesterday P.M. -GIN
secretary-DAT
[s' kondo-no senkyo-wa kanarazu katu to] iikikaseta (koto)
next election-TOP surely will that told
'[Prime Minister/PM. Suzuki]_i told PM's_i secretary yesterday that
(they) will definitely win the election this time'

b. [sensei/Yamada sensei]_i-ga kinoo-no kyoojyukai-de
prof/Prof. Yamada-NOM yesterday-GEN faculty meeting-at
sono posuto-ni sensei_i-no gakusei-o sulsensita (koto)
that post-to prof-GEN student-ACC recommended
'[prof/Prof. Yamada]_i recommended prof_i's student for that post at
yesterday's faculty meeting'

- c. [butyoo/Yamada butyoo]_i-ga minna-ni butyoo-no buka_j-o
 chief/Chief Yamada-NOM all-DAT chief-GEN subordinates-ACC
 syookaisita (koto)
 introduced
 '[section chief/Chief Yamada]_i introduced chief_i's subordinates to everyone'

The sentences in (152), on the other hand, indicate that social titles cannot be bound in their local domain, indicating that they too are subject to the local disjointness condition identical to condition B.⁷²

(152)

- a. *[[syusyoo/Suzuki syusyoo]_i-ga kinoo syusyoo_i-ni
 prime minister/PM Suzuki-NOM yesterday PM-DAT
 [s' kondo-no senkyo-wa kanarazu katu to] iikikaseta (koto)
 next election-TOP surely will that told
 '[Prime Minister/PM. Suzuki]_i told PM_i yesterday that (they) will definitely win the election this time'
- b. *[[sensei/Yamada sensei]_i-ga kinoo-no kyoojyukai-de
 prof/Prof. Yamada-NOM yesterday-GEN faculty meeting-at
 sono posuto-ni sensei-o suisensita (koto)
 that post-to prof-ACC recommended
 '[prof/Prof. Yamada]_i recommended prof_i for that post at yesterday's faculty meeting'
- c. *[[butyoo/Yamada butyoo]_i-ga minna-ni butyoo_i-o syookaisita (koto)
 chief/Chief Yamada-NOM all-DAT chief-ACC introduced
 '[section chief/Chief Yamada]_i introduced chief_i to everyone'

Notice that (151) and (152) differ minimally from each other.

As in the cases observed earlier, when anaphor *zibun* replaces the social title in (152), the resulting sentences are acceptable with the intended coreference, as indicated in (153).

(153)

- a. [syusyoo/Suzuki syusyoo]_i-ga kinoo zibun_i-ni
 prime minister/PM Suzuki-NOM yesterday self-DAT
 [s' kondo-no senkyo-wa kanarazu katu to] iikikaseta (koto)
 next election-TOP surely will that told
 '[Prime Minister/PM. Suzuki]_i told himself_i yesterday that (they) will definitely win the election this time'

- b. [sensei/Yamada sensei]_i-ga kinoo-no kyoojyukai-de
 prof/Prof. Yamada-NOM yesterday-GEN faculty meeting-at
 sono posuto-ni zibun_i-o suisensita (koto)
 that post-to prof-ACC recommended
 '[prof/Prof. Yamada]_i recommended himself_i for that post at yesterday's faculty meeting'

- c. [butyoo/Yamada butyoo]_i-ga minna-ni zibun_i-o syookaisita (koto)
 chief/Chief Yamada-NOM all-DAT chief-ACC introduced
 '[section chief/Chief Yamada]_i introduced chief_i to everyone'

The examples in (154), in which the titles are not bound, allow coreference, confirming that coreference is possible as long as the titles are not locally bound.

(154)

- a. [[syusyoo/Suzuki syusyoo]_i-no titioya]-ga kinoo syusyoo_i-ni
 prime minister/PM Suzuki-GEN father-NOM yesterday PM-DAT
 [s' kondo-no senkyo-wa kanarazu katu to] iikikaseta (koto)
 next election-TOP surely will that told
 '[Prime Minister/PM Suzuki]_i's father told PM_i yesterday that (they) will definitely win the election this time'
- b. [[sensei/Yamada sensei]_i-no sinyuu]-ga kinoo-no
 prof/Prof. Yamada-GEN best friend-NOM yesterday-GEN
 kyoojyukai-de sono posuto-ni sensei-o suisensita (koto)
 faculty meeting-at that post-to prof-ACC recommended
 '[prof/Prof. Yamada]_i's best friend recommended prof_i for that post at yesterday's faculty meeting'
- c. [[butyoo/Yamada butyoo]_i-no uwayaku]-ga minna-ni butyoo_i-o
 section chief/Chief Yamada-GEN boss-NOM all-DAT section
 syookaisita (koto)
 introduced
 '[section chief/Chief Yamada]_i's boss introduced chief_i to everyone'

The above data indicate that social titles behave exactly like Names, epithets and pronouns in that they too are subject to the local disjointness requirement identical to condition B. This result then means that, given the formulation of binding conditions as in (155) adopted in Lasnik (1986):

(155)

- a. Condition A: [+a] categories must be bound in its local domain.
- b. Condition B: [+p] categories must be free in its local domain.
- c. Condition C: [+r] categories must be free.

it is not motivated to assign [-a, -p, -r] to social titles. For under this feature assignment, we would predict, incorrectly, that social titles are not subject to condition B. But, as we have seen, they do seem to be subject to this condition. The attempt to directly relate the referential hierarchy to binding theoretic features, as in Lasnik (1986), has resulted in the assignment of [-a, -p, -r] to social titles (cf. 2.6). The fact that such a feature assignment is not motivated, as we have seen above, is then an indication that the referential hierarchy and binding theoretic features cannot be directly related with each other. Since condition D crucially refers to the referential hierarchy, this result in turn suggests that condition D is not directly related to binding features.

There are a number of issues one might raise at this point. For example, one might argue, as is in fact indicated in Lasnik (1986, p.154) but not pursued further, that condition C is parameterized as to its locality requirement.⁷³ That is, based on his Vietnamese data, Lasnik indicates that condition C may be parameterized with respect to its locality requirement.⁷⁴ Since Vietnamese as reported in Lasnik (1986) patterns like Japanese, one might suggest that condition C in Japanese (and in Vietnamese) is as given in (156).

- (156) An R-expression (i.e. a [+r] category) is free in its local domain (= the minimal NP or S)

Given this parameterized condition C for Japanese, the relevant data discussed above, i.e. the data in which all the non-anaphoric nominal categories in Japanese seem to be subject to condition B can be accounted for by condition C, if they are [+r]. That is, by virtue of [+r], they are all subject to condition C in (156). Under this approach, not only Names but nominals such as *kare* 'he' and *sensei* 'prof' are [+r]. It is of course not necessary to assume that they are all [+r]. Even if they (or some of them) are not [+r], as long as they are [+p], they will be subject to condition B, repeated in (157), and we can get the desired results.

- (157) A pronominal (i.e. a [+p] category) is free in its local domain (=the minimal NP or S)

That is, the generalization that the non-anaphoric nominal categories in Japanese are all subject to the local disjointness requirement identical to condition B can then be accounted for as long as these nominals are [+r] or [+p] (or both). If they are [+r], they are subject to the parameterized condition C in (156). If they are [+p], they are subject to condition B in (157). Both (156) and (157) have the same local disjointness effects.

The fact that condition C in (156) and condition B in (157) impose the identical local disjointness requirement makes one wonder whether the redundancy may be eliminated. Notice further, given the consideration given above, it seems completely arbitrary whether a given non-anaphoric nominal category in Japanese is assigned [-p, +r], [+p, -r] or [+p, +r]. No empirical considerations, at this point, will determine the choice. Recall that no matter which of these feature complexes is assigned to a category X, X will be subject to the same local disjointness requirement.

What emerges is the situation as follows. The behavior of the non-anaphoric nominal categories in Japanese with respect to binding conditions B and C does not distinguish them from each other. Yet, they clearly behave differently in terms of condition D. The postulation of some relationship between the referential hierarchy, to which condition D crucially refers to, on the one hand, and the binding theoretic features on the other, has been motivated in Lasnik (1986) based on the different behavior of different nominal categories with respect to binding conditions B and C (and A). The fact that the non-anaphoric nominal categories in Japanese do not behave differently at all with respect to these binding conditions (i.e. A, B and C) thus indicates that we cannot motivate the relationship between the referential hierarchy and the binding theoretic features. This in turn indicates that condition D may not be a member of Binding Theory, after all. I will explore this possibility for condition D in chapter 3.

Before I present a possible alternative to Chomsky's (1981, 1986) and Lasnik's (1986) formulations of binding theory, based on the generalizations discussed above, let us briefly note that the condition B (type of locality) effects are observed inside NP's, exactly as we expect.

2.9.5. NP-Internal Structure

In 2.7, we have observed that condition D effects are observed inside NP's; cf. Morikawa (1989, Ch. x). As is expected, the condition B effects are also observed inside NP's, as illustrated in (158).^{75, 76}

(158)

- a. [??kare/*?butyoo/*?John]_i-no kare_i-no hihan/hyooka
 hc/section chief/John-GEN he-GEN criticism/evaluation
 '[his/section chief/John]_i's criticism/evaluation of him_i'
- b. [??butyoo/*?Yamada butyoo]_i-no butyoo_i-no hihan/hyooka
 section chief/Chief Yamada-GEN section chief-GEN
 criticism/evaluation
 '[section chief/Chief Yamada]_i's criticism/evaluation of section chief_i'
- c. ??John_i-no John_i-no hihan/hyooka
 John-GEN John-GEN criticism/evaluation
 'John_i's criticism/evaluation of John_i'

As compared to the variably marginal status of (158), the coreference in (159) is not problematic.

(159)

- a. [kare/butyoo/John]_i-no zibun_i-no hihan/hyooka
 hc/section chief/John-GEN self-GEN criticism/evaluation
 '[his/section chief/John]_i's criticism/evaluation of himself_i'
- b. [butyoo/Yamada butyoo]_i-no zibun_i-no hihan/hyooka
 section chief/Chief Yamada-GEN self-GEN criticism/evaluation
 '[section chief/Chief Yamada]_i's criticism/evaluation of himself_i'
- c. John_i-no zibun_i-no hihan/hyooka
 John-GEN self-GEN criticism/evaluation
 'John_i's criticism/evaluation of himself_i'

Similarly in (160) and (161), in which *kare*, the title and the Name are not locally bound, the coreference does not seem to be as problematic.⁷⁷

(160)

- a. [kare/butyoo/John]_i-no [kare_i-no jyoosi/buka]-no
 hc/section chief/John-GEN he-GEN boss/subordinate-GEN
 hihan/hyooka
 criticism/evaluation
 '[his/section chief/John]_i's criticism/evaluation of [his_i
 [boss/subordinates]]'
- b. [sensei/Yamada sensei]_i-no [sensei_i-no gakusei]-no
 hihan/hyooka
 prof/Prof. Yamada-GEN prof-GEN student-GEN
 criticism/evaluation
 '[prof/Prof. Yamada]_i's criticism/evaluation of prof_i's students'
- c. John_i-no [John_i-no ronbun]-no hihan/hyooka
 John-GEN John-GEN paper-GEN criticism/evaluation
 'John_i's criticism/evaluation of John_i's paper'

(161)

- a. [[kare/butyoo/John]_i-no jyoosi]-no kare_i-no hihan/hyooka
 hc/section chief/John-GEN boss-GEN he-GEN criticism/evaluation
 '[his/section chief/John]_i's boss's criticism/evaluation of him_i'
- b. [[butyoo/Yamada butyoo]_i-no buka]-no
 section chief/Chief Yamada-GEN subordinate-GEN
 butyoo_i-no hihan/hyooka
 section chief-GEN criticism/evaluation
 '[section chief/Chief Yamada]_i's subordinates' criticism/evaluation
 of section chief_i'
- c. [John_i-no gakusei]-no John_i-no hihan/hyooka
 John-GEN student-GEN John-GEN criticism/evaluation
 'John_i's students' criticism/evaluation of John_i'

The examples in this section thus indicate the condition B effects for all the non-anaphoric nominals in Japanese are observed inside NP's. This is exactly as expected, given the parallelism between the S and the NP in terms of binding conditions established elsewhere.

2.9.6. A Proposal on Condition B

In the preceding sections we have observed that all the non-anaphoric nominal categories in Japanese are subject to the disjoint reference requirement that has the same locality restriction as binding condition B, while not being subject to condition C. Let us summarize the relevant data with Names and epithets by using English structures in (162) and (163)

- (162)
 a. NP_i thinks that Mary respects NP_i.
 b. NP_i admires NP_i's teacher.

(163) NP_i admires NP_j.

The NP's in (162) and (163) represent Names and epithets. The difference between Japanese and English is summarized in (164).⁷⁸

	Japanese	English
Structure in (162)	ok	*
Structure in (163)	*	*

Disregarding the cases of condition D violations, the crucial difference is that Names and epithets in Japanese can occur in the position of the second NP_i in (162), but those in English cannot. In this section, I will consider how this difference between the two languages can be accounted for, and how this difference can be made compatible with the types of acquisition models that can plausibly be assumed in the general framework adopted here.

Let us first consider how the difference could be accounted for under the standard formulation of binding conditions. Continuing to disregard the refinement of binding theory in terms of "BT-compatibility", we have the following three conditions and the feature assignment for the different types of nominals.

- (165) Binding Conditions (Chomsky (1981))
 a. Condition A: [+a] categories are bound in their local domain.
 b. Condition B: [+p] categories are free in their local domain.
 c. Condition C: [-a, -p] categories are free.

(166)

- a. anaphors: [+a, -p]
 b. pronominals: [-a, +p]
 c. Names (R-expressions): [-a, -p]

For the purposes of discussion, let us assume first that the local domain for X is the minimal NP or S that contains a subject and X.

As a point of departure for the ensuing discussion, I will assume that the features for nominals are determined based on their syntactic properties. In other words, I do not assume it to be the case that the child identifies himself to be an anaphor, i.e. [+a, -p], based on some semantic properties of this word such as it being "anaphoric" or that the child identifies John to be a Name, i.e. [-a, -p], based on some semantic properties such as it being "referential". After all, (anaphoric) epithets and titles can be "anaphoric" and he and care can be "referential", using these concepts loosely.⁷⁹

One reasonable assumption to make is that the binding conditions are part of UG, and the task for the child is to determine what features each nominal expression is assigned.⁸⁰ In the standard binding theory, the features for R-expressions are assumed to be "default". Thus, unless there is positive evidence otherwise, every nominal expression that the child encounters would be assigned [-a, -p]. The determination of [+a] for a category X can be considered to be invoked by an instance of X being locally A-bound, as in the case of anaphors such as himself, as in (167).

(167) John_i washed himself_i.

The determination of [+p] for category X can be considered to be triggered by an instance of X being non-locally bound, as in the case of pronominals such as him, as in (168).

(168) John_i says that Mary likes him_j.

Thus the assignment of [+/-a] and [+/-p] as given in (166) can be assumed to proceed in a straightforward fashion.

We now consider how the values of the parameter can be set for condition C, differentiating English and Japanese. But before doing so, let us first consider some issues pertaining to the parameter setting for condition A with respect to its locality requirement. It has been known that condition A, as formulated in (165a) is too strong for languages like Japanese, with respect to its locality requirement. One standard approach to such a parametric variation, found in Wexler and Manzini (1987), for example, is to say that

condition A is parameterized with respect to its locality requirement and that the unmarked case of condition A has the locality requirement as indicated in (165a). According to this view, an occurrence of "long-distance" reflexives triggers the choice of the value of this parameter for Japanese in which the locality restriction apparently does not hold. Put in the context of the preceding discussion, one can then assume that the Japanese reflexive zibun as well as the English reflexive himself are assigned [+a] by virtue of some instances of it being locally A-bound. Furthermore, the fact that this [+a] category can be bound non-locally in Japanese triggers the selection of the right value of the parameter for binding condition A for this language.⁸¹ What is crucial in this view is (i) that the feature [+a] remains constant, once it is set based on positive evidence and (ii) that the domain restriction may be changed based on further positive evidence. Given this assumption, let us consider how we can set the relevant parameter for condition C.

Recall that we assume, following Lasnik's (1986) suggestion for Vietnamese, that condition C for Japanese is as in (169).

(169) An R-expression, i.e. a [-a, -p], categories are free in its local domain.

To incorporate this option, condition C in UG must then be like (170).⁸²

(170) An R-expression, i.e. a [-a, -p], categories are free (in its local domain).

The part in the parentheses is "parameterized" and the unmarked setting must be the one without it, based on the Subset Principle considerations given in Welxer and Manzini (1987) and Berwick (1987) (cited in W & M).⁸³ Notice that the condition in (170) without the content in the parentheses would allow fewer grammatical structures than the same condition with it. Thus, presumably, until the child hears an utterance in which a Name is A-bound (non-locally), the condition C remains as the "standard" condition C, i.e. (170) without the content in the parentheses, and an utterance of this kind will trigger the selection of the marked case, i.e. (170) with the locality specification. It thus appears that the parameter setting for condition C is as straightforward as the parameter-setting for condition A; cf. footnote xx and the references therein for some complications.

J.
[+a]
Data - local binding
↓
extension

impossibility
of accommodating
condition C

The situation is, however, considerably more complicated if we consider the assignment of [+p] (and the feature assignment in general) together with the parameter setting for condition C. Recall that the assignment of [+p] for X is based on the evidence that X is non-locally bound. This means that when a category X is non-locally bound, the default [-a, -p] for X must be changed into [-a, +p] (or X will be assigned [-a, +p] if the "defaults" are not assumed). One would most likely assume this to be the case for he and kare 'he'. He and kare "start out with" [-a, -p], as "default, and when they appear bound non-locally, their features should be changed into [-a, +p].⁸⁴ And Names such as John are no exception to this, unless further assumptions are made to treat Names differently. But if we assign [-a, +p] to John, based on it being bound non-locally, then John's appearing non-locally bound, the very evidence that triggers the [+p] assignment for it, would not affect the parameter-setting for condition C since this condition as given in (170) is a condition on [-a, -p] categories, which John is not (it is [-a, +p]). Besides, if John is already subject to condition B, it is not clear why we need to assume that it is also subject to condition C which has the same locality requirement as condition B.

The crucial point is this: since the distribution of Names and that of the so-called overt pronoun kare in Japanese are identical with respect to their disjointness requirement, it is not possible to differentiate the two based on distributional properties. Thus it seems clear that at least within the standard binding theory, and given the reasonable assumptions about the acquisition of binding features and parameter-setting for the binding conditions adopted above, the parametric difference on condition C observed between Japanese and English cannot be accommodated.

Let us now consider how Lasnik's (1986) proposal on binding features and binding conditions would accommodate the relevant parameter-setting for condition C. As noted earlier (cf. section xx), Lasnik's proposal has features [+/-a], [+/-p] and [+/-r] and the binding conditions in (171).

(171) Lasnik's (1986) Binding Conditions⁸⁵

- Condition A: A [+a] categories must be bound in its local domain.
- Condition B: A [+p] categories must be free in its local domain.
- Condition C: A [+r] categories must be free (in its local domain).

These features are assigned as indicated in (172).⁸⁶

(172) (Lasnik's (41))

- | | | |
|----|--------------|----------------------|
| a. | [+a, +p, -r] | PRO |
| b. | [+a, -p, -r] | anaphors |
| c. | [-a, +p, -r] | pronouns |
| d. | [-a, -p, +r] | 'pure' R-expressions |
| e. | [-a, +p, +r] | anaphoric epithets |

Proceeding with the assumption that the core part of the acquisition of "binding theory" is the determination of binding theoretic features, we must consider how each of [+a], [+p] and [+r] is determined for appropriate nominal categories.⁸⁷ Following the line of reasoning presented above in the case of the "standard" model of acquisition in Chomsky's (1981, 1986) system, we might assume (i) that a category X is assigned [+a] if it is locally bound (ii) that a category X is assigned [+p] if it is bound non-locally and (iii) that, unless there is positive evidence, the value for a given category for a given feature Y is [-Y]. This takes care of the assignment of [+a] and [+p] (together with that of [-a] and [-p]). What about [+r]? In Chomsky's (1981, 1986) system, condition C holds of the [-a, -p] category, which is the default case; that is, "everything else" is subject to condition C. In the system proposed in Lasnik (1986), on the other hand, condition C is not an elsewhere condition; rather it holds for the category [+r]. This means that the child needs some positive evidence for identifying some categories to be [+r].

Unlike in the case of [+a] and [+p], however, it is not immediately clear how feature [+r] can be determined based on positive evidence. Being unbound would not suffice for this purpose since pronouns do occur unbound, i.e. the so-called "pragmatic" or "referential" pronouns, as in (173).

(173) He is here.

If an instance of a category X's being free makes X [+r], then he will be assigned [+r] (as well as [+p], which is assigned based on an instance of it being bound non-locally). With the default value for [+/-a], i.e. [-a], the feature complex for he then would be [-a, +p, +r]. But this is for anaphoric epithets in (172).

It appears therefore, that if the feature determination is solely based on some positive evidence with respect to the distribution of the nominal categories, the [+r] feature is simply unlearnable. Notice that we need not exhaustively examine every logical possibility of determining [+r] by some distributional evidence. This is so because of the identical behavior of all the overt non-anaphoric nominal

categories in Japanese with respect to the local disjointness requirement that they are subject to. Recall that they are all subject to the local disjointness identical to that of condition B. This means that whatever mechanism may be attempted for determining [+r] based on the distribution of Names, the other overt non-anaphoric categories will also be identified as [+r], apparently an unwanted result (given that we WANT to differentiate among these different nominals such as *kare* (presumably a pronoun), *aitu* (presumably an anaphoric epithet), *John* ('pure' R-expression) and social titles.)

It is thus not clear how we can capture, in Chomsky's (1981, 1986) or Lasnik's (1986) system, (i) the generalization that all the overt non-anaphoric nominal categories in Japanese are subject to the condition identical, in its effect, to condition B and (ii) Names in Japanese and Names in English behave differently with respect to locality in their disjointness requirement.⁸⁸

Let us summarize the results of the preceding discussion before I propose a possible solution to the problem at hand. First, we have arrived at the generalization in (174), a part of which is already noted in Oshima (1979).^{89, 90}

- (174) All the non-anaphoric overt nominal categories in Japanese, i.e. Names ("pure" R-expressions), social titles, epithets (e.g. *aitu*) and pronouns (e.g. *kare*), are subject to the locality condition whose effect is identical to that of binding condition B.

The binding conditions and the feature assignment for the overt nominal categories for Chomsky (1981, 1986) are summarized below.

Chomsky (1981, 1986)

(175)

- | | | |
|----|----------|---------------|
| a. | [+a, -p] | anaphors |
| b. | [-a, +p] | pronominals |
| c. | [-a, -p] | R-expressions |

(176) English

- Condition A: [+a] categories are bound in their local domain.
- Condition B: [+p] categories are free in their local domain.
- Condition C: [-a, -p] categories are free.

In this system, three non-anaphoric nominal categories are distinguished in terms of their behavior with respect to the binding conditions in (175). Given the assumption that (the core part of) the binding conditions are universal, it seems reasonable to assume that the binding conditions in Japanese are as in (177).²¹

(177) Japanese

- a. Condition A: [+a] categories are bound in their local domain.
- b. Condition B: [+p] categories are free in their local domain.
- c. Condition C: [-a, -p] categories are free in their local domain.

The addition of "in their local domain" in (177c), based on Lasnik's (1986) suggestion for Vietnamese, is to ensure the locality restriction for Names in Japanese (and in Vietnamese). Assuming that the nominal categories in Japanese are to be classified basically as in English (although I will argue against this assumption later) the feature assignment for the nominals in Japanese must be as in (178).

(178)

- a. [+a, -p] anaphors (e.g. zibun)
- b. [-a, +p] pronouns (e.g. kare)
- c. [-a, -p] Names

The earlier discussion indicates that there are two more categories: social titles and epithets. They can be [-a, +p] or [-a, -p], i.e., they can either be like a pronoun or like a Name. Descriptively speaking, either option will suffice, since both [-a, +p] and [-a, -p] categories are, in effect, subject to the same disjointness condition. The problem arises, however, as to how such feature assignment, one way or the other, is performed by the child in the process of language acquisition. Given our assumption that the feature assignment is determined based on the distributional properties of nominals, as discussed above, there does not seem to be any way in which the child can distinguish among Names, social titles, epithets and pronouns in Japanese, since they are all subject to essentially the same disjointness condition.

The same problem also arises in Lasnik's (1986) system, which is summarized below.

Lasnik (1986)

(179) (Lasnik's (41))

- | | | |
|----|--------------|----------------------|
| a. | [+a, +p, -r] | PRO |
| b. | [+a, -p, -r] | anaphors |
| c. | [-a, +p, -r] | pronouns |
| d. | [-a, -p, +r] | 'pure' R-expressions |
| e. | [-a, +p, +r] | anaphoric epithets |

(180) English

- a. condition A: [+a] categories are bound in their local domain.
- b. condition B: [+p] categories are free in their local domain.
- c. condition C: [+r] categories are free.

Given this system, the binding conditions in Japanese must be like (181) and the feature assignment for overt categories must be like (182).

(181) Japanese

- a. condition A: [+a] categories are bound in their local domain.
- b. condition B: [+p] categories are free in their local domain.
- c. condition C: [+r] categories are free in their local domain.

(182)

- a. [+a, -p, -r] anaphors
- b. [-a, +p, -r] pronouns
- c. [-a, +p, +r] epithets
- d. [-a, -p, +r] "pure" R-expressions

If we are to regard social titles as an independent category, it must be [-a, -p, -r]. As we have observed above, however, social titles are subject to the condition B type restriction. This means, given the formulation of the binding conditions as in (181), they must have either [+p] or [+r], or both. If they have only [+p] (i.e. [-a, +p, -r]), they would be analyzed on a par with pronouns; if they have only [+r] (i.e. [-a, -p, +r]), they would be analyzed on a par with a Name; and finally if they have both [+p] and [+r] (i.e. [-a, +p, +r]), then they would be analyzed on a par with epithets. Here, too, any of these options would suffice in terms of the description of the relevant generalization. But the problem of the indeterminacy with respect to the feature assignment for these categories remains. That is, since Names, social titles and epithets/pronouns behave identically in terms of conditions B and C (while they don't in terms of condition D),

there can be no distributional evidence available for the child to differentiate them with respect to the [+/-p] and [+/-r] features.

It seems clear therefore that the task we face is to accommodate in our binding theory the generalizations recapitulated in (183).

(183)

- a. While English Names obey the standard condition C, Japanese Names obey the condition identical to condition B.
- b. All the non-anaphoric overt nominal categories in Japanese obey the condition identical to condition B.

On the one hand, we must make a finer distinction in our theory to capture (183a). On the other hand, we want to generalize our binding theory so as to capture (183b).

In the preceding discussion, we have explored the possibilities in which the features for Names, epithets (e.g. *aitu*) and pronouns (e.g. *kare*) in Japanese are identical to those in English and in which the locality restrictions are parameterized in condition C, much as in the standard proposals to account for the cross-linguistic variations of the behavior of anaphors. Having seen that these possibilities are not very promising, one might explore another logical possibility, i.e. the possibility in which (i) the features of these nominals may not be the same in these languages and (ii) the features of these nominals may not be differentiated within one language, in particular, in Japanese. That is, let us suppose (i) that all the non-anaphoric overt nominal categories have the same feature complex and (ii) that this feature complex is not the same as that for English Names. The assumption in (i) ensures that all the non-anaphoric overt nominal categories in Japanese behave the same and the assumption in (ii) ensures that English Names and Japanese Names behave differently.

This idea may be instantiated as illustrated below. The binding conditions in (184) are based on Chomsky (1981, 1986).

(184)

- a. Condition A: A [+a] category must be bound in its local domain.
- b. Condition B: A [+p] category must be free in its local domain.
- c. Condition C: A [-a, -p] category must be free.

(185)

Features for Nominals in Japanese and English

	Japanese	English
a. anaphors	[+a, -p]	[+a, -p]
b. pronominals	[-a, +p]	[-a, +p]
c. Name/epithets	[-a, +p]	[-a, -p]

Epithets and Names are not differentiated here.⁹² In fact every category except anaphors are [-a, +p] in Japanese, including social titles, which are not included in (185). Hence they must obey condition B. Since they are not [-a, -p], on the other hand, they are NOT subject to condition C, to which English Names and epithets are, since they are [-a, -p]. Under this approach, we can achieve both goals noted above. The determination of these features in language acquisition seems straightforward. All of the [+p]-marked categories do occur in a non-locally bound environment. Hence if we assume, as in the preceding discussion, that the determination of [+a] for a category X is triggered by an instance of X being locally bound and that that of [+p] by an instance of X being non-locally bound, the acquisition of the appropriate values for the binding theoretic features in Japanese can be accounted for. In English, on the other hand, Names and epithets, presumably, do not appear in environments in which they are bound (locally or non-locally); hence they will not be assigned [+p], thereby remaining as [-p], the unmarked value for this feature.

There are, however, at least two problems with this analysis. One is a problem noted earlier with respect to the so-called "long-distance" anaphors in Japanese. Since non-locally bound *zibun* is acceptable, we must make sure that instances of such *zibun* do not trigger the assignment of [+p] for *zibun*; cf. the discussion earlier (p.xx).⁹³ The other problem has to do with the assignment of [+p] to Names as well as epithets and pronouns in Japanese. While there is nothing inherently wrong with this assignment of the feature, one might feel that this move is somewhat counter-intuitive. Note that Names such as *John* are now marked [+p]. To the extent that [+p] reflects the "pronounhood" in some sense, this does not seem to be intuitive, to say the least.

There is, however, some reason to suspect that this possibility is not completely unwarranted. It has been noted earlier that the "function" of personal pronouns in English is often performed by social titles and by the zero pronoun. Another group of categories in Japanese that perform the function of English personal pronouns is in fact Names. Thus the use of the Name of the addressee in place of

you is completely natural and in fact more natural than the use of a word that corresponds to you. Consider the examples in (186), which are all addressed to Mr. Yamada.

(186) (Speaking to Mr. Yamada:)

a. Yamada-san-wa kinoo nani-o simasita ka
Mr. Yamada-TOP yesterday what-ACC did Q
'What did Mr. Yamada do yesterday?'

b. Boku-wa [s' Yamada-san-no ronbun-ga itiban omosiroi to]
omoimasu
I-TOP Mr. Yamada-GEN article-NOM most interesting that
think
'I think that Mr. Yamada's article is the most interesting.'

c. [NP [s' kinoo Mary-ga Yamada-san-no kenkyuusitu-ni
yesterday Mary-NOM Mr. Yamada-GEN office-to
turetekita] gakusei]-wa gengogaku-no gakusei desita ka
brought student-TOP linguistics-GEN student was Q
'Was the student who Mary brought to Mr. Yamada's office a
linguistic student?'

The English translations for (186) are not acceptable in the same context, i.e. when addressed to Mr. Yamada.⁹⁴ The fact that Names can be used in place of the second person pronoun might then be taken as an indication of the pronominal "nature" of Names in Japanese.⁹⁵

One might, however, raise an objection to assigning [+p] to Names based on an independent ground. As pointed out to me by O. Jaeggli (p.c.), and briefly noted in footnote 11 above, it seems plausible, and desirable indeed from a learnability point of view, that positive values of a given feature is assigned only to those nominals that belong to the closed class in some sense. The closed class can be, for example, defined based on morphological markings such as inflection. But in light of the fact that proper nouns as well as common nouns (and of course "pronouns") in some languages (e.g. xx) inflect, inflection might not be a sufficient condition for making Names immune to the assignment of the positive value of a feature. Hence the exact characterization of the "closed class" that is relevant to the present discussion is not clear. Nonetheless, the intuitive idea of the "closed class" is clear enough. That is, proper nouns and common nouns can be added to the lexicon without limit but adding a new pronoun or an anaphor seems almost unthinkable, intuitively

speaking, at least in English. Suppose that the child knows (i.e., UG contains the information) that nominal categories in natural language can be divided into two classes; one is the open class and the other is the closed class. Suppose further that the child also knows (i.e. UG contains the information) that only the members of the closed class may be assigned the positive value of a binding feature. Under these assumptions, the [+p] feature can never be assigned to Names in Japanese, since they are not members of the closed class.⁹⁶

This then naturally leads one to another possibility that all the non-anaphoric overt nominal categories in Japanese have the default value of the [p] feature, and are thus marked as [-p]. The features of the nominals in Japanese and English would be like (187).

(187)

Features for Nominals in Japanese and English

	Japanese	English
a. anaphors	[+a, -p]	[+a, -p]
b. pronominals	[-a, -p]	[-a, +p]
c. Name/epithets	[-a, -p]	[-a, -p]

Given (187), binding condition C must be parameterized in the familiar way, as indicated in (188c) below; see footnote xx above.

(188)

- Condition A: A [+a] category must be bound in its local domain.
- Condition B: A [+p] category must be free in its local domain.
- Condition C: A [-a, -p] category must be free (in its local domain).

According to this alternative, social titles, epithets (e.g. aitu) and pronouns (e.g. kare) are all "R-expressions" and their local disjointness requirement is not due to condition B but due to condition C which has the locality encoded in it.

While this alternative might appear to be descriptively adequate, a problem seems to arise when we consider both the [+p] assignment in English and the lack of it in Japanese. Recall that, under the assumption that is adopted here regarding how the binding theoretic features are assigned, the [+p] feature is assigned to a nominal that is bound non-locally. This is how English pronouns get assigned [+p]. Recall further that all the non-anaphoric overt nominal categories in Japanese may appear non-locally bound. Hence, according to our assumption on the feature assignment, they must be assigned [+p], as well. A way to avoid this problem is to resort to the idea, noted above, that the positive value of the feature

is assigned only to members of the closed class. First of all, Names, social titles and the so-called epithets in Japanese do not have any morphological inflections or any peculiarities of their own, much like English Names and epithets. The so-called overt pronouns in Japanese, including the first and the second persons, do not have such peculiarities either and can in fact be viewed essentially on a par with (definite) descriptions. Furthermore, the restriction on the addition of new members in the class of so-called overt pronouns does not seem to be as severe as that in the case of English personal pronouns.⁹⁷ It thus seems clear both from the morphological consideration and from the "lexical rigidity" consideration that the so-called overt pronouns in Japanese might as well be on a par with Names (and (definite) descriptions), as has in fact been suggested or hinted at in a number of works in the past such as Kuroda (1965, pp.105-106), Martin (1975/87, pp.1074-1077) and Mikami (1955/72, p.184).

Thus, given the assumption that the positive value of a binding feature may be assigned only to members of the closed class, the assignment of [+p] to the so-called overt pronouns (and to the other non-anaphoric overt nominals) in Japanese can be avoided, thereby enabling us to maintain [-p] for these categories.⁹⁸

According to this alternative, the local disjointness requirement for the non-anaphoric overt nominal categories in Japanese is due to condition C. They are subject to condition C since they are unable to be assigned any positive binding features and remain [-s, -p], the default marking. Notice that, in this alternative, our initial assumption that binding theoretic features are assigned solely based on the syntactic distribution (in terms of binding) of these nominals is abandoned. Names, social titles, the so-called epithets and the so-called overt pronouns in Japanese are now considered to be immune to the assignment of any positive value of a binding theoretic feature presumably because they do not belong to the closed class. Their distribution thus does not determine feature assignment at all; but it may result in the setting of the value of the parameter for condition C.

Let us call this alternative (which we may call Alt (B)) with the previous alternative (which we may call Alt (A)). In Alt (A), all the [-s] categories are [+p] while in Alt (B) they are [-p]. Thus the local disjointness effects for them are attributed to condition B in Alt (A) and to condition C in Alt (B). Alt (B) has been favored over Alt (A) based on the assumptions (i) that the positive value of a binding feature is assigned only to those nominals that belong to the closed class and (ii) that none of these nominals belong to the closed class. Unless we make these assumptions, Alt (A) and Alt (B) are

indistinguishable and the choice of condition C over condition B in accounting for the the relevant local disjointness requirement is arbitrary. To the extent that these assumptions are not yet clearly articulated or argued for, one might wish to have an account without recourse to such assumptions.

Let us thus consider yet another alternative, Alt (C), in which the binding features for the nominals are as in (189) and the binding conditions are as in (190).

(189)

Features for Nominals in Japanese and English

	Japanese	English
a. anaphors	[+a]	[+a, -p]
b. pronominals	[-a]	[-a, +p]
c. Name/epithets	[-s]	[-a, -p]

(190)

- Condition A: A [+a] category must be bound in its local domain.
- Condition B: A [-s] category must be free in its local domain.
- Condition C: A [-a, -p] category must be free.

Alt (C), and in particular its condition B, capitalizes on the very fact that all the non-anaphoric overt categories in Japanese are subject to the locality condition whose effect is identical to that of condition B. These nominals in Japanese are subject to condition B due to their feature [-s].

The crucial modification of the binding conditions in Alt (C) obviously is that condition B no longer refers to [+p], but rather to [-a]. This has two obvious consequences. One is that the so-called PRO theorem is no longer "derivable" from binding conditions. The other is that we predict that Names in English too are subject to condition B. As to the first consequence, it is not clear how damaging this is, in light of the controversies regarding the status of PRO and the PRO theorem.⁹⁹ As to the second consequence, it is not problematic since condition B effects may not be detectable due to condition C effects. Thus (191) might in fact be ruled out due to the violation of both condition B and condition C.

(191)

- *John_i likes John_i.
- *John_i admires John_i.

There is some supporting evidence, though somewhat subtle in nature, for the view that Names in English too are subject to condition B. That is, a number of native speakers of English, linguists and non-linguists, detect a contrast between (191) and (192), as indicated below.

(192)

- a. *?/?ok John_i thinks that Mary admires John_i's work.
b. *?/? John_i is fixing John_i's ear

If Names, as well as pronouns, are subject to condition B, then the contrast between (191) and (192) is at least partially accounted for. Thus the contrast between (191) and (192), if real, constitutes evidence for the modification of condition B as proposed in Alt (C).¹⁰⁰

One problem with Alt (C) is how to assign the [+p] feature to English pronouns while not assigning it to the non-anaphoric nominals in Japanese, in light of the fact that their distributional properties are identical.¹⁰¹ They may be non-locally bound. They may be free. But they cannot be locally bound. Alt (C) then forces us to abandon the assumption that [+p] is assigned based on the distributional properties of these nominals. This result seems to be quite similar to the situation that has arisen under Alt (B).

I would like to suggest, however, that there is a way to differentiate English and Japanese with respect to the [+p] assignment for these nominals. One crucial difference between English pronouns and the Japanese nominals under discussion, for example, *karu* 'he', is that while the former can be construed as bound variables, the latter typically cannot, as has been noted in Nakai (1976), Nakayama xxxxx. Thus while (193) is acceptable, (194) is not.

(193) No one_i brought his_i book.

(194)

- *daremo_i karu_i-no hon-o motte konakaita (koto)¹⁰²
no one he-GEN book-ACC did not bring
'no one_i brought his_i book'

Suppose that the non-anaphoric overt nominal categories in Japanese fails to be construed as bound variables, at least in the unmarked cases, as has been noted in literature. Then we may entertain the possibility that the assignment of [+p] for a category X is contingent upon the bound variable construal of X. Since the Japanese overt

non-anaphors cannot be construed as bound variables, according to our assumption here, it follows that they will not be assigned [+p]. This raises a question as to how to block the assignment of [+p] to anaphors since they clearly can be construed as bound variables. While it is possible to restrict the assignment of [+p] to a category X to cases where X is non-locally bound AND is construed as a bound variable, I would instead like to suggest the acquisitional process, as schematized in (195).¹⁰³

(195)

Step One: X is assigned [-a], if it occurs free.

Step Two: X is assigned [+a], if it occurs locally bound.

Step Three-A: The [-a] category is assigned [+p], if it is construed as a bound variable (or is A'-bound).¹⁰⁴

Step Three-B: When Step Three takes place, the [-a] category that is not marked [+p] is marked [-p].

First of all, according to this alternative, there are no default values. The nominals that appear free, including those that appear without linguistic antecedents (in the sentence or in the discourse) will be assigned [-a].¹⁰⁵ When a category appears locally bound, it will be assigned [+a].¹⁰⁶ Notice that this conception of the [+a] assignment avoids the problem that we have faced with respect to the feature assignment for *zibun*, which can be bound non-locally as well as locally, as illustrated below.

Step Three-A is contingent upon Step One in that the feature assignment in Step Three-A applies only to those categories that have already been marked [-a]. One consequence of this alternative, therefore, is that the "long-distance" *zibun* will not be assigned [+p] (despite the fact that it is construed as a bound variable) since it cannot be assigned [-a] due to its inability to occur inbound.¹⁰⁷ This holds true also of anaphors in English. While they can be construed as bound variables, they will not be marked [-a] since they do not occur free. Hence it will not be assigned [+p]. Step Three-B is in turn contingent upon Step Three-A, in a rather curious fashion. When and only when the latter step takes place, the former does also. When Step One and Step Two have taken place, we have certain categories such as *he* and *John* that are marked [-a] (since they have presumably occurred free). Among them, categories such as *he* [-u] (i.e. the third person pronouns) may occur as a bound variable, i.e., may have an antecedent that is not referential. But categories such as *John* (i.e. Names) do not. Thus *he* will be marked [+p]. It is at this point that Step Three-B stipulates that categories such as *John* [-a]

are marked [-p]. Thus, unless there is [+p] marking, there is no [-p] marking. Only [-p]-marked categories are subject to condition C. Hence, as long as no [-a] categories in Japanese are construed as bound variables, the [-p] marking never takes place in this language, according to this scenario.¹⁰⁸

This scenario thus relates the presence and the absence of condition C effects with the availability of bound variable construal for overt pronouns, leaving aside the cases of epithets noted in the footnote above. In English, overt pronouns can be construed as bound variables AND there are condition C effects. In Japanese, on the other hand, the so-called overt pronouns cannot be construed as bound variables, and the language does not have condition C effects. Suppose that we relate the availability of the bound variable construal for overt pronouns in a language X to the availability of an empty pronoun in X, in the spirit of Montalbetti (1984), and assume the functionally-based correlation that roughly states that the "overt pronouns" in X can be construed as bound variables when there is an empty pronoun in X. We then have a correlation, in part functionally driven, that says if a language has an empty pronoun, then it does not have condition C effects. While the verification of this correlation based on the study of a number of languages is beyond the scope of this work, some correlation of this type seems to exist. Thus in languages such as Chinese and Spanish, in which the empty pronoun is allowed but not as freely as in Japanese, the effects of condition C seems to be somewhere between those in English and those in Japanese.¹⁰⁹

Notwithstanding the problems noted in footnotes 29 and 30 (the immediately preceding ones) and the possible problem with respect to the PRO theorem, Alt (C) (i) captures, quite straightforwardly, the fact that all the non-anaphoric overt categories in Japanese are subject to the local disjointness requirement, (ii) provides an account for similar local disjointness requirement effects for English Names and (iii) captures a possible correlation between the existence of empty pronouns and the absence of condition C effects in a given language. Furthermore, the "acquisition" of the binding theoretic features under Alt (C) seems more straightforward than any of the other alternatives discussed above, including those based on Chomsky (1981, 1986) and based on Lasnik (1986). Although the problems noted above and perhaps some others might turn out to warrant its rejection in the end, I will adopt this alternative, until I modify it in chapter 6, in light of the discussion of bound-variable anaphora and coreference in chapters 4 and 5. In the next section, I will argue that the phenomenon of

overlapping coreference provides further support for this alternative.

2.10. Overlapping Coreference

In this section, the phenomenon of overlapping coreference will be considered. It will be pointed out that the locality restriction identical to condition B applies also to overlapping coreference between two R-expressions. This is clearly seen in Japanese due to the absence of condition C effects. In English, on the other hand, the condition B effects for overlapping coreference between two R-expressions is less clear due to condition C effects. Some speakers of English, however, find the condition C effects, but not condition B effects, to be relatively weak in certain structures; for them the possibility of overlapping coreference can serve as an indicator for condition B effects for Names in English.

Consider first the example in (196) from Lasnik (1976).

(196) (=Lasnik's (1976) (39))

The soldiers think that the officers are competent.

Lasnik (p. 102) notes that "although the judgment is delicate, no reading in which soldiers is understood as including officers seems to be available [in this sentence]". Lasnik thus suggests that (196) cannot mean (197a) that includes the interpretation indicated in (197b).

(197)

- a. The soldiers, some of whom are officers, think that the officers are competent.
- b. [The soldiers who are officers]_i think that they_i are competent.

Lasnik (1976, p. 102) contrasts (196) with (198) and claims that "soldiers can be understood in the wider sense [in (198)]." Lasnik thus claims that (198) can have the interpretation in (199a) that includes the interpretation indicated in (199b).¹¹⁰

(198) (=Lasnik's (40))

The man who spoke to the soldiers praised the officers.

(199)

- a. The man who spoke to the soldiers, some of whom are officers,

praised the officers.

- b. The man who spoke to [the soldiers who were officers]_i, among other soldiers, praised them_i.

Lasnik (1976, p. 102) states that "[the] correct generalization appears to be that in any structural configuration in which coreference between two NP's is precluded, overlap in reference is also precluded."

Now consider example (200) from Chomsky (1973, p. 94); cf. Postal (1969) cited there.

- (200) (=Chomsky's (1973) (44))
The soldiers shot the officers (among them)

Chomsky states that in (200) "we interpret the NP's as nonintersecting in reference: that is, we assume that the officers are not included among the soldiers doing the shooting."¹¹¹ Chomsky discusses (200) above together with (201) below, which is a familiar case of condition B violation.

- (201) (his (43)) He saw him

Chomsky (p. 94) states that [the] point seems to be that a rule of interpretation RI applying to the structure NP-V-NP (among others) seeks to interpret the two NP's as nonintersecting in reference."

Notice that if "the structure NP-V-NP" is intended as the structure in which the second NP is bound in its local domain, then the disjoint reference in (201) and the impossible overlapping coreference in (200) may be attributed to the same reason. According to the proposal adopted at the end of the preceding section, the relevant condition here is binding condition B.

It is of course entirely possible that the overlapping coreference in (200) is due to condition C and the lack of coreference in (201) is due to condition B, as one might suggest based on the binding conditions in Chomsky (1981, 1986) and on those in Lasnik (1986). Recall, however, that some speakers accept sentences like (202), to varying degrees.¹¹²

- (202) John_i thinks that Mary admires John_i's work.

If the possibility of overlapping coreference between X in an position NP_i and Y in a position NP_k can be attributed to the structural conditions that govern the coreference between Z in NP_i and W in

NP_k, as indicated by Lasnik (1976, p. 102), then we predict that those speakers who find (202) acceptable also find acceptable the overlapping coreference in sentences that have the structure identical to (202). That this seems to be a correct prediction is indicated by the fact that those speakers who find (202) acceptable indeed find the overlapping coreference possible in (203) below.

- (203) The soldiers think that the general admires the officers' work.

Crucially, even those speakers who accept the overlapping coreference in sentences like (203) reject the overlapping interpretation in (200) above. This then is quite analogous to the fact that while they accept (202), they do not accept (204).

- (204) *John_i admires John_i.

The relevant contrasts are summarized in the paradigms given in (205) and (206) (with the judgments of the speakers under discussion).

- (205)

- a. *John_i admires John_i.
b. John_i thinks that Mary admires John_i work.

- (206)

- a. The soldiers admire the officers. (no overlap)
b. The soldiers think/claimed that the general admires/had praised the officers' work.

(overlap ok)

Thus, for some speakers, while the interpretation of (11a) cannot include (207), (11b) (with the claimed/had praised pair) may include (208) in its interpretation.

- (207) The soldiers_i, who are officers, admire themselves_i.

- (208) The soldiers_i, who were officers, claimed that the general had praised them_i.

The contrasts are further illustrated by another set of paradigms given in (209) and (210) below.

(209)

- a. *John_i shot John_i.
- b. John_i shot the person who insulted John_i's work.

(210)

- a. The soldiers shot the officers. (no overlap)
- b. The soldiers shot the general who insulted the officers' work. (overlap ok)

Notice that the contrasts summarized in (205) through (210) are quite analogous to the contrasts that seem to be due to the regular condition B effects illustrated in (212).

(211)

- a. *He_i admires him_i.
- b. He_i think that Mary admires him_i.

(212) (Cf. Chomsky (1973, p. 94).)

- a. They admire him. (no overlap)
- b. They think that Mary admires him. (overlap ok)

The phenomenon of overlapping coreference in English thus seems to confirm that Names are indeed subject to condition B. We will now turn to overlapping coreference in Japanese.

Since Japanese does not have condition C effects, as we have already seen, we predict that in structures where coreference is not possible due to condition B, overlapping coreference is not possible either. This prediction is illustrated by using the schematic structures in (213) and (214).

(213) (Overlapping is not possible.)

- a. NP_i-ga NP_k-o Verb
-NOM -ACC

- b. NP_i-ga NP_k-ni Verb
-NOM -DAT

(214) (Overlapping is possible.)

- a. NP_i-ga [NP_k-no N']-o Verb
-NOM -GEN -ACC

- b. NP_i-ga [s' ... NP_k ...] Verb
-NOM

In (213) and (214), NP_k is a non-anaphor and is not more referential than NP_i. Recall that the coreference between NP_i and NP_k is not possible due to condition B. It is possible in (214), by contrast, since NP_i is outside the local domain of NP_k in (214). The prediction is hence that (213) does not but (214) does allow overlapping coreference between NP_i and NP_k.

This prediction seems to be confirmed by interpretations available for sentences such as those given in (215), (216) and (217) below. Consider first the example in (215), which has the structure in (214b).

(215) (The overlapping is possible.)

(toozitu kaigi-ni syusseki site ita hito no nakade-wa)
(among those who attended the meeting that day,
zimintoo-no giin-ga [s' kensatu-ga sangiin-no giin-o
LDP -GEN dictperson-NOM PPO-NOM House of Councilor-GEN member-ACC
sirabeteiru to] omotteita
is investigating that thought
'(among those who attended the meeting that day, (the) LDP (Liberal
Democratic Party) members thought that the Public Prosecutor's Office was
investigating (the) members of the House of Councilors'

To avoid the generic interpretations such as "LDP members in general" and "members of the House of Councilors in general", I prefixed the phrase "among those who attended the meeting that day" to the sentence in (215). This sentence can describe the situation that (216) describes.

(216)

[Some of the LDP members at the meeting]_i thought that the Public Prosecutor's Office was investigating some members of the House of Councilors, including them_i'

By contrast, the sentence in (217), which has the structure in (213a) seems unable to yield the interpretation that is indicated in (218).

(217) (overlapping not possible.)
 (toozitu kaigi-ni syusseki site ita hito no nakade-wa)
 (among those who attended the meeting that day.)
 zimintoo-no giin-ga Bush daitooryoo-ni
 LDP-GEN dietperson-NOM President Bush-DAT
 [sangiin-no giin]-o syookaisita
 House of Councilors-GEN member-ACC introduced
 '(among those who attended the meeting that day) (the) LDP
 dietpersons introduced (the) members of the House of Councilors to
 President Bush'

(218) [(Some of) the LDP members]; introduced to President
 Bush [(some of) the members of the House of Councilors]
 including themselves;

That is, it does not seem possible to interpret (217) to refer to a
 situation in which (some of) the LDP members at the meeting, who
 happened to be members of the House of Counselors, introduced
 themselves to President Bush.

The example in (219), which has the structure in (214a), also
 allows the overlapping coreference, as predicted.

(219) (overlapping possible)
 (toozitu kaigi-ni syusseki site ita giin-ni kansite iebe)
 (speaking of the dietpersons who were present at the meeting that day.)
 zimintoo-no giin--ga Bush daitooryoo-ni
 LDP-GEN dietperson-NOM President Bush-DAT
 [sangiin-no giin-no sokkintati-o syookaisita
 House of Counselors-GEN member-ACC close aides -ACC introduced
 '(speaking of the dietpersons who were present at the meeting that
 day,) (the) LDP dietpersons introduced (the) [members of the House
 of Counselors]'s aids to President Bush'

It is possible to interpret (219) to refer to a situation that is
 described by (220).

(220)
 [(some of) the LDP dietpersons]; introduced to President Bush
 the close aides of [(some of) the members of the House of
 Councilors] including themselves;].

Finally, the overlapping coreference is possible in the examples (221), in
 which no c-command relation holds between the relevant NP's.

(221)
 (toozitu kaigi-ni syusseki site ita giin-ni kansite iebe)
 (speaking of the dietpersons who were present at the meeting that day.)
 zimintoo-no giin-no hisyotati-ga Bush daitooryoo-ni
 LDP-GEN dietperson-GEN secretaries-NOM President Bush-DAT
 [sangiin-no giin]-o syookaisita
 House of Councilors-GEN member-ACC introduced
 '(speaking of the dietpersons who were present at the meeting that
 day,) (the) LDP dietpersons' secretaries introduced (the) members of
 the House of Councilors to President Bush'

The sentence in (221) allows the interpretation as indicated in (222).

(222)
 [(some of) the LDP dietpersons]'s secretaries introduced to
 President Bush [(some of) the members of the House of
 Councilors] including them;

The Japanese data presented above thus confirms the
 generalization that all the non-anaphoric overt categories in Japanese
 are subject to condition B. Furthermore, they, together with the
 above observation on overlapping coreference in English, render
 strong support for the view that the condition B effects are not
 restricted to pronouns; and hence the [+/-p] feature cannot be
 motivated based on the condition B effects. This in turn constitutes
 (indirect) evidence for the formulation of condition B adopted here,
 i.e., the [-a] categories are free in their local domain.

2.11. Social Titles as Descriptions

In the preceding discussion, it has been assumed that there is a
 special class of nominals, social titles, in Japanese. In this section, I
 will argue that they are nothing other than descriptions. I will
 further argue that English does have its analogues of social titles and
 that they provide strong confirming evidence for the new
 formulation of condition B proposed above.

To the extent that the professor can be used in place of he in
 (223) in English, it seems reasonable to assume that what I have
 been calling social titles in Japanese indeed correspond to nominals
 such as the professor in (223).

(223)

A: Where is Prof. Smith?

B: The professor/He is in the classroom.

Suppose that we call the professor in (223) simply a description and that social titles in Japanese are in fact nothing other than descriptions.¹¹³ Under this assumption, we predict that the professor's binding Prof. Smith results in more severe unacceptability than Prof. Smith's binding the professor. The prediction seems to be borne out, at least for those speakers who could "violate" condition C in certain contexts.

(224)

a. *?Prof. Smith_i thinks that Mary admires the professor_i.

b. **The professor_i thinks that Mary admires Prof. Smith_i.

Due to the effects of condition C, (224a) does not sound fully acceptable but (224b) seems to be significantly worse than (224a). Notice that both (224a) and (224b) violate condition C. The only possible account for the contrast in (224) that is available to us at this point is by means of condition D. This implies that Prof. Smith is more referential than the professor.

The status of (224b) must also be compared with that of (225).

(225)

a. ?The professor_i's wife thinks that Mary admires Prof. Smith_i.

b. ?Prof. Smith_i's wife thinks that Mary admires the professor_i.

The low status of (225) might be due to the fact that, unlike social titles in Japanese, the professor and other such expressions in English cannot freely be used in place of pronouns. Apart from this factor, the examples in (225) do not violate condition C or condition D.

In this connection, consider the examples in (226) discussed in Lasnik (1976, p. 108 fn. 9).

(226) (Lasnik's (i)-(iii), with the judgments reported there)

a. Nixon believes that the president should have absolute authority.

b. Nixon believes that anyone who is the president should have absolute authority.

c. *Nixon believes that the president ate dinner at 6:00 PM yesterday.

Lasnik argues that the acceptability of (a) is not problematic for his disjoint reference condition since the president in (a) is used in an

attributive rather than a referential way, as in (b). He cites (c) as evidence that the referring expression the president cannot be bound. The fact that (227) below is acceptable, in contrast with (226c), seems to support Lasnik's claim.

(227) Nixon's aids believe that the president ate dinner at 6:00 PM yesterday.

On the other hand, the sentences in (228) below seem significantly better than (226c) above, indicating that the absolute prohibition of the descriptions being bound is too strong.

(228)

a. ?Nixon believes that the president 's aids ate dinner at 6:00 PM yesterday.

b. ?Nixon reported to the press that Castro came to see the president in White House yesterday.

The familiar contrast in (229) further indicates that even under the assumption that the professor may be less referential than Professor Smith, the former must be more referential than he.

(229)

a. The professor_i thinks that Mary admires him_i.

b. *He_i thinks that the Mary admires the professor_i.

Since the professor is subject to condition C, we cannot derive the contrast in (229) solely from condition D. But compare (229b) with (224a), repeated here.

(224a) *?Prof. Smith_i thinks that Mary admires the professor_i.

The speakers who find (224a) somewhat acceptable still reject (229b) strongly. Both in (229b) and (224a), the professor is bound, violating condition C. Thus the contrast here must be due to condition D effects.

The examples in (230) below illustrate that condition D effects show up also in English in the structure that is analogous to the Japanese structure that is discussed in Saito's (1985, Ch. 2), although the judgments might be somewhat less clear in English.

- (230)
- a. Yesterday, I saw Prof. Smith_i at school, who seems to me to think that we all admire the professor_i.
- b. *Yesterday, I saw the professor_i at school, who seems to me to think that we all admire Prof. Smith_i.
- Cf. Yesterday, I saw the professor at school, who seems to me to think that we all admire him_i.

Thus (230b) is much worse than (230a). Crucially, (231) seems to be better than (230b).¹¹⁴

- (231) ??Yesterday, I saw the professor's wife at school, who seems to me to think that we all admire Prof. Smith_i.

It thus appears, to the extent that the relevant judgments are valid, that the above data indicate that English does have something like social titles, or to put it differently, that the so-called social titles in Japanese are not peculiar to Japanese syntax (and some other "Asian languages" such as Korean and Thai). This then provides strong confirmation that we should not relate the "referential hierarchy" to binding theoretic features, as argued in chapter 2.

I suspect that in some specialized register in which titles play more significant roles than the ordinary register, the contrasts noted above can be more clearly observed. One such register may be that of a military community. Thus the contrasts in (232), I suspect, are fairly clear.¹¹⁵

- (232)
- a. ?Lieut. Smith_i thinks that the general will praise the lieutenant's performance at yesterday's practice.
- b. *The lieutenant_i thinks that the general will praise Lieut. Smith's performance at yesterday's practice.
- c. The lieutenant's friends think that the general will praise Lieut. Smith's performance at yesterday's practice.

We, therefore, no longer give Japanese social titles a special status. Instead, we assume that they are nothing but descriptions. Given the assumption that some nominals in English, functionally, behave quite analogously to Japanese social titles, as indicated above, one might expect that such nominals in English provide confirming evidence for the condition B effects for non-anaphoric nominals in English. Consider the examples in (233).

- (233)
- a. Lieut. Smith_i praised himself_i.
- b. *Lieut. Smith_i praised the lieutenant_i.
- c. *Lieut. Smith_i praised him_i.

The contrast between (233b) and (232a) seems clear. Similarly, as compared to (233b), which, according to our proposal, violates condition B, the sentence in (234) seems significantly better.

- (234) ?Lieut. Smith_i praised the lieutenant's men.

The contrast between (11b) and (234) is analogous to that between (233c) and (235).

- (235) Lieut. Smith_i praised his_i men.

The sentence in (234) is not as acceptable as (235), but this is presumably because of condition C effects. (While the lieutenant is subject to condition C, he/his is not.) But, unless we adopt that definite descriptions such as the lieutenant are subject to condition B, the contrast between (11b) and (234) will be left unaccounted for. Hence, the paradigms given in (233) and (234) (as well as (232a)) constitute strong confirmation for the condition B proposed in this chapter, repeated in (236) below.

- (236) Condition B: A [-a] categories must be free in its local domain.

2.12. Summary

This book has a dual goal which is identical to Kayne's (1975), i.e. "the illumination of the language by the theory, and of the theory through study of the language." The module of linguistic theory that we are most directly concerned with is that which deals with referential association among nominal expressions, and the language that is at the center of our discussion is Japanese, often in juxtaposition with English.

The starting point of this chapter was how binding condition C, which rules out (237), leads one to a particular conception of the phrase structure of Japanese.

- (237) *He_i likes John's work.

An argument has been given in Whitman (1982) and Saito (1983) that, given this condition, as formulated in terms of the structural notion of "c-command", as in Reinhart (1976) and Chomsky (1981), the phenomenon of the relevant referential association in Japanese leads us to conclude that the Japanese phrase structure is "configurational" in the sense that there is a node that dominates the object NP and the verb, but does not dominate the subject NP. Thus, this crucial aspect of the Japanese language was justified in Whitman (1982) and Saito (1983) based on the aspect of the theory that incorporates binding condition C formulated in terms of "c-command."

We have followed the lead of Lasnik (1986) and argued that the relevant condition in Japanese is condition D, which states that a less referential expression may not bind a more referential one. This immediately accounts for the fact that while a Name can be bound by another Name, a Name cannot be bound by a pronoun in Japanese. The phenomenon that is subsumed under condition D has then been argued to be a great deal more general than the referential association between a Name and a pronoun. In the arena of the condition D discussion, Lasnik (1986) has included epithets. I have included social titles, such as *sensei* 'prof' in Japanese. A variety of combinations among the nominals with differing referentiality have been shown to support condition D proposed in Lasnik (1986). At the same time, this discussion, by providing confirming evidence for the condition D effects in Japanese, has strengthened significantly Whitman's and Saito's argument for the configurational structure of Japanese.

Furthermore, the variety of combinations among these nominals have also been shown to reinforce Saito's (1985) argument for the irrelevance of the notion "precede" for the phenomenon subsumed under condition D. This argument of Saito's (1985, Ch. 2), to my knowledge, is the only empirical argument that has so far been constructed based on Japanese for the relevance of "c-command" and the irrelevance of "precede" for the condition D phenomenon in particular and for the determination of syntactic domains in general. Thus the strengthening of his argument that we have seen in this chapter is indeed a significant result.

A discovery of more differentiation among nominals in terms of referential hierarchies has thus constituted strong confirmation for Lasnik's condition D as well as for the configurational structure of Japanese. However, this discovery has also led us to question whether the referential hierarchies, to which condition D crucially refers to, can, as suggested in Lasnik (1986), be related to binding

theoretic features. This question has in turn led us to the exploration of the status of condition B in Japanese. The descriptive generalization that we have arrived at is that all non-anaphoric overt nominals in Japanese are subject to the local disjointness requirement that is identical to condition B, a major portion of which has already been observed in Oshima (1979). We have considered several alternative accounts to accommodate this generalization together with the familiar binding theoretic generalizations in English, especially in regards to how the relevant values of the binding theoretic features can be acquired by the child of each language. A somewhat radical modification of binding theory has then been proposed, according to which a [-a] category must be free in its local domain. The three binding conditions, according to this proposal are as in (238).

(238)

- a. Condition A: A [+a] category must be bound in its local domain.
- b. Condition B: A [-a] category must be free in its local domain.
- c. Condition C: A [-a, -p] category must be free.

Given the formulation of condition B in this proposal, a prediction is made that R-expressions in English too are subject to the local disjointness requirement. Based on the phenomena of overlapping coreference and English analogues of "social titles", I have argued that this is indeed a correct prediction.

It must be also noted that the formulation of condition B in (238) captures the very insight that has always been at the center of the binding phenomena since the earliest days of generative studies of the phenomenon. That is to say, in the obligatory Reflexivization context (the minimal S or NP) nothing can, in principle, appear bound except for an anaphor.

In a number of places in this chapter, it has been noted that the judgments are somewhat less clear than what the theory predicts them to be. This problem will be addressed in chapters 4, 5 and 6 where I will differentiate bound-variable anaphora and coreference in the lines of Reinhart (1983, 1986). Before taking a Reinhartian turn, however, I will further consider the nature of condition D in contrast to condition B in the next chapter.

¹ Whitman (1982) and Saito (1983) do not state the condition exactly as in (2), as will be discussed in 2.3.

² The relevant definitions are given in (i) and (ii).

(i) X is bound by Y if and only if X and Y are coindexed and X is c-commanded by Y.

(ii) X is free if and only if X is not bound.

(iii) X c-commands Y if and only if the first branching node that dominates X also dominates Y and neither X nor Y dominates the other.

We will return to these in 2.2.

³ Reinhart (1983, Ch. 2) provides a review of the same materials contained in this section.

⁴ What Ross (1967b) cites as Langacker's (1966) manuscript is the same as Langacker (1969).

⁵ Langacker (1969, p.161) states that his proposal is "neutral with respect to various alternative ways of representing pronominalization in a generative grammar" and that "it makes no difference whether pronouns are derived by reducing fully specified underlying noun phrases or whether they are present in deep structure (although we will adopt the former alternative for purposes of exposition)."

⁶ Ross (1967b, p. 192 fn 9) notes that the relevant "condition on backward pronominalization was arrived at independently by Paul Postal, by G. H. Matthews and Maurice Gross, and by George Lakoff and me. Also working independently, Ronald Langacker has proposed a nearly equivalent condition (cf. his recent "On pronominalization and the Chain of Command)."

⁷ Langacker discusses the paradigms like (3) as well as conjoined phrases. For the time being, I will not be concerned with referential dependency involving conjoined phrases. I will return to this issue in xx.

⁸ Among the arguments against deriving pronouns from a full NP are:

(i) There is a need to have pronouns at the Base independently because of examples like He finally left. (Cf. Lasnik's (1976, p. 90-91) discussion.) (I should cite Wasow here.)

(ii) When a pronoun is used as a bound variable, the deep structure representation of he in No one thought that he would win must be no one. But No one thought that no one would win differs semantically from the preceding sentence. Hence if the deep structure is the sole input to semantic interpretation, this discrepancy in meaning is unexpected. (Citation)

(iii) Bach/Peters paradox: The pilot that shot at it hit the Mig that chased him.

Every pilot that shot at it hit a Mig that chased him.

(Discussion on (iii).)

¹⁰ Lasnik's footnote 10 notes:

This formulation is a modification of the rule mentioned in Chomsky (1973), which "seeks to interpret two NP's [in certain configurations] as nonintersecting in reference."

¹¹ Some speakers seem to accept sentences such as given in (10). I will take up this issue directly. But, for the time being, I assume the judgments reported in Lasnik (1976), suppressing such complications in the relevant data.

¹² One way to rule out (10), under the pronominalization approach, is to make the rule of pronominalization obligatory, as in Ross (1967b, p. 192). However, examples such as Ross' (1967b, fn.10) (i), attributed to J. Emonds, would then be problematic.

(i) Willy washed his car_i and then he polished it_i/his car_i.

Ross states that "for the purposes of the present argument it is not required that the rule be obligatory under all circumstances, for it is sufficient that it is obligatory in such cases as [(ii)]."

(ii) *Oscar_i realized that Oscar_i was unpopular.

Lasnik (1976, p.92) recapitulates this: "the very sharpest instances of obligatory pronominalization are those in which one of the two identical noun phrases both precedes and commands the others." If we make the stipulation that the rule of Pronominalization is obligatory in cases like (i), then Langacker's theory and Lasnik's become undistinguishable with respect to the description of (10).

¹³ As the result of the use of "disjoint in reference" rather than "non-coreferential" in its formulation, the condition in (8) also accounts for cases of the presumably "impossible" intersecting coreference in sentences like (i), as opposed to (ii). (Lasnik's (39)

and (40))

- (i) The soldiers think that the officers are competent
- (ii) The man who spoke to the soldiers praised the officers.

Notice that the officers is both preceded and kommanded by the soldiers in (i) hence the two NP's are predicted to be disjoint in reference. Thus the individuals that the officers refers to and those that the soldiers refers to cannot overlap. Some speakers do not completely reject, contrary to the judgment that Lasnik (1976) reports. I will return to overlapping coreference in 2.10.

- (iii) The soldiers shot the officers (among them).

14 Wexler, Culicover and Hamburger (1974, p. 42) use the term "governs" as the converse of the "in construction with", as pointed out in Evans (1977, footnote 42).

15 It is not completely clear to me what "fully lexical" exactly means. This is so at least for two reasons. One has to do with the so-called anaphoric epithets such as the bastard and the other has to do with the fact that the effects in (14) are very weak in some languages including Japanese when the binder is a Name. The latter is discussed in Lasnik (1986), for example; cf. also xxx. I will return to this issue in 2.3.

16 The definition of Klima's (1964, p. 297) "in construction with" is given in (i).

- (i) A constituent is "in construction with" another constituent if the former is dominated by the first branching node that dominates the latter.

If we disregard "neither dominates the other" in (16), (ii) holds.

- (ii) X c-commands Y iff Y is in construction with X.

In the definition adopted in Reinhart (1976, 1981 and 1983), the condition "neither X nor Y dominates the other" does not appear in the definition.

- (i) Reinhart (1983, p.18)

Node A c(constituent)-commands node B iff the branching node most immediately dominating A either dominates B or is immediately dominated by a node a_2 which dominates B, and a_2 is of the same category type as a_1 .

Reinhart (1983, p.24) states:

The major reason why I excluded the requirement that neither node dominates (or contains) the other from the definition of c-command has been to restrict the domains it defines to be constituents, which would not be the case otherwise.

If the branching must always be binary, as argued in Kayne (1981), this consideration of Reinhart will cease to be relevant. This modification is, at any rate, nonconsequential in the following discussion. Furthermore, under the recent conception of the X'-theory in which S' is taken to be C^{max} , the "or ..." clause in (i) above no longer yields the results that it is intended to yield

17 If an index is not a single integer, but rather, is a non-null set of integers, we follow Lasnik (1986, Appendix) and define "free" as in (i).

- (i) A is free with respect to B if either B does not c-command A or the intersection of the indices of A and B is null.

The requirement in (14), under this definition of "free", thus dictates that if NP_1 c-commands NP_2 and if NP_2 is an R-expression, the intersection of the indices of NP_1 and NP_2 must be null. So, we are assuming (ii), given in Lasnik (1986, appendix); cf. Lasnik (1981).

- (ii) If the intersection of the index of A and the index of B is null, then A, B are disjoint in reference.

18 It has often been noted that general syntactic properties of a language, including "basic word order", are reflected in the embedded sentences more directly than in matrix sentences; cf. Emonds (1979). Such seems to be indeed the case in languages like Japanese, in which a highly sophisticated system of discourse rules seems to be interacting with syntactic principles. For example, its heavy usage of the "theme" or "topic" marker wa often, it seems, conceals what really goes on in terms of the syntactic properties of the language. For this reason, as in a fairly large body of recent work on Japanese syntax, I will, when it seems necessary, add koto, which can roughly be translated as "the fact that", at the end of a sentence so as to avoid unnecessary interference from what seem to be non-syntactic factors. What koto basically does is to create an embedded

sentence, thereby making the sentence without a topic sound more natural. In translations, however, koto used for this purpose will be consistently ignored. The same effect can be achieved in other way, e.g. by supplying node 'since', thereby embedding the sentence in the "since ..." context. The generalizations in Japanese presented in this work are, therefore, based on the observations of the relevant sentences in these embedded context as well as in the context in which the sentences have a topic marker.

19 I follow the customary practice in literature and refer to kanozyo and kare as "pronouns" and assign the translations of "she" and "he", respectively, although their status as "pronoun" is not clear. I will discuss the "pronounhood" of these words in 2.9 and more directly in chapter 4.

20 I assume that the case markers are either cliticized to the NP's, as suggested in Miyagawa (1989), or are realized only at the phonetic component (PF); cf. xx. This assumption suffices to ensure that the subject NP c-commands the object NP in Japanese.

21 Whitman (1982) cites Mohanan (1981) for sentences of this type with the indicated coreference. Mohanan (1981) reports an observation that sentences such as (21b) do not allow coreference and this is argued against in Whitman (1982). Saito's (1983) judgment is in agreement with Whitman's in this respect. As indicated above, I agree with Whitman (1982) and Saito (1983) in this regard.

22 In the works cited here, the condition is stated with the notion "antecedent", basically as in (i).

(i) A pronoun cannot c-command its antecedent.

The formulation in (i), which presupposes the notion "antecedent-of" as a primitive in linguistics theory, has been stated in (Saito (1985) and) Hoji (1985) in the terms of Higginbotham's (1981, 1983) theory of linking. The formulation in (27) and that in (i) are equivalent, descriptively speaking. The theory of linking will not be discussed until chapter 3.

23 Chapter 3 contains discussion of the cases that involve syntactic preposing. A brief discussion of definite NP anaphora in conjoined structures in Japanese will be given in xx.

24 It must be understood, throughout this book, that when two or more sets of the "conjoined NP's" with slashes are used, as in (31a)

and in (i), the correspondence is intended as in the case of the familiar notation in (ii).

(i) ...{A/B}_i...{C/D}_i...

(ii)

$$\dots \left\{ \begin{array}{c} A \\ B \end{array} \right\}_i \dots \left\{ \begin{array}{c} C \\ D \end{array} \right\}_i \dots$$

Thus (i) is intended to be an abbreviation of the union of (iia) and (iib), with the parts of "..." being identical in (iia) and (iib).

(iii) a. ... A_i ... C_i ...
b. ... B_i ... D_i ...

25 For reasons that are not clear, it appears that (31a) is better with Mary than with this woman.

26 It is not clear how to define the degree of referentiality in a precise manner. We may, for example, follow Reinhart (1983, 26), who follows Keenan (1974), and define "more referential" as a subcase of "more prominent."

Following Keenan (1974), we may describe an expression A as having prominence over an expression B, if the assignment of reference to A is independent of the reference of B, but the assignment of reference to B may depend on that of A. Thus, the pronoun may depend for its reference on the antecedent, but not conversely. (underline by HH)

The Novelty Condition of Wasow (1972), which Williams (1989, p. 434) calls "the most fundamental nonstructural property of anaphora and coreference relation", states "that an anaphorically dependent element cannot have more determinate reference than its antecedent." The notion "more determinate than" seems to correspond to "more referential than" here. Williams (1989) gives the contrast in (i).

(i) (Williams' (25))

a. A captain_i walked into the room. The officer_i at first said nothing.
b. *An officer_i walked into the room. The captain_i at first said nothing.

Williams states:

In these examples the second NP in each case depends on the first for its reference-hence, we call the first the antecedent, and the second the dependent. Assuming that the set of officers properly includes the set of captains, captain, is more determinate in reference than officer --that is, it picks out a smaller set of possible referents. Hence the oddness of (25b), but not (25a), under the Novelty Condition.

The Novelty Condition applies in the case of ordinary pronominal anaphora as well: John thinks he is sick. Here the set of John's is a subset of the set of he's (the set of singular male entities), and so the condition is satisfied.

Further discussion of how to define "the degrees of referentiality" will be given in chapter 6. It will be pointed out there that the "proper subset" relation is not sufficient for the characterization of "more determinate in reference" or "more referential".

²⁷ When its application is limited to a pair consisting of a pronoun and a Name, binding condition D in (32) is the same as the condition that Langacker (1969) proposes, except that "precede and command" rather than "c-command" defines the relevant syntactic domain.

Reinhart's (1983, p.26) condition in (i) is intended to have the effect of (ii).

(i) If a rule assigns node A some kind of prominence over node B, A must be a D(omain)-head of the domain containing B.

(ii) If one NP is in the domain of the other, the 'prominent,' or the referentially independent, node should be the D-head node. (Reinhart (1983, p. 42))

While the exact content of the condition in (i), as it is formulated there, is not completely clear (for example, what kind of rule assign "referential dependency/independency" to given two NP's?), the condition in (i), with what it is intended to achieve (as given in (ii)), seems also to be a predecessor of binding condition D.

²⁸ We will consider why Japanese apparently does not have condition C effects in 2.9.

²⁹ Lasnik's (1986, footnote 5) examples are as in (i).

(i) a. ? John_i-ga [Mary-ga ano bakaj-o sonkeisite iru to] omotteiru
John Mary the idiot respects thinks
'John_i thinks Mary respects the idiot_i'

b. *ano bakaj-ga [Mary-ga John_i-o sonkeisite iru to] omotteiru
'The idiot_i thinks Mary respects John_i'

c. ?ano bakaj-ga [Mary-ga ano bakaj-o sonkeisite iru to] omotteiru
'The idiot_i thinks Mary respects the idiot_i'

Since some speakers prefer aitu 'that guy' over ano baka 'that idiot' in these sentences with the indicated coreference, the former is used in (36) in place of the latter .

³⁰ The first point is made in works such as Martin (1975, p. 1075), Kuno (1978, p. 127) Fiengo and Haruna (1987, p. 116). The second is observed in works such as Nakai (1976, 1977), Saito (1981), C. Kitagawa (1979), Nakayama (1982), Saito and Hoji (1983) and discussed in some depth in Hoji (1989) and will be discussed further in chapter 4.

³¹ Martin (1975/1988 p.1075) states that "[it] should be borne in mind that in many unmarked situations, the appropriate translation of an English pronoun is either zero (omit the reference) or a repetition of noun."

³² One might argue that the titles in these cases are in fact definite NPs without determiners. Since Japanese apparently does not have clear instances of determiners; (cf. xxx and Fukui (1986, Ch. x), this seems to be a reasonable objection to raise.

In the case of sensei, there is evidence that it need not be a definite NP in examples like (42). Unlike butyoo 'section chief', for example, which must in principle be used to refer to an individual who holds the position of "the chief of a section of some company or another", sensei 'teacher' need not be used to refer to individuals who are teachers. Novelists, congressmen, elected official in a village and the like can also be referred to as sensei. In certain contexts (as in a saloon (baa 'bar'), any customer (with some restrictions based on the gender distinction) may be referred to as sensei. In such situations, therefore, sensei does indeed seem to assume the function of a pronoun (instead of a definite NP, such as the teacher). Although such a "liberal" usage seems restricted to sensei and does not seem to extend to the other titles, I assume that titles can always be used "as titles." Thus while I accept that sensei in (42) may be a full NP

without a determiner, I assume that it may simply be a title. This stipulative assumption will not be needed when we modify our view of "social titles" in Appendix to this chapter.

33 In the subsequent examples, I do not provide sentences with appropriate honorific markers, for ease of presentation. The possible or likely unnaturalness resulting from the absence of honorific markers may easily be eliminated by the addition of appropriate forms of honorification.

34 I am disregarding the cases in which the bindee is located in the minimal/local domain of the binder, i.e. the binding condition B context. I will discuss such cases in xx.

35 As noted earlier, the definition of "kommand" is as in (i).

(i) A kommands B if the minimal cyclic node dominating A also dominates B. (Cyclic nodes: S and NP -- HH)

36 Cf. Lasnik and Barss (1986) and Larson (1988?) for much relevant discussion.

37 As is well-known, "precedence" is relevant in discourse. Cf. Reinhart (1983, p.xx) and xxx. Thus (i) is clearly more natural than (ii) despite the fact that there is no c-command relation between he and John in either case.

(i) John_i came in. After a short while, he_i sat down.

(ii) He_i came in. After a short while, John_i sat down.

Contrast similar to that in (i) and (ii) can be observed in Japanese as well.

38 Reinhart (1981, p. 621, 1983, p. 46) provides the following from Malagasy (a VOS language) as a piece of evidence for the irrelevance of "precedence" and the relevance of "c-command". She attributes these to Ed Keenan.

(i) (Reinhart's (1983) (51))

a. namono azy ny anadahin-dRakoto
hit/killed him the sister-of-Rakoto
'Rakoto's sister killed him.'

b. *namono ny anadahim-dRakoto izy
hit/killed the sister-of-Rakoto he
'he killed Rakoto's sister'

Notice in (ib), the coreference is not allowed despite the fact that the pronoun izy 'he' does not precede Rakoto. The status of (ib) is accounted for by the c-command formulation of condition D, together with the assumption that the sentential structure of this language is as in (ii) at the relevant level of representation.

(ii) [s [vp V NP] NP]

Saito (1985, p. 46) provides additional Malagasy, attributing them to Lisa Travis, to make the paradigm in (i) complete.

(ii) (Saito's (30), with slight modification in terms of glossary)

a. Nahita ny reniny Rasoa
past-see the mother-her/his Rasoa
'Rasoa saw her mother'

b. (identical in structure to (ib) above)

*Nahita ny renin-d Rasoa izy
past-see the mother-of Rasoa she/he
'she saw Rasoa's mother'

c. (identical in structure to (ia) above)

Nahita azy ny renin-d Rasoa
past-see her/him the mother-of Rasoa
'Rasoa's mother saw her'

d. Nahita Rasoa ny reniny

past-see Rasoa the mother-her/his
'her mother saw Rasoa'

The fact that the coreference is allowed in (iiid) indicates that it is not the case that the reverse of 'precedence' is relevant in this language. That is, it is not the case that a pronoun may not FOLLOW its antecedent.

39 I have provided additional bracketing and glossary for clarity.

40 As in the case of ga and o, I assume that the so-called genitive case marker (or the pronominal modification marker) no is either cliticized to the immediately preceding NP or is realized only at the level of PF.

41 Kare is more like that (male) person, as pointed out in Kuno (1978) and C. Kitagawa (1979, 1981), for example, and will be discussed in chapter 4. One may, therefore, translate (63a), (63b)

and (60b) into (i), (ii) and (iii) below, respectively, to make their intended interpretations more accessible to non-native speakers of Japanese.

- (i) that male person_i, at the time when his_i mother was well (=that male person_i, as he_i was when his_i mother was well)
- (ii) that male person_i, at the time when Mary was well (=that male person_i, as he_i was when Mary was well)
- (iii) that male person_i, at the time when John's mother was well (=that male person_i, as he_i was when John's mother was well)

I will subsequently translate *kare* as 'that man' when its rendition into 'he' might obscure the intended interpretation of the relevant sentences..

⁴² As in the case of (60), some bracketing and glossary are added to Saito's example.

⁴³ This observation has been made in a number of earlier non-generative works in the past, such as xxx; cf. chapter 4 for discussion.

⁴⁴ It is not clear that the Japanese relative clause MAY involve syntactic movement, as in the cases of topic and cleft constructions, while it is clear that it need not, based on the Subjacency violation noted in Kuno (1973, ch. 20); cf. chapter 5. For this reason, I will represent an empty category that is associated with the head of the relative simply as *e* (an empty category), rather than as *pro* (an empty pronominal) or a trace.

As to the distinction between restrictive and appositive relatives in Japanese, see Kuno (1973, ch. 20) and Kamio (1979).

⁴⁵ The contrast may become clear if we place the NP's in (66) in a sentence, as in (i) below.

- (i) NP_k-ga Outstanding Teaching Assistant Award-o moratta no ni-wa
 really was surprised
 'I was really surprised at the fact that NP_k had received an Outstanding Teaching Assistant Award.'

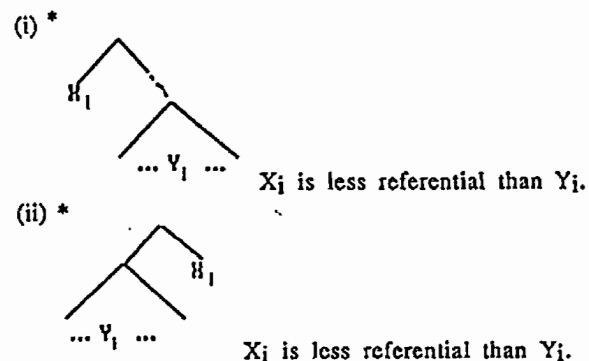
When the entire NP in (66a) replaces the NP_k in (i), its intended interpretation is (ii); but the coreference seems rather difficult to obtain.

- (ii) I was really surprised at the fact that that man_i, who John's students all hate, had received an Outstanding Teaching Assistant Award.

On the other hand, when the entire NP in (66b) replaces the NP_k in (i), its intended interpretation is (iii); and the coreference seems to be readily available.

- (iii) I was really surprised at the fact that John_i, who that man's students all hate, had received an Outstanding Teaching Assistant Award.

J. Kim (p.c.) has pointed out to me that the coreference in (i) seems more clearly impossible than that in (ii).



Although the judgments are not completely clear, the coreference in (ii) appears to be slightly more available than that in (i), if there is a contrast. To the extent that the contrast is real, I would like suggest that this is due to some discourse principle that favors the early appearance of a more referential expression, as compared to a less referential one. That is, while both (i) and (ii) violate condition D, a syntactic condition, only (i) but not (ii) violates this "discourse principle". Hence, the coreference is more hopeless in (i) than in (ii).
⁴⁶ (69) may be interpreted as a restrictive relative, as indicated in the translation. (Because of the form of the predicate, the restrictive reading may in fact be preferred here; but it may be interpreted as an appositive easily enough (if we, for example, use the non-past form of the verb *yomu* and add an adverbial such as *itumo* 'always' so as to favor the "habitual reading.") The coreference is possible

regardless of whether it is interpreted as a restrictive relative or an appositive relative.

⁴⁷ Cf. Fiengo and Haruna (1987, p. 116).

⁴⁸ Kuroda (1965, p. 105) compares personal pronouns in English and "the so-called personal pronouns" in Japanese and states that "they (the so-called personal pronouns in Japanese, HH) can be modified by an adjective just like ordinary nouns. The following examples are his.

- (i)
a. the short man
b. *short he
c. tiisai hito
 small man
d. (=70) tiisai kare

⁴⁹ In this sense, the entire argument in the preceding discussion for the configurational structure of Japanese based on the condition D phenomenon can be considered as strengthening Whitman's (1982) and Saito's (1983) argument for this claim, which is based on sentences with *kare* 'he' and *kanozzyo* 'she'.

⁵⁰ Although the preferred interpretation of a relative construction headed by *sensei* 'prof' may be that of a restrictive relative, it is possible to have an appositive relative interpretation as in (i).

- (i) [NP [_S *gaku daigaku-o* *deta bakari no*] (sono) *sensei*]-ga
 university-ACC just graduated (that) prof-NOM
gakutyoo-o *hihansita*
president-ACC criticized
'(that) professor, who had just graduated from a university,
criticized the president'

The coreference in (71a) is not possible with the restrictive reading or with the appositive reading.

⁵¹ Sentences such as (i) seem acceptable.

- (i) [S *Johni-o* [S *Johni-no* *gakusei-ga* *ji* *sonkeisiteiru*]]
 John-ACC John-GEN student-NOM respect
 'John_i, John_i's students respect'

Given Saito's (1985) proposal that Scrambling is A'-adjunction, the trace of the object NP in (i) is a variable; hence (i) has the same structure inside the minimal S as (74). This acceptability of (i),

therefore, provides indirect evidence that the structure in (74) does not violate any principles.

⁵² Kuno (1985, p. xx) claims that sentences like (i) do not allow the indicated coreference.

- (i) *Johni-no* *okaasan-ga* *pro_i* *semeta*
 John-GEN mother-NOM criticized
 'John_i's mother criticized *pro_i*'

It is argued in Hoji (1985, p.xx) that such sentences allow coreference; cf. Fukui (1986, p. xx). It is interesting to add that Kuno (1985, p.xx) acknowledges that when *John* is a topic of discourse, the coreference in (i) is possible. This, I take as a clear indication that the relevant coreference is indeed possible in (i) for Kuno as well. More direct arguments for this view will be presented in chapter 6, in which I follow the essentials of Reinhart (1983) and differentiate bound-variable anaphora and coreference.

⁵³ I continue to refer to *kare* as "pronoun" and *aitu* as "epithets", delaying the discussion of the "pronounhood" in Japanese until chapter 4; but some discussion will be given in 2.9. In (81), "Names" include "Name plus social title". I am therefore not distinguishing *Suzuki* and *Suzuki Sensei* in terms of referential hierarchy. Neither am I distinguishing *John* and *John Smith* in this regard.

⁵⁴ Cf. Morikawa (1989, Ch. 6) for discussion on the configurational properties inside the Japanese NP's, in which he provides the array of data as is given in (88), based on the "standard" pronominal coreference argument in Whitman (1982) and Saito (1983).

⁵⁵ As in the case of the sentential structure, the point of this claim is not what the NP-internal structure should exactly be. It is rather that one NP asymmetrically c-commands the other inside the NP, as in (88). Thus the generalization noted here can be straightforwardly translated into the so-called DP analysis of Kuroda (1987) and Abney (198x).

⁵⁶ I suspect that the configurational structure for the adjuncts inside the NP is the same as that for arguments. But since the relevant examples are harder to construct, thought perhaps not impossible, I do not attempt its demonstration here.

⁵⁷ An expression like *aitu* 'that guy', which has been considered as an epithet, and an expression like *kare* 'he', which has been considered as a pronoun, do not seem to be compatible with each other, for reasons that seem to have to do with the stylistic factors; while *aitu* is somewhat vulgar, *kare* is somewhat formal. Hence it

does not seem possible to determine the hierarchy between these two types of nominal expressions.

58 Here, "bound" means "A-bound", as in the standard view of binding theory.

59 It is not clear how solid this generalization is. Three Thai speakers I have consulted with do not agree that (100b) is as acceptable as (100a). In light of the discussion in Ch. 6, the variation of acceptability is not entirely surprising; cf.

60 The [-p] for Names is not a direct result of the above consideration.

61 I will consider whether they may be bound in its local domain in the next section.

62 Oshima's (1979) proposal is embedded in an earlier version of binding theory, in which there is a rule of "Disjoint Reference" and Conditions like Tensed S and the Specified Subject Condition. When translated into the version of binding theory that we are discussing, his proposal there is as indicated here.

Until chapter 4, I will disregard the possibility that condition B is, as argued in Reinhart (1983), holds only of cases where bound variable reading is relevant.

63 I keep the use of the topic marker wa in the original examples from Oshima (1979). The use of the nominative marker ga in place of wa here should not change the status of these examples; but some subtle change seems to arise, as will be discussed later. For the time being, I will suppress such potential change effected by the use of ga in place of wa in (111).

64 Oshima (1976, pp. 425) states that there are many verbs in Japanese which are subject to Unlike-NP Constraint and such verbs cannot take their object coreferential with the subject. Thus he provides (i) as ungrammatical sentences.

(i)

a. *John_i-wa (zibun_i-de) zibun_i/kare_i-o arat-ta
'John_i washed SELF_i/him_i.'

b. *John_i-wa (zibun_i-de) zibun_i/kare_i-o korosi-ta
'John_i killed SELF_i/him_i.'

It thus appears that certain verbs seem to have particular semantic properties that disallow their subject to "corefer" with the object. It is interesting to note that a verb kiyomeru 'purify' in place of araw 'wash' makes the anaphor binding possible. (Maybe some references

on this?)

(ii)

a. John_i-wa (zibun_i-de) zibun_i-o/*kare_i-o kiyome-ta
'John_i purified SELF_i/him_i.'

b. John_i-ga zibun_i-o kiyometeita/*arattcita toki ni
'When John_i was purifying/washing SELF_i.'

It must also be noted that the "ungrammatical" sentence in (ib) is acceptable with the reading on which zibun-o koros is taken as 'suppress oneself/one's feelings.' This reading is analogous to English idioms such as to lose NP's way, to lose NP's mind, in which the possessive NP must be "coreferential with" (or "controlled by") the subject of these VP's. This type of observation, it seems to me, confirms that there are properties of zibun (as far as I can tell, they also show up with zibunzisin) that English anaphors do not have. These properties seem to be related to the so-called "point-of-view", "empathy", "logophoricity" and so on; and they seem to be responsible for some of the peculiar behavior of the Japanese anaphors; cf. Kuroda (1965, Ch. 5, 1973) and Kuno (1972, xxx). To understand the syntactic properties of the Japanese anaphors, then, we need to understand and distinguish these properties on the one hand and the purely syntactic properties of zibun on the other. It seems to me to be a misguided view to take sentences like (i) as suggesting that zibun is a pronominal rather than an anaphor, the view taken in Fukui (1984) and Ueda (1984); cf. Sportiche (1986) for a critique of their view.

65 It seems that the ga option tends to make the coreference slightly more available than the wa option. I will not discuss the reason for this contrast here. As is the case elsewhere, the examples in the following, if the matrix subject NP is marked with ga, the entire sentence must be considered as embedded, even where no explicit indication to that effect is given in the text.

66 Oshima presents examples such as (i) and argues that the zero pronoun is also subject to condition B. (Oshima represents the zero pronoun as PRO; but since he does not distinguish PRO and pro (i.e., he uses PRO for empty objects as well as empty subjects of the "obligatory control" predicates), I use pro for empty NP's that clearly are not the instances of the "obligatory control" PRO.)

(i)

- a *John_i-wa proj_i-o bengosi-ta
'John_i defended proj_i'
- b. *John_i-wa proj_i-ni iikikase-ta
'John_i told proj_i (something)'
- c. *John_i-wa proj_i-o seme-ta,
'John_i criticized proj_i'
- d. *John_i-wa proj_i-o nagusame-ta
'John_i consoled proj_i'
- e. *John_i-wa [S' PRO_i proj_i-o seme] hazime-ta
'John_i started to criticize proj_i'

He also presents examples like (ii), which are intended to show that pro can be bound non-locally.

- (ii) (Oshima's (48))
John_i-ga [S' proj_i kai-ta] tegami-o tookansi-ta
John-NOM wrote letter-ACC mailed
'John_i mailed the letter he_i wrote.'

- (iii) (Oshima's (54))
Mary_i-ga [S' John-ni proj_i okur]-asc-ta
Mary-NOM John-DAT take home-made
'Mary_i made John take her_i home.'

There is some complication in demonstrating that the coreference is possible when pro is embedded in another NP (with pro being the possessive NP). That is, it is not completely clear that the empty possessive NP indicated in (iv) is syntactically realized.

- (iv) Mary_i-ga [NP proj_i hahaoya]-ni ayamatta (koto)
Mary-NOM mother-DAT apologized
'Mary_i apologized to proj_i's mother'
- (v) [NP proj_i hahaoya]-ga Mary_i-o semeta (koto)
mother-NOM Mary-ACC criticized
'proj_i's mother criticized Mary_i'

To the extent that the postulation of the empty possessive NP is motivated in (iv) and in (v), the unacceptable coreference in (i), taken together with the apparently possible coreference in (iv) and (v), confirm that pro cannot be bound non-locally. Partly because the syntactic status of the possessive empty NP is not clear, I do not present full discussion of paradigms that involve pro here; cf. Hoji (1987) for some relevant discussion.

67 As in the case of condition B violation with pronouns, if we replace wa with ga in (130), the coreference seems to become somewhat easier to obtain. Some speakers find the coreference more or less acceptable in some of the sentences in (130) and (131). This seems especially so when the two instances of John are pronounced with some stress and when they are adjacent to each other, uttered without any pause between the two. On the other hand, if a pause is placed between the two occurrences of John, or if other elements intervene as in (131), the coreference seems more difficult to obtain. In fact, Oshima (1979) states:

As for the judgment of grammaticality on these sentences, it is not so clear-cut as that on sentences involving a pronoun. ... But it seems to be only because of a pragmatic factor. When presented with a sentence like [(91a)] for example, one is normally forced to interpret two occurrences of John as non-coreferential but feels uncomfortable about the sentence. The reason seems to be that in this real world it is less likely to be talking about two different persons with an identical name than about one and the same person. If it is clear from the context that the speaker is indeed talking about two separate persons, then the sentence unambiguously means that one John defended another John, although this sort of sentence will be avoided because it does not make clear which John defended which John.

Extending this remark to the cases of possibility of coreference, the fact that some speakers find the coreference acceptable in some of the sentences in (130) and (131) can be said to be due to this "pragmatic reason". I will return to this issue in chapter 6 when we consider the status of sentences like (i) and its counterpart in Thai discussed in Lasnik (1986).

- (i) *? John_i-ga John_i-o suisensita

John-NOM John-ACC recommended

'John_i recommended John_j'

68 Oshima (1979, p.430) states that the formulation of the disjoint reference rule should be generalized to include a full NP.

Kuno (1986, p. 35) also argues that condition B in Japanese holds of Names as well as pronouns, claiming that sentences such as (i) and (ii) do not allow coreference .

(i) *John_i-ga minna-ni John_j-o syookaisita
John-NOM all-DAT John-ACC introduced
'John_i introduced John_j to everyone'

(ii) *John_i-ga minna-ni kare_j-o syookaisita
'John_i introduced him_j to everyone'

69 Recall that Oshima's proposal is that not only pronouns but also full NP's are subject to condition B. (Oshima (1979, p. 430)) Thus if epithets are considered as "full NP's", then the data in this subsection are completely as expected in Oshima's analysis.

70 As in the preceding discussion, I am ignoring the unnaturalness that may result from the absence of honorific markers of various types.

71 The embedded subject *sensei* (as well as the embedded subject *gakusei* 'student') can be taken as generic but it need not be. The sentence is acceptable on either reading.

72 I will not discuss the differences in acceptability indicated in (152) at this point.

73 Lasnik (1986. p.154):

As a first approximation, we have the following: An R-expression is free (English); An R expression is free in its governing category (Vietnamese); No requirement (Thai).

Given the division of the standard condition C into condition C and condition D, the "parameterization alluded to in this passage pertains to condition C and not to condition D. In his summary of the article (p. 162), Lasnik states:

In particular, it has been argued that Condition C does exist, and, in fact, that it is parameterized, holding in English, for example, but not holding in Thai.

The parameterization of condition C with respect to its locality requirement is not pursued in Lasnik (1986) beyond the discussion on the "first approximation" on p. 154. The relevant Vietnamese data that Lasnik (1986) provides are given in the next footnote.

74 Lasnik (1986) reports the following paradigms in Vietnamese .

(i) (his ((23), (21), (26) and (27))

a. *John *thuong* John
'John likes John'

b. John *tin* John *se* *thang*
'John thinks that John will win'

c. John *tin* *thang* *cho* *de* *se* *thang*
'John believes the son of a bitch will win'

d. * John *thuong* *cai* *thang* *cho* *de*
'John likes the son of a bitch'

As we have seen , Japanese patterns like Vietnamese.

75 As in some sentence-internal instances of condition B violations discussed above, the effects of condition B violation is somewhat weak in some of these cases, as indicated. I do not, however, discuss why this is so until chapter 6 .

76 In the following examples, as in the discussion of condition B effects in the preceding sections, I avoid the structures in which condition D is violated, since in those structures, while condition B is perhaps violated as well, their effects cannot be teased apart from the effects of condition D.

77 The use of *ni taisuru* or *ni taisite-no* 'towards' (which might have a structure more complex than a simple P) in place of the genitive *no* for the "object NP" in (160) and (161) seem to improve the status of these examples, in case some speakers find them less than perfect. It must be noted, however, that the use of such a "complex P" in place of *no* tends to improve the acceptability of the relevant NP's quite independently of the relevant coreference possibility, being possibly related to the clarity that its use produces as to the assignment of the theta (semantic) roles to the NP's inside the entire NP.

It is, incidentally, not clear whether the embedding of the "object NP" inside this PP headed by this type "complex P" makes the coreference option more available. For example, I do not find clear

contrast between (i) and (ii).

(i) *?John_i-no kare_j-no hihan
'John's criticism of him_i'

(ii) *?John_i-no kare_j-ni taisuru hihan
'John's criticism toward him_i'

One possibility is that PP does not constitute a local domain, as is in fact suggested in the formulation of binding conditions presented above. Another possibility is to explore the plausible analysis of *ni taisuru*, in which this "P" is analyzed as a relative clause. (Notice that the ending of this "P" does indeed have the verbal ending and it is clear that this is related to the verb *tais* 'to face'. Under this analysis, according to which (ii) would have some structure like (iii), the condition B violation may arguably arise due to *kare* being bound by the empty subject of the verb *tais*.

(iii) John_i-no [[S' pro_i kare_j-ni' taisuru] hihan]
John-GEN he-to face criticism

As Kiyoshi Kurata (p.c.) pointed out, however, it is not clear the the embedded subject *pro* is coindexed with (or "refers to") *John_i*; it may be "related to *hihan*". There are a number of related issues here but I will not pursue them here.

⁷⁸ There are factual questions as to how unacceptable (163) is in Japanese and how unacceptable (162) is in English. Until chapter X, I will proceed with the assumption that the judgments indicated in (164) are correct.

⁷⁹ In fact, under the assumption that the so-called "inherent semantic" properties of nominals determine these features, it is not clear how these "semantic" properties are determined by the child. In other words, what evidence would be available for the child to distinguish, for example, between Names and epithets, between Names and titles or between titles and epithets? I will return to this and other related issues in Chapter 7.

⁸⁰ Given this conception of the "acquisition" of binding conditions (i.e. the acquisition of binding features), the question of whether binding condition B is acquired later than condition A (cf. Grimshaw and Rosen (1990) and references cited there as well as those cited in Chapter 7) does not even arise. More discussion will be provided in Chapter 7 on this issue.

⁸¹ One question arises in this regard; namely, how we can block the logical possibility of acquisitional process in which the child encounters the long-distance *zibun* earlier than the "short-distance" *zibun*. If everything that the child hears counts as an equally relevant piece of evidence for him/her, regardless of the degree of its structural complexity in the relevant data, this possibility cannot be denied. According to this possible scenario, then *zibun*, by virtue of appearing non-locally bound, will be assigned [+p]. Upon encountering the "short-distance" *zibun*, what would the child do? (This problem is addressed in Hyams (1989?)). Two possibilities come to mind, reflecting different analyses of *zibun*.

Let us suppose that *zibun* is analyzed to have only one set of features. Or to put it differently, suppose that *zibun* is analyzed unambiguously as an anaphor. Recall that, given the possibility of "long-distance" *zibun*, [+p] may first be assigned to *zibun* based on it being non-locally bound. Upon witnessing instances of *zibun* being locally bound, the child must assign [+a] to it, thereby making *zibun* and [+a, +p]. If one adopts the PRO theorem (and hence its logic), this is not possible since a lexical category cannot occur in an ungoverned position. (But cf. Bouchart (1984) and xx.) (Even under the "BT-compatibility" binding theory of Chomsky (1986), the PRC theorem remains to be derivable from binding conditions, if one adopts the original PRO theorem (and its logic); cf. Chomsky (1986, pp. 183).) Then the evidence of the locally bound *zibun* must have the effect of altering the [+p] feature, assigned to it earlier, to [-p]. Based on this rather complicated process, *zibun* will be marked [+a, -p] in the end. Suppose on the other hand that *zibun* is not limited to just one set of features, i.e., that there are more than one *zibun*, to put it loosely; cf. Bouchard (1984), Sportiche (1986) and xx. Under this assumption, the locally-bound *zibun* and the non-locally bound *zibun* need not be identical with respect to their feature specifications. More specifically, it is possible that the former is [+a, -p] while the latter is [-a, +p]. It is not clear to me at this point how to resolve the issue. I will argue later that this complication will not arise if we adopt the somewhat radical modification of binding conditions, as proposed below.

To avoid this problem, one may assume that the child first pays attention to evidence that comes in the form of simplex sentences and the assignment of [+a] to *zibun* precedes the time at which occurrences of the "long-distance" *zibun* are taken into account by the child. But in the absence of a general theory of language acquisition that defines and distinguishes among the different levels

of accessibility of positive evidence, this remains to be sheer speculation. Furthermore, a similar problem still remains; i.e., upon encountering a long-distance *zibun*, how does the child choose between the two options; i.e. between (i) modifying binding condition A so as to remove the locality requirement and (ii) assigning [-a, +p] to the long-distance *zibun* while keeping the feature specification [+a, -p] for "short-distance" *zibun*?

⁸² According to Lasnik (1986, p. 162) (see footnote xx above), some languages such as Thai do not have condition C at all. Hence, for Lasnik (1986), it must be possible to eliminate, in addition to determine the possible value of, condition C altogether based on positive evidence. At this point, I am concerned only with the parametric difference between English and Japanese (and Vietnamese as described in Lasnik (1986)).

⁸³ See, however, Lust, et. al (1990) for a critique of Wexler and Manzini (1987).

⁸⁴ I disregard the question of whether *kare* is part of the children's lexicon.

⁸⁵ I am ignoring the parameter that allows Thai not to have condition C at all; cf. Lasnik (1986, p. 162). I am also ignoring the different values for the "domain" for condition A.

To the extent that the value of the "local domain" is subject to variation (as seems to be assumed in most works in literature on condition A), it is plausible that the "local domain" for condition C may also be subject to variation. It is technically possible to eliminate the parentheses in (171c) and state it as in (i).

(i) Condition C: [+r] categories must be free in its local domain.

One could assume that the unmarked "value for the local domain" for condition C is the matrix clause and the marked "value for the local domain" for it is the minimal NP or S (or the minimal Complete Functional Complex in the sense of Chomsky (1986, p. xx)). It is an interesting question whether the variation of the "value" for the local domain is tightly constrained in UG. From a learnability point of view, this should most likely be the case. In the unmarked cases, the local domain (the governing categories in Chomsky (1981)) for condition A and condition B are identical, i.e. the minimal NP or S (or the minimal Complete Functional Complex). Suppose that the local domain for condition C, when it is not the matrix clause, is also identical to that for conditions B and C. Then the determination of the relevant local domain for condition C would be quite simple. This

conception of the "local domain" seems plausible, at least in the unmarked cases; furthermore, as we will see later in this section, it is completely in accordance with the proposal that I will adopt at the end of this section.

⁸⁶ As to the three other categories that this "three feature" system predicts that we may find, Lasnik speculates that they are for NP-trace and arbitrary PRO, as indicated in (i).

- (i) a. [-a, -p, -r] NP-trace
b. [+a, +p, +r] and [+a, -p, +r] arbitrary PRO

For the relevant reasoning, see Lasnik (1986, pp.158-6).

⁸⁷ As it must be clear from the discussion so far, I am concerned with the feature determination for overt nominal categories. The feature assignment for empty categories seems much less likely to be subject to cross-linguistic variation, based in part on the apparent unlikelihood of positive evidence for such variations.

⁸⁸ An alternative has been suggested to me by O. Jaeggli (p.c.) that relies on the distinction between closed class categories and open class categories. Suppose that the open class of nominals are marked as [-a, -p] in UG and that in order for a category to be [+p] or [+a], it must be a member of a closed class and that the membership of a closed class is based on some morphological markings. This ensures that the non-locally bound instance of *John*, for example, does not qualify to be [+p], while being able to work as a trigger for the setting of the parameter for condition C for Japanese. This idea will be explored later.

⁸⁹ As indicated in footnote xx above, if it turns out that both social titles and epithets are pronominals or Names, then the generalization in (174) is indeed equivalent to that of Oshima's (1979).

⁹⁰ The behavior of these nominals with respect to condition D, repeated in (i), have indicated that the referential hierarchies among them are as in (ii).

(i) Condition D

A less referential expression may not bind a more referential one.

(Lasnik (1986, p. xx))

(ii) Names > Social Titles > Epithets (e.g. *aitu*), Pronouns (e.g. *kare*)

We have already seen that the hierarchy in (ii) cannot be directly

related to the binding theoretic features, as attempted in Lasnik (1986). It must be clear that the hierarchies in (ii) cannot be directly related to the binding features in Chomsky (1981, 1986), since it cannot even accommodate the hierarchy between Names ("pure" R-expressions) and anaphoric epithets. Notice that both of them are simply [-a, -p] in this system; cf. Lasnik's (1986, pp. xx) discussion.

Since our immediate concern here is how to assign features to different nominal categories based on their behavior with respect to conditions B and C, the summary here does not include discussion of (i) and (ii) with respect to Chomsky's and Lasnik's systems.

⁹¹ I continue to ignore the "BT-compatibility" refinement made in Chomsky (1986). Notice also that the difference between English and Japanese in terms of the domain restriction for condition A is not expressed in (176) and (177). See footnote xx above.

⁹² The motivation for the differentiation of the two in Lasnik (1986) comes from (i) their different behavior with respect to condition D and (ii) the Vietnamese data that he reports there, according to which "epithets" in this language are subject to condition B while not being subject to condition C. As for (i), we have already seen that the condition D-related phenomena do not warrant the postulation of binding theoretic features for nominal categories. As for (ii), this is exactly the way all the non-anaphoric overt nominal categories in Japanese behave. Thus if the proposal that is being discussed here is tenable, it automatically applies to Vietnamese. Hence the elimination of the distinction between epithets and Names does not have any adverse effects in itself.

⁹³ In fact, Lust, et. al. (in preparation) reports that the children of the age x whose performance they have monitored in a variety of ways almost never use zibun in the environment in which it is locally bound. This is also in conformity with the adult intuition about the usage of zibun that it is more natural to use it in non-locally bound environments. This intuition has contributed to the formulation of the hypothesis that zibun is a pronominal; cf. Fukui (1984) and Ueda (1984). As I have noted in footnote xx above, and as pointed out in Sportiche (1986), there is reason to believe that this move is misguided.

⁹⁴ N. Hyams (p.c.) has pointed out to me that in the language that the mothers use when talking to children, called Motherese, sentences like (i) are natural.

(i) (when talking to John)
a. So, what is John going to do today?

b. What did John do this afternoon?

When talking to an adult, on the other hand, sentences in (i) are not natural at all. By contrast, Japanese sentences like (186) are natural when the speaker is talking to an adult, Mr. Yamada.

⁹⁵ Notice that the validity of this argument is not so clear. After all, the first and the second person pronouns are essentially deictic. If a Name is considered to be deictic in the sense that it points to an individual that it denotes, then the relevant fact here does not necessarily indicate the "pronounhood" of Names (it might simply be an indication of the "deictic" nature of Names). But the question still remains as to why Japanese (186) are acceptable while their English counterparts are not, when addressed to Mr. Yamada.

⁹⁶ We will discuss whether social titles and the so-called epithets in Japanese belong to the closed class (in the sense here) later.

⁹⁷ It is, first of all, well-known that English personal pronouns, I, you, he and she will be expressed in Japanese in a number of different ways. As to the Japanese counterparts of the third-person pronouns in English, Martin (1975/87, p. 1074) states that "[w]hen modified by demonstratives, the more general words for 'person' (such as hito 'person' and ko 'child', HH) often function like the third-person pronouns of English 'he/him, she/her, it, they/them'...." As to the first persons pronoun, the following is a non-exhaustive list of nominals that may be used in place of the first-person pronoun in Japanese. Some of which are versions of others. Cf. Martin (1975/87, p.1075-1076), for example.

- (i)
a. watasi
b. watakusi
c. atakusi
d. atasi
e. watai
f. assi
g. wasi
h. boku
i. ore
j. uti
k. kotti

Kuno (1978, p. 127) describes the state of affairs regarding the pronouns in Japanese as follows. (I used '->' in place of Kuno's '-' for

the clear indication of the "derivation.")

Japanese lacks authentic pronoun for any grammatical persons. Most existing forms that correspond to pronouns in other languages are derived from nominal expressions: boku '(your) servant -> I', watakusi 'personal -> I', kimi 'lord -> you', anata 'far away -> you', omae 'honorable (person in) front (of me) -> you', kare 'thing far away -> he', kanozjo, 'far away woman -> she', karera 'far away + Plural -> they'.

Sakuma (1951/1983, p. 22) states that there are no third person pronouns in Japanese, that kono, sono and ano are added to hito 'person', kata 'person (honorific)', otoko 'man', onna 'woman', ko 'child' and so on, which express 'humans'. He also adds that due to the need for translation the word kare 'he' is sometimes used with a tone of translation, in some places (itibudewa). The following is the relevant passage from Sakuma (1951/1983, p. 22)

Tasyoo matawa sanninsyooto sitewa, gannrai tokubetuno ninnsyoodaimeisiga nakute, 'kono, sono, ano' o 'hito' ya 'kata' ya 'otoko' ya 'onna' ya 'ko' to yuu yoono hitogara o simesu goini tsukete tukaimasuga, honyakujyoono yookyuukara, 'kare' to yuu tangoga, itibudewa--honyakutyooowo obite motiirarerukotomo arimasu.

Mikai (1955/72, p. 184) also points out that "while the vocabulary of pronouns in any language tends to be rather rigid and stable, Japanese "I" and "you" are extremely liberal." He even notes that "one cannot deny the possibility that you 'you' and me 'me' will someday incorporated into the Japanese lexicon, very much like papa and mama." The translation of the relevant passage is not easy mainly because of Mikami's style of writing. For this reason, I will cite the relevant paragraph in Japanese below.

xxx
xxx

The considerations of the type noted above, among others, clearly indicate that the status of the so-called personal pronouns is far from being established, to say the least. I will return to this question in chapter 4.

⁹⁸ One may explore the possibility that this generalizes to the

assignment of the positive value for any syntactic feature. But the discussion of this possibility is beyond the scope of this work.

⁹⁹ A wide distribution of "missing arguments" in Japanese can be accounted for by the postulation of the zero pronoun, *pro*; cf. Kuroda (1965, Ch. 4), Ohso (19xx), Hoji (1985) Kameyama (1985) and Shibatani (1990, 365-367). It is, on the other hand, not clear how motivated the postulation of *PRO* is in Japanese; see Saxon (1990), xxx. (to be completed)

(to be added; on (i) *PRO* in Japanese, (ii) the status of *PRO* and (iii) the *PRO* theorem)

¹⁰⁰ One remaining question, obviously, is why sentences such as (192a) are somewhat acceptable for many speakers and even completely acceptable for some speakers, despite the apparent condition C violation.

Another problem is the fact that most speakers reject (i) more strongly than (ii).

- (i) **John_i likes/recommended him_i.
- (ii) *John_i likes/recommended John_i.

If, in accordance with the proposal being entertained here, (i) violates condition B and (ii) conditions B and C, we would expect that (i) is better than (ii), contrary to the fact. I will leave this problem unresolved in this chapter; but when we differentiate bound-variable anaphora and coreference in later chapters, taking essentially a Reinhartian approach to anaphora, we will again take up this problem, which has to do with the nature of condition C. A problem of this type is discussed in Reinhart (1983, pp. 168-170); see the references there also.

¹⁰¹ I am disregarding some subtle differences among them, which I will discuss later in this chapter as well as in chapters 6 and 7.

¹⁰² It is not clear that daremo in (194) is in an argument position. As suggested in Hasegawa (1986, 1987), for example, it is perhaps analogous to a "floating quantifier". Examples like (i) are given by Hasegawa to support this idea.

- (i) gakusei-ga daremo hon-o motte konakatta (koto)
student-NOM NO ONE book-ACC did not bring
'none of the students brought book(s)'

I will return to this and other related issues in chapter 4. If daremo in (i) is indeed a "floating quantifier", then the subject in (i) is most

likely the zero pronoun, pro. Still, the fact that *kare* cannot be used as a bound variable, unlike, for example, *zibun*, remains.

¹⁰³ I would like to thank N. Hyams for discussion that has resulted in the articulation of these processes as given here.

¹⁰⁴ It is not clear whether this means that the assignment of the value of the binding theoretic features is now contingent, at least in part, on "semantic properties" of the categories under discussion. To the extent that bound variable construal for category X is contingent upon X being A'-bound, the property under discussion might as well be a reflection of a SYNTACTIC property of such categories. Chapters 4 and 5 have more discussion on this and other related topics.

¹⁰⁵ Notice that although it has not yet been clearly articulated in the foregoing discussion, what appears in argument positions are NP's rather than N's. The nominals, whose lexical properties with respect to their binding theoretic features we are concerned with, are the heads of these NP's. In this sense, the preceding discussion must be prefixed with the qualification that the relevant lexical properties of nominals are determined by the distribution of the NP's that they head. With this qualification, I will, in the ensuing exposition, continue to use "nominals" and "categories" as in the the preceding discussion.

¹⁰⁶ While it is perhaps the case that the child experiences Step One earlier than Step Two, such ordering need not hence is not specified in (195).

¹⁰⁷ In the light of the fact that imperative sentences are most plausibly part of the data for the child, it must be assumed that the notion of the empty category, corresponding to the "deleted imperative *you*" is available to the child at a fairly early stage.

¹⁰⁸ There are two very relevant questions in this connection, both of which I must leave open at this point. One is how "general" the assignment of these features is, i.e., whether the assignment of the features is done for individual lexical items, one by one, or it is done, in part, for groups of lexical items. Notice if the feature assignment is done one by one, the child's null hypothesis, in terms of "sentence-production", would contain:

- (i) Don't use any NP locally bound unless there is evidence that they can.
- (ii) Once some non-locally bound categories have appeared as "bound variables", don't use any NP bound, unless there is evidence that it can.

I will argue in later chapters that the assignment must be done at least in part for groups of items. This assumes on the part of the child some knowledge based on which it can categorize nominals into groups; cf. xxx.

The other is whether the anaphoric epithets in English, which, as pointed out in Hornstein and Weinberg (1986?) and xx, may be construed as bound variables, will be marked [+p]. But to the extent that they obey condition C, as argued in Lasnik (1986) (cf. also Chomsky (1986, p. 79-80)), such feature assignment would result in the type of problem such as has led Lasnik to the "three-feature" system, as discussed above. I will return to this issue also in later chapters.

¹⁰⁹ As O. Jaeggli (p.c.) has pointed out, the fact that the covert pronouns in these languages may be construed as bound variables in some environments (cf. Montalbetti (1984) and Aoun (1986)) poses a problem with respect to the correlation between the feature assignment of [+p] and that of [-p] "for the rest of the [-a] categories, at the time Step Three-A has taken place". Recall that the latter feature assignment is crucial for the effects of condition C. (to be completed)

In addition, the process of [-p] marking as the result of [+p] marking seems somehow stipulative. Notice that when certain [-a] categories are marked [-a, +p], the rest of the [-a] categories are marked [-a, -p]. I will leave open here how this restricted type of "elsewhere" feature assignment can be motivated independently or how damaging it may be conceptually.

Another problem with this proposal is that binding conditions do not refer directly to [+p] at all while the [+/-p] feature is one of the two binding theoretic features. The [+p] feature is used only to "trigger" the [-p] assignment.

I will return to and further discuss these problems in later chapters, in which I explore an essentially Reinhartian (1983, 1986) approach to anaphora.

¹¹⁰ Lasnik (1976) also notes that "*they* in [(i)] cannot be understood as having *Tom* and *Bob* as intended referents" (p. 101)

- (i) They assume that *Bob* will talk to *Tom*.

If the possibility of overlapping coreference between X in an position NP_i and Y in position NP_k can be reduced to the possibility of

coreference between Z in NP_i and W in NP_k, as suggested in Lasnik (1976, p. 102), then the impossibility of overlapping coreference here can be attributed to the violation of condition D as well as condition C. Since the nature of condition D is not clear at this point, I will not discuss such cases of overlapping coreference until chapter 3.

¹¹¹ Chomsky has this statement followed by "(we do not interpret this sentence as referring to a situation in which some of the officers shot others)." (p. 94) It is not clear to me, based on the observation from Japanese that what is precluded from (196) is the interpretation in which "some of the officers shot other (officers). It is, on the other hand, rather clear to me that (196) cannot refer to a situation in which some of the soldiers who are officers shot themselves while the other soldiers who might or might not be soldiers shot some officers, some of them are doing the shooting.

¹¹² Violations of condition C, as well as condition B, are discussed in Bolinger (1979), Evans (1980) and Reinhart (1983), among others. More general discussion of such "violations" will be presented in chapter 6.

¹¹³ Not all nominals can be used in the position of X in (i).

(i) X Smith

Such nominals as professor, doctor and judge, for example, can. But it is not clear how acceptable to use as X in (i) nominals such as assistant professor, lecturer and (office) manager, despite the fact that these nominals too denote some kind of titles. In addition to such idiosyncrasies, it is furthermore not the case that all the nominals that can occur in the position of X in (i) can occur as in (ii).

(ii) the X

A similar situation obtains also in Japanese. There are some restrictions as to what nominals can occur as X in (iii), and furthermore not all nominals that can occur as X in (iii) can occur as X in (iv).

(iii) Yamada X

(iv) X

¹¹⁴ The data above raise a new question regarding how "syntactic" the effects of condition D are, since the head of the appositive

relative may not be in syntactic relation with the relative clause; cf. Emonds (1979?) and xx.

¹¹⁵ In terms of usage, then, the military register in English may be said to be quite similar to Japanese.

Chapter Three

On the Nature of Condition D

3.1. Introduction

In this chapter, we will first consider the nature of condition D. Recall a conclusion in chapter 2 that the referential hierarchies relevant for condition D cannot be directly related to binding theoretic features. We will now observe a crucial difference between condition D and condition B. While the former can be suspended when a certain structural condition is met, the latter cannot. This observation, together with the problem of how to syntactically characterize "referentiality", will lead us to the conclusion that condition D and condition B are of different natures, and that the former is a condition on linking and the latter is a condition on binding. A rule of linking that is contingent upon coindexation is proposed, and the condition on linking will be adopted from Higginbotham (1983). A conclusion at this point in the chapter is that linking and coindexation are both needed in linguistic theory.

Two related issues will then be discussed. One has to do with the putative generalization that *kare*, the so-called overt pronoun in Japanese, cannot be bound by the anaphor *zibun*. This observation is made in Lasnik (1986) and Aoun and Hornstein (1987) each with their respective different accounts. Under the proposed conception of condition D, and given the generalization of the suspension of condition D, such putative generalization is expected to be a consequence of independent considerations. It will be argued (i) that the contrast is not genuinely syntactic and (ii) that it is related to such notions as "point-of-view", "empathy" and "logophoricity" in the sense of Kuroda (1973), Kuno (1972) and many recent works such as xxx. The other has to do with the landing site of Scrambling. It has recently been proposed that the landing site of (at least short distance) scrambling is an A-position, capturing the fact that scrambling and NP-movement share a number of properties (Yoshimura (1989), Aoun and Li (1989?), Miyagawa (1990)). It will

be pointed out, however, that the landing sites of NP-movement scrambling cannot be generalized into one, based on the behavior of the moved NP with respect to condition D. It will be shown that while the former invokes condition D violation, the latter does not.

3.2. A Crucial Difference between B and D

So far, we have seen evidence for the following three generalizations:

- (1) a: Japanese does not exhibit effects of condition C in the standard sense.
b: Japanese has condition D.
c: Japanese has condition B.

It will be pointed out in this section that condition D and condition B are fundamentally different in nature. The relevant generalization that will be presented is that in certain configurations the effects of condition D can be suspended but such is not the case for condition B.

Let us first review the typical cases of condition D violations that we have observed. In each of the examples given below, a less referential expression binds a more referential one, with the referential hierarchy as given in (2).

- (2) a. Names > social titles > epithets
b. Names > social titles > pronouns
- (3) Names > social titles
 - a. *sensei_i-ga [s' Mary-ga [Yamada sensei]_i-o semetei u to] itta (koto)
Prof.-NOM Mary-NOM Prof. Yamada-ACC is criticizing that said
'prof._i said that Mary was criticizing Prof. Yamada.'
 - b. *sensei_i-ga [Yamada sensei]_i-no gakusei-o suisen:ita (koto)
prof-NOM Prof. Yamada-GEN student-ACC recommended
'prof._i recommended Prof. Yamada's students'
- (4) Names > epithets
(from footnote 5 of Lasnik (1986)).

a. *ano bakai-ga [s' Mary-ga Johni-o sonkeisite iru to] omotteiru (koto)
 that idiot-NOM Mary-NOM John-ACC respects that thinks
 'The idiot_i thinks Mary respects John_i'

b. *aitu_i-ga Johni-no hon-o nakusita (koto)
 that guy-NOM John-GEN book-ACC lost
 'that guy_i lost John_i's book'

(5) Social titles > epithets

a. *aitu_i-ga [NP[s' syatyoo-ga butyooi-ni cc_i watasita] syorui_i]-o
 that guy-NOM president-NOM chief-DAT passed document-ACC
 nakusita (koto)
 lost

'that guy_i lost the document that the president had given to the chief_i'

b. *aitu_i-ga butyooi-no buka-o sikatta (koto)
 that guy-NOM chief-GEN men-ACC scolded
 'that guy_i scolded chief_i's men'

(6) Names > pronouns

a. *karei-ga Susan-ni [s' Mary-ga Johni-o semeta to] itta
 he-NOM Susan-DAT Mary-NOM John-ACC criticized that said
 'he_i told Susan that Mary criticized John_i'

b. *karei-ga Johni-no hon-o suteta
 he-NOM John-GEN book-ACC discarded
 'he_i discarded John_i's book'

(7) Social titles > pronouns

a. *Mary-ga karei-ni kyoozyu_i-no gakusei-nituite hanasitagatteiru
 Mary-NOM he-DAT prof.-GEN student-about wants to talk
 'Mary wants to talk to him about prof_i's student'

b. *karei-ga kyoozyu_i-no hon-o nakusita
 he-NOM prof.-NOM book-ACC lost
 'he_i lost prof_i's book'

In all of the examples above, the relevant structure is as follows.

(8)



X is less referential than Y.

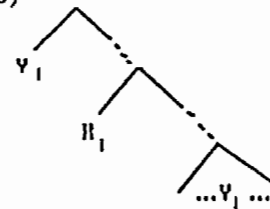
The binding in (8) is ruled out by Lasnik's (1986) condition D, which is repeated below.

(9) Condition D (so named in Huang (1987))
 A less referential expression may not bind a more referential one.

Lasnik (1986, pp.12-13)

What is most significant is that if we have another occurrence of Y, for example, as in (9), in which the additional occurrence of Y c-commands X, the resulting structure allows the relevant binding/coreference much more easily.¹

(10)



The suspension of condition D in the configuration of (10) is illustrated by the examples in (11) through (15) below.

(11) Names > social titles

a. (7) Yamada sensei-ga [NP[s' sensei-ga
 Prof. Yamada-NOM prof-NOM
 [s' Mary-ga [Yamada sensei]_i-o semeteiru to] itta] koto]-o
 Mary-NOM Prof. Yamada-ACC is criticizing that said fact-ACC
 kookaisiteiru (koto)
 is regretting
 'Prof. Yamada_i regrets the fact that prof_i said that Mary was criticizing Prof. Yamada_i'

b. (?) Yamada sensei-ga [s' sensei-ga [Yamada sensei]-no gakusei-o
 Prof. Yamada-NOM prof-NOM prof. Yamada-GEN student-ACC
 suisensurubeki da to] omotteiru (koto)
 should recommend that thinks

(12) Names > epithets

a. (?) Johni-wa [doosite aitui-ga [s'Mary-ga Johni-o
 John-TOP why that idiot-NOM Mary-NOM John-ACC
 sonkeisite iru to] omotteita ka] darenimo iwanakatta
 respects that thought Q(-ACC) no one(DAT) did not say
 'Johni did not tell anyone why that guyi thought Mary respected
 Johni'

b. (?) Johni-ga [s'aitui-ga Johni-no hon-o nakusita to] omoikondeita
 (koto)
 John-NOM that guy-NOM John-GEN book-ACC lost that believed
 'Johni believed that that guyi lost Johni's book'

(13) Social titles > epithets

a. (?) butyooi-ga [aitui-ga [NP[s' syatyoo-ga butyoo-ni ~~ga~~ watasita] syorui]-o
 chief-NOM that guy-NOM president-NOM chief-DAT passed document-ACC
 nakusita koto]-ni sekinin-o kanziteiru (koto)
 lost fact-at responsibility-ACC is feeling
 'Section chiefi feels responsible for the fact that that guyi lost the
 document that the president had given to chiefi'

b. (?) butyooi-ga [aitui-ga butyooi-no buka-o sikatta to] itta (koto)
 chief-NOM that guy-NOM chief-GEN men-ACC scolded that said
 'Chiefi said that that guyi had scolded chiefi's men'

(14) Names > pronouns

a. (?) Johni-ga [karei-ga Susan-ni [s' Mary-ga Johni-o semeta to] itta to.]
 John-NOM he-NOM Susan-DAT Mary-NOM John-ACC criticized that said that
 hakuzyoo sita (koto)
 confessed
 'Johni confessed that hej had told Susan that Mary criticized Johni'

b. (?) Johni-ga [karei-ga Johni-no hon-o suteta koto]-o kakusiteita (koto)
 John-NOM he-NOM John-GEN book-ACC discarded fact-ACC was hiding
 'Johni was hiding the fact that hej discarded Johni's book'

(15) Social titles > pronouns

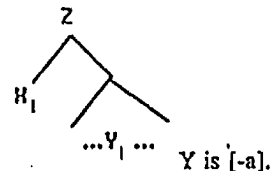
a. (?) kyoozyui-ga [s' Mary-ga karei-ni kyoozyui-no gakusei-niuite
 prof-NOM Mary-NOM he-DAT prof-GEN student-about
 hanasitagatteiru to] omotteita (koto)
 wants to talk that thought
 'profi thought that Mary wanted to talk to him about profi's
 student'

b. (?) butyooi-ga [karei-ga butyooi-no hon-o nakusita to] itta (koto)
 chief-NOM he-NOM prof-GEN book-ACC lost that said
 'chiefi said that hej had lost chiefi's book'

The examples in (11) through (15) minimally differ from those in (3) through (7). Only in the former is there another occurrence of a more referential expression that binds a less referential expression which in turn binds an occurrence of the more referential expression. The additional occurrence of the more referential expression is crucial for the suspension of the condition D effects in (11) through (15). For if the matrix subject in (11)-(15) were replaced by George, for example, the condition D effects are no longer suspended, and the resulting sentences have the same status as those in (3)-(7)

In sharp contrast to the condition D effects, the condition B effects cannot be suspended in this way. Consider (16), which schematically represents the structure for condition B.²

(16)



In chapter 2, we have observed a number of examples, many of which are taken from Oshima (1979), that illustrate condition B effects in Japanese. There, a generalization has been arrived at that the non-anaphoric categories in Japanese cannot be locally bound. Some relevant examples are provided below, some of which have been given in chapter 2.

(17) (Oshima's (1979) (3) and (5))³

a. *John_i-wa kare_j-ni iikikase-ta
'John told him (about something)'

b. *John_i-wa kare_j-o nagusame-ta
'John consoled him'

(18) (Shibatani's (106a) and (107a))⁴

a. *Taroo_i-wa kare_j-o osae-ta
Taroo-TOP he-ACC suppressed
'Taroo_i suppressed him_j.'

b. *Taroo_i-wa Hanako-ni kare_j-o sarakedasi-ta
Taroo-TOP Hanako-DAT he-ACC exposed
'Taroo_i exposed him_j to Hanako.'

(19)

a. *?John_i-ga John_j-o osae-ta (koto)
John_i-NOM John_j-ACC suppressed
'John_i suppressed/stopped John_j.'

b. *?Yamada sensei_i-ga Hanako-ni sensei_j-o sarakedasita (koto)
Prof. Yamada-NOM Hanako-DAT prof-ACC exposed
'Prof. Yamada_i exposed the professor_j (i.e. told everything about him) to Hanako.'

c. *John_i-ga nitu_j-o nagusameteita (koto)
John-NOM that guy-ACC was consoling
'John_i was consoling that guy_j.'

(20)

a. *butyoo_i-ga kinoo kare_j-ni [s' yappari kaisya-ga Bill-o
chief-NOM yesterday him-DAT after all company-NOM Bill-ACC
kubinisubekida to] iikikaseta (koto)
should fire that told
'section chief_i told him_j yesterday that the company should fire Bill after all'

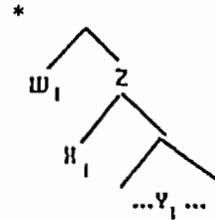
b. *John_i-ga kinoo John_j-ni [s' Bill-ga Mary-no hon-o
John-NOM yesterday John-DAT Bill-NOM Mary-GEN book-ACC
kaubekida to] iikikaseta (koto)
should buy that told
'John_i told John_j yesterday that Bill should buy Mary's book'

c. * [NP_i aitu/butyoo/John]_i-ga kinoo nitu_j-ni
that guy/section chief/John-NOM yesterday that guy-DAT
[s' keikaku-ga/wa kanarazu seikoo suru to] iikikaseta (koto)
plan-NOM/-TOP surely succeed that told
'[that guy/the section chief/John]_i told that guy_j yesterday that the plan would succeed for sure'

d. *?[syusyoo/Suzuki syusyoo]_i-ga kinoo syusyoo_j-ni
prime minister/PM Suzuki-NOM yesterday PM-DAT
[s' kondo-no senkyo-wa kanarazu katu to] iikikaseta (koto)
next election-TOP surely will that told
'[Prime Minister/PM. Suzuki]_i told PM_j yesterday that (they) will definitely win the election this time'

What is crucial here is that even if there is a non-local binder W for Y as schematized in (21), the marginal to impossible status of the sentences in (17) through (20) persists; see the footnote directly above (16).

(21)



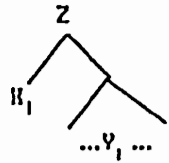
Y is [-a].

X is in the local domain of Y

W is outside the local domain of Y.

In other words, the status of (21) is the same as that of (16) above, repeated below as (22).

(22)



Y is [-a].
X is within the local domain of Y.

I will now illustrate that the addition of a non-local binder for Y as in (21) does not improve the availability of the binding/coreference possibility. Consider the examples in (23).

(23) (Cf. (17), from Oshima (1979))

- a. *John_i-wa [s' John_i-ga kare_j-ni soo iikikaseta to] itta
John-TOP John-NOM he-DAT so told that said
'John_i said that John_j told him_j so'
- b. *John_i-wa [John_i-ga kare_j-o nagusameta koto]-o kookaisiteiru
John-TOP John-NOM he-ACC consoled regrets
'John_i regrets that John_j had consoled him_j'

As indicated, the addition of another John in the matrix clause does not change the status of the sentences. Notice that the sentences in (24) are basically acceptable, due to the apparent absence of condition C effects in Japanese.

(24)

- a. John_i-wa [s' John_i-ga Mary_j-ni soo iikikaseta to] itta
John-TOP John-NOM Mary-DAT so told that said
'John_i said that John_j told Mary_j so'
- b. ?John_i-wa [John_i-ga Bill_j-o nagusameta koto]-o kookaisiteiru
John-TOP John-NOM Bill-ACC consoled regrets
'John_i regrets that John_j had consoled him_j'

The basically acceptable status of (24), as compared to (23), confirms that the unacceptability of (23) is NOT due to condition C.

The examples in (25), (26) and (27) illustrate the same point.⁵

(25) (Cf. (18), from Shibatani's (106a))

- *Taroo_i-ga [NP[s' Taroo_i-ga kare_j-o osacta] riyuu]-o hito-ni
Taroo-TOP Taroo-NOM he-ACC suppressed reason-ACC others-DAT
iwanakatta (koto)
did not tell
'Taroo_i did not tell the others the reason why Taroo_i suppressed him_j.'

(26) (Cf. (19).)⁶

- a. ?Yamada sensei_j-ga [s' Yamada sensei_j-ga Hanako-ni sensei_j-o
Prof. Yamada-NOM Prof. Yamada-NOM Hanako-DAT prof-ACC
sarakedasubekidatta to] omotteiru (koto)
should have exposed that thinks
'Prof. Yamada_j thinks that Prof. Yamada_j should have exposed the professor_j (i.e. told everything about him) to Hanako_i.'

- b. *John_i-ga [s' John_i-ga aitu_j-o nagusameta to] itta (koto)
John-NOM John-NOM that guy-ACC consoled that said
'John_i said that John_j consoled that guy_j.'

The marginal status of (19a) remains the same in (26a), despite the addition of another instance Yamada sensei in the matrix clause.

(27) (Cf. (20).)

- *?Suzuki syusyoo_i-wa [s' syusyoo-ga kinoo syusyoo_i-ni
PM Suzuki-TOP prime minister-NOM yesterday PM-DAT
[s' kondo-no senkyo-wa kanarazu katu to] iikikaseta to]
next election-TOP surely will that told that
kisyadan-ni happyoosita
reporters-DAT announced
'PM. Suzuki_i told the reporters that PM_j had told PM_j yesterday that (they) would definitely win the election this time.'

The acceptable sentences in (28) and (29) indicate that the status of (27) is not due to the repetition of syusyoo or to the mere complexity of the sentence.

(28)

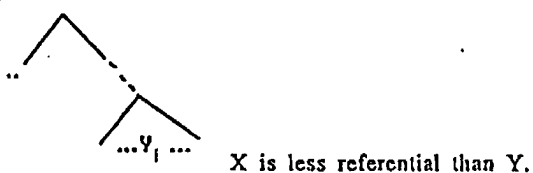
Suzuki syusyooi-wa [s' syusyoo-ga kinoo [NP syusyooi-no
 PM Suzuki-TOP prime minister-NOM yesterday PM-GEN
 kooensyatati-ni [s' kondo-no senkyo-wa kanarazu katu to]
 iikikaseta to]
 supporters-DAT next election-TOP surely will that told that
 kisyadan-ni happyoosita
 reporters-DAT announced
 'PM. Suzuki_i told the reporters that PM_i had told PM_i's supporters
 yesterday that (they) would definitely win the election this time'

(29)

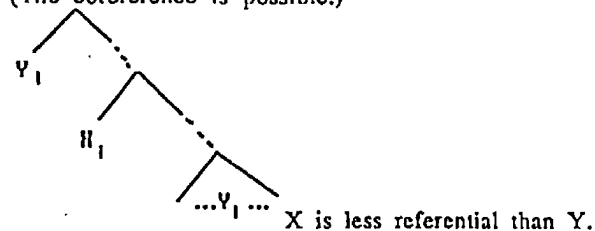
Suzuki syusyooi-wa [s' syusyoo-ga kinoo zibun_i-ni
 PM Suzuki-TOP prime minister-NOM yesterday self-DAT
 [s' kondo-no senkyo-wa kanarazu katu to] iikikaseta to]
 next election-TOP surely will that told that
 kisyadan-ni happyoosita
 reporters-DAT announced
 'PM. Suzuki_i told the reporters that PM_i had told himself_i yesterday
 that (they) would definitely win the election this time'

In this section, we have seen that the condition D effects, but not the condition B effects, can be "suspended" in a certain structure. That is, the marginal to impossible coreference in (30) improves significantly in (31) while the marginal to impossible binding/coreference in (32) remains the same in (33).

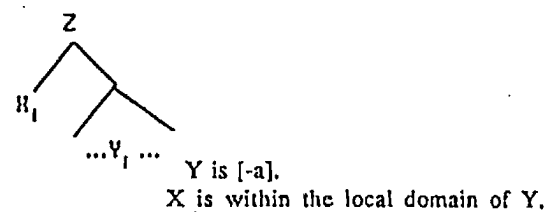
(30) (The coreference is not possible.)



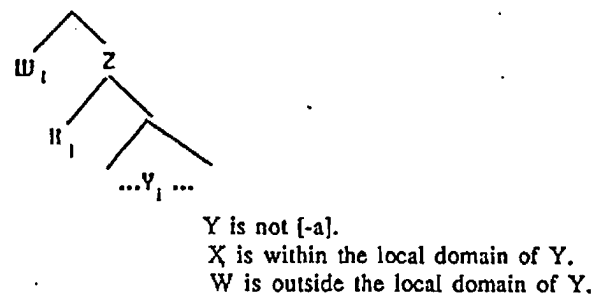
(31) (The coreference is possible.)



(32) (The coreference is not possible.)



(33) (The coreference is not possible.)



3.3. On the Nature of Condition D

In this section, the nature of condition D will be considered, as contrasted to condition B, in light of the preceding discussion. A proposal will be made to capture the generalizations noted in the previous section. It will be argued that condition D is a condition on linking while condition B is a condition on binding.

3.3.1. A Proposal on Linking

Consider again the two conditions that are being discussed.

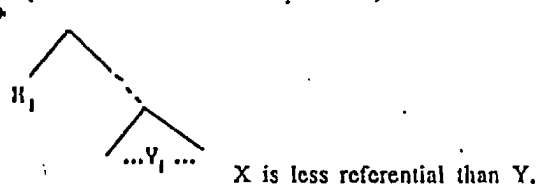
(34) Condition B: A [-a] category must be free in its local domain.

(35) Condition D: (Lasnik (1986))
A less referential expression may not bind a more referential one.

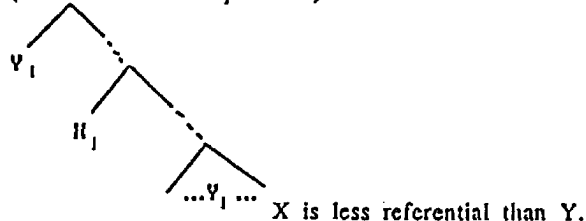
Condition B refers to a binding theoretic feature.⁷ Condition D, by contrast, does not refer to a binding theoretic feature. We have furthermore seen in chapter 2 that the referential hierarchy relevant to condition D cannot be directly related to binding theoretic features, contra Lasnik (1986). It thus seems that condition D and condition B differ in a rather fundamental way. In this section, I propose that while condition B is a condition on binding, condition D is on linking.

Let us first review the fundamental difference between the two conditions. Consider the schematic structures in (36) through (39).

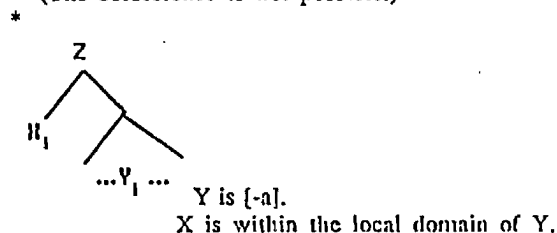
(36) Condition D
(The coreference is not possible.)



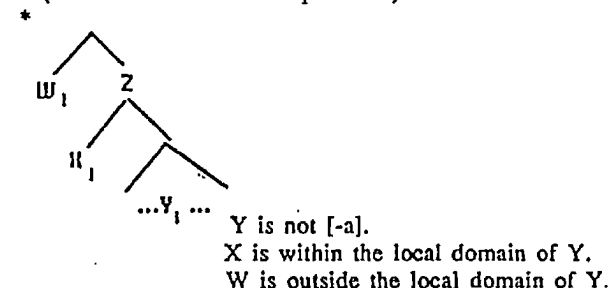
(37) Condition D Suspended
(The coreference is possible.)



(38) Condition B
(The coreference is not possible.)



(39) Condition B NOT Suspended
(The coreference is not possible.)



Notice, first of all, that according to condition D given in (35), (37) should be ruled out completely on a par with (36). With or without another occurrence of Y, X binds Y that it c-commands in (37). Contrary to the case of condition D in (36) and (37), the addition of another occurrence of Y does not affect condition B effects as indicated in (38) and (39).

The intuition behind the suspension of condition D is that the effects of condition D can be suspended as long as there is another possible antecedent for X in a position higher than X. It thus appears that the presence of another antecedent, i.e. the higher Y, for X, saves the structure in (37). The relevance of the notion "antecedence" here reminds us of the linking approach of Higginbotham (1983, 1985), which reintroduces the asymmetrical "antecedent-of" relation into the theory of referential association.

In the binding theory of Chomsky (1981, 1986), the referential association between John and his in (40) is expressed by means of coindexation, as indicated.

- (40) a. John_i loves his_i father.
 b. His_i father loves John_i.

This is the notation that has been adopted throughout the present discussion. The impossible cases of referential association such as those in (41) and (42) are ruled out by binding conditions that crucially utilize the notion "bind", which in turn makes a crucial use of the notion "coindexation".



(41) *He_i loves John_i's father.

(42) *John_i loves his_i father.

As we have seen, (41) is ruled out by condition D (and maybe condition C as well); and (42) by condition B. The definition of "bind" is repeated in (43).

- (43) Definition of "Bind"
 X binds Y if and only if X and Y are coindexed and X c-commands Y.

In an alternative to this approach, proposed in Higginbotham (1983, 1985), the notion "antecedent-of" is taken to be a primitive notion in linguistic theory. Under this approach referential dependency is represented by means of "Linking", as in (44).

- (44) a. 
 b. 

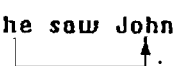
The head and the tail of the arrows indicate an antecedent and that which takes it as an antecedent, respectively. In (44), his is linked to John, indicating that John is an antecedent of his. Higginbotham suggests "a universal principle" in (45a).⁸

- (45) (Higginbotham (1983, p. 402))
 a. If X c-commands Y, then Y is not an antecedent of X.

The notion "antecedent-of" is defined as in (45b).

- b. Y is an antecedent of X if X is linked to Y or, for some Z, X is linked to Z and Y is an antecedent of Z.

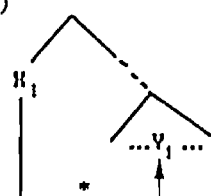
Condition in (45a) rules out structures like (46).⁹

- (46) 

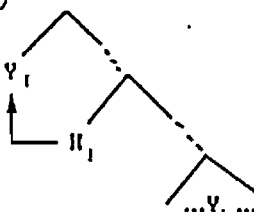
Suppose that we adopt (45a), which I restate as in (47).

- (47) The Condition on Linking
 If A c-commands B, A cannot be linked to B.

The structure in (36) is then ruled out because the linking indicated in (48) is illicit due to the condition in (47).

- (48) 
 X is less referential than Y.

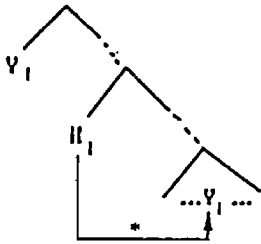
The structure in (37) on the other hand must be licit. Let us therefore assume that (37) may have linking as indicated in (49).

- (49) 
 X is less referential than Y.

The linking in (49) does not violate the condition in (47) since X does not c-command Y.

In order to rule out (36) by the condition in (47), the linking indicated in (48) must be obligatory. On the other hand, the same linking must not be obligatory so as to allow the "suspension of condition D" in (37), hence in (49). Otherwise, (37) would have the linking as indicated in (50) and the structure would, incorrectly, be ruled out by the condition in (47).

(50)



To achieve these two goals, I propose the following.¹⁰

(51) The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

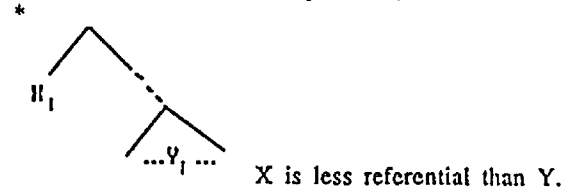
- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

As it is formulated here, Z may be Y in (51).

It is thus proposed, contra Higginbotham (1983, 1985), that the linking is not free. It is in fact assumed that linking takes place only by the rule (RL) in (51). Notice that linking is contingent on coindexation, as indicated in (51). Let us consider (36) and (37) again, which are repeated below, in light of the RL in (51) and the CL in (47).

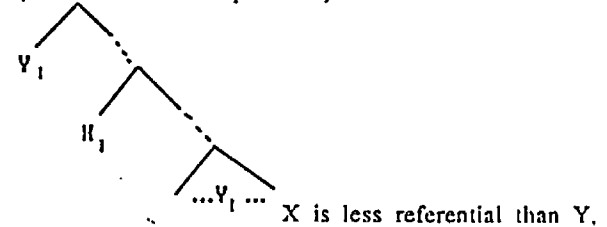
(36) Condition D

(The coreference is not possible.)



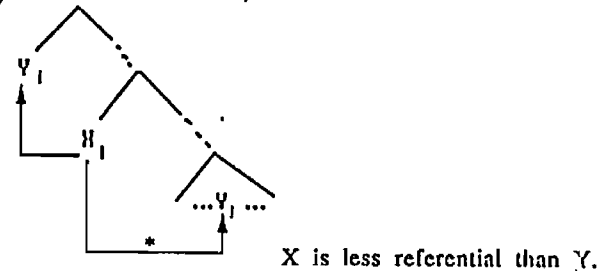
(37) Condition D Suspended

(The coreference is possible.)



In (36), X must be linked to Y in accordance with the RL in (47). But this linking results in the violation of CL in (51). In (37), on the other hand, X can be linked to either occurrence of Y in accordance with the RL. One of the two is compatible with the CL in (51), namely the linking to the higher Y, as indicated in (52).

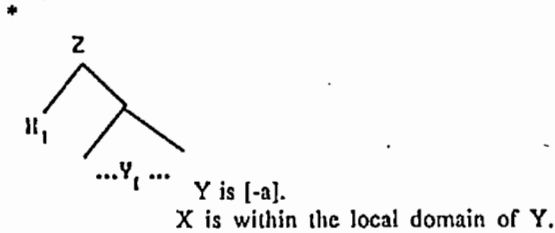
(52)



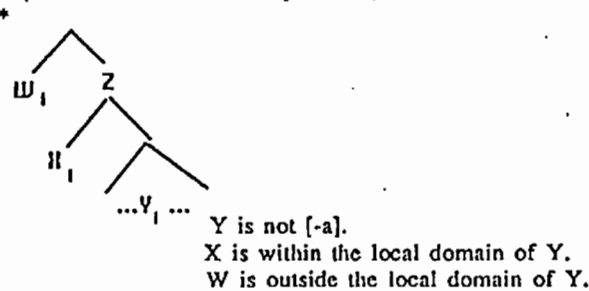
Thus the coreference in (37) is accounted for.

Let us now turn to condition B. Consider again the structure in (38) and (39), repeated below.

- (38) Condition B
(The coreference is not possible.)



- (39) Condition B NOT Suspended
(The coreference is not possible.)



Condition B is stated in terms of binding, rather than in terms of linking. Condition B is repeated in (53).

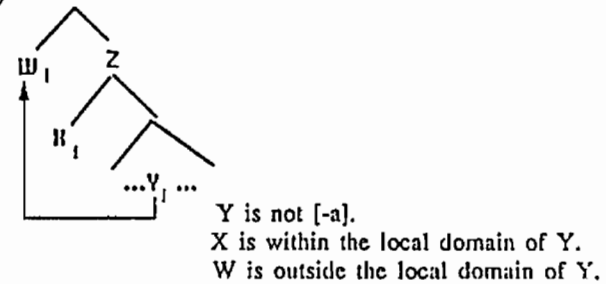
- (53) Condition B: A [-a] category must be free (i.e. not bound) in its local domain.

Since the condition is stated in terms of "binding", i.e. "c-command" and "coindexation", the addition of another possible "antecedent" as in (39) should not minimize the effects of this condition. Suppose that condition B were stated in terms of linking, such as in (54a) given in Higginbotham (1985) or as in (54b); cf. footnote xx.

- (54) a. A pronoun cannot be linked in its local domain.
b. A [-a] category cannot be linked in its local domain.

Condition B, as formulated in (54), would allow the linking in (55).

(55)



The structure and the linking indicated in (55) corresponds to (56).

(56)

John-ga [_S John-ga kare-o Verb COMP] Verb

Sentences of the structure (57) do not allow coreference, as we have seen as cases of condition B violations.

(57) John_i-ga [_S John_i-ga kare_i-o V COMP] V

Thus we should not allow the linking as indicated in (56) and (55). This is in sharp contrast with the case of condition D suspension, which has a structure as given in (58), for example.

(58)

John-ga [_S kare-ga [_{NP} John-no N']-o Verb COMP] Verb

We must allow the linking in (58).

The problem simply disappears if condition D is a condition on linking while condition B is a condition on binding. The "escaping" or "suspension" from the condition by means of linking is not available in the case of condition B because this condition is not a condition on linking but on binding.

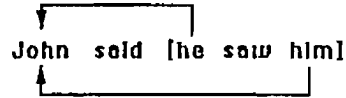
The situation here may remind us of Higginbotham's "transitivity condition (after Jackendoff (1972))". Higginbotham (1983, p. 406) proposes a condition in (59) to rule out the unwanted linking shown in (60).

(59) (Higginbotham's (1983) (43))

If X and Y share an antecedent and Y c-commands X, then Y is an antecedent of X.

(Definition: X and Y share an antecedent if some argument Z is antecedent of both.)

(60) (Higginbotham's (1983) (42))



Higginbotham (1985, p. 570) states:

"The antecedent John of both pronouns in [(60)] is outside the tensed S containing them; however, the sentence cannot mean that John said that he, John, saw himself. The transitivity condition was to rule out [(59)] by requiring that if X and Y shared an antecedent, one c-commands the other, then one was the antecedent of the other."

In order to rule out (56) by some extension of the transitivity condition, we would have to say something like the following.

(61) Transitivity Condition

If X is an antecedent of Y and if there is an argument Z that has the same value as X, then Z is an antecedent of Y.

In accordance with the definition of "antecedent-of" in (45b), repeated below, X must either be linked to Y or linked to an antecedent of Y in order for Y to be an antecedent of X.

(45b) Y is an antecedent of X if X is linked to Y or, for some Z, X is linked to Z and Y is an antecedent of Z.

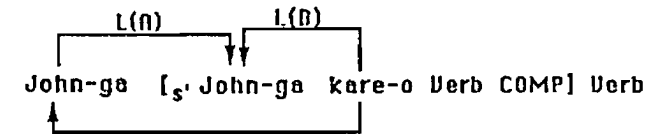
In (56), repeated below, the embedded subject John must then be an antecedent of him, since the matrix subject John is an antecedent of him due to the latter being linked to the former and since the embedded John and the matrix John presumably share a value.

(56)



In accordance with (61), this means that we must have the linking indicated as L(A) or that indicated as L(B) in (62).

(62)

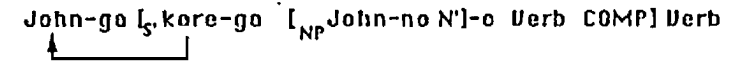


But, the linking L(A) violates the condition on linking in (47) (as well as the condition in (iii) in the footnote x); and the linking L(B) violates the linking version of condition B in (54). Thus it appears that, with the version of transitivity condition in (61), we can rule out the structure in (57).

This account, however, does not extend to the structure in (63), which is represented in terms of linking in (58), repeated here.

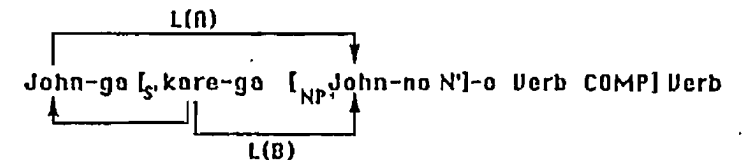
(63) John_i-ga [s' kare_i-ga [NP John_i-no N']-o Verb] Verb

(58)



For in (58), the matrix John is an antecedent of kare; and hence the embedded John must also be an antecedent of kare. But this requires one of the two linkings to be designated as L(A) and L(B) in (64) below.

(64)



Note, however, that in (64) not only the linking L(A) but also the linking in L(B) violates the CL given in (47). Thus the adoption of the transitivity condition in (61), while enabling us to account for the absence of the suspension of condition B, leaves the suspension of condition D unaccounted for.

I thus conclude that the linking approach cannot simultaneously account for the suspension of condition D and the non-suspension of condition B in Japanese.¹¹ We have already seen that a straightforward account for them is available under the assumption that condition D is a condition on linking and condition B is a condition on binding. Hence, we have evidence that both linking and binding are needed in linguistic theory.

It is clear, as we have observed earlier, that the binding approach alone cannot account for these generalizations, either. For if both conditions D and B are stated in terms of binding and hence are conditions on binding, the suspension of condition D will be left unaccounted for.

One may stipulate that the transitivity condition in (61) applies in the case of condition B but not in the case of condition D. Within the linking approach, this stipulation makes the description of the data possible.¹² However, not only does this leave the question of why such a stipulation is needed, but it also fails to capture the fact that while condition B simply refers to all the non-anaphors, i.e. [-a] categories, condition D refers to referential hierarchies that cannot be directly related to binding theoretic features (or perhaps to any syntactic or grammatical features). While the precise nature of the difference between the linking condition, i.e. condition D, and binding conditions such as condition B, is not clear yet, differentiating them in this way seems to be a step forward in understanding the phenomena of referential association in natural language.

The analysis proposed here thus argues, strongly, against replacing binding conditions entirely by conditions on linking. At the same time, it also clearly indicates the necessity of linking in addition to binding (= "c-command" and "coindexation").

3.3.2. On the Suspension of Condition D

Consider again the Rule of Linking (RL), repeated in (65).

(65) The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

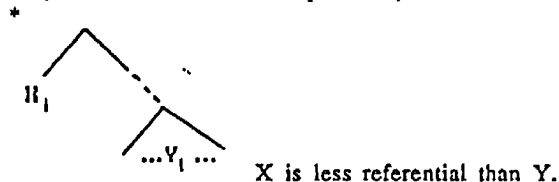
In the preceding section, we have seen that the RC, together with the condition on linking (CL), repeated in (66), accounts for the impossible coreference in (67) as well as the possible coreference in (68).

(66) The Condition on Linking (a restatement of Higginbotham (1983, p. 402))

If A c-commands B, A cannot be linked to B.

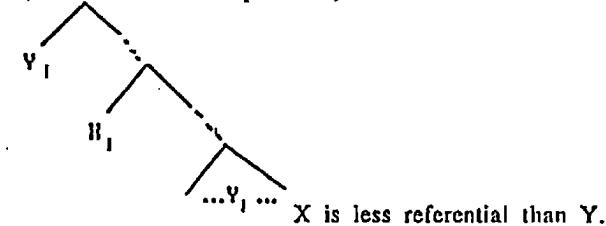
(67) Condition D

(The coreference is not possible.)



(68) Condition D Suspended

(The coreference is possible.)



Given the structure in (67), X must be linked to Y, under the assumption that there is no Z that is coindexed with X and Y in the structure (and that is more referential than or equally referential to Y). (Recall that as it is formulated in (65), Z may be Y itself.) The linking from X to Y in (67), however, results in the violation of the CR since X c-commands Y. This is illustrated in (69).

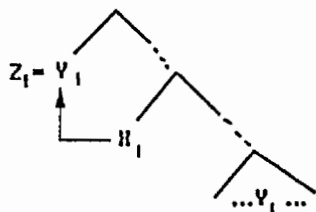
(69)



X is less referential than Y.

Now, the RL in (65) states that, given the structure in (67), X must be linked to some Z that is both (i) coindexed with X (and hence with Y) and (ii) more referential than or equally referential to Y. Z may be but need not be Y itself. Hence, if there is Z that is distinct from Y, as in (68) (although Z is in fact Y (the "higher" Y in this case)), X may be linked to the Z (i.e., the "higher" Y). This is illustrated in (70).

(70)

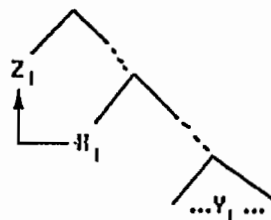


X is less referential than Y.

Since the linking in (70) does not violate the CR, the coreference is allowed in this structure. This is the account of the suspension of condition D proposed in the previous section. In this section, I will consider several additional structures whose grammaticality is predicted by the RL and the CR.

First of all, the RL in (65) would also allow the structure in which Z is more referential than Y. The schematic structure would then be (71).

(71)



Z > Y > X (A > B means that A is more referential than B.)

The sentences like (72) are of this structure and the coreference here indeed seems possible, as compared to the typical case of condition D violation given in (73).

(72)

(7) Matsumoto sensei-wa/-ga [s' kanozyo_i-ga [NP_i Taroo-ga
Teacher Matsumoto-TOP/-NOM she-NOM Taroo-NOM
sensei-no ic-made todoketa repooto]-o
teacher-GEN house-to delivered report-ACC
ic-ni wasurete kita to] omotteita (koto)
house-in forgot that thought
'Ms. Matsumoto_i thought that she_i left in (her) house the report
that Taroo had delivered to the teacher's house'

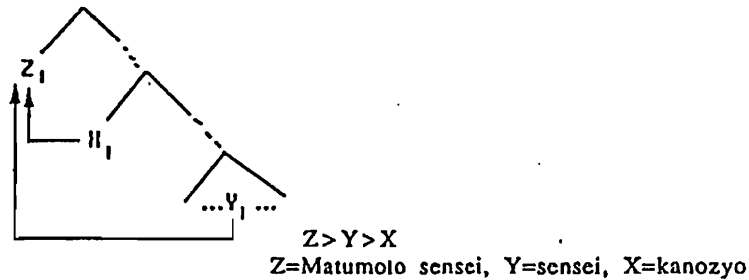
(73)

*Ziroo-wa/-ga [s' kanozyo_i-ga [NP_i Taroo-ga
Jiroo-TOP/-NOM she-NOM Taroo-NOM
sensei-no ic-made todoketa repooto]-o
teacher-GEN house-to delivered report-ACC
ic-ni wasurete kita to] omotteita (koto)
house-in forgot that thought
'John thought that she_i left in (her) house the report that Taroo
had delivered to the teacher's house'

The contrast between (72) and (73) is clear. In (73) *kanozyo* must be linked to *sensei* since they are coindexed and since the latter is more referential than the former. However, *kanozyo* c-commands *sensei*; hence the resulting linking violates the CL. In (72), unlike in (73), there is *Matsumoto sensei*, which is also coindexed with *kanozyo* (hence with *sensei* too). Since *kanozyo* does not c-command *Matsumoto sensei*, the linking from the former to the latter does not violate the CL.

In (73), another linking must take place in accordance with the CL. Notice that sensei and Matsumoto sensei are coindexed, and the former is less referential than the latter. This means that sensei must be linked to Matsumoto sensei; and this linking does not violate the CL since sensei does not c-command Matsumoto sensei. Thus the structure in (74) represents the coreference in (72) in terms of linking.

(74)



The minimal pair in (74) and (75) below mirrors that in (72) and (73).

(75)

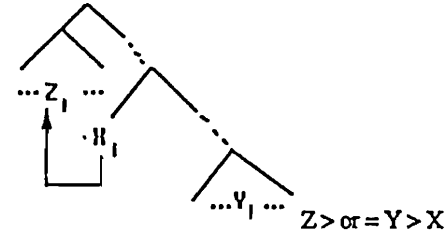
- (7) Yamada katyooi-wa/-ga [karej-ga kaytooj-no buka-ni nani-o
Chief Yamada-TOP/-NOM he-NOM chief-GEN men-DAT what-ACC
itta ka] yoku oboeteinai. (koto)
said Q well does not remember
'Section Chief Yamada_i does not remember well what he_i had
told the section chief's men'

(76)

- * Susan-wa/-ga [karej-ga kaytooj-no buka-ni nani-o
Susan-TOP/-NOM he-NOM chief-GEN men-DAT what-ACC
itta ka] yoku oboeteinai (koto)
said Q well does not remember
'Susan does not remember well what he_i had told the section
chief's men'

Second, the RL does not require that Z c-command X or Y. This means that we predict that the structure in (77) yields coreference.

(77)



The examples in (78), in which Z is as referential as Y, confirm this prediction.¹³

(78)

- a. [Johnj-no gakusei]-ga karej-ni [s' Mary-ga Johnj-o
John-GEN student-NOM he-DAT Mary-NOM John-ACC
hiansiteiru to] tugeta (koto)
is criticizing that told
'Johnj's student told himj that Mary was criticizing Johnj'
- b. [Johnj-no sensei]-ga minna-ni
John-GEN teacher-NOM all-DAT
[s' karej-ga LI-ni Johnj-no ronbun-o okutta to] itta (koto)
he-NOM LI-to John-GEN paper-ACC sent that said
'Johnj's teacher told everyone that hej had sent Johnj's paper to LI'

As we have observed earlier, without the occurrence of John that is not c-commanded by kare, the sentences exhibit the typical condition D effects, as indicated in (79).

(79)

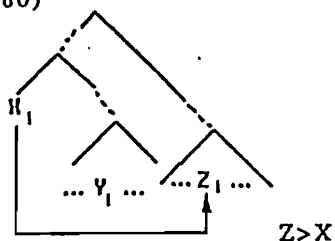
- a. *Susan-ga karej-ni [s' Mary-ga Johnj-o hiansiteiru to] tugeta (koto)
Susan-NOM he-DAT Mary-NOM John-ACC is criticizing that told
'Susan told himj that Mary was criticizing Johnj'
- b. *Susan-ga minna-ni [s' karej-ga LI-ni Johnj-no ronbun-o okutta to]
Susan-NOM all-DAT he-NOM LI-to John-GEN paper-ACC sent that
itta (koto)
said
'Susan told everyone that hej had sent Johnj's paper to LI'

Relevant sentences can be constructed also with other pairs of nominal expressions that we have considered in chapter 2.

Furthermore, the structure in which Z is more referential than Y in (77) also allows coreference among X, Y and Z, as we predict. In that structure, Y must be linked to Z; and this linking does not violate the CI. The relevant examples, however, are not provided here for space considerations.

Thirdly, as pointed out to me by O. Jaeggli (p.c.), this analysis predicts that structures like (80) and allow coreference, since the RL does not require that Z precede X or Y.

(80)



The examples below illustrate that the structure of (80) indeed allows coreference, in contrast to the structure in which there is no Z to which X can be legitimately linked.

(81)

- a. * $[NP[S'$ ecj [karej-ga Johnj-no gakusei-ni kibisisugiru to yuu he-NOM John-GEN student-DAT too strict that uwasa]-o nagasita] otoko]-ga gaku \dot{h} utyoo \dot{k} -ni ayamatta (koto) rumor-ACC spread man-NOM chairperson-DAT apologized 'the man who had spread the rumor that hej is too hard on Johnj's students apologized to the chairperson \dot{k} '
- b. [karej-ga Johnj-no gakusei-ni kibisisugiru to yuu uwasa]-ga he-NOM John-GEN student-DAT too strict that rumor-NOM Johnj-o odorokaseta (koto) John-ACC surprised 'the rumor that hej is too hard on Johnj's students has surprised Johnj'

- c. $[NP[S'$ ecj [karej-ga Johnj-no gakusei-ni kibisisugiru to yuu he-NOM John-GEN student-DAT too strict that uwasa]-o nagasita] otoko]-ga Johnj-ni ayamatta (koto) rumor-ACC spread man-NOM John-DAT apologized 'the man who had spread the rumor that hej is too hard on Johnj's students apologized to Johnj'

The coreference between John and kare in (81a) is not allowed as a typical case of condition D violation. In (81b) and (81c), in which the matrix John has been added, the coreference is allowed. The pair in (82) below exhibits the same contrast.

(82)

- a. *Mary-ga $[NP[S'$ eck karej-ni tyokusetu [Johnj-no kenkyuu-no Mary-NOM he-DAT directly John-GEN research-GEN koto]-o kikitagatteita] otoko \dot{k}]-ni atta (koto) things-ACC wanted to hear man-DAT met 'Mary met the man who wanted to directly ask himj about Johnj's research'
- b. Mary-ga $[NP[S'$ eck karej-ni tyokusetu [Johnj-no kenkyuu-no Mary-NOM he-DAT directly John-GEN research-GEN koto]-o kikitagatteita] otoko \dot{k}]-ni Johnj-o syo \dot{o} kaisita (koto) things-ACC wanted to hear man-DAT John-ACC introduced 'Mary introduced Johnj to the man who wanted to directly ask himj about Johnj's research'

The examples like (83) illustrate the possibility of coreference when Z is embedded in a larger constituent.

(83)

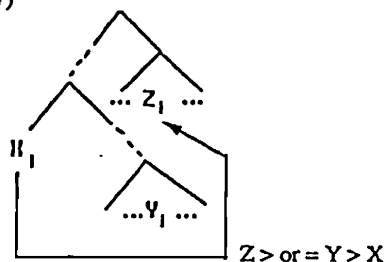
- a. [karej-ga Johnj-no 'gakusei-ni kibisisugiru to yuu uwasa]-ga he-NOM John-GEN student-DAT too strict that rumor-NOM Johnj-no okusan-o odorokaseta (koto) John-GEN wife-ACC surprised 'the rumor that hej is too hard on Johnj's students has surprised Johnj's wife'
- b. $[NP[S'$ ecj [karej-ga Johnj-no gakusei-ni kibisisugiru to yuu he-NOM John-GEN student-DAT too strict that uwasa]-o nagasita] otoko]-ga Johnj-no okusan-ni ayamatta (koto) rumor-ACC spread man-NOM John-GEN wife-DAT apologized

'the man who had spread the rumor that he_i is too hard on John_i's students apologized to John_i's wife'

- c. Mary-ga [NP[S' eck_i kare_i-ni [John_i-no kenkyuu-no koto]-o
 Mary-NOM he-DAT John-GEN research-GEN things-ACC
 kikitagatteita] otoko_x-ni John_i-no hisyo-o syookaisita (koto)
 wanted to hear man-DAT John-GEN secretary-ACC introduced
 'Mary introduced John's secretary to the man who wanted to ask
 him_i about John's research'

Fourthly, we predict that the coreference is possible also in the structure in (84).

(84)



Although the judgments are less clear here, NP's such as (85) and (86) seem to yield the indicated coreference more easily than (87) and (88).

(85)

- a. ?[NP[S' kare_i-ga John_i-no hahaoya-o totemo daizinisiteita
 he-NOM John-GEN mother-ACC much was taking good care of
 koro]-no [John_i-no koibito]
 time-GEN John-GEN girlfriend
 '[John's girlfriend] at the time when he_i was taking very good care
 of John's mother'

- b. ?[NP[S' sensei_i-ga Yamada sensei_i-no gakusei-o
 prof-NOM Prof. Yamada-GEN student-ACC
 kibisiku sidoositeita koro]-no [Yamada sensei_i-no kennkyuusitu]
 strictly was supervising time-GEN Prof. Yamada-GEN office
 '[Prof. Yamada's office] at the time when prof_i was supervising
 Prof. Yamada's students strictly'

(86)

- a. ?[NP[S' kare_i-ga John_i-no hahaoya-o totemo daizinisiteita
 he-NOM John-GEN mother-ACC much was taking good care of
 koro]-no [John_i-no koibito]
 time-GEN John-GEN girlfriend
 '[John's girlfriend] at the time when he_i was taking very good care
 of John's mother'

- b. ?[NP[S' sensei_i-ga Yamada sensei_i-no gakusei-o
 prof-NOM Prof. Yamada-GEN student-ACC
 kibisiku sidoositeita koro]-no [Yamada sensei_i-no kennkyuusitu]
 strictly was supervising time-GEN Prof. Yamada-GEN office
 '[Prof. Yamada's office] at the time when prof_i was supervising
 Prof. Yamada's students strictly'

(87)

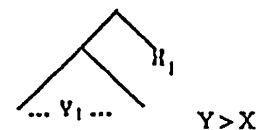
- a. *kare_i-ga John_i-no hahaoya-o totemo daizinisiteita (koto)
 he-NOM John-GEN mother-ACC much was taking good care of
 'he_i was taking very good care of John's mother'
- b. *sensei_i-ga Yamada sensei_i-no gakusei-o kibisiku sidoositeita (koto)
 prof-NOM Prof. Yamada-GEN student-ACC strictly was supervising
 'the professor_i was supervising Prof. Yamada's students strictly'

(88)

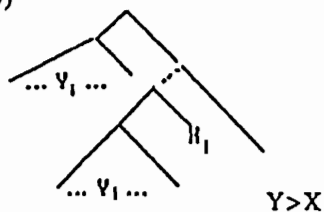
- *?[NP[S' Mary-ga John_i-no hahaoya-o totemo daizinisiteita
 Mary-NOM John-GEN mother-ACC much was taking good care of
 koro]-no kare_i
 time-GEN he
 'him_i (i.e. that person_i) at the time when Mary was taking very
 good care of John's mother'

Next, we also predict that the structure in (89), which the NP in (88) has, would allow coreference, once it is embedded in a larger structure, as, for example, in (90).

(89)



(90)



NP's of the structure in (89) typically do not allow the relevant coreference as in (88) above. This has been compared, in chapter 2, with NP's such as (91) below, in which kare is embedded in the head NP.¹⁴

(91)

[?][NP[S' Mary-ga Johni-no hahaoya-o totemo daizinisiteita
 Mary-NOM John-GEN mother-ACC much was taking good care of
 koro]-no [karei-no katei-no zizyoo]
 time-GEN he-GEN family-GEN circumstances
 'his_i (i.e. that person_i's) family situation] at the time when Mary
 was taking very good care of John_i's mother'

Examples such as (92) indicate that the structure in (90) indeed seems to yield the relevant coreference more easily than in (89).

(92)

[?]Johni-ga [S' [NP[S' Mary-ga Johni-no hahaoya-o totemo
 John-NOM Mary-NOM John-GEN mother-ACC much
 daizinisiteita] koro]-no karei]-ga
 was taking very good care time-GEN he-NOM
 itiban yoku hataraita to] itteiru (koto))
 most hard worked that is saying
 'John_i says that [[he_i (i.e. that person_i)] at the time when Mary of
 taking very good care of John_i's mother] worked the hardest'

The example in (93) clearly shows that the matrix John is crucial in the improvement of the coreference possibility in (92), as compared to (88).¹⁵

(93)

[?]Susan-ga [S' [NP[S' Mary-ga Johni-no hahaoya-o totemo
 Susan-NOM Mary-NOM John-GEN mother-ACC much
 daizinisiteita] koro]-no karei]-ga
 was taking very good care time-GEN he-NOM
 itiban yoku hataraita to] itteiru (koto))
 most hard worked that is saying
 'Susan says that [[he_i (i.e. that person_i)] at the time when Mary of
 taking very good care of John_i's mother] worked the hardest'

Many more intricate predictions are in fact made by this analysis, including cases in which the referential hierarchy among Z, Y and X is as in Z>Y>X rather than Z=Y>X. The examples given above with the hierarchy of Z=Y>X can be converted to examples with the hierarchy of Z>Y>X, following the pattern in (75). Since the judgments become significantly more difficult to make in many of these complex cases, I will not discuss them here.¹⁶ I, however, find the contrasts noted in this section as a sufficient body of evidence that supports the proposed account of condition D effects as well as the suspension of it.¹⁷

In the next section, I will present evidence that this account, as one would expect, extends to English, indicating that we can observe cases of the suspension of condition D in English as well.

3.4. The Suspension of Condition D in English

As Lasnik (1986, p. 162) suggests, there is good reason to suspect that condition D is universal.¹⁸ We have in fact seen a wide array of data from Japanese that fall, sometimes in a rather intricate fashion, under the jurisdiction of condition D. In chapter 2, we have also observed some effects of condition D in English, although they are more difficult to detect than in Japanese (due to the effects of condition C). Given the assumption that condition D is universal, we would expect to find some cases of its suspension in English as well. In this section, we will observe that condition D may indeed be suspended. We will at the same time observe that, unlike condition D, condition B may not be suspended in English, just as in the case of Japanese. These observations then provide strong confirmation of the proposal that has been made above, regarding the nature of conditions D and B.

First, consider the examples in (94) and (95), representing condition D violation and condition B violation, respectively.

(94)

- a. *he_i should fix John_i's car
- b. *he_i introduced everyone to John_i's new girl friend at the party

(95)

- a. *John_i adores him_i
- b. *John_i introduced him_i to everyone.at the party

According to the proposed analysis, both in (94) and (95), he must be linked to John, due to the rule of linking (RL). Such linking violates the condition on linking (CL), adopted from Higginbotham (1983), in the case of (94). (he c-commands John.) In (95), on the other hand, the CL is not violated since he does not c-command John in (95); however, condition B rules out (95), which states that [-a] categories must be free in their local domain.

Given our proposal, we predict that if "another" John appears in (94) in a place that he does not c-command, then (i) the condition D effects will disappear but (ii) the condition B effects in (95) will not. In conducting the relevant experiment to verify the prediction, we must bear in mind that, unlike Japanese, English has condition C effects. (Condition D states that [-a, -p] categories, i.e. R-expressions (such as Names), must be free.) In the structures where the "additional" John c-commands the other John, therefore, condition C would be violated. Recall, however, that there are speakers of English who do not have strong effects of condition C in certain structures; cf. chapter 2, xx. Thus the relevant experiment can be conducted most successfully with those speakers. I, however, suspect that the contrast that our analysis predicts can be detected even for those speakers who seem to have strong effects of condition C.

Now, consider the sentences in (96), which are obtained by embedding the sentences in (94) as S' complements.

(96)

- a. ??John_i thinks that he_i should fix John_i's car (rather Bill's)
- b. ??John_i claims that he_i introduced everyone to John_i's new girl friend at the party

The acceptability of (96) varies among speakers. Some find them (almost) perfect, and others find them rather marginal. Yet (96) is invariably judged better than (94), and also better than (97) below, which has the same status as (94).

(97)

- a. *Mary thinks that he_i should fix John_i's car (rather than Bill's).
- b. *Mary claims that he_i introduced everyone to John_i's new girl friend.at the party.

It seems that the status of (96) is the same as that of (98).

(98)

- a. ??John_i thinks that Mary should fix John_i's car (rather than Bill's).
- b. ??John_i claims that Mary introduced everyone to John_i's new girl friend at the party.

Those who reject (98) strongly also reject (96) strongly, and those who basically accept (98) also accept (96). If this observation is correct, it clearly indicates that condition D effects are suspended in (96) and that only condition C effects remain there.¹⁹

By contrast, there does not seem to be any significant difference between (95) and (99) or between (99) and (100).

(99)

- a. *John_i denies John_i adores him_i
- b. *John_i claims that John_i introduced him_i to everyone.at the party

(100)

- a. *Mary denies that John_i adores him_i
- b. *Mary claims that John_i introduced him_i to everyone.at the party

If anything, (99) must be worse than (95) and (100) since the former violates condition C in addition to condition B while the latter violates only condition B. But, to the extent that the difference is not detectable here, it seems that the effects of condition E are too strong for the difference to be detected between the B violation alone and the B/C violation combined.

This result itself already constitutes confirming evidence for differentiating condition D and condition B, as proposed in the preceding section.

Now let us consider the cases where "another John" does not c-command he (and hence John), which are given in (101).

(101)

- a. ?John_i's mother thinks that he_j should fix John_i's car (rather than Bill's)
- b. ?John_i's friends claim that he_j introduced everyone to John_i's new girl friend.at the party

(102)

- a. *John_i's friends think that John_i adores him_j
- b. *John_i's friends claim that John_i introduced him_j to everyone.at the party

The condition B effects remain unaffected and the coreference in (102) is as impossible as (95), (99) and (100). On the other hand, the coreference seems somewhat easier to obtain in (101) than in (96) and (98). It seems that the status of (101) is analogous to (103); see footnote xx (on "a mild prohibition).

(103)

- a. ?John_i's mother thinks that Mary should fix John_i's car (rather than Bill's)
- b. ?John_i's friends claim that Mary introduced everyone to John_i's new girl friend.at the party

If the judgements here are correct, the slight marginality of (101) is not due to condition D effects. It must be due to whatever makes (103) slightly marginal, such as the "mild" effects of condition C (the embedded John is bound in (101) as well as in (103)) and "a mild prohibition against the repetition of R-expressions" noted in footnote xx. This means that the examples in (103) are indeed cases of the suspension of condition D. In our analysis, (103a) may have the linking as in (104), while (94a) must have the linking as in (105), respectively.

(104)

John_i's mother thinks that he_j should fix John_i's car



(105)

he_j should fix John_i's car



The linking in (105) is ruled out by the CL.

We have observed cases of the suspension of condition D in English. It is interesting to note a prediction that our analysis makes regarding the example in (106), noted in Jackendoff (1969., 1972) and Postal (1972) and discussed in Wasow (1972), Lasnik (1976, p. 99-100) and Higginbotham (1983, p. 405-406).

(106) *The woman he_j loved told him_i that John_i was a jerk.

The puzzle of this example, as discussed in the earlier works among those cited above, is that the indicated coreference is possible in (107), taken from Lasnik (1986, p. 99).

(107)

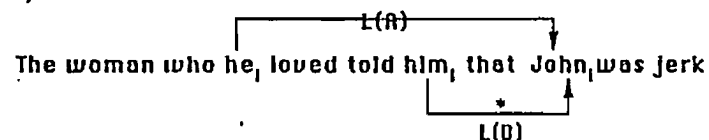
- a. The woman he_j loves told us that John_i was a jerk.
- b. The woman he_j loved told him_i that we were all jerks.

As Lasnik (1976, p. 99) argues, correctly in my view, that the the impossible coreference in (106) is reducible to that in (108).

(108) *I told him_i that John_i was a jerk.

In the terms of the preceding discussion, the indicated coreference is not allowed in (106) because of the linking from him to John violates the CL, as indicated in (109).

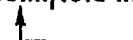
(109)



This in turn means that if him does not link to John, him and the the CL (i.e. condition D) is not violated, thereby the coreference between him and John available, except for the condition C effects. The relevant structure is provided in (110).

(110)

The woman who loved John_i told him_i that John_i was jerk



This prediction in fact seems to be borne out, as illustrated by the much improved coreference possibility in (111), as compared to (106) and (108).

(111) (?)The woman who loved John_i told him_j that John_i was a jerk.

We have observed earlier that condition B cannot be suspended in the way that condition D can. Thus we have seen that the coreference in (112) is as impossible as that in (113).

(112) *John_i thinks that John_j loves him_j.

(113)

a. *John_i loves him_j.

b. *Mary thinks that John_j loves him_j.

In (112), the "additional" John c-commands the embedded John. As noted above, this might be taken as contributing, to some extent, to the impossible coreference in (112). Consider, however, the examples in (114).

(114) *The woman who knows John_i very well thinks that John_j loves him_j.

In (114), the "additional" John does not c-command the embedded John. Nevertheless, the status of (114) is the same as (113) above and (115) below.

(115) *The woman who knows human psychology very well thinks that John_j loves him_j.

This clearly indicates that the non-improvement of the grammatical status in (112) is not due to the fact that the "additional" John c-commands the embedded John in (112).

In this section, we have seen evidence from English that supports the distinction drawn between condition D and condition B in the preceding section. It is pointed out in chapter 2, xx, that "social titles" in Japanese are nothing other than (definite) descriptions. Thus we expect that English too has what corresponds to "social titles". In that section, we have indeed observed that expressions such as the professor and the lieutenant "function" like "social titles" in that they are less referential than Prof. Smith and Lieut. Smith. A relevant paradigm is repeated below.

(116)

- a. ?Lieut. Smith_i thinks that the general will praise the lieutenant_j's performance at yesterday's practice.
- b. *The lieutenant_i thinks that the general will praise Lieut. Smith_j's performance at yesterday's practice.
- c. The lieutenant_i's friends think that the general will praise Lieut. Smith_j's performance at yesterday's practice.

Given the preceding discussion, we predict the suspension of condition D to be possible in these cases as well. Although the judgments might be less clear here, it appears that this in fact is a correct prediction. Consider the examples in (117) and (118).

(117)

- a. *Mary_i told the lieutenant_j that the general would praise Lieut. Smith_j performance.
- b. ?The woman who was dating Lieut. Smith_i told the lieutenant_j that the general will praise Lieut. Smith_j performance.

(118)

- a. *The general reported that the lieutenant_j had praised/scolded Lieut_j Smith's men.
- b. Lieut. Smith's boss reported that the lieutenant_j had praised/scolded Lieut_j Smith's men.

In the (a) examples, the CL (i.e. condition D) is violated; but in the (b) examples it is not, due to the "additional" occurrence of Lieut. Smith, which is not c-commanded by the lieutenant. By contrast, the effects of condition B persists, as one expects, even with the presence of the "additional" Lieut. Smith. This is illustrated in (119).

(119)

- a. *Lieut. Smith_i praised the lieutenant_j.
- b. *Lieut. Smith's boss reported that Lieut. Smith_j praised the lieutenant_j.

It thus seems that the English "versions" of "social titles" as well provide confirmation for the proposed account of the relevant referential associations, in which condition D is claimed to be a condition on linking, condition B is a condition on binding. The effects of condition D and the suspension of it are accounted for by (120) and (121), and the effects of condition B by (122); cf. footnote

xx (on the possible revision of the RL in (120).

(120) The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

(121) The Condition on Linking (CL)

(a restatement of Higginbotham (1983, p. 402)

If A c-commands B, A cannot be linked to B.

(122) Condition B: A [-a] categories must be free in its local domain.

3.5. Some Related Issues

3.5.1. Kare v.s. Zibun

Lasnik (1986, p. 161) suggests that "[+a] categories would also fall under [(123)], and there is, in fact, some evidence that this is the case."

(123) (Lasnik's (51'))

A less referential expression may not bind a more referential one.

(The condition in (123) has been called condition D, and is now stated as a condition on linking (the CL), given at the end of the previous section.) Lasnik first states that "quite generally, an anaphor cannot bind an R-expression." He then provides a pair of Japanese sentences, given in (124), that are intended to show that "an anaphor may not bind a pronoun."^{20, 21}

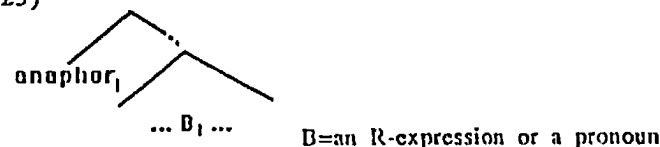
(124) (Lasnik's (52) and (53), with the judgments reported there)²²

a. John_i-ga [s' kare_j-ga [s' zibun_i-ga tensai da to] omotte iru to] itta (koto)
 John-NOM he-NOM self-NOM genius be that thinks that said
 'John_i said that he_j thought that self_i was a genius'

b. *John_i-ga [s' zibun_i-ga [s' kare_j-ga tensai da to] omotte iru to] itta (koto)
 John-NOM self-NOM he-NOM genius be that thinks that said
 'John_i said that self_i thought that he_j was a genius'

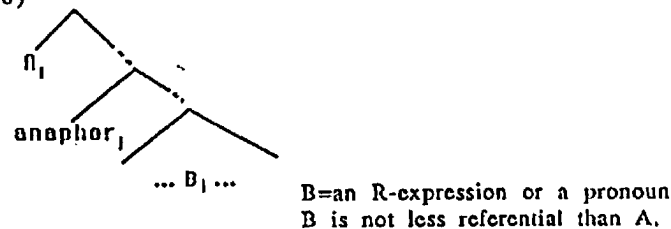
Lasnik thus claims that the structure in (125) is ruled out by the condition in (123), given the assumption that [+a] categories are less referential than [-a] categories.

(125)



Note that the structure in (125) must, in the unmarked cases, be embedded in a larger structure as in (126), since anaphors typically need a c-commanding antecedent, which is expressed by condition A, given in (127)

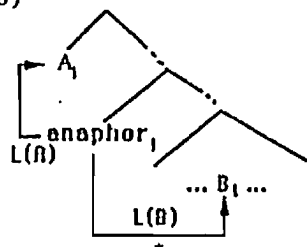
(126)



(127) Condition A: A [+a] category must be bound in its local domain.²³

My analysis of the condition D phenomena predicts, in contrast to Lasnik's claim, that (126) is well formed, with the linking designated as L(A) in (128).

(128)



B=an R-expression or a pronoun
B is not less referential than A.

Notice that if the structure in (126) does not allow coreference, as indicated in Lasnik (1986, p. 161), it would mean that the relevant condition (i.e. condition D) must be formulated in terms of binding, rather than in terms of linking. For if the condition is formulated in terms of binding, then the structure in (125) must be ruled out, no matter where it appears.

In this section, I will argue for the linking formulation of condition D, by demonstrating that the structure in (126) indeed allows coreference, both in Japanese and English. The contrast in (124) will, in turn, be argued to be due to extragrammatical factors such as "point-of-view"; cf. Kuroda (1965, xx), Kuno (1972, xxx), Kameyama (1985), Sells (19887) and others.

First of all, sentences such as given in (129) seems to allow the indicated coreference. There is some variations among speakers, but the coreference is much more readily available in (129) than in Lasnik's (2b).²⁴

(129)

a. John_i-ga [s' zibun_i-ga kare_i-no kuruma-o naosubekida to] omotteiru
(koto)

John-NOM self-NOM he-GEN car-ACC repaired that think
'John_i thinks that self_i has repaired his_i car'

b. John_i-ga zibun(zisin)_i-o kare_i-no kaisya-no syatyoo-ni
John-NOM self-ACC he-GEN company-GEN president-DAT
sinakatta (koto)

did not make
'John_i did not make self_i president of his_i company'

c. John_i-ga [s' zibun_i-ga [Mary-ga kare_i-no ie-ni mottekita hon]-o
John-NOMself-NOMMary-NOM he-GEN house-to brought book]-ACC
nakusita to] omotteita (koto)
lost that] thought
'John_i thought that self_i had lost the book that Mary had brought to
his_i house'

Before seeking an account for the contrast between (124b) and (129), let us first consider the "difference" that Lasnik (1986, footnote 6) notes between Japanese and English in regard to the relevant generalization. He notes that "[c]ontrary to what we have seen in Japanese and Korean, in English, an anaphor apparently may bind a pronoun, as in [(130)]."

(130) (Lasnik's (i) and (ii) in footnote 6)

a. John_i told himself_i that he_i should leave.

b. John_i believes himself_i to have said that he_i would accept the job.

While accepting that "[w]hy this should be the case is not clear," he notes the correlation, pointed out to him by M. Saito (p.c.), between (i) the difference between (124b) and (130) on the one hand and (ii) the fact that he can, but kare cannot, function as a bound variable.²⁵

The correlation noted above is expressed in a formal term in Aoun and Hornstein (1987), in which they capitalize on this correlation and propose to account for the contrast in (124) by means of the stipulation in (131) and the assumption in (132).

(131) Kare cannot be A'-bound.²⁶

(132) Zibun raises at LF (to an A'-position).²⁷

In Aoun and Hornstein (1987), therefore, Lasnik's (1986, footnote 6) puzzle, i.e. the difference between English (130) and Japanese (124b) is reduced to the difference between (133a) and (133b), thereby no longer a mystery.

(133)

a. No one_i finished his_i paper.

b. *daremo_i kare-no ronbun-o siagenakatta²⁸
no one he-GEN paper-ACC did not finish
'no one_i finished his_i paper'

Consider (124b) and (130a) again.

(124b) (Lasnik's (1986) (53))

*John_i-ga [s' zibun_i-ga [s' kare_i-ga tensai da to] omotte iru to] itta (koto)
John-NOM self-NOM he-NOM genius be that thinks that said
'John_i said that self_i thought that he_i was a genius'

(130a) (Lasnik's (1986) (i) in footnote 6)

John_i told himself_i that he_i should leave

After the LF raising of zibun and himself, both kare in (124b) and he in (130a) will be A'-bound. As indicated in (133), however, he, but not kare, can be construed as a bound variable. Hence if we assume that X is construed as a bound variable if and only if X is A'-bound, the contrast between (124b) and (130a) is accounted for. While he can be A'-bound, kare cannot.

There is, however, reason to believe that the A'-bindability is not, (hence the correlation noted in Lasnik (1986) is not) the crucial distinguishing factor in the relevant contrast.

First, the sentences in (134) seem to be relatively acceptable for most speakers.

(134)

- a. ?John_i finally convinced himself_i to submit one of John_i's papers to a journal.
- b. ?John_i believes himself_i to have said that John_i's work is first rate.
- c. ?John_i expects himself_i to recommend John_i's student for that position.
- d. ?John_i told himself_i that Mary would eventually accept John_i's proposal.
- e. ?John_i believes himself_i to have eaten the pizza that Mary made for John_i.

The status of the sentences in (134) seems analogous to those discussed in the previous section, as cases of condition D violation in English; cf. xxx. The somewhat marginal status of these sentences seems to be due to the effects of condition C, rather than to condition D in (123) or the stipulation in (135), which is analogous to (131). (123) is repeated below.

(123) A less referential expression may not bind a more referential one.

(135) Names cannot be A'-bound.

If (135) violate (123), the coreference there must be as impossible as in (136) or (137); but it is not.

(136)

- a. *Mary finally convinced him_i to submit one of John_i's papers to a journal.
- b. *Mary believes him_i to have said that John_i's work is first rate.
- c. *Mary expects him_i to recommend John_i's student for that position.
- d. *Mary told him_i that Susan would eventually accept John_i's proposal.
- e. *Mary believes him_i to have eaten the pizza that she made for John_i.

(137)

- a. *He_i finally convinced himself_i to submit one of John_i's papers to a journal.
- b. *He_i believes himself_i to have said that John_i's work is first rate.
- c. *He_i expects himself_i to recommend John_i's student for that position.
- d. *He_i told himself_i that Susan would eventually accept John_i's proposal.
- e. *He_i believes himself_i to have eaten the pizza that Mary made for John_i.

On the other hand, if (134) violates (135) (and if (135) has the same effect as (131)), then the coreference in (134) should be as impossible as the bound variable construal in (138), at least in terms of the relevant syntactic properties of these sentences. However, this is not the case.

(138)

- a. (=133b)
*daremo_i kare-no ronbun-o siagenakatta
no one he-GEN paper-ACC did not finish
'no one_i finished his_i paper'
- b. **No one_i finished John_i's book.
- c. **Everyone_i finished John_i's book.

In fact, the status of (134) seems quite analogous to that of (139).

(139)

- a. ?John_i finally convinced Bill to read one of John_i's papers.
- b. ?John_i believes Bill to have said that John_i's work is first rate.
- c. ?John_i expects Bill to recommend John_i's student for that position.
- d. ?John_i told Bill that Susan would eventually accept John_i's proposal.
- e. ?John_i believes Bill to have eaten the pizza that Mary made for John_i.

The only violation in (139) is that of condition C.²⁹ It is hence most likely that the only violation in (134) is also that of condition C.

Let us now turn to Japanese. As noted in Saito (1982), Nishigauchi (1986) and Yoshimura (1987), members of the *so* system of the deictic paradigms in Japanese may, to varying degrees, be construed as bound variables; cf. also Iloji (1989).³⁰ Thus sentences like (140) tend to yield bound variable construal for *soitu* 'that guy, the guy'.³¹

(140)

- a. daremo karemo_i-ga soitu_i-no ronbun-o mottekita
everyone-NOM the guy-GEN paper-ACC brought
'everyone_i brought the guy_i's paper'
- b. ?daremo_i soitu_i-no ronbun-o mottekonakatta
no one the guy-GEN paper-ACC did not bring
'no one_i brought the guy_i's paper'

Suppose that the coreference in (124b) is disallowed due to *kare*'s inability to be construed as a bound variable, as proposed in Aoun and Hornstein (1987). We would then expect that, if *kare* in (124b) is replaced by *soitu*, the relevant coreference becomes possible, thereby eliminating the contrast in (124).

Contrary to this expectation, the pairs in (141) and (142) seem to exhibit the same kind of contrast as (124) does.³²

(141)

- a. daremo karemo_i-ga [s' soitu_i-ga [s' zibun_i-ga tensai da to]
everyone-NOM the guy-NOM self-NOM genius be that
omotteiru to] itta (koto)
thinks that said
'everyone_i said that the guy_i thought that self_i was a genius'

- b. *daremo karemo_i-ga [s' zibun_i-ga [s' soitu_i-ga tensai da to]
everyone-NOM self-NOM the guy-NOM genius be that
omotteiru to] itta (koto)
thinks that said
'everyone_i said that self_i thought that the guy_i was a genius'

(142)

- a. sono sinnyuusei_i-ga [s' soitu_i-ga [s' zibun_i-ga tensai da to]
that new student-NOM the guy-NOM self-NOM genius be that
omotteiru to] itta (koto)
thinks that said
'that/the new student_i said that the guy_i thought that self_i was a genius'
- b. *sono sinnyuusei_i-ga [s' zibun_i-ga [s' soitu_i-ga tensai da to]
that new student-NOM self-NOM the guy-NOM genius be that
omotteiru to] itta (koto)
thinks that said
'that/the new student_i said that self_i thought that the guy_i was a genius'

The fact that the contrast in (124) persists in (141) and (142) clearly indicates that *kare*'s inability to be construed as a bound variable cannot be the reason for the unacceptable status of (124b), contra Aoun and Hornstein (1987).³³

We have thus seen evidence against an account of the unacceptable (124b) by the stipulation in (131), with the assumption in (132). I repeat (124), (131) and (132) below.

(124) (Lasnik's (52) and (53), with the judgments reported there)

- a. John_i-ga [s' kare_i-ga [s' zibun_i-ga tensai da to] omotte iru to] itta
(koto)
John-NOM he-NOM self-NOM genius be that think's that said
'John_i said that he_i thought that self_i was a genius'
- b. *John_i-ga [s' zibun_i-ga [s' kare_i-ga tensai da to] omotte iru to] itta
(koto)
John-NOM self-NOM he-NOM genius be that think's that said
'John_i said that self_i thought that he_i was a genius'

(131) *Kare* cannot be A'-bound.

(132) Zibun raises at LF (to an A'-position).

This conclusion, of course, does not constitute evidence against the stipulation in (131) or the assumption in (132). Rather, it constitutes evidence against the account of the contrast in (124) based on (131) and (132).

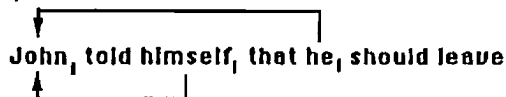
Recall that Lasnik's account of the contrast in (124) is based on condition D in (123), which is formulated in terms of "binding" (rather than "linking"). Hence, the fact that himself can bind him in English, as in (130), repeated below, is problematic in Lasnik (1986).

(130)

- a. John_i told himself_i that he_j should leave.
- b. John_i believes himself_i to have said that he_j would accept the job.

Within our proposal, in which condition D is formulated as a condition on linking, the coreference possibility in (130) is expected since the linkings indicated in (143) are licit.

(143)



As noted, Lasnik mentions the correlation (attributing it to M. Saito) between kare's inability (and he's ability) to be construed as a bound variable on the one hand and the contrast between (124b) and (130) on the other, hinting at the possibility that the "unexpected" (for his analysis) coreference possibility in (130) may be accounted for in such a way that it is related to he's being able to be construed as a bound variable. One rather unrefined way to execute this idea is to say that an anaphor may bind a more referential expression X if X may function as a bound variable.³⁴ We have, however, observed that the coreference possibility in (130) is unrelated to the bindee of himself being able to be construed as a bound variable. Recall that in sentences like (134) above, Names may be bound by himself, without yielding the type of unacceptability in (124b). Furthermore, we have also observed that the sentence in (124b) cannot be improved even if we replace kare by a category oita 'the guy', which can independently be construed as a bound variable. These observations thus indicate, strongly, that

the coreference in (130) is NOT problematic but that what is problematic is the impossible coreference in (124b); and this is precisely what our proposal implies. There is in fact more reason to believe that this is a more correct way to identify the problem. That is to say, it is not always the case that zibun cannot bind kare, as indicated by the possible coreference in (129) above.³⁵ Thus, all the relevant structures that we have considered above and the coreference possibilities in them are consistent with the analysis proposed in the previous section, EXCEPT FOR THE IMPOSSIBLE COREFERENCE IN (124b).

Let us now consider why the coreference is not possible in (124b). I repeat (124) again for ease of reference.

(124) (Lasnik's (52) and (53), with the judgments reported there)

a. John_i-ga [s' kare_j-ga [s' zibun_i-ga tensai da to] omotte iru to] itta (koto)
John-NOM he-NOM self-NOM genius be that thinks that said
'John_i said that he_j thought that self_i was a genius'

b.*John_i-ga [s' zibun_i-ga [s' kare_j-ga tensai da to] omotte iru to] itta (koto)
John-NOM self-NOM he-NOM genius be that thinks that said
'John_i said that self_i thought that he_j was a genius'

As I noted in footnote x, I do not find the coreference in (124b) to be completely impossible, while finding the contrast in (144b) sharper than in (124b).

(144)

a. John_i-ga [s' kare_j-ga [s' zibun_i-ga tensai da to] omotta to] itta (koto)
John-NOM he-NOM self-NOM genius be that thought that said
'John_i said that he_j had thought that self_i was a genius'

b.*John_i-ga [s' zibun_i-ga [s' kare_j-ga tensai da to] omotta to] itta (koto)
John-NOM self-NOM self-NOM genius be that thought that said
'John_i said that self_i had thought that he_j was a genius'

(The embedded predicate in (124) is omotteita 'was thinking' while that in (144) is omotta 'thought'.) For this reason, I use (144) rather than Lasnik's (124) as the basis for the ensuing discussion.

Consider first a typical case that seems to involve a notion like "point-of-view". Kuroda (1965, p. 142-143; 1973) observes that certain sensation adjectives in Japanese require their subject to be a first person. Thus while (145a) is acceptable, (145b) and (145c) are not.³⁶

(145)

a. watasi-wa kanasii yo
I-TOP sad
'I am sad.'

b. *John-wa kanasii yo
John-TOP sad
'John is sad.'

c. *Kimi-wa kanasii yo
you-TOP sad
'You are sad.'

The verb omow 'think' seems to have a similar restriction.³⁷ The contrast in (146) seems analogous to that in (145).³⁸

(146)

a. Watasi-wa [s' Mary-ga kuru to] omow-ru yo.
I-TOP Mary-NOM come that think
'I think that Mary will come.'

b. *John-wa [s' Mary-ga kuru to] omow-ru yo³⁹
John-TOP Mary-NOM come that think
'John thinks that Mary will come.'

With the "past tense" of omow too, we have a similar contrast, although the contrast seems to me to be somewhat less sharp here.

(147)

a. Watasi-wa [s' Mary-ga kuru to] omow-ta yo.⁴⁰
I-TOP Mary-NOM come that thought
'I thought that Mary will come.'

b. *John-wa [s' Mary-ga kuru to] omow-ta yo
John-TOP Mary-NOM come that think
'John thought that Mary will come.'

Now compare (147) with (148) below, in which iw 'said' is used.

(148)

a. Watasi-wa [s' Mary-ga kuru to] iw-ta yo⁴¹
I-TOP Mary-NOM come said
'I said that Mary would come.'

b. John-wa [s' Mary-ga kuru to] iw-ta yo
John-TOP Mary-NOM come said
'John said that Mary would come.'

It therefore seems that while omow 'think' has something like the "first person subject" restriction, analogous to certain sensation adjectives discussed in Kuroda (1965), iw 'say' does not.

The similarity between the sensation adjectives and omow can be seen further by applying to omow the following considerations given in Kuroda (1973). Kuroda (1973, pp. 378-381) observes that the "first person-subject" restriction for the sensation adjectives does not obtain in embedded contexts such as (i) the relative clause, (ii) the koto nominalization, (iii) the ni tigainai "complex predicate" and (iv) the no da "complex predicate". Consider the examples in (149) through (152).

(149) (Cf. Kuroda's (7).)

[NP [s' ee; sabisii] hito:] wa paatii-ni ikubeki da
is lonely person-TOP party-to should go
'Those who are lonely should go to the party.'

(150) (Kuroda's (9))

[Mary-ga sabisii koto]-wa daremo utagawanai
'No one doubts that Mary is lonely.'

(151) (Kuroda's (11))

Mary-wa sabisii ni tigainai
'Mary must be lonely'

(152)

Mary-wa sabisii no da⁴²
'Mary is lonely.'

The sentences given above are all acceptable with yo attached, contrasting sharply with (153) below.

(153)

*John-wa sabisii yo
'John is lonely.'

In such embedded contexts, the "first person-subject" restriction is lifted also for omow 'think', as illustrated in (154).

(154)

a. [... omotta hito]-ga paatii-ni ikubeki da yo
'A person who thought ... should go to the party.'

b. John-ga ... omotta koto-wa daremo utagawanai
'No one doubt that John thought ...'

c. John-wa ... omotta ni tigainai yo
'John must have thought ...'

d. John-ga ... omotta no da yo
'John thought ...'

The examples in (154) should be compared with the marginal (155).

(155)

*?John-wa ... omotta yo
'John thought ...'

These observations confirm that omow is subject to similar restrictions that apply to the sensation adjectives.⁴³ Let us therefore call omow 'think', but not iw 'say' is a "sensation" verb, having a "point-of-view" property.⁴⁴

Having seen that omow, but not iw 'say', has a "point-of-view" property, let us now turn to Kuno's (1972) observation that has to do with the difference between zibun and kare. In arguing for his "direct discourse analysis" of "pronominalization" and "reflexivization", Kuno (1972, p. 184) makes the following observation. Consider the examples in (156) from Kuno (1972, p. 184).

(156) (Kuno's (97))

a. John_i-wa zibun_i-o kiratte-iru onna to kekkonsite-simaimasita yo.
John-TOP self-ACC hating-is woman with marrying-ended-up
'John_i ended up marrying the woman who hated self_i.'

b. John_j-wa kare_j-o kiratte-iru onna to kekkonsite-simaimasita yo.
John-TOP he-ACC hating-is woman with marrying-ended-up
'John_j ended up marrying the woman who hated him_j.'

Kuno notes (p. 184) that "[156a] implies that John was aware that this woman hated him, while there is no such implication in [156b]." Within his "direct discourse analysis", (156a) is related to the well formed "direct representation of John's internal feeling" as indicated in (157); but (156b) is not.⁴⁵

(157)

John: Kanozyo-wa boku-o kiratte-iru
'She hates me.'

The only difference between (156a) and (156b) is the choice between zibun and kare. Since (144a) and (144b) also differ from each other only with respect to the choice between zibun and kare, it seems reasonable to hypothesize that the contrast in (156) and that in (144) receive the same account. In the following, I will in fact argue that the considerations given in Kuno (1972) are in fact applicable not only to his (156) but to (144).

It is reported in Kuno (1987, p. 138) that there is a contrast between (158a) and (158b).

(158) (Kuno's (14.10), with the judgments reported there)

a. Taroo_i-wa [S' zibun_i-ga tensai da to] omotte iru.
Taroo-TOP self-NOM genius is that is thinking
'Taroo_i thinks that self_i is a genius.'

b. ??Taroo_i-wa [S' kare_i-ga tensai da to] omotte iru.
Taroo-TOP he-NOM genius is that is thinking
'Taroo_i thinks that he_i is a genius.'

Kuno (1987, p. 138) states:

Facts about reflexive pronouns in Japanese are extremely complex, and the above examples (i.e. (158)) grossly oversimplify them. However, it would not be too inaccurate to state that in complement clauses of saying and thinking verbs, reflexive pronouns are the unmarked [+log-1] pronouns at least in subject position.⁴⁶

This statement has the effect that in a structure like (159), when NP₁ and NP₂ are "coreferential", then NP₂ must be zibun in the unmarked cases.⁴⁷

(159) NP₁-ga [s NP₂-ga VP that] THINK/SAY

Within the direct discourse analysis of Kuno (1972, 1987), the contrast reported in (158) would be related to the possibility of the "direct representation of Taroo's internal feeling" as indicated in (160) in the case of (158a), and the impossibility (or the marginal possibility) of it in the case of (158b).

(160) John: Boku-wa tensai da⁴⁸
'I am a genius.'

I do not fully share the judgment reported in (158).⁴⁹ But, I agree that (158a) seems to imply John's internal feeling as indicated in (159) more clearly than (36b). To account for the marginal, but not impossible, status of (158b), one may assume that the "point-of-view" (or "logophoric") property of the predicate omotteiru somehow fluctuates among and/or within the speakers. Recall in this connection that the "point-of-view" property (i.e. the first person-subject requirement) of omow disappears when we add teiru; cf. footnote around (145). This then suggest that the relevant property of omow can be felt more strongly without teiru. It seems that this is indeed the case. Thus, the contrast in (161) seems sharper than that in (158).

(161)

a. John_i-wa [s' zibun_i-ga tensai da to] omotta
John-TOP self-NOM genius is that think
'John_i thinks that self_i is a genius.'

b. ??/*John_i-wa [s' kare_i-ga tensai da to] omotta
John-TOP he-NOM genius is that think
'John_i thinks that he_i is a genius.'

Given the contrast in (161), one may already suspect that the contrast in (144) may, at least in part, be attributed to the "point-of-view" property of omow.

Recall that iw 'say' does not exhibit the kind of "point-of-view" properties that omow 'think' exhibits. Hence, we expect that the contrast of the sort found in (161) does not show up with iw. This

indeed seems to be the case. Unlike (161), the contrast in (162), if any, is very difficult to detect.

(162)

a. John_i-wa [s' zibun_i-ga kane-o nusunda to] itta
John-TOP self-NOM money-ACC stole that said
'John_i said that self_i had stolen the money.'

b. (?)John_i-wa [s' kare_i-ga kane-o nusunda to] itta
John-TOP he-NOM money-ACC stole that said
'John_i said that he_i had stolen the money.'

Consider again (144), repeated below, which we have been using to represent Lasnik's (124) (since the contrast in (144) seems clearer than in (124)).

(144)

a. John_i-ga [s' kare_i-ga [s' zibun_i-ga tensai da to] omotta to] itta (koto)
John-NOM he-NOM self-NOM genius be that thought that said
'John_i said that he_i had thought that self_i was a genius'

b. *John_i-ga [s' zibun_i-ga [s' kare_i-ga tensai da to] omotta to] itta (koto)
John-NOM self-NOM self-NOM genius be that thought that said
'John_i said that self_i had thought that he_i was a genius'

The considerations in the preceding paragraphs suggest that the contrast in (144) might, at least partially, be independent of the interaction between zibun and kare. The paradigm in (163) supports this view.⁵⁰

(163)

a. Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' Chomsky-ga tensai da to] omotta to] itta yo

b. Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' zibun_i-ga tensai da to] omotta to] itta yo

c. *?Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' kare-ga tensai da to] omotta to] itta yo

Notice that there is a contrast between (163b) and (163c) but that zibun and kare do not interact with each other in either of these two

sentences. Notice furthermore that condition D is not violated in (163c). The marginal status of (163c) must thus be due to kare in the subject position of the S' complement of omow 'think'. As we expect, if we replace omow by some verb that does not involve "point-of-view", (163c) becomes acceptable. This is indicated in (164).

(164)

- a. Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' Chomsky-ga tensai da to] sono hookokusyo-ni kaita to] itta yo
- b. Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' zibun_i-ga tensai da to] sono hookokusyo-ni kaita to] itta yo
- c. Yamada kyoozyu_i-wa [s' kyoozyu_i-ga [s' kare-ga tensai da to] sono hookokusyo-ni kaita to] itta yo

It now seems that the contrast in (144) is actually, at least, in part, independent of the interaction between zibun and kare; cf. footnote above, however.

We would then predict that we can make (144b) acceptable by replacing omotta 'thought' by a predicate like hookokusyo-ni kaita 'wrote in the report'. It seems that this is also a correct prediction. Thus (165) below does not seem to have the type of contrast found in (144) above.

(165)

- a. John_i-ga [s' kare_j-ga [s' zibun_i-ga tensai da to] John-NOM he-NOM self-NOM genius be that hookokusyo-ni kaita to] itta (koto) wrote in the report that said 'John_j said that he_j had written in the report that self_i was a genius'
- b. John_i-ga [s' zibun_i-ga [s' kare_j-ga tensai da to] John-NOM self-NOM self-NOM genius be that hookokusyo-ni kaita to] itta (koto) wrote in the report that said 'John_j said that self_i had thought that he_j was a genius'

The status of (165) is then analogous to the other examples given earlier, in which zibun binds kare; cf. xx above.

It now appears that the marginal status of (144b) is due to the interaction between the selection of the "point-of-view" predicate and the use of kare and zibun. Recall that Kuno (1987, p. 138) specifically notes "at least in subject position" when he states that the NP position in the S' complement of omow 'think' must be zibun if it is coreferential with the subject of this verb. This implies that in structures like (144b), zibun may bind kare, as long as kare is not in the subject position of S' complement to omow. This in fact appears to be the case, as indicated in (166), which is significantly better than (144b), providing further confirmation that the marginality of (144b) is due to non-syntactic factors.

(166) (Cf. (144b))

John_i-ga [s' zibun_i-ga [s' kaisya-ga ^{??}kare-o/^{??}kare-no buka-o John-NOM self-NOM company-NOM he-ACC/he-GEN men-ACC kubinisuru to] omotta to] itta (koto) will fire that thought that said 'John_j said that self_i had thought that the company would fire him_j/his_j men'

I have argued that the marginal status of (144b) is due to the factors that have to do with "point-of-view" or "logophoricity" effects and that zibun indeed may bind kare once we eliminate such effects. This is in complete accordance with the analysis of the condition D phenomenon proposed in the previous section. Such "binding" is allowed as an instance of the suspension of condition D, which is now expressed by the rule of linking (RL), given in xx. Many other seemingly non-syntactic factors may contribute to the ultimate acceptability judgments of the sentences of the sort that we have considered above; cf. Kuno (1987, Ch. 6). Nonetheless, the preceding discussion has indicated, clearly in my view, that the contrast in (144) (and hence Lasnik's (2)) is due to the type of non-syntactic factors discussed above.

In the examples considered above, zibun is c-commanded by its antecedent. Before closing this subsection, let us consider the structures where zibun is not c-commanded by its antecedent. The relevant structure is the cases of "backward reflexivization" discussed in N. MacCawley (1972, 1976). Consider the example in (167).⁵¹

(167)

[zibun_i-ga razio-o kowasi-ta koto]-ga John_i-o gakkarisase-ta
self-NOM radio-ACC broke fact-NOM John-ACC disappointed
'The fact that self_i had broken the radio disappointed John_i.'

A number of examples of this sort are discussed in N. MacCawley (1972, 1976). The exact analysis of how the anaphor binding is possible in this type of structure does not concern us here, given the assumption that zibun is not linked to an NP (its antecedent) that it c-commands; cf. xxxxx and xxx for recent proposals. The "surface" antecedent, i.e. the matrix object NP, is not c-commanded by zibun. Furthermore, none of the "more abstract" analyses seems to postulate the antecedent of zibun at some level of representation in a position that is c-commanded by zibun. Hence this assumption seems well-motivated.

Now, consider the following.⁵²

(168)

a. (?) [zibun_i-ga kare_j-no razio-o kowasi-ta koto]-ga John_i-o
self-NOM he-GEN radio-ACC broke fact-NOM John-ACC
gakkarisase-ta
disappointed
'The fact that self_i had broken his_j radio disappointed John_i.'

b. ? [zibun_i-ga soitu_j-no naifu-o nakusi-ta koto]-ga
self-NOM the guy-GEN knife-ACC lost fact-NOM
sono susi syokunin_j-o gakkarisase-ta
that sushi chef-ACC disappointed
'The fact that self_i had lost his_j knife disappointed that sushi chef_j.'

(169)

a. ? [zibun_i-ga sono repooto-ni [s' kare_j-ga tensai da to] kaita koto]-ga
self-NOM that report-in he-NOM genius be that wrote fact
(imagoroni natte) John_i-o kurusimeteiru
(at this point) John-ACC is plaguing
'The fact that self_i wrote in that report that he_j was a genius is
now plaguing John_i.'

b. ? [zibun_i-ga sono repooto-de [s' soitu_j-ga tensai da to] itta koto]-ga
self-NOM that report-in the guy-NOM genius be that said fact
(imagoroni natte) sono gengogakusyai-o kurusimeteiru
(at this point) that linguist-ACC is plaguing
'The fact that self_i wrote in that report that the guy_j was a genius
is now plaguing that linguist_j.'

I find the examples in (168) and (169) acceptable. Notice that in these examples zibun binds kare or soitu. (Recall that soitu may function as a bound variable, as noted above.)

By contrast, if we use the "point-of-view" predicate omow, the resulting sentences, given in (170) below, seem to me to be as unacceptable as (144b).

(170)

a. * [zibun_i-ga (sono koro) [s' kare_j-ga tensai da to] omow-ta
self-NOM then he-NOM genius is that thought
koto]-ga (imagoro ni natte) John_i-o kurusimeteiru
fact-NOM now John-ACC is plaguing
'the fact that self_i (at that time) thought that he_j was a genius is
(now) plaguing John_i'

b. * ? [zibun_i-ga (sono koro) [s' soitu_j-ga tensai da to] omow-ta
self-NOM then the guy-NOM genius is that thought
koto]-ga (imagoro ni natte) sono gengogakusyai-o kurusimeteiru
fact-NOM now that linguist-ACC is plaguing
'the fact that self_i (at that time) thought that the guy_j was a
genius is (now) plaguing John_i'

As expected, when kare and soitu are eliminated in the most deeply embedded S', the anaphor binding seems possible, as indicated in (171).

(171)

a. [zibun_i-ga (sono koro) [s' Bill-ga tensai da to] omow-ta
self-NOM then Bill-NOM genius is that thought
koto]-ga (imagoro ni natte) John_i-o kurusimeteiru
fact-NOM now John-ACC is plaguing
'the fact that self_i (at that time) thought that Bill was a genius is
(now) plaguing John_i'

b. zibun_i-ga [[s' Mary-ga Bill-no naifu-o nusunda to] omow-ta
 self-NOM Mary-NOM Bill-GEN knife-ACC stole that thought
 koto]-ga (imagoro ni natte) sono susi syokuni_i-o kurusimeteiru
 fact-NOM now that sushi chef-ACC is plaguing
 'the fact that self_i thought that Mary stole Bill's knife is (now)
 plaguing that sushi chef'

Furthermore, if *zibun* and *kare/soitu* are exchanged in (170), thereby creating the configuration in which *kare/soitu* c-commands *zibun*, the resulting sentences seem acceptable with the relevant coreference.

(172)

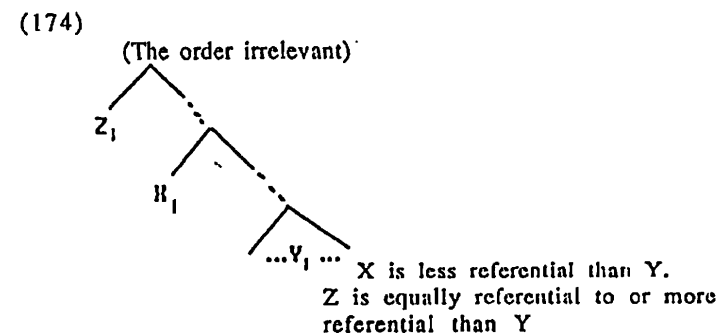
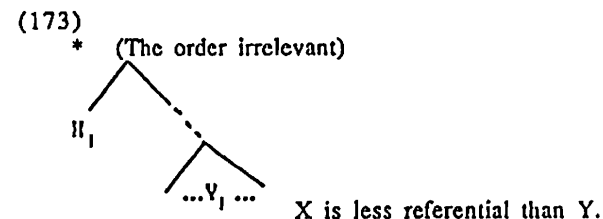
a. [kare_i-ga (sono koro) [s' zibun_i-ga tensai da to] omow-ta
 he-NOM then self-NOM genius is that thought
 koto]-ga (imagoro ni natte) John_i-o kurusimeteiru
 fact-NOM now John-ACC is plaguing
 'the fact that he_i (at that time) thought that self_i was a genius is
 (now) plaguing John_i'

b. ?[soitu_i-ga (sono koro) [s' zibun_i-ga tensai da to] omow-ta
 the guy-NOM then self-NOM genius is that thought
 koto]-ga (imagoro ni natte) sono gengogakusya_i-o kurusimeteiru
 fact-NOM now that linguist-ACC is plaguing
 'the fact that that guy_i (at that time) thought that self_i was a
 genius is (now) plaguing John_i'

The acceptability and the unacceptability of *zibun*'s binding *kare* that we have observed earlier have thus been reproduced in the "backward pronominalization" structure of N. McCawley (1972, 1976). I take this as strong confirmation for my claim that the marginal to impossible coreference between *zibun* and *kare* in (144b) (and hence Lasnik's (144b)) is due to non-syntactic factors such as "point-of-view." This in turn provides confirming evidence for our proposal that condition D is a condition on linking. Recall that *zibun*'s binding *kare* need not violate condition D since the condition is now formulated as a rule of linking (RC), as in xx, and the condition on linking (CL), xx.

3.5.2. Landing sites of Scrambling and NP Movement

In the preceding sections, we have seen that the indicated coreference in (173) is not possible while that in (174) is.



The structure in (173) is a typical condition D violation and that in (174) is a typical case of the suspension of condition D. In (173), X must be linked to Y, in accordance with the rule of linking (RL); and this results in the violation of the condition on linking (CL). In (174), on the other hand, X may be linked to Z, not violating the CL. The RL and the CL are repeated here for convenience.

(175) The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

(176) The Condition on Linking (a restatement of Higginbotham (1983, p. 402)

If A c-commands B, A cannot be linked to B.

In the examples that have been considered, X in (173) and Z in (174) are clearly in A-positions.⁵³

As noted in chapter 1, it is argued in Saito (1985) that Scrambling is an adjunction operation (cf. Harada (1977) and Whitman (1982)). This hypothesis has been assumed and supported in a number of subsequent works such as Hoji (1985), Takezawa (1987), Miyagawa (1989), xxx. According to this view, the scrambled NP in (177) is in an A'-position.

(177)
[s susi-_{oi} [s John-ga _{ti} tabe-ta]
sushi-ACC John-NOM eat-PAST
'sushi, John ate'

It has independently been argued in Miyagawa (1988, 1989) and Hoji, Miyagawa and Tada (1989), as well as in Saito (1982), that the Japanese passive does involve movement, as indicated in (178), induced by the Case Filter, much like NP movement in English; cf. also xxx and Hasegawa (1988).

(178)
Susan-ga John-ni (yotte) Bill-ni _{ti} syookais-are-ta
Susan-NOM John-by Bill-DAT introduce-PASSIVE-PAST
'Susan was introduced to Bill by John.'

These proposals on scrambling and passives are closely interrelated with the theory of case-marking in Japanese as well as the X-bar theory and its manifestation in Japanese. Kuroda (1986, 1988) embeds his system of case-marking in Japanese (Kuroda (1965b, 1978, 1983, 1987) in his "completed X-bar theory, which generalizes Chomsky's (1986) X-bar theory to the category V.⁵⁴ Within this theory of phrase structure of Japanese, Kuroda proposes that scrambling may be a substitution operation, i.e. substitution into Spec(I), as indicated in (179b). (The case-marking is ignored in (179b).. 55

(179)
a. (D-structure)
[IP ec [r [VP John [_{v'} susi_i tabe]] [INFL ta]]]

b. (S-structure)
[IP susi_i [r [VP John [_{v'} _{ti} tabe]] [INFL ta]]]

c. susi-o John-ga _{ti} tabeta
sushi-ACC John-ga ate
'sushi, John ate'

According to this view, the scrambled phrase moves into where the English subject of active sentences moves, as indicated in (180), in the "standard" VP-internal subject theory; cf. the references in footnote xx.

(180)
a. (D-structure)
[IP [NP ec] [r [INFL TENSE] [VP John [_{v'} eat sushi]]]

b. (S-structure)
[IP John_i [r [INFL TENSE] [VP _{ti} [_{v'} eat sushi]]]

Since the position for John, i.e. the S-structure subject position, in (180b) is most likely to be an A-position (cf. xxx), it is reasonable to hypothesize that the position of susi, i.e. the scrambled NP, in (179b) is also an A-position. This hypothesis then amounts to the claim that scrambling is an A-movement rather than an A'-movement. This possibility is noted in Saito and Fukui (1986), where they discuss Kuroda's theory of phrase structure in Japanese, and it is pursued further in Yoshimura (1989, forthcoming).⁵⁶

Most of the arguments for the existence of NP-movement in Japanese advanced in the works cited above are based on the operational tests that have motivated the hypothesis that scrambling is a syntactic movement, such as "floating quantifier" and quantifier scope interpretation. In fact, as pointed out in Hoji, et. al. (1989), it is not easy to differentiate between scrambling and NP movement in terms of some operational tests.

In this section, I will examine how the scrambled NP and the passivised NP behave in regard to condition D effects. More specifically, I will consider how X in (173) and Z in (174) may be a scrambled NP and/or a passivised NP. The results of this section will have significant consequences as to the proper characterization of the landing sites for scrambling and NP movement, which a number of recent works seem to be concerned with.⁵⁷

The questions we ask are:

(181)

- a. Does (173) violate the CL if X is a scrambled NP?
- b. Does (173) violate the CL if X is a passivized NP?

(182)

- a. Can X in (174) be linked to Z if Z is a scrambled NP?
- b. Can X in (174) be linked to Z if Z is a passivized NP?

The questions in (182) may be paraphrased, descriptively, as (183).

(183)

- a. Can (174) be a case of the suspension of condition D if Z is a scrambled NP?
- b. Can (174) be a case of the suspension of condition D if Z is a passivized NP?

These are clearly related to the following two questions.

(184)

- a. At what levels of representation do the condition on linking (CL) hold?
- b. What is the nature and its manifestation in Japanese of the so-called "anti-reconstruction" effects in the sense of van Riemsdijk and Williams (1981)?

I will hence try to answer the questions in (182) and (183) by considering those in (184).

3.5.2.1. Levels of Representations

A great deal of attention has been given to the issue of which levels of representations the binding conditions hold at. The coreference possibility in (185) and the impossibility in (186) have been a major basis for the claim that condition C holds at S-structure rather than at D-structure or at LF.

(185) [which book that John_i read] did he_i like

(186)

- a. *he_i liked [every book that John_i read]
- b. *I don't remember who thinks that he_i read [which book that John_i likes]

The examples in (185) and (186) are from Chomsky (1981, pp. 196-197), who cites Brody's (1979) manuscript for examples such as (186) "in support of the conclusion that the binding conditions hold at S-structure."

If condition C (i.e. condition D, and more precisely the condition on linking (CL)) holds at D-structure, (185) should be ruled out just as (186) and (187) are.

(187) *he_i likes those pictures that Mary gave to John_i

At the level of D-structure, i.e. at the level where the *wh*-phrase is in the object position, *he* c-commands *John* in (185), just as in (186) and (187), which would violate condition D, if it applies at this level.⁵⁸

On the other hand, if condition C holds at LF, the sentences in (186) should be as acceptable as (185), given the assumption that quantified NP's and *wh*-phrases in situ raise to the sentence initial position, making the LF representation of (185) indistinguishable from those of (186) in the relevant respects.

Let us thus assume that condition D (hence the CL) holds at S-structure. This means that while the coreference is not possible in the Japanese structure of the type in (173), it would become possible if movement removes the c-command relation between X and Y at the level of S-structure, just as in the case of the English example in (185), as compared to (186).

It appears that this is indeed a correct prediction, as the contrast between (188a) and (188b), noted in Saito (1983, p. 80), indicates.

(188) (adapted from Saito's (5))

- a. *kare_i-ga [NP e_i nandomo nandomo John_i-ni tegami-o kaitekita]
he-NOM many times John-DAT letter-ACC wrote
onnano_j-ni mada itidomo tegami-o dasiteirai (koto)
girl-DAT yet once letter-ACC has not sent
'he_i has not sent a letter even once to the girl who has send letters to John_i many times'

- b. [NP ecj nandomo nandomo John_i-ni tegami-o kaitekita] onnanokoj]-ni
 many times John-DAT letter-ACC wrote girl-DAT
 karej-ga mada itidomo tegami-o tj dasiteinai (koto)
 he-NOM yet once letter-ACC has not sent
 '[to the girl who has send letters to John_i many times], he_i has not
 sent a letter even once'

Similarly, there is a contrast between (189a) and (189b), as has been observed in works in Saito (1983) and others; cf. chapter 2.

- (189)
 a. *karej-ga John_i-no gakusei-o semeta
 he-NOM John-GEN student-ACC criticized
 'he_i criticized John_i's students'
 b. [John_i-no gakusei]-o karej-ga tj semeta
 John-GEN student-ACC he-NOM criticized
 'John_i's student criticized him_i'

In both (188) and (189), the configuration in (a) in which *kare* c-commands *John* is eliminated in (b); cf. (187) and (188).

The contrast observed in (188) and (189) can be reproduced with the other nominal expressions that are discussed in chapter 2, as illustrated, for example, in (190).⁵⁹

- (190)
 a. *sensei-ga [Yamada sensei-no gakusei]-o hometa (koto)
 prof-NOM Prof. Yamada-GEN student-ACC praised
 'the professor_i praised Prof. Yamada's students'
 b. [Yamada sensei-no gakusei]-o sensei-ga tj hometa (koto)
 Prof. Yamada-GEN student-ACC prof-NOM praised
 'Prof. Yamada's student the professor praised'

Unlike condition D, condition B seems to be unaffected by syntactic movement. Thus, (191b) is as unacceptable as (191a), as noted in Brody (?) and Barss (1986, p.x).

- (191)
 a. *John_i introduced him_i to everyone
 b. *him_i, John_i introduced tj to everyone

The Japanese examples in (192) seems to confirm this generalization regarding the condition B effects.

- (192)
 a. *John_i-ga karej-ni soo iikikaseta (koto)
 John-NOM he-DAT so told
 'John_i told him_i so'
 b. *karej-ni John_i-ga tj soo iikikaseta (koto)
 he-DAT John-NOM so told
 'to him_i, John_i told so'

One might suggest that (191b) and (192b) are ruled out by condition C, rather than by condition B, since the trace to the moved NP is A-bound by the subject NP, *John*.⁶⁰ The acceptable coreference in (193b) and in (194b), however, indicates otherwise.⁶¹

- (193)
 a. John_i-ga [s' Chomsky-ga karej-ni ainikita to] omotteita
 (koto)
 John-NOM Chomsky-NOM he-DAT came to see that thought
 'John_i thought that Chomsky came to see him_i'
 b. (?)karej-ni John_i-ga [s' Chomsky-ga tj ainikita to] omotteita
 (koto)
 he-DAT John-NOM Chomsky-NOM came to see that thought
 'him_i, John_i thought that Chomsky came to see'

- (194)
 a. John_i-ga [s' minna-ga aituj-ni aitagatteiru to] omotteita
 (koto)
 John-NOM all-NOM that guy-DAT wants to meet that thought
 'John_i thought that everyone wants to meet (with) him_i'
 b. (?)aituj-ni John_i-ga [s' minna-ga tj aitagatteiru to] omotteita
 (koto)
 that guy-DAT John-NOM all-NOM want to meet that thought
 '(with) that guy_i, John_i thought that everyone wanted to meet'

Notice that in (193b) and (194b), the trace is A-bound by *John*. If (191b) and (192b) are ruled out as the result of the trace being A-bound (as an instance of so-called strong crossover), (193b) and (194b) should therefore be as unacceptable as (191b) and (192b).

Since that is not the case, the reason for the unacceptability of (191b) and (192b) cannot be due to the trace being A-bound; it should most likely be the violation of condition B, as argued in Barss (1986, p. x).

There is further evidence for not considering (192b) as an instance of strong crossover, i.e. the violation of condition C. This is based on the coreference possibility in the cleft construction. Consider the examples in (195).

(195)

a. *John_i-ga \bar{u} soo iikikaseta no wa [kare_j-ni] da
 John-NOM so told he-DAT is
 'It was [to him_i] that John_i told so'

b. John_i-ga [s' minna-ga \bar{u} aitagatteiru to] omotteita no wa [kare_j-ni] da
 John-NOM all-NOM wants to meet that thinks he-DAT is
 'It was [with him_i] that John_i thinks that everyone wants to meet'

In a separate work (presented at WCCFL 1987 among other places) I have argued, extending Saito's (1985, Ch. 3) analysis of the Japanese topic construction, that when the case marker or P is attached to the focused element in the cleft construction, the syntactic movement of an empty operator is involved. Let us assume this to be correct. The strong crossover account of (192b) would then also rule out both examples in (195). But (195b) is quite acceptable as it is.⁶²

On the other hand, (192b) can be ruled out by condition B, and so can (195a). In these examples the trace is A-bound in its local domain. Incidentally, the local disjointness effect observed in (192b) and (195a) cannot be taken as evidence that the trace left behind is pronominal, hence is [+p], rather than a variable [-a, -p]. This is because all the non-anaphoric nominal categories in Japanese are subject to the local disjointness condition that is identical to condition D, based on which I have proposed in chapter 2 that condition B applies to [-a] categories, rather than to [+p] categories. Hence, the unacceptability of (192b) and (195b) is still compatible with the hypothesis that the trace of scrambling is a variable, i.e., [-a, -p]; cf. footnote above (the one immediately above?)

Recall that I have proposed to account for the absence of condition C effects (distinct from condition D effects) in Japanese by hypothesizing that no overt categories in Japanese are marked with respect to [+/-p]. Hence the proposed account there does not preclude the possibility that the grammar of Japanese does have condition C but that its effects for overt categories are not observed

due to the absence of the [-p] marking. Now the acceptability of (193b), (194b) and (195b) means that Japanese DOES NOT have condition C of Chomsky (1981) if the trace of scrambling is indeed a variable [-a, -p] (cf. Saito (1985)).^{63, 64}

Notice that the possibility of coreference in (193b) and (194b) indicates that they do not violate condition D, i.e. the CL. This means that kare in (193b), for example, need not be linked to John. Otherwise, such a linking would violate the CL.⁶⁵

This is in sharp contrast with the cases of NP movement. Consider (196) below.

(196)

a. John_i-no atarasii sensei-ga Susan-ni kare_j-o syookaisita (koto)
 John-GEN newteacher-NOM Susan-DAT he-ACC introduced
 'John_i's teacher introduced him_i to Susan'

b. *Kare_j-ga John_i-no atarasii sensei-ni (yotte)
 he-NOM John-GEN new teacher-BY
 Susan-ni \bar{u} syookaisareta (koto)
 Susan-DAT was introduced
 'he_j was introduced to John_i's new teacher'

The passive version of (196a), namely, (196b), seems as unacceptable as the "active" sentence in (197a) below.

(197)

*Kare_j-ga Susan-ni John_i-no atarasii sensei-o syookaisita (koto)
 he-NOM Susan-DAT John-GEN new teacher-ACC introduced
 'he_j introduced John_i's new teacher to Susan'

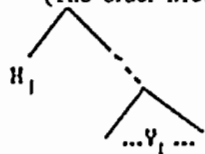
Unacceptable (197) must in turn be compared with basically acceptable (198).

(198)

(?)kare_j-o John_i-no atarasii sensei-ga Susan-ni syookaisita (koto)
 he-ACC John-GEN new teacher-NOM Susan-DAT introduced
 'he_j introduced John_i's teacher to Susan'

We can thus conclude that the answers to (181) are as in (199). I repeat (173) and (181) for convenience.

(173)
(The order irrelevant)



X is less referential than Y.

- (181)
a. Does (173) violate the CL if X is a scrambled NP?
b. Does (173) violate the CL if X is a passivized NP?

- (199)
a. (173) does not violate the CL if X is a scrambled NP (hence the coreference is possible in (173)).⁶⁶
b. (173) does violate the CL if X is a passivized NP (hence the coreference is not possible in (173)).⁶⁷

It seems that (199) hold true in English as well, as the examples in (200) and (201) indicate.

- (200) (Cf. Brody (?) and Barss (1986).)
a. John_i told Mary that Sue would introduce him_i to everyone
b. ?him_i, John_i told Mary that Sue would introduce _i to everyone

- (201)⁶⁸
a. It seems to John_i's mother that he_i has done something wrong at the party.
b. *He_i seems to John_i's mother _i to have done something wrong at the party.

Before proceeding further, I would like to attempt to clarify some factual complications in regard to the crucial data given in (194b), (195b), (198) and (200b). This seems necessary since sentences analogous to these have been marked ungrammatical in some past works, both in English and in Japanese.

Consider first the example in (202) and (203); cf. Postal (1971).

- (202) (Reinhart's (1983, 104) (24) with the judgment reported there)
*I_iim_i, John_i's father likes.

- (203) (Kuno's (1987, p. 48) (5.6b) with the judgment reported there)
*Him_i, John_i's mother loves dearly.

Barss (1986, 275 and 316), on the other hand, provides the sentences in (204) as well-formed, and some speakers find (202) and (203) acceptable.

- (204)
a. I_iim_i, John says Mary loves _i with all her heart.
b. I_iim_i, John thinks Mary likes _i.

The judgmental difference shows up in Japanese as well. Kuno (1986, pp. 30-31) claims (205) and (206) to be "totally unacceptable".

- (205) (Kuno's (50b) with his judgment there)
*Kare_i-o Taroo_i-no hahaoya-ga [s' Hanako-ga ga aisiteru to]
he-ACC Taroo-GEN mother-NOM Hanako-NOM loves that
omotteiru (koto)
thinks
'Him_i, Taroo_i's mother thinks that Hanako loves.'

- (206) (Kuno's (54b) with his judgment there)
*[s Kare_i-o [s John_i-no titloya-ga _i aisite inai]] (koto)
he-ACC John-GEN father-NOM does not love
'Him_i, John_i's father does not love.'

Recall, on the other hand, that sentences analogous to (205) and (206) have been given above as basically acceptable. The relevant examples in (193b), (194b) and (198) are repeated below as (207).

- (207)
a. (?)kare_i-ni John_i-ga [s' Chomsky-ga _i alnikita to] omotteita (koto)
he-DAT John-NOM Chomsky-NOM came to see that thought
'him_i, John_i thought that Chomsky came to see'
b. (?)aitu_i-ni John_i-ga [s' minna-ga _i aitagatteiru to] omotteita (koto)
that guy-DAT John-NOM all-NOM want to meet that thought
'(with) that guy_i, John_i thought that everyone wants to meet'
c. (?)kare_i-o John_i-no atarasii sensei-ga Susan-ni syookaisita (koto)
he-ACC John-GEN new teacher-NOM Susan-DAT introduced
'he_i introduced John_i's teacher to Susan'

As I have implied above, the coreference in the sentences in (207) is somewhat less acceptable than their pre-scrambled counterparts. However, the contrast between (207) and the typical condition D violation cases is quite clear. Thus, for every (linguist and non-linguist) speaker I have consulted with, sentences like (208a) are significantly better than those like (208b) and (208c).⁶⁹

(208)

- a. (?) *karej*-o John-no sensei/gakusei-ga hometa (node ...)
 he-ACC John-GEN teacher/student-NOM praised because
 '(because) him_i, John_i's teacher/student(s) praised'
- b. **karej*-ga John_i-no sensei/gakusei-o hometeita (node ...)
 he-NOM John-GEN teacher/student-ACC praised because
 '(because he_i praised John_i's teacher/student(s)'
- c. **karej*-ga John_i-no (atarasii) sensei/gakusei-ni syookaisareta node
 he-NOM John-GEN (new) teacher/student-DAT was introduced
 '(because) he_i was introduced to John_i's (new) teacher/students'

Suppose that Kuno's (205) and (206) are indeed ruled out by condition D (i.e. the CL) or by his condition in (209).

(209) (Kuno's (1986) (43))⁷⁰

Condition JC

A *kare*-form pronoun must be given disjoint indexing with an R-expression that it both precedes and k-commands in surface structure.

We would then predict that the sentences in (207) and (208a) are all ruled out on a par with (208b) and (208c). But they do not have the same status, as indicated above.

The sharp contrast between (207) and (208a) on the one hand and (208b), (36c), (193b) and (194b) on the other indicates that we should not rule out all of these examples by the same mechanism.⁷¹

I therefore conclude that sentences such as (207), (208a), (205) and (206) do not violate any of the syntactic conditions/principles such as binding conditions A, B, C or the condition on linking. As I noted in footnote xx above, I do not find (205) and (206) "totally unacceptable" at all.

The preceding discussion thus indicates that the landing site of NP movement and that of scrambling must be distinguished. It suggests that while the landing site of NP movement must be an A-position, that of scrambling may not be an A'-position. (This is based on the assumption that condition D (i.e. the CL) regulates relations among A-positions, as is expected since condition D is part of the standard condition C, which has in turn been argued to regulate among A-positions.⁷²) Notice that the preceding discussion does not preclude the possibility that scrambling MAY be an A-movement while it does preclude the possibility that scrambling MUST be an A-movement. If scrambling may be either an A-movement or an A'-movement, as is suggested in works such as Mahajan (1989), the scrambled X in (173) NEED NOT be an A-position; cf. also Webelhuth (1989), Saito (1990), Yoshimura (forthcoming) and the references therein. Hence we can obtain (199a).

Alternatively, we may follow Saito's (1986) suggestion, and distinguish between D-positions and D'-positions, as defined in (210).

(210) (Saito's (1986) (47))

A D-position is a position in which an NP can appear at D-structure and can be licensed as a non-operator. A D'-position is one that is not a D-position.

Suppose that what is relevant for condition D (hence, for the rule of linking (RL) and the condition on linking (CL)) is a D-position but not a D'-position. The adjoined position is, by definition, not present at D-structure, hence a D'-position. Adopting (210), we may attribute the judgmental difference noted above (e.g. with respect to (202), (203) and (204)) to two different positions available for the "preposed" NP.

Let us consider the schematic structure in (211), representing both English and Japanese.

(211) (order irrelevant)

[S/S' X_i [S [NP ... Y_i ...] [VP ... cc ... V]]] X is less referential than Y.

The status of the empty category is deliberately left undetermined in (211). When X in (210) is base-generated in that position, then it is relevant for condition D; if it is preposed from the position of cc by adjunction, on the other hand, X is not relevant for condition D. This in turn means that the structure in (211) is well-formed if X is adjoined to that position at S-structure while it is not if X base-generated there. If this analysis is correct, then the judgmental

variation noted above may be attributed to the structural ambiguity of the surface string that corresponds to (211); one involves syntactic movement and the other does not.

If this is a correct result, we can relate this to the position of the so-called topic phrases in Japanese. It is proposed in Saito (1985) and supported further in Hoji (1985) that the NP topics can be either base-generated at the sentence-initial position or be preposed there by an adjunction operation. In Hoji (1985) the syntactically moved wa-marked phrase is related to the presence of stress (and its tendency to have a contrastive reading). Our prediction is then: Without stress on kare-wa, (212) is not well-formed, as compared to (213).

(212)

*?kare_i-wa John_i-no sensei/gakusei-ga pro_i hometa
 he-TOP John-GEN teacher/student-NOM praised
 'As for him_i, John_i's teacher/student(s) praised him_i'

(213)

[S kare_i-o [S John_i-no sensei/gakusei-ga ti hometa]] (koto)
 he-ACC John-GEN teacher/student-NOM praised
 'him_i, John_i's teacher/student(s) praised ti'

This seems right, as indicated. On the other hand, heavy stress does seem to improve the status of (212) to some extent. (The bold face represents heavy stress.)

(214) (Cf. (212).)

??kare_i-wa John_i-no sensei/gakusei-ga ti hometa

In Saito's work cited above, it is argued that PP topics, the so-called dative NP-ni, cannot be base-generated at the sentence-initial position, and they must be preposed from the S-internal position by scrambling. Given this, we predict that (215b) allows coreference.⁷³

(215)⁷⁴

a. John_i-no gakusei-ga kare_i/aitu_i-ni-wa monku-o itta/iwanakatta (koto)
 John-GEN student-NOM he-DAT complaints-ACC said/did not say
 'John_i's student(s) complained to him_i/that guy_i (but not to other people)
 "John_i's student(s) did not complain to him_i/that guy_i'

b. ?kare_i/aitu_i-ni-wa John_i-no gakusei-ga ti monku-o itta/iwanakatta (koto)

The prediction seems right. I find the coreference possibility in (215b) analogous to that in (216).

(216)

kare_i/aitu_i-no gakusei-ga John_i-ni monku-o itta (koto)
 he/that guy-GEN student-NOM John-DAT complaints said
 'his_i/that guy_i's students complained to John_i'

Notwithstanding the complications in regard to the crucial data, it thus appears that the answers to (181), as given in (199) represent the core cases of the syntactic generalizations in the relevant phenomena. This means that the landing site of NP-movement and that of scrambling must be distinguished from each other. If the relevant distinction is A v.s. A', then what is relevant to condition D (i.e. the RL) is an A-position. NP movement must be an A-movement while scrambling need not be an A-movement. If the relevant distinction is between D v.s. D', based on Saito's (1986) distinction, then (i) D-positions are the ones that are relevant for condition D, and (ii) NP movement must be, but scrambling need not be, a movement into a D-position. I will not choose between these two alternatives here; instead I will, in the ensuing discussion, simply assume that the relevant distinction is A v.s. A', suppressing the question whether this distinction should in fact be that between D v.s. D'.

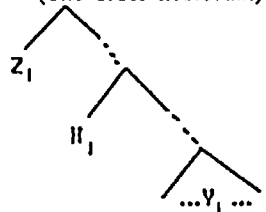
Let us now consider whether scrambling CANNOT be an A-movement, by considering the questions in (182) again. I repeat (182) and (174) below.

(182)

a. Can X in (174) be linked to Z if Z is a scrambled NP?
 b. Can X in (174) be linked to Z if Z is a passivized NP?

(174)

(The order irrelevant)



X is less referential than Y.
Z is equally referential to or more referential than Y

Given that the A-positions are relevant for the condition D phenomena, and given that NP movement is an A-movement, we expect that the answer to (182b) is in the affirmative. This prediction is confirmed by the acceptability of sentences like (217).

(217)

a. Yamada_i-ga [NP[S_i kare_i-ga Yamada_i-no syoosin mondai-ni kansite Yamada-NOM he-NOM Yamada-GEN promotion problem-about monku-o itteita] uwayaaku]-ni yotte Osaka-e tobarasareta (koto) complaint-ACC was saying boss-by Osaka-to was sent away 'Yamada_i was sent away to Osaka by the boss to whom he_i was complaining about Yamada_i's promotion problem'

b. *Iianako-ga [NP[S_i kare_i-ga Yamada_i-no syoosin mondai-ni kansite Iianako-NOM he-NOM Yamada-GEN promotion problem-about monku-o itteita] uwayaaku]-ni yotte Osaka-e tobarasareta (koto) complaint-ACC was saying boss-by Osaka-to was sent away 'Iianako was sent away to Osaka by the boss to whom he_i was complaining about Yamada_i's promotion problem'

The embedded sentence in (217b) violates condition D (i.e. the CL). The acceptability, or at least much improved status, of (217a) seems to be a typical instance of suspension of condition D.⁷⁵

Consider now (218).

(218)

a. * [NP[S_i kare_i-ga Yamada_i-no syoosin mondai-ni kansite he-NOM Yamada-GEN promotion problem-about monku-o itteita] uwayaku]-ga kubininatta (koto) complaint-ACC was saying boss-NOM got fired 'the boss to whom he_i was complaining about Yamada_i's promotion problem got fired'

b. ? [NP[S_i kare_i-ga Yamada_i-no syoosin mondai-ni kansite he-NOM Yamada-GEN promotion problem-about monku-o itteita] uwayaku]-ga Yamada_i-o kubinisita (koto) complaint-ACC was saying boss-NOM Yamada-ACC fired 'the boss to whom he_i was complaining about Yamada_i's promotion problem fired Yamada_i'

Again, (217a) shows typical condition D effects, and (217b) illustrates an instance of the suspension of condition D, although the judgments are subtle. Now, consider the scrambled version of (218b), given in (219).

(219)

? Yamada_i-o [NP[S_i kare_i-ga Yamada_i-no syoosin mondai-ni kansite Yamada-ACC he-NOM Yamada-GEN promotion problem-about monku-o itteita] uwayaaku]-ga t_i kubinisita (koto) complaint-ACC was saying boss-NOM fired 'Yamada_i, the boss to whom he_i was complaining about Yamada_i's promotion problem fired t_i'

The status of (219) is not completely clear. But it is much better than (218a) or a sentence that has Hanako in place of the preposed object Yamada. The judgments are admittedly quite subtle. But the sentence in (219) seems as acceptable as the cases of the suspension of condition D discussed in the preceding sections, as compared to the typical cases of condition D violation, t. This result means that in (174) the X MAY be linked to the scrambled phrase Z in (174). This in turn means that the scrambled NP MAY be in an A-position.

We have seen that the considerations regarding the effects of condition D indicate (220).

(220)

- a. NP movement must be an A-movement.
- b. Scrambling may, but need not, be an A-movement.

As noted earlier, Mahajan (1989) has proposed that, based on independent grounds (of Hindi data) that scrambling is either A or A'-movement; cf. the references in footnote x (right here).⁷⁶ While it is beyond the scope of this work to present a comprehensive analysis of scrambling, the results in (220), which is based on the consideration of the effects of condition D as well as its suspension, in fact seem to corroborate the characterization of scrambling that has emerged in a number of recent works on this phenomenon based on mostly independent considerations.

3.5.2.1. "Reconstruction" Effects and Condition D

I will now briefly discuss the interaction between condition D and the so-called "reconstruction". Consider the examples in (221) discussed earlier, which is taken from Postal (1971, p. 82).

(221) (Postal's (10.(24)b))
[Which of the men who criticized Charley_i] did he_j visit?

We have assumed, following Chomsky (1981), that the coreference possibility in (221) constitutes evidence for the view that condition D applies at S-structure. It is pointed out in van Riemsdijk and Williams (1981, p. 201), however, that there is a contrast in (222).

(222) (Van Riemsdijk and Williams' (86))
a. ?? Which picture of John did he like
b. Which picture that John saw did he like best

We have seen earlier that if the preposed constituent occupies its D-structure (or the argument) position and if John is c-commanded by he, the coreference is not be possible, as indicated by the examples in (223).

(223) (van Riemsdijk and Williams' (87))
a. *He likes those pictures of John
b. *He likes the pictures that John saw best

These are familiar examples of condition D violation.

Lebeaux (1988, pp.144-156; 1990) contains a more recent and more extensive discussion of this contrast. There he marks the contrast in (222) sharper than what is reported in van Riemsdijk and Williams (1980), as indicated in (224).

(224) (Lebeaux's (1988) (34c) and (34d), p. 144)
a. ?? Which pictures of John_i does he_j like?
b. Which pictures that John_i took does he_j like?

Since the coreference possibility in (221) has been a primary piece of evidence for assuming that condition D (and hence the CL) applies at the level of S-structure, as opposed to D-structure, the marginal to impossible coreference possibility of sentences like (222a) and (224a) seems problematic. In this section, I will not discuss the general issue raised by the contrast in (224), which I attempt to do in chapter 6; but I will rather concentrate on the Japanese data that are relevant to the contrast in (224) and its account offered by Lebeaux (1988, 1990).

While van Riemsdijk and Williams (1981, 201) suggest that the contrast in (222) has to do with the depth of embedding, Lebeaux (1988, 1990) proposes that the contrast is due to the argument/adjunct difference.⁷⁷ Lebeaux points out that John in (222a) is a complement of picture whereas John in (222b) is in an adjunct, i.e. in the relative clause. He argues that the relevance of the argument/adjunct distinction to the contrast in (222) can be confirmed by the paradigm in (225), in which the depth of embedding is held constant.

(225) (Lebeaux's (1990) (3))
a. *He denied the claim that John_i made.
b. *He denied that claim that John_i likes Mary.
c. Which claim that John_i made did he_j later deny ?
d. *Whose claim that John_i likes Mary did he_j deny ?

The pairs in (226)-(228) from Lebeaux (1990) are also intended to illustrate the argument/adjunct distinction being relevant for the contrast in (222).

(226) (his (4))
a. ?? Which pictures of John_i did he_j like ?
b. Which pictures near John_i did he_j look at ?

(227) (his (5))
a. *Whose examination of John_i did he_j like ?
b. Which examination near John_i did he_j peak at ?

(228) (his (6))

- a. ?*Which picture of John_i does he_j like t?
- b. Which pictures of John_i's does he_j like t?

When John appears in an adjunct as in (225b) and (226b), the coreference is possible. When John appears as a complement of the head N, receiving a theta role from the head, as in the process nominal in (226a), the coreference is not possible. Lebeaux states that the coreference in (225a) is disallowed, although less clearly than (226a), reflecting the selection of John by the head picture. He further notes, based on the contrast in (227), that the post-head genitive patterns with the adjunct, not with the argument.⁷⁸

Lebeaux (1988, 1990) thus suggests the generalization given in (229).⁷⁹

(229) (Lebeaux's (1990) (9))

Anti-Reconstruction Effects

Condition C effects are abrogated, when the fronted name is contained in an adjunct.

The basic idea of Lebeaux's proposal is to ensure that adjuncts containing a Name X need not appear at any point of the derivation for (222)-(228) in a position that is c-commanded by a pronoun Y that is coindexed with X, but that arguments containing X must at some point of the derivation. He achieves this by adopting (i) the view that the derivation of a sentence may involve the Merger operation of subtrees and (ii) an explicit distinction between licensing conditions and filters; as stated in (230).

(230) (Lebeaux's (1990) (32))

Condition on Indexing (UG)

- a. Positive conditions on indexing must be met somewhere in the derivation.
- b. Negative conditions on indexing may not be met anywhere in the derivation.

Condition D, being a negative condition, may not be met anywhere in the derivation.⁸⁰

In particular, Lebeaux (1990) proposes (231).

(231) (his (16))

Apply the transitive closure of X' principles, the Projection Principle, and the theta criterion.

An effect of (231) is that the D-structure representation of (232) now consists of two subtrees as given in (233), whereas (234) has only one (sub)tree, i.e. (235).

(232) which pictures near John_i does he_j like

- (233) a. he_j likes which pictures
- b. near John_i

(234) which pictures of John_i does he_j like

(235) he_j likes which pictures of John_i

Since John in (234) is (assumed to be) a complement of picture, it is part of the projection of like (+INFL), which takes which picture of John as its complement. On the other hand, since near John in (232) is an adjunct, it is not part of the projection of like (+INFL). Rather it is represented independently as in (233b). The rule of Adjoin @ adjoins (233b) to (233a) in the derivation of (232). Since Move @ is unordered with respect to Adjoin @, there is a well-formed derivation for (232), in which the fronting takes place before near John adjoins to which pictures. After the fronting of the wh-phrase, and before the Merger operation, (232) is represented by the two subtrees as in (236).

- (236) a. [which pictures]_k he_j likes t_k
- b. near John_i

After (236b) is adjoined to (236a) by Adjoin @, we have (237).

(237) [which pictures {near John_i}]_k he_j likes t_k

Nowhere in the derivation of (237), is John c-commanded by he, hence condition D is not violated at any point of the derivation. The same account applies to the contrast in the other pairs noted above.

Let us consider the relevant data in Japanese in light of this interesting proposal by Lebeaux. First of all, we have already seen that the syntactic preposing analogous to that in (225c), i.e., the case of relative clause, makes the coreference possible in Japanese. So the empirical question at this point has to do with the case that involves complements. Unfortunately, however, there are no clear cases of S' complement to an N head. It seems that all the structures of [NP...[S'

...] N] or something similar to this behave on par with the relative clause construction with respect to the "reconstruction" effects for condition D. That is, the coreference is allowed between John contained in [NP...[S' ...] N] and he, as indicated schematically in (238) below.

(238)

- a. *karej-ga [NP...[S' ... Johnj ...] N]-o ...
 b. [NP...[S' ... Johnj ...] N]k-o karej-ga lk ...

But these should most naturally be analyzed as "appositive". Thus Mary-no S' to yuu syutyoo 'Mary's claim (that says) S' corresponds to Mary's claim, i.e. S' rather than Mary's claim S'.

One construction that can arguably involve a complement to the N head is the case of "nominalization". If the conclusion in Hoji (1987) is basically correct, John in (239) is a complement to hihan 'criticism.'

(239)

Mary-no John-no hihan
 Mary-GEN John-GEN criticism
 'Mary's criticism of John'

Under this assumption, let us use (240) as a basis for the relevant test.

(240)

*karej-ga [NP Mary-no Johnj-no hihan]-o musisiteiru (koto)
 he-NOM Mary-GEN John-GEN criticism-ACC is ignoring
 'hej is ignoring Mary's criticism of Johnj'

If, as we assume it to be the case, John in (240) is a complement to hihan 'criticism', it must be present in the relevant phrase marker at D-structure. Hence condition D is violated at that point of the derivation. Hence the coreference must not be possible regardless of whether Mary-no Johnj-no hihan-o has been preposed. As indicated in (241), however, the preposing of this phrase does make the difference and make the coreference possible.

(241)

[NP Mary-no Johnj-no hihan]j-o karej-ga lj musisiteiru (koto)
 Mary-GEN John-GEN criticism-ACC he-NOM is ignoring
 'Mary's criticism of Johnj, hej is ignoring'

If Lebeaux's proposal is basically correct, the possibility of the coreference in (241) indicates that the sentence in (241) must have a derivation at no points of which John is c-commanded by kare. Thus, the well-formed derivation of (241) must be the D-structure representation as indicated in (242) below.⁸¹

(242)

- a. karej-ga hihan-o musisita
 he-NOM criticism-ACC ignored
 'hej ignored criticism'
 b. Mary
 c. Johnj

The fronting of hihan 'criticism' yields (243).

(243)

- a. hihanj-o karej-ga lj musisita
 criticism-ACC he-NOM ignored
 b. Mary
 c. Johnj

The adjoining of Mary and John to hihan gives (244), ignoring the genitive case marking.

(244)

[Mary [Johnj [hihanj]]]-o karej-ga lj musisita

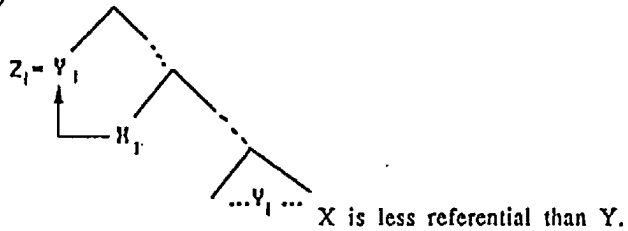
In this derivation condition D is not violated at any point.

The derivation described above, given Lebeaux's proposal, means either (i) that, contra Hoji (1987), John in (239) and (240), i.e. NP that appears to receive the "theme" (or "criticize") theta role by hihan 'criticism', is not a complement but an adjunct, or (ii) that the presence of an argument X is required in Japanese only if X is an argument of a verbal head. Regardless of the choice between the two, it is clear that Japanese does not exhibit the type of "reconstruction" effects for condition D. Hence the preceding discussion of the suspension of condition D effects in Japanese remains unaffected.⁸²

3.6. On the pragmatic licensing of the suspension of D

We have observed that condition D may be suspended in a configuration like (245).

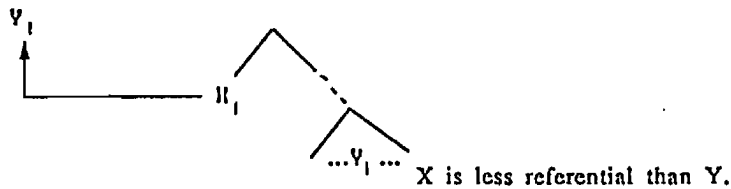
(245)



Given that fact that the coreference possibility is often affected by pragmatic considerations, one might raise the question as to whether condition D may be suspended pragmatically. That is, can the linking of the sort indicated in (246) be allowed that makes it unnecessary for X to be linked to Y that it c-commands?

(246)

(In discourse)



I will suggest in this section that the answer to this question is in the negative.

Let us first consider the sentence in (247) uttered after a lengthy discussion about John, hence in the context in which John is the topic of conversation.

(247) (during a discussion about John)

*Kono tyoosa-no kekka, [kare_i-ga John_i-no gakusei-o
 this investigation-GEN result he-NOM John-GEN student-ACC
 amari daizini siteinai koto_i-ga wakarimasita ne
 much take good care of fact-NOM became known
 'As the result of this investigation, it has become clear that he_i does not care very strongly about John_i's students, hasn't it?'

As indicated, even in the context in which John is prominent in the context of discourse, the effects of condition D seem quite strong. By contrast, (248) seems to exhibit the typical effects of the suspension of condition D

(248)

Kono John_i-ni kansuru tyoosa-no kekka, [kare_i-ga
 this John-regarding investigation-GEN result he-NOM
 John_i-no gakusei-o amari daizini siteinai koto-ga
 John-GEN student-ACC much take good care of fact-NOM
 wakarimasita no
 became known
 'As the result of this investigation of John_i, it has become clear that he_i does not care very strongly about John_i's students, hasn't it?'

Similarly, (249b) and (249c) below do not seem to allow the coreference, even as a response to the question in (249a).

(249)

a. John_i-ni suite nanika atarasii koto sittemasu ka?
 John-regarding something new fact know Q
 'Do you know anything new about John?'

b. *Soo desu nee, kare_i-wa kondo John_i-no ronbun-o LI-ni
 Well he-TOP recently John-GEN paper-ACC LI-to
 okutta ndesu yo
 sent
 'Well, he_i has sent John_i's paper to LI recently.'

c. *Soo desu nee, kare_i-ga kondo John_i-no ronbun-o LI-ni okutta
 koto-ga minna-no aidade zuibun hyooban-ni natteiru ndesu yo
 'Well, everyone is talking about the fact that he_i sent John_i's paper to LI.'

It thus appears that the suspension of condition D cannot be licensed pragmatically. This then confirms the syntactic nature of this condition. Given the discussion in the preceding sections, this means that the relevant linking, and more crucially the relevant condition on linking, is syntactic in nature.

3.7. Summary

In this chapter I have argued that condition D and condition B are of very different nature. I have in particular argued that the former is a condition on linking while the latter is a condition on binding. The conclusion that condition D is a condition on linking rather than on binding is in fact consistent with an earlier observation that the referential hierarchy to which condition D crucially refers to cannot be directly related to binding theoretic features. Given the identification of condition D as a condition on linking, we now have evidence that both linking and coindexation are needed in linguistic theory.

The crucial difference between the two conditions is that while condition D can be suspended in a particular configuration, condition B cannot. To capture the suspension of condition D, I have formulated the rule of linking (RL) and adopted the condition on linking (CL) from Higginbotham (1983). In light of the proposed account for condition D effects and the suspension of condition D, I have considered the structure in which *zibun* binds *kare*. I have argued, contra Lasnik (1986) and Aoun and Hornstein (1986), that *zibun* indeed may bind *kare*, as long as the CL is not violated. I have then discussed the properties of the scrambled NP and the passivized NP, arguing that while the former need not, the latter must, be an A-position. Finally, a question has been raised as to whether or not the suspension of condition D can be invoked pragmatically. We have seen that the pragmatic contexts cannot license the suspension of condition D.

Condition B:

I have noted that the effects of condition B show up most clearly with predicates that seem to have the semantic property of "point-of-view", "empathy", "logophoricity" and so on. These predicates allow the locally bound *zibun* more easily than other types of predicates. In addition to the examples taken from Oshima (1979) that we have seen in chapter 2, examples such (250) also illustrate this point. These are provided in Shibatani (1990, pp. 312-313).⁸³

(250)

a. (Shibatani's (106a))

*Tarooj-wa karej-o osae-ta
Taroo-TOP he-ACC suppressed
'Tarooj suppressed himj.'

b. (Shibatani's (1067))

*Tarooj-wa Hanako-ni karej-o sarakedasi-ta
Taroo-TOP Hanako-DAT he-ACC exposed
'Tarooj exposed himj to Hanako.'

It thus appears that the effects of condition B in Japanese can be detected most clearly in sentences with this type of predicates.

Recall that if *zibun* replaces *kare* in (250), then the coreference becomes possible, as illustrated in (251).

(251)

a. Tarooj-wa zibunj-o osae-ta
Taroo-TOP self-ACC suppressed
'Tarooj suppressed himselfj.'

b. Tarooj-wa Hanako-ni zibunj-o sarakedasi-ta
Taroo-TOP Hanako-DAT self-ACC exposed
'Tarooj exposed himselfj to Hanako.'

Furthermore, if *kare* is non-locally bound *John*, then the coreference is allowed, as indicated by the examples in (252).

(252)

a. Tarooj-wa kare-no kimotij-o/karej-no yuuzin-o osae-ta
Taroo-TOP he-GEN 'feelings-ACC/he-GEN friends-ACC suppressed
'Tarooj suppressed hisj feelings/stopped hisj friends.'

b. Tarooj-wa Hanako-ni kare-no kanzyooj-o sarakedasi-ta
Taroo-TOP Hanako-DAT he-GEN feelings-ACC exposed
'Tarooj exposed hisj feelings to Hanako.'

As expected, the patterns in (250), (251) and (252) can be easily reconstructed by using other nominals, such as Names, titles and epithets, as the intended bindee.

On the other hand, examples like (253) are also abundantly found.⁸⁴ The example in (253) is cited in Martin (1975:87, p. 1077).⁸⁵

(253)

Nan da nete ita noka, ore-wa? Karei-wa karei-ni itta
"What? Have I been asleep?" He said to himself.

(254)

?Johni-ga (zibun-de) karei-o suisensita (koto)
John-NOM (self-by) he-ACC recommended
'Johni has recommended himi voluntarily'

While I tend to find (253) less than perfect, its status and that of (254) are unquestionably better than (255) in English, which most native speakers of English invariably reject strongly.

(255) "What? Have I been asleep?" *Hei said to himi.

Thus it seems quite clear that while Japanese has condition B effects, they are not as strong as the effects of condition D in English.

This apparent puzzle might lead one to reconsider the status of condition B (and perhaps binding conditions in general) in regard to whether they are to regulate coreference relations. According to Reinhart's (1983, 1986) theory of anaphora, binding conditions directly regulate only those referential associations that have to do with bound-variable anaphora, not with coreference anaphora. Thus, in her theory, the contrast in (256) noted in Sportiche (1986) is as expected.

(256)

- a. John hates him.
- b. No one/everyone likes him.

Sportiche notes:

In English, although a pronoun used referentially can sometimes, given appropriate pragmatics, violate Principle B (i.e. condition B, HH), a bound pronoun can never do so. In [(256a)], for example, the pronoun can be made to accidentally corefer with the subject; the equivalent with a bound pronoun is completely impossible (for example, [(256b)])...

(p. 372)

While Evans (1980) provides some such cases, the "appropriate pragmatics" seem to be difficult to construct for most speakers of English. Japanese sentences such as (253) and (254), on the other hand, do not seem at all to require extraneous efforts to construct the "appropriate pragmatics".⁸⁶

As noted above, the effects of condition B in English show up most clearly when bound pronouns are involved, which is consistent with Reinhart's theory of anaphora. One might predict, based on this observation, that condition B effects show up clearly in the case of bound pronouns. The verification of this expectation requires a study of how bound variable anaphora is expressed in this language. In this sense, an attempt to confirm the clear effects of condition B in Japanese should provide us with further insight into the grammar of Japanese as well as into the nature of condition B itself. Furthermore, such an investigation might eventually lead us to understand why sentences like (253) and (254) are not as hopeless as condition B predicts. With these in mind, we will start considering the phenomenon of bound-variable anaphora in Japanese in chapter 4.

Notes to Chapter Three

¹ Whether it is necessary for the suspension of condition D effects that the additional occurrence of Y c-command X will be discussed later.

² When X is less referential than Y, (16) violates both condition B and condition D and is worse than when X is not less referential than Y. In the latter case, only condition B will be violated.

³ I keep the use of the topic marker wa in the original examples from Oshima (1979). As noted in chapter 2, footnote x, some subtle change seems to arise as the result of the use of ga in place of wa. I will continue to suppress such effects until the last part of this chapter.

⁴ As in some of the Japanese examples taken from other works, I have slightly modified the glossary here.

5 As in the case of (24), the sentences in (25), (26) and (27) would all become basically acceptable when the offending bindee is replaced by an NP that is not coreferential with the relevant NP's. I do not provide the relevant sentences here.

6 The appropriate honorific markers are not provided here.

7 The relevant feature is [-a] according to the proposal in chapter 2. It is not crucial for the argument in this section that we adopt this proposal. If the standard binding theory is assumed, then the relevant feature is [+p], with the consequences that we have discussed in chapter 2.

8 As Higginbotham (1983) notes in his footnote 2, earlier proposals such as Langacker (1967) have this condition, with a different structural relation; cf. section 1 of chapter 2.

9 In Higginbotham (1983), Chomsky's (1981) binding conditions in (i) are recast in the terms of "linking" as in (ii), (iii) and the condition in (45).

- (i) a. Condition A: An Anaphor is bound in its local domain.
 b. Condition B: A pronominal is free in its local domain.
 c. Condition C: A Name is free (i.e., not bound).

(ii) (Higginbotham's (1983) (27))

A*. If A is a pronominal and B c-commands A in G(A) (i.e., its local domain--HII), then B is not an antecedent of A.

B*. If A is an anaphor, then there is exactly one B in G(A) such that B c-commands A, and A is linked to B.

(iii) (Higginbotham's (1983) (26))

The interpretation of an expression is given in one and only one way.

The condition in (iiA*) is a linking version of binding condition B and the one in (iiB*) is a linking version of binding condition A.

In the linking approach of Higginbotham, binding condition C in (i) is replaced by (iii) and (45). As noted in the text, (45) rules out the linking in (iv).

(iv)

he saw John

(v)

he saw John

Since either (iv) or (v) below would correspond to the coindexation in (vi), it is also necessary to rule out the linking in (vi).

(vi) *he_i saw John_i

Higginbotham (1983) rules out the linking in (vi) by the condition in (iii), which states in effect that Names cannot be linked to anything, i.e., that Names cannot have antecedents.

It is not, however, clear how sentences in (vii) can be ruled out in the linking theory of Higginbotham (1983). (The judgments on (vii) are in accordance with the "standard" judgments.)

(vii) a. *John_i saw John_i.

b. *John_i thinks that Mary hates John_i.

Higginbotham (1985, p.572) modifies his theory and recasts the binding conditions of Chomsky (1981) as in (viii) (and also provides another version of them, to which we will return shortly).

(viii) (Higginbotham's (1985) (27))

a. Condition A: A anaphor is locally linked.

b. Condition B: A pronominal is not locally linked.

c. Condition C: An R-expression is not linked.

Higginbotham (1983, 1985) has motivated his linking approach based on such phenomena as "overlapping coreference", "split antecedence" and "the apparently long-distance reciprocal licensing." An additional argument is constructed in Montalbetti (1984) for this approach. Lasnik (1986, Appendix), "following Sportiche (1985) [and a discarded proposal of Higginbotham (1983)], "present[s] a version of indexing that circumvents these problems to a significant extent." (p. 162) Heim, Lasnik and May (1988) argues against the Linking approach in regard to its treatment of the "apparently long-distance reciprocal" licensing. In chapters 6 and 7, I will discuss Montalbetti and Wexler's (1985) proposal which has the effect of combining Higginbotham's linking approach and Reinhart's (1983) theory of anaphora. See Lasnik and Uriagereka (1988) for a summary and

discussion of the relevant issues.

The argument that will be presented below for "linking" is independent of the issues and considerations discussed in these works.

In Appendix to chapter 3, I will present some comparison between the proposal made in this chapter with Higginbotham's theory of linking.

¹⁰ I owe J.-R. Vergnaud and S.-Y. Kuroda for their (separate) help in formulating this condition.

¹¹ Higginbotham (1985, pp.570-575) abandons the condition in (59), and attempts to rule out (60) by the condition in (i) and the notion of "obviativity" as given in (ii).

(i) (Higginbotham (1985, p. 572)
A Pronominal is locally obviative.

(ii) (Higginbotham's (1985, (87)))
If X and Y are obviative, then they cannot be determined by the structure in which they occur to share a value:

I find this aspect of Higginbotham's linking theory less interesting than his (1983) version since it obscures the difference between the linking approach and the binding approach. Be that as it may, the relevant differentiation between condition D and condition B in Japanese cannot be made within this version of Linking Theory, either; see more discussion in Appendix.

¹² Since the asymmetrical relation of "antecedent-of" is not available, at least in the "standard" binding approach in Chomsky (1981) that Higginbotham (1983, 1985) compares his theory of linking with, it is not clear how a similar stipulation can save the binding approach.

¹³ To the extent that we can assume that PP that is "headed" by P's such as *kare* 'from' do not count as a "branching node" in terms of "c-command, we may include sentences like (i) in the relevant data here.

(i) [NP[S' eci sono paatii-de hazimete Johnj-ni atta] hito]-ga
karej-kare
 that party-at first time John-DAT met person-NOM
he-from
Johnj-no denwa bangoo-o moratta (koto)
John-GEN phone number-ACC received

'the person who met Johnj for the first time at the party got Johnj's phone number from himj'

The relevant operational tests such as variable binding, quantifier scope and pronominal coreference (i.e. condition D effects) all indicate that this assumption is needed; cf. Hoji (1985). Thus (ii), as contrasted with (i), seems to exhibit the typical condition D effects.

(ii) *[NP[S' eci sono paatii-ni hazimete kita atta] hito]-ga karej-kare
 that party-to first time came person-NOM he-
 from
Johnj-no denwa bangoo-o moratta (koto)
John-GEN phone number-ACC received
'the person who came to the party for the first time got Johnj's phone number from himj'

¹⁴ The contrast sometimes become clearer when the NP's in (88) and (91) in the position of the NP* in (i).

(i) Watasi-wa NP*(-no koto)-o yoku sitteiru
I-TOP -GEN matters-ACC well know
'I know (about) NP* very well.

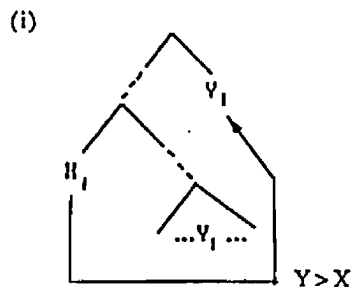
¹⁵ As noted in footnote xx in chapter 2, it is not clear how impossible the intended coreference is in examples like (88) and (93). As pointed out by JongDal X (p.c.), the impossibility of the coreference in examples like (88) and (93), i.e. the structure in (89) (schematized below as (i)) seems somewhat less clear than the cases when a less referential expression both precedes and c-commands a more referential one, as in (ii).

(i) **[[... Yi ...]Xi] where Y > X
(ii) *[Xi[... Yi ...]] where Y > X

As I noted in the footnote cited here, I would attribute this difference to some discourse "principle" that states "a more referential expression appears earlier than a less referential expression, if they refer to the same individual/object." What I hope to have established is that GIVEN THE PRECEDENCE RELATION CONSTANT, the structural notion "c-command" plays the most crucial role in the account of condition D effects. In this sense the unclear

nature of the subtle difference between (i) and (ii) does not affect this main point of contention.

¹⁶ I will consider two such cases here. First, another prediction we make is that the structure in (i) would allow the coreference, as indicated here.



This is a structure in which the relative head "licenses" the suspension of condition D. The judgment become increasingly more difficult to make. But the coreference in (ii) seems easier to obtain than in (iii).

(ii) ?[[NP [S' karej-ga Johnj-no hahaoya-o totemo daizini siteita] koro]-no Johnj]
 he-NOM John-GEN mother-ACC was taking good care of
 time-GEN John
 'Johnj, at the time when hej was taking good care of Johnj's mother'

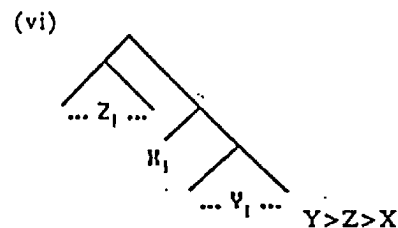
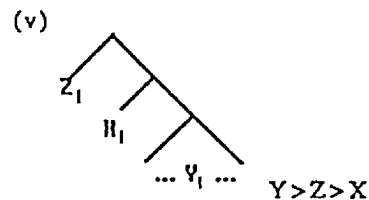
(iii) *[[NP [S' karej-ga Johnj-no hahaoya-o totemo daizini siteita] koro]-no ano kazoku]
 he-NOM John-GEN mother-ACC was taking good care of
 time-GEN that family
 'that family, at the time when hej was taking good care of Johnj's mother'

Again, the contrast may become clearer when these NP's are put in a sentence. We can, for example, place these NP's in the position of the NP* in (iv).

(vi) Watasi-wa NP*-ga suki da

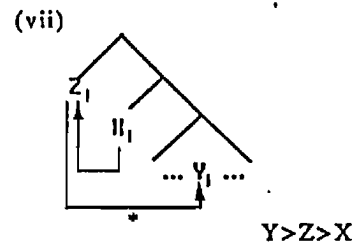
I-TOP -NOM like
 'I like/liked NP*'

Second, given the RL in (65), we predict neither (v) nor (vi) would allow the relevant coreference.



As indicated, it is assumed in both of these structures that Z is more referential than X but less referential than Y.

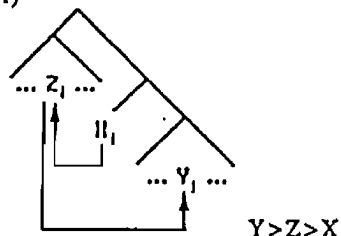
In regard to (v), the RL requires that Z be linked to Y. But such linking violates the CL. Thus, even if we allow X to be linked to Z, rather than to Y, in (v), the resulting structure would violate the CL. This is indicated in (vii).



Notice, incidentally, that if X were linked to Y, that linking would also violate the CL.

Consider next the structure in (vi). In this structure, Z can be linked to Y, without violating the CL, since the former does not command the latter. So, if X can be linked to Z without having to be linked to Y, the structure would allow the coreference. This situation is indicated in (viii).

(viii)



But, given the formulation of the RL in (65), repeated here, X MUST be linked to Y.

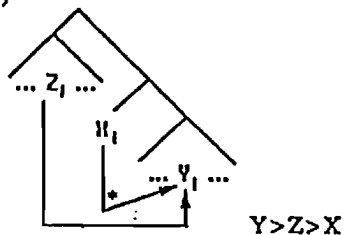
(65) The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

In (viii), X and Y are coindexed and X is less referential than Y. The RL then states that X must be linked to some identically indexed Z that is more referential than or equally referential to Y. Z in (viii) is less referential than Y. In the case of (viii), therefore, the Z that is to be designated in the RL is Y itself. Hence X MUST be linked to Y. Hence the structure for (vi) should be (ix) rather than (viii).

(ix)



As indicated on the linking from X to Y, this violates the CL. Hence the coreference in the structure in (vi) is predicted to be impossible, based on the proposed analysis.

The judgments on the relevant data are not very clear. But it seems that the prediction is not quite correct. Consider first the example in (x), a typical condition D violation.

- (x) * $kare_i$ -ga Yamada butyoo_i-no hon-o nakusita (koto)
 he-NOM Chief Yamada-GEN book-ACC lost
 'he_i lost Section Chief Yamada_i's book'

The example in (xi) below represents the structure in (v).

- (xi) *butyoo_i-ga [_s $kare_i$ -ga Yamada butyoo_i-no hon-o nakusita
 to]
 chief-NOM he-NOM Chief Yamada-GEN book-ACC lost
 that
 omoikondeita (koto)
 thought
 'the section chief_i thought that he_i had lost Chief Yamada's book'

As indicated, the coreference is not possible here. As noted above, this is predicted by the CL in (65).

Now, consider the example in (xi), which represents the structure in (vi).

(xii)

- a. ??[butyoo_i-no dookisei]-ga [_s $kare_i$ -ga Yamada butyoo_i-no hon-o
 chief-GEN colleague-NOM he-NOM Chief Yamada-NOM book-
 ACC
 nakusita to] omoikondeiru (koto)
 lost that think
 "the section chief's colleague (i.e. a person who entered the
 company in the same year as he_i did) thinks that he_i lost Chief
 Yamada's book"
- b. ??butyoo_i-no dookisei-ga $kare$ -ni [_s minna-ga
 chief-GEN colleague-NOM he-DAT all-NOM
 Yamada butyoo-no koto-o waruku itteiru to] tugeta
 Chief Yamada-GEN matter-ACC badly is saying that told
 "the section chief's colleague has told him_i that everyone is

speaking ill of Chief Yamada]"

If the judgments here are correct then the RL in (65) should be modified as in (xiii).

(xiii) The Rule of Linking (RL) (Revised)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential X
- (ii) Z is coindexed with X and Y.

In accordance with (xiii), the structure in (vi) will have the linking as indicated in (viii). Hence the coreference in (vi) should be allowed.

The RL in (xiii) makes its own predictions as to the suspension of condition D effects in a variety of structures, including those discussed in the text, (with Z and Y not being equally referential to each other). I will, however, not attempt to verify such predictions in this work mainly because the relevant judgments are substantially less clear in those cases and partly because of space limitations. The main points of the preceding arguments will remain valid, no matter which formulation of the RL eventually turns out to be correct.

¹⁷ For the same reason, I will also not consider the predictions that the proposed analysis makes in regard to the suspension of condition D inside the NP's whose head (appears) to assign theta roles to its arguments.

¹⁸ Lasnik's (1986, p. 162) suggestion that this condition is "possibly universal" is made in connection with the parameterization of condition C; cf. chapter 2, xx. Thus his intent there is perhaps that condition D is not subject to parametric variations.

¹⁹ In addition to conditions D and B, there may be a factor of what Lasnik (1986, 149) calls "a mild prohibition, reasonably regarded as extragrammatical in nature, against the repetition of R-expressions", contributing further to the murkiness of the data.

²⁰ While I tend to find (124b) less offensive than is indicated in Lasnik (1986), I agree that there is a contrast in (124). If *omotta* 'thought' is used in place of *omotte iru* 'is thinking' in (124), the contrast becomes sharper for me; i.e., I find (ib), as compared to (ia), quite offensive.

(i) a. John_i-wa [S' kare_j-ga [S' zibun_j-ga tensai da to] omotta to] itta

John-TOP he-NOM self-NOM genius be that thought that said

'John_i said that he_j had thought that self_i was a genius'

b.*John_i-ga [S' zibun_j-ga [S' kare_j-ga tensai da to] omotta to] itta

John-TOP he-NOM self-NOM genius be that thought that said

'John_i said that self_i had thought that he_j was a genius'

I will return to the contrast between (124) and (i) later.

²¹ Lasnik also reports that the same contrast obtains in Korean. I confine my discussion here to Japanese since the status of the Korean counterparts of the kinds of data that will be considered below is not clear to me, based on the responses from several informants.

The contrast in (124) is also reported and discussed in Aoun and Hornstein (1987) and Katada (1988), to which I will return.

²² I have supplied the glossary and included the indices..

²³ As discussed in chapter 2, the "locality" of this condition is subject to cross-linguistic variations.

²⁴ (to be deleted, unless I get responses from more speakers) One Korean linguist's initial reaction was that the Korean counterparts of the sentences in (129) are basically acceptable. He judges (129c) acceptable and finds the rest of the examples in (129) in Korean slightly worse. The same linguist. The same speaker shares the contrast in (125) in Korean, and does not detect significant difference between (125) and (122x) below.

²⁵ See chapter x, pp.xx for references for this observation. Chapter 4 discusses the bound variable construal in Japanese in some depth.

²⁶ The stipulation in (131) is embedded in Aoun's (1985, 1986) theory of Generalized Binding, and it is a subcase of a more general statement in UG, which is intended to account for seemingly different locality restrictions on the bound pronoun, i.e. the overt pronoun that is construed as bound variables, across languages; cf. Montalbetti (1984) for some such restrictions on Spanish overt pronoun and Aoun (1986) for a locality restriction on the bound overt pronoun in Chinese.

Hong (1985) also makes a stipulation such as (131), covering both *kare* and the so-called overt pronoun in Korean *ku*.

²⁷ The assumption in (132) is in accordance with the LF raising analyses of reciprocals in Lebeaux (1986?) and of anaphors in Pica

(1987) and Chomsky (1986). Katada (1988) independently presents arguments for the assumption in (132), one of which is based on the contrast as observed in (124).

²⁸ See footnote xx in chapter 2 for a brief discussion on whether *daremo* in (133b) is an argument.

²⁹ If the judgments reported here, which many speakers share, are taken as a core part of the data, we will then be forced to reconsider the nature of condition C, along the lines of Reinhart (1983, 1986). I will explore this possibility in chapters 6 and 7.

³⁰ I will discuss the relevant issues in some depth in chapter 4.

³¹ *Sōitu* is the *so* counterpart of *aitu* 'that guy' that we have used so far as a Japanese "epithet". The deictic paradigms in Japanese will be discussed in chapter 4.

³² As in the case of (124b) (cf. footnote xx above), it is not clear to me that (141b) and (142b) are completely unacceptable. But the contrast in (124) seems to be clearly mirrored in (141) and (142).

³³

³⁴ One may attempt to generalize this as "a less referential expression may bind a more referential one if the latter may function as a bound variable." It is, however, clear, based on the discussion in the previous sections, that this does not hold.

³⁵ The relevant observations here therefore indicate that both of the "generalizations" that Lasnik (1986, 161) notes as evidence for the assumption that "[+a] categories would also fall under [condition D]" turn out not to be quite established. The two "generalizations" are:

(i) "[Q]uite generally, an anaphor cannot bind an R-expression."

(ii) "[I]n Japanese, an anaphor may not bind a pronoun."

Note, however, that this result does not necessarily mean that [+a] categories are not subject to the condition D that is formulated in terms of linking. The cases that go against (i) and (ii) are all cases of the "suspension of condition D", which is now expressed by our formulation of the RL (rule of linking). On the other hand, such cases do constitute evidence against formulating condition D in terms of binding, as in Lasnik (1986).

³⁶ As noted in Kuroda (1973, footnote 5), a second person subject is required in interrogative sentences.

Kuroda (1965, p. 142, p. 163 footnote 5) notes, attributing the observation to G. Itasaka of Harvard University, that "in narration [these adjectives] may be used freely with any type of subject". This

style is called in Kuroda (1973, p. 381) "the nonreportive style". Thus, (i) is acceptable in the nonreportive style.

(i) John-wa kanasikatta
John-TOP was sad
'John was sad.'

The sentence-final particle *yo* is added in (145) to force the non-narrative style, following Kuroda (1965, 142).

As is also noted by Kuroda, *garu* 'to show a sign of' must be used to express the intended meaning of (i), as shown in (ii).

(ii) John-wa kanasi-gat-ta yo
'John showed a sign of being sad. = John was sad.'

It must be noted that that the "tense" distinction too seems to make some difference. Thus (iii) seems to have a somewhat low acceptability than (i) even as a "narrative" form.

(iii) ??John-wa ima (kagirinaku) kanasii
John-TOP now extremely is sad
'John is extremely sad now'

(The addition of *yo* seems to make (iii) totally unacceptable.) It is not clear that the distinction is real. In fact, the distinction of this type is not noted in Kuroda (1965, 1973). It is in fact indicated in Kuroda (1973, p. xx) that these sensation adjectives must have a first person subject regardless of their "tense". The marginality of (iii) might simply be related to the fact that the "present" tense tends to favor the nonreportive style more than the "past" tense; cf. also the discussion of (147).

³⁷ Kuno (1987, p. 138) suggests that the saying and thinking verbs, including *omow*, take "logophoric" complements. As we will see directly, however, a distinction has to be made between *omow* 'think' and *iw* 'say'. Hence it is not clear that we can take this suggestion as corroborating my claim here. See the discussion below (p. xx).

³⁸ With the *te-i-ru* form, (145b) becomes acceptable.

(i) John-wa [S' Mary-ga kuru to] omow-te-i-mas-ru
yo/omow-te-i-ru yo

John-top Mary-NOM come that is thinking
'John thinks that Mary will come.'

This might be related to the fact that the sensation adjectives lose the relevant restriction, when garu is added.

³⁹ The example in (146b) is acceptable on the reading "John will/would think so"; but it is not on the relevant reading given in the text. The phonetic realization of omow-ru is omou. The more abstract form omow-ru is used in (145) and below for a clear identification of the verb.

⁴⁰ The phonetic realization of omow-ta is omotta.

⁴¹ The phonetic realization of iw-ta is itta.

⁴² Regarding the syntactic and semantic characterization of the no da construction, Kuroda's (1973, p. 379-380) states:

Syntactically, no da is attached to a sentence at the end and forms another one. Semantic description of no da is not easy. The closest equivalent in one of the more familiar languages would be c'est que in French, though one can still only speculate as to what exactly they have in common.

Thus, the semantic effects of no da are difficult to characterize clearly and completely. The only generalization one can make from the preceding examples is that no da somehow serves as a marker to indicate that some "second order" assertion, so to speak, is made with respect to the proposition expressed by the sentence to which no da is attached. That is, it serves to indicate that some assertion is made as to how the proposition in question is related to some other proposition or propositions that are stated (or even understood) in a particular discourse context. However, even such a vague characterization may be too narrow.

See also Kuno (1970; 1973, Ch. 19) for more discussion on this construction.

⁴³ The parallelism is not complete, however. While the "tense" distinction does not affect the "lifting" of the relevant restriction in the case of the sensation adjectives, it seems to play some role in the case of omow. Thus the use of the "present", "non-past" or

"nonperfective" form of the verb, i.e. omow-ru (-> omowu), in the b, c and d examples in (154) seem to result in the marginality similar to that of (155).

⁴⁴ It may be called a "point-of view" verb or a "logophoric" verb; cf. Kuroda (1965, pp. 142-143; 1973), Kuno (1972, 1987), Kameyama (1985), Sells (1987), Koopman and Sportiche (1990) and references therein for more general discussion of the relevant phenomena (and different terms employed in the description of such phenomena).

⁴⁵ Similarly, according to Kuno, (ia) implies that John_i is aware of the fact that the man that he is dining with is trying to kill him_i, but (ib) does not.

(i) (based on Kuno's (98))

a. John_i-wa zibun_i-o koros-oo to site-iru otoko to syokuzi-o siteimasu
John-TOP self-ACC kill-try do-ing man with dining-ACC do-ing
'John_i is dining with the man who is trying to kill self_i'

b. John_i-wa kare_j-o koros-oo to site-iru otoko to syokuzi-o siteimasu
John-TOP he-ACC kill-try do-ing man with dining-ACC do-ing
'John_i is dining with the man who is trying to kill him_j'

⁴⁶ The symbol [+logo-1] is used to "mark the NP that represents the speaker or experiencer (i.e., first person)." (Kuno (1987, p. 108)

⁴⁷ We restrict our attention to overt nominal categories here.

⁴⁸ In the terms of Kuno (1972), the deep structure representation that corresponds to (159) is like (i).

(i) John-ga [Boku-wa tensai da] (to) omotta
'John thought, "I am a genius."

The marginal status of (158b) reported in Kuno (1972) would be accounted for by assuming that (ii) is not well-formed as a "representation of John's internal feeling".

(ii) John: John-wa tensai da
'John is a genius.'

⁴⁹ There is, however, a clear difference between the two. While

(158a) yields a bound variable reading, (158b) cannot. This will be discussed in some depth in chapter 6, where I will discuss the phenomenon of "sloppy identity" in Japanese.

⁵⁰ It seems that (163c) is somewhat better than (144b) and (i) below.

(i)

*?Yamada kyoozyui-wa [S' zibun-ga [S' kare-ga tensai da to] omotta to] itta yo

'Profj. Yamada said that selfj thought that hej is a genius.'

A functional account like the following may be given for this contrast. First, the "point-of-view" property of omow makes zibun (rather than kare) an "unmarked" subject of the S' complement of this verb, if it is "coreferential" with the subject of omow, as proposed in Kuno (1972, 1987). The use of kare instead of zibun in (163c) (despite the use of the verb omow) means that the speaker is deliberately not taking Yamada's point of view, and is detached from Yamada. Thus, to the extent that this "detachment" is somehow possible, (163c) MAY become acceptable to some extent. In (144b) and (i), on the other hand, zibun is used as "coreferential" with Yamada, which typically makes the speaker to take Yamada's point of view. But then, the use of kare in (144b) and (i) (despite omow) is not compatible with the use of zibun since the former implies the speaker's detachment from Yamada while the latter implies the speaker's taking Yamada's point of view. Hence this incompatibility of the "point-of-view" results in the severe unacceptability in (144b) and (i) than in (163c). In (163c), only the "detachment of the speaker's feeling" from Yamada is required to make the sentence acceptable, which itself is in contradiction with the use of omow (to the extent that this verb has the property of "point-of-view").

As will be indicated below, if a "point of view" predicate is not used, the use of kare does not necessarily imply the speaker's detachment from Yamada.

⁵¹ It appears that the anaphor binding in (167) is difficult to obtain in the nonreportive style. That is, if we add yo at the end of this sentence, the relevant anaphor binding seems to be much more difficult. For this reason, I will not use yo in the "backward reflexivization" examples to be given below.

This may be related to Kuno's (1986) argument against Saito and Hoji's (1983) weak crossover account of certain Japanese sentences. Cf. Hoji (1985, pp.33-42) for a reply to Kuno (1985) in

this connection.

⁵² It seems that something like "a shift of point of view" is involved in judging sentences of this sort. Discussion of some related issues will be given in Ch. 6.

⁵³ They include the head of the appositive relative clause.

⁵⁴ The 'schema of D-structure well-formedness condition' is then as in (i) and (ii):

- (i) a. $X^{\max} = Y^{\max} X'$
b. $X' = X Z^{\max}$

"where W^{\max} ($W=X, Y, Z$) is the maximal projection of W , W' the bar-level category, and W the zero-level (basic) category type W , and where W ranges over lexical categories (N, A, V, P) as well as over two clausal argumentizers, C(complementizer) and I(NFL). The linear order of the constituents is language specific. [(i)] represents the linear order for English." (Kuroda (1986; 1988, p. 2).

Generalizing Chomsky's (1986) (i) to the category V, Kuroda (1986, 1988) thus advocates the so-called VP-internal subject hypothesis, the hypothesis that has independently been proposed in Fukui (1986), Y. Kitagawa (1986), Sportiche (1987) and Zagana (1987). It must be noted, in this connection, however, that, as far as the Japanese instantiation of this hypothesis is concerned, Fukui, Y. Kitagawa and Kuroda employ radically different, and many of them mutually incompatible assumptions, and propose quite different executions of this idea. Hence, it is misleading to assume, based on the fact that these authors all advocate the so-called VP-internal subject hypothesis, that there is accumulating EMPIRICAL EVIDENCE for it.

⁵⁵ Kuroda uses Ext(I), External Complement of INFL, in place of Spec(I), Specifier of I; cf. his footnote 2.

⁵⁶ Incidentally, Kuroda himself does not entertain this idea and suspects that the landing site of scrambling is neither a customary sense of an A'-position (if taken as an operator position) or of an A-position.

⁵⁷ They include, in addition Saito and Fukui (1986) and Yoshimura (1989, forthcoming, Saito (1990) and Tada (1990). Among the works that discuss scrambling in languages other than Japanese are Mohajan (1989?) and Webelhuth (1989).

⁵⁸ This need not be the case if we adopt Lebeaux's (1988, 1990) proposal on "derivation", according to which that John read can be

adjoined to book after the wh-movement. Lebeaux argues that the option of adjunction at this point of derivation is not allowed for complements, drawing on the contrast illustrated in (i).

(i) (Lebeaux's (1990) (3c) and (3d), with the judgments reported there)

- a. Which claim that John_i made did he_j later deny _i?
 b. *Whose claim that John_i like Mary did he_j deny _i?

I will turn to this proposal briefly in the next subsection. Chapter 6 contains a more extensive discussion Lebeaux's proposal.

⁵⁹ Analogous to (186) in English, (i) below does not allow the coreference.

(i)

- a. *karej-ga kyoositu-ni [Johnj-no gakusei]-o zennin atumeta
 (koto)
 he-NOM class room-to John-GEN student-ACC all gathered
 'he_j gathered all of John_i's students in the classroom'
- b. *karej-ga [NP dare-no Johnj-nitaisuru hihan]-ni hungaisiteiru
 no
 ke-NOM who-GEN John-toward criticism-DAT is infuriated
 Q
 'he_j is infuriated with whose criticism toward John_i?'

As we expect, the scrambled versions of (i) allow the coreference.

(ii)

- a. [Johnj-no gakusei]-o zennin karej-ga kyoositu-ni _i atumeta
 (koto)
 John-GEN student-ACC all he-NOM class room-to
 gathered
 'all of John_i's students, he_j gathered _i in the classroom'
- b. [NP dare-no Johnj-nitaisuru hihan]-ni karej-ga _i
 hungaisiteiru no
 who-GEN John-toward criticism-DAT ke-NOM is
 infuriated Q
 'whose criticism toward John_i, he_j is infuriated with _i?'

If the phrases that contain John in (i) undergoes LF raising, the LF representations for (i) would be identical to those for (ii). (It is in fact argued in Choe (1984), Nishigauchi (1986) and Hasegawa (1986) that the NP containing John in (ib) undergoes LF wh-movement. Thus, under this assumption, the contrast in (i) and (ii) can be considered as confirming evidence that condition D does not hold at LP; cf. Pesetsky (1987) and the discussion in xx in chapter 4.

Incidentally, it is not clear whether zennin forms a constituent with the John-no gakusei 'John's students' above; cf. Terada (1986), Miyagawa (1989), making somewhat unclear the significance of the contrast between (ia) and (ib). It must further be noted that when zenin 'all' remains to the position adjacent to the verb, unlike in (ia), then the coreference seems to become somewhat more difficult to obtain. This is apparently related to the "licensing" of the floating quantifiers. Observations of this sort have been made by H. Tada (p.c.). The interaction between condition D effects and the so-called "reconstruction" effects will be discussed in some depth in chapter 6.

⁶⁰ It must be assumed, in this view, that condition C holds of empty categories (i.e. variables) in Japanese, despite the fact that it does not hold for overt nominal expressions such as Names. This in itself is not an unreasonable assumption to make. Evidence that bears on the properties of empty categories is, prima facie, is not as available to the language learner than that bears on the properties of overt categories. Thus it seems at least plausible, although I do not accept it, that while positive evidence results in the absence of condition C for overt categories, the relevance of condition C for empty categories that are [-a, -p] is invariable across languages.

⁶¹ The Dative-marked NP is used for the scrambled argument in (193b) and (194b). One might find (i) somewhat worse than (193b) and (194b).

- (i) ??karej-o Johnj-ga [S' Chomsky-ga _{ii} hihansita to]
 omotteita (koto)
 he-ACC John-NOM Chomsky-NOM wants to meet that
 thought
 'him_i, John_j thought that Chomsky had criticized'

As noted in Saito (1983a, p. 88), verbs like omow 'think' and 'say' apparently may take NP and S' as its complements_{xx}; cf. also Kuno (1976, pp. 41-42) and Y. Kitagawa (1985, pp.268-270). The example in (ii) illustrates this.

(ii)

John-ga Mary_j?(-no koto)-o [S' kanozyoj-ga tensai kamosirenai
to] omotteita (koto)
John-NOM Mary(-GEN matter)-ACC she-NOM genius may be
that thought
'John thought of Mary_j that she_j might be a genius'

The sentence might be more natural with no koto, but it is basically acceptable even without it. (See Kuno (1976, pp. 41-42) for a brief discussion of no koto of this use.) Due to the independently available structure of this type, i.e. V NP S', it is not clear that the Q-marked phrase in (i) has indeed been extracted from the embedded object position as indicated above or has been extracted from the matrix object position as indicated in (iii) below.

(iii)

*kare_j-o John_j-ga ti [S' Chomsky-ga pro_j hihansita to]
omotteita (koto)
he-ACC John-NOM Chomsky-NOM wants to meet
that thought
'him_j, John_j thought of ti that Chomsky had criticized him_j'

As the asterisk (given here as the "predicted judgment") here indicates, this structure is then identical to (192b) and violates condition B. It is for the purpose of avoiding this complication due to the structural ambiguity that I have chosen to use the ni-marked argument for the scrambled NP in the case of the "long-distance" scrambling. The structure of V NP-ni S' is not possible even for these verbs.

⁶² There is a slight contrast between (196b) on the one hand and (193b) and (194b) on the other. The former seems somewhat better than the latter. This, I suspect, is due to the "precedence effect" of some discourse "principle".

⁶³ Alternatively, one might propose, as in Reinhart (1983), that there is no such grammatical principle as condition C. I will eventually adopt this view in chapter 6.

⁶⁴ One might wonder how the unacceptable status of (192b) may be made compatible with the assumption that the trace of scrambling is [+a]. One way to bring about the compatibility in question is to resort to Rizzi's condition on chains (i.e. A-chains). As

O Jeaglli (p.c.) has pointed out to me, (192b) can be ruled out by the condition on chains in Rizzi (1986); cf. also Lasnik (1985). The effects of this condition can be attained by the following definitions and conditions, taken from Baker, Johnson and Roberts (1989, p. 225).

(i)

a. Chains: C = (x_i, ... , x_n) is a chain iff, for 1 < i < n, X_i locally binds X_{i+1}. (Rizzi (1986, (2)))

b. Local binding: X locally binds Y iff X binds Y and there is no Z that binds Y but not X.

c. Binds: X binds Y iff X c-commands and is co-indexed with Y.

(ii) For each well-formed structure there exists a set of chains S, such that:

a. Each argument appears in a unique chain of S.

b. Each chain of S contains a unique visible theta-position P and a unique argument.

c. Each theta-position P is visible in a chain of S.

(iii)

a. A theta-chain is an element of the set S in (ii).

b. The Projection Principle requires arguments to appear in a theta-chain at every level.

What this condition amounts to, in the case of our (192b) is that in order for (kare_j, ti) to be a well-formed A-chain, the ti must not be c-commanded by John.

However, the condition on chains, as formulated above, is violated in (193b), (194b) and (195b), where (e.g. in (193b)) the trace of the scrambled NP is not locally bound by an NP that is not c-commanded by it. This means that if the trace of scrambling is invariably [+a], the unacceptability of (192b) and (195a) cannot be attributed to Rizzi's condition on chains, at least in a straightforward fashion. These considerations apply equally to Lasnik's (1985) condition on chains.

⁶⁵ This in turn indicates that the rule of linking must not apply at the level of D-structure, given the assumption, made in Higginbotham (1983), that linking between X and Y is preserved through movement.

⁶⁶ If the trace of X c-commands Y, then the structure in (173) would violate the CL, whether X is a scrambled NP or a passivized NP.

⁶⁷ The "is passivized NP" in (199b) can be generalized to "is

moved by NP movement", to include the other cases of NP movement discussed in Miyagawa (1988, 1989) and in Tada (1988) and Hoji et al. (1989). They include the intransitivising resultative and the ergative constructions; cf. also Terada (1986) and Ueda (1987).

⁶⁸ Some speakers seem to find (201b) more or less acceptable. I, however, follow the "standard" judgment reported in the literature, such as in x, xx and xxx.

⁶⁹ It appears that the contrast in (208) also obtains in Korean as well, at least, according to some native Korean speakers that I have consulted with.

⁷⁰ The notion "k-command" is the same as Lasnik's (1976) "kommand", introduced in chapter 2. Its definition is repeated in (i).

(i) X kommands Y iff the minimal cyclic node dominating X also dominates Y. (Lasnik (1976, p. 101)

⁷¹ I will turn to a similar issue that arise when we consider double object construction in chapter 6.

⁷² It is not clear at all how we could capture the relevant data above, without this assumption.

⁷³ Incidentally, the acceptability of (214b) cannot be accounted for based on the assumption that *kare/aitu* does not c-command *John* because of *ni*, because *ni* is a dative case, in which case it is not a P, and/or because PP's (at least those PP's headed by "simple" P's) in Japanese do not count as branching nodes in the definition of "c-command". The fact that PP's in Japanese do not seem to count as branching nodes for "c-command" has led Kuno (1986) to adopt "k-command" (=kommand) rather than "c-command" in the formulation of his conditions.

⁷⁴ It appears that (215b) sounds better with negation. But this is also true of (215a) and seems to be related to the fact that the so-called "contrastive" *wa* is most natural with negation.

⁷⁵ When *kare* does not c-command *Yamada*, the coreference is acceptable as indicated in (i) and (ii).

(i)

Hanako-ga [NP[S' Yamada-ga karej-no syoosin mondai-ni kansite
Hanako-NOM Yamada-NOM he-GEN promotion problem-about
monku-o itteita] uwayaku]-ni yotte Osaka-e tobarasareta
(koto)
complaint-ACC was saying boss-by Osaka-to was sent

away

'Hanako was sent away to Osaka by the boss to whom Yamada-j was complaining about his-j promotion problem'

(ii)

Hanako-ga [NP[S' karej-no sinyuu-j-ga Yamada-j-no syoosin mondai-ni kansite
Hanako-NOM he-GEN best friend-NOM Yamada-GEN promotion problem-about
monku-o itteita] uwayaku]-ni yotte Osaka-e tobarasareta
(koto)
complaint-ACC was saying boss-by Osaka-to was sent away
'Hanako was sent away to Osaka by the boss to whom his-j best friend was complaining about Yamada-j's promotion problem'

Making explicit some contexts such as 'Hanako is Yamada's girl friend might facilitate the acceptability of (i) and (ii). Crucially, such contexts do not help (217b).

⁷⁶ This possibility is currently being examined extensively in works such as Saito (1989), Yoshimura (forthcoming) and Tada (forthcoming).

⁷⁷ They state (p. 201):

Essentially, certain NPs which are embedded in a phrase X which has undergone *wh*-movement must be prevented from being reconstructed along with the rest of X (which has the effect of yielding condition D effects in the case of (222)--HH). The exact nature of degree of embedding which must hold in order for this exemption to obtain is not known. Most linguists agree that an NP which is contained in an S' which is dominated by X must be exempted (cf. Wasow (1979; appendix II), Vergnaud (1974: chapter 3 footnote 10). Beyond that there is much variation and/or little agreement.

⁷⁸ He notes that [t]his is expected, since (i) the post-head genitive has a loose, "relation R" relation to the head, unlike that of the complement, (ii) it is attached after subcategorized complements, and (iii) it is an island for extraction. The presence and the absence of condition D effects in these structures then may serve as an

operational test for identifying whether an XP in a given construction is like an argument or like an adjunct.

Lebeaux (1990) in fact notes that "[t]he lack of Condition C (i.e. condition D, as acknowledged in effect in his footnote 2--HH) effects in partitive-type constructions (as indicated in (i) below--HH) suggests that they pattern with post-head genitive; they appear to be acting as adjunct type elements in this construction," which he relates to "the loose relation to the (null) head, and the lack of extractability (as indicated in (ii)--III)"

(i) (his (7))

Which (ones) of John's pictures does he_j like y?

(ii) (his (8))

*Whose pictures does he like which of t?

⁷⁹ As in the case of the discussion in the previous section, here too, we seem to have some judgmental differences. Thus, Roberts (1987, p. 56), contra van Riemsdijk and Williams (1980) and Lebeaux (1988, 1990), notes that sentences in (i) "seem perfectly fine."

(i) (Roberts (1987) (16))

- a. That picture of John_j he_j likes
- b. Which picture of John_j does he_j like

Kuno (1986) reports the contrast as indicated in (ii) and proposes to account for it by resorting to the notion of "logophoric complement" and "logophoric NP."

(ii) (his (148b) and (149b))

- a. The student this professor_j has personally taught, he_j recommends lavishly for teaching appointment.
- b. *That John_j was the father of the child, he_j claimed persistently.

Kuno (1986, p. 61) states:

As in the case of Japanese, the unacceptability of [(iib)] can be accounted for by hypothesizing the following rule:

(150) Condition D: An R-expression is a logophoric complement must be assigned a disjoint index with the logophoric NP of that complement.

(cyclical and obligatory)

The "logophoric complement" and the "logophoric NP" refer to "a complement that represents an utterance or internal feeling of the main clause speaker or experiencer" and "the main clause NP whose utterance or internal feeling the logophoric complement represents." (p. 41) While it is conceivable that considerations such as "logophoricity" contribute to the relevant acceptability judgments, they do not seem to have to do with the contrast in (227), for example. Thus if the contrast reported in Lebeaux (1988, 1990) is real, a pragmatic-based account, such as given in Kuno, seems incapable to account for it.

⁸⁰ Positive conditions include condition A and the indexing that results in bound pronouns.

⁸¹ If Mary is adjoined to hihan 'criticism' at D-structure, it still give us the right result, as long as John is not adjoined to it until after the fronting of hihan has taken place.

⁸² The choice between the two would have consequences for how we can account for the difference between English and Japanese, i.e. the fact that while English has "reconstruction" effects for condition D for arguments, Japanese appears to have none.

The contrast in English noted that Lebeaux (1988) reports, however, seems to be not completely clear. Some speakers seem to find the coreference in all of (225), (226), (227) and (228) basically acceptable.

In chapter 6, I will return to Lebeaux's proposal and discuss some Japanese data that exhibit "reconstruction" effects with respect to condition D.

⁸³ As in the case of some of the Japanese examples from other works, I have slightly modified the glossary here.

⁸⁴ It is interesting to note that the selection of the predicates seems to be done quite carefully in Oshima (1979) when he intends to illustrate the condition B effects in Japanese. The same can be said of Kuno's examples that are ruled out presumably by condition B. At the time of the presentation of Hoji (talks at UC Irvine, UCSD, Ohio State and USC in 1988), the predicates for the sentences for the illustration of condition B were also selected with some care, while apparently problematic cases where condition B effects fail to show up clearly were considered to be arising from some independent (and perhaps pragmatic) reasons. It is through discussion with Y. Kitagawa (p.c.) (cf. also Y. Kitagawa (1989)) that I have come to realize that the what earlier appeared to be problematic and marked

cases might well be a core part of the phenomena in question.
85 He cites Kubota, 1963, p. 203 as the source of this example.

Kubota, Mantaroo, 1963, Kubota Mantaroo shuu. Nihon-Bungaku Zenshuu 26. (Shincho-Sha).

86 The difference between Japanese and English becomes even clearer when we discuss cases in which the intended bindees are Names, descriptions (such as titles and epithets); cf. the discussion in chapter 6.

Chapter Four

Bound Variable Anaphora in Japanese

4.1. Introduction

A sharp line "between the bound variable use and the pragmatic use of pronouns" has been drawn since Keenan (1971); cf. Sag (1976, p. 132, footnote 18), Partee (1978). As Partee (1978, p. 79) notes, "[t]he clearest cases of bound variable anaphora involve antecedents like every man and no man which are singular in form but do not refer to individuals," as in (1), taken from Partee (1978).

- (1)
a. Every man put a screen in front of him.
b. No child will admit that he is sleepy.

As she notes, "[w]hen he of [(1b)] is understood as anaphorically related to the noun phrase no child, the he clearly does not refer to a particular individual. Rather, the sentence can be understood as the result of binding an open sentence, [(2)], with a quantifier phrase, no child."¹

- (2) He₀ will admit that he₀ is sleepy.

The logical form representation for (2) would thus be something like (3).

- (3) There is no x, x = a child, x admits that x is sleepy.

She states: "The clearest cases of what I am calling pragmatic uses of pronouns are cases where a pronoun is used with no linguistic antecedent at all, as in [(4a)], or where the antecedent occurs in an earlier sentence of a discourse, as in [(4b)]." (p. 80)

(4) (her (5) and (6))

- a. (On walking into a room) Why is he [pointing] here?
b. I couldn't reach Elliot last night. He is probably in Boston.

"These are cases where the pronoun is being used to refer to a particular individual, and the determination of which individual the intended referent is requires making use of the linguistic and non-linguistic context."²

The phenomena of referential association among nominal expressions that we have discussed in chapters 2 and 3 may be regarded as cases of "pragmatic use of pronouns" in the sense that the coindexed NPs there refer to particular individuals. To be more precise, we must call it "the pragmatic use of nominal expressions", since not all "referentially dependent elements" discussed there are clearly "pronouns".³ All the overt non-anaphoric, i.e. [-a], categories in Japanese that are discussed in these chapters refer, i.e., they can be used in isolation, without linguistic antecedents. To cover these Japanese cases as well as the pragmatic use of pronouns in English noted above, I will refer to the second type of referential association that Partee (1978) discusses as "coreference" while maintaining the term "bound variable anaphora" for the first type.⁴

At the end of chapter 3, I have noted briefly, referring to Reinhart (1983) and Sportiche (1986), that the effects of condition B are sharper in the case of bound variable anaphora than in the case of coreference. Sportiche (1986, p. 372), for example, notes that the disjointness requirement between the subject NP and the object NP is stronger in (5b) than in (5a); cf. the discussion at the end of chapter 3.

(5)

- a. John recommended him.
b. No one/everyone recommended him.

That is, in some contexts (5a) may be made acceptable but (5b) cannot; cf. Evans (1980, p. x).

Recall that Japanese sentences like (6) are accepted by many speakers to varying degrees despite the fact that they violate condition B, while similar sentences such as (7) have been judged unacceptable in some past works; cf. xx.⁵

(6)

*?/?/?/? John_i-ga kare_j-o suisensita
John-NOM he-ACC recommended
John_i recommended him_j'

(7) (from Oshima (1979))

*John_i-ga kare_j-ni iikikaseta
John-NOM he-DAT told
'John_i told him_j (something).'

It thus appears that certain pragmatic contexts (and perhaps lexical properties of the relevant predicates) contribute to the fluctuation of the sharpness of condition B effects for coreference.⁶ This situation in Japanese seems analogous to the situation in English depicted above, while (6) seems much more readily acceptable than (5a).⁷

In light of the consideration regarding (1), we might then expect that when the antecedent of kare in (6) is not referential, as in the case of (5b), the sentence becomes more clearly unacceptable, rendering clearer evidence for the existence of condition B in Japanese. The unacceptable (8) appears to confirm this prediction.

(8)

subete-no hito_i-ga zibun_j/*kare_j-o suisensita
all-GEN person-NOM self/his-ACC recommended
'all the persons_i/every person_j recommended self_i/him_j'

However, as is well known, the so-called Japanese overt pronoun kare 'he' may not serve as a bound variable even if its binder is outside its local domain, as indicated in (9).

(9)

subete-no hito_i-ga zibun_j/*kare_j-no tomodati-o suisensita
all-GEN person-NOM self/his-GEN friend-ACC recommended
'all the persons_i/every person_j recommended self_i's/his_j friend'

The generalization that has been reported and appears to be widely accepted is that the bound variable construal for kare is not possible even if kare is not locally bound; cf. Nakai (1976, 1977), Saito (1981), C. Kitagawa (1981), Nakayama (1982), Saito and Hoji (1983) and other subsequent works. This generalization has sometimes been stated as (10).

- (10) Overt pronouns in Japanese may not be construed as bound variables.

In order to use bound variable anaphora as a means of obtaining clearer characterization of the effects of condition B in Japanese, it is therefore necessary to first consider how bound variable construal may be expressed in this language; this will be the primary concern of this chapter.

4.2. Bound Variable Anaphora

Consider the structure in (11).

- (11) (order irrelevant)

... Y_i ... X_i ... , where X is construed as a variable bound to Y .

We need to ask, minimally, the following two questions in regard to (11).

- (12)
- What is the structural requirement that must be satisfied between Y and X ?
 - What categories may serve as X ?

The question in (12a) has been discussed in a number of works in the past, and it constitutes a major area of inquiry in generative grammar.⁸ As an approximation of an answer to (12a), I assume (13), following Evans (1977), Partee (1978) and Reinhart (1976, 1983).

- (13) Y must c-command X at S-structure.

The generalization in (13), which has been stated in several different ways in literature, distinguishes (14a) from (14b).

- (14)
- No one_i recommended his_i teacher.
 - *His_i teacher recommended no one_i.

Crucially, (14b) must be compared with (15), in which the coreference is allowed between his and John.

- (15) His_i teacher recommended John_i.

Phenomenally, then, the answer to (12b) in Japanese is those categories that function in place of his in (14) and (15) and yield the same contrast as described there.

Similarly, sentences with such categories must exhibit the contrast analogous to that illustrated by the examples below, taken from Chomsky (1976).

- (16) (Chomsky's (82))
Every soldier has his_i orders.

- (17) (Chomsky's (83))
- Every soldier is armed, but will he shoot?
 - Every soldier is armed. I don't think he'll shoot, though.
 - If every soldier is armed, then he'll shoot.

"Sentence [(16)] can and normally would be construed with the pronoun as anaphoric (bound), but in the examples in [(17)] the pronoun he must literally be construed (contrary to the obviously intended sense) as referring to someone whose identity is established elsewhere."⁹ By contrast, (18) allow he indicated coreference.

- (18)
- John_i is armed, but will he_j shoot?
 - John_i is armed. I don't think he_j'll shoot, though.
 - If John_i is armed, then he_j'll shoot.

The categories in Japanese that serve as X in (11) above therefore must function analogously to he in the structures analogous to those given in (17) and (18).¹⁰

4.3. Bound Variable Anaphora in Japanese

In the works cited above, in which it is observed that kare is unable to be construed as bound variables, the relevant "quantificational" binders are dareka 'someone', daremo 'everyone',

dare 'who', subete no gakusei 'every student/all the students' and so on, as illustrated in (19).

(19) (based on Nakai's examples (1976, pp. 32-34b))

a. *{donna hito/darej}-ga karej-no zyoosi-ni sakaraimasita ka
 what kind of person/who-NOM he-GEN boss-DAT rebelled Q
 '(What kind of a person_i/Who_i) rebelled against his_i boss?'

b. *(subete-no gakusei/onoono-no gakusei)-ga sensei-ni
 all-GEN student/each-GEN student-NOM teacher-DAT
 [NP [s' karej-ga tukutta] kikai]-o miseta (koto)
 he-NOM made machine-ACC showed
 '{all the students_i/each student_i} showed the professor the machine that he_i made.'

(20) (based on C. Kitagawa's (1981) (29a))

*daremoj-ga [s' karej-no ronbun-ga itiban ii to] omotte ita (koto)
 everyone-NOM he-GEN paper-NOM most good that thought
 'everyone_i thought that his_i paper was the best'

One might attribute the status of (19) and (20) to the fact that kare must be used in reference to a male and kanozuyo 'she' to a female. According to this view, the indicated binding in (19) and (20) is not possible because the binder is neutral with respect to its gender while kare is clearly masculine. Notice that English he is also for "male" when it is used referentially. But it may also be used as "generic", as in (21).

(21) He who works hard will succeed someday.

The Japanese counterpart of (21), on the other hand, cannot have kare as the head N; a common noun like hito 'person' must be used instead.

(22)

[NP [s' ga mazimeni hataraku] hito]-wa ituka seikoosuru
 hard work person-TOP someday succeed
 'those who work hard will succeed someday'

If kare replaces hito in (22), the topic NP refers to a specific individual and the sentence would mean something like "that man, who works hard, will succeed someday."¹¹

It is, however, fairly easy to demonstrate that the problem with (19) and (20) cannot simply be attributed to the "gender restriction". For example, the relevant binding does not become possible even when the binder and the bindee match with respect to the "gender", as indicated in (23).¹²

(23)

*(ippantekini itte) donna otoko_i-ga karej-no
 (generally speaking) what kind of man-NOM he-GEN
 zyoosi-ni sakaraimasu ka
 boss-DAT rebel Q
 '(Generally speaking) what kind of a man_i would rebel against his_i boss?'

b. *(subete-no dansi gakusei/onoono-no dansi gakusei)-ga sensei-ni
 all-GEN male student/each-GEN male student-NOM teacher-DAT
 [NP [s' karej-ga tukutta] kikai]-o miseta (koto)
 he-GEN made machine-ACC showed
 '{all the male students_i/each male student_i} showed the professor the machine that he_i made.'

The preceding paradigms thus illustrate the generalization that kare cannot function as a bound variable.¹³

As noted in most of the works cited above, zibun may be bound by quantified NP's. Thus the replacement of kare in (19) and (20) by zibun makes the relevant binding possible, as noted in Nakai (1976) and C. Kitagawa (1981). However, zibun has a rather severe restriction on the distribution of its antecedent, such as the subject-antecedent condition and binding condition A, which makes it virtually impossible to construct examples of the structure in (15), which must be compared with those of the structure in (14b). I repeat (15) and (14b) for ease of reference.

(14b) *H_is_i teacher recommended no one_i.

(15) H_is_i teacher recommended John_i.

Besides, we cannot expect to use zibun to check the condition B effects for bound-variable anaphora since it can be bound locally.

The zero pronoun too may be bound by quantified NP's, as noted in Nakai (1976). Thus (19b) would yield the bound reading if we replace kare by the zero pronoun (pro). Because pro appears to be less restricted than the anaphor zibun with respect to the distribution of their "antecedents", it is pro that has been used in Iioji's (1985, 1987a, b, c) and Saito's (1985) paradigms that illustrate

the availability and the unavailability of bound variable construal in Japanese. There are, however, some problems with the use of *pro* in the relevant paradigms. First, the existence of *pro* has not been established in the position of the possessive NP, i.e. the *no*-marked NP that is directly dominated by a projection of N. This means that we cannot unequivocally use *pro* (in place of *his*) in the Japanese sentences that corresponds to sentences like (14). For this reason, all the examples in Iloji's and Saito's works cited above involve *pro* that is in an argument position within an S (embedded, for example in a relative clause construction.)¹⁴ Second, the postulation of *pro* in the object (of the V) position is challenged in Isegawa (1984), who extends Huang's (1984) theory of generalized control.¹⁵ Although the majority of the recent works adopt the position that *pro* may occur both in the subject and the object position (Fukui (1986), Iloji (ibid), Kameyama (1985), Miyagawa (1989), Takezawa (1987), Shibatani (1990), Saito (1985), Yoshimura (forthcoming)), the issue does not seem to be settled yet.

To avoid these problems, it would therefore be desirable to find overt categories that may be construed as bound variables and hence may be used in our test of the condition B effects for bound variable anaphora. In the next section we will consider such overt categories in Japanese.

4.4. The *So* System

4.4.1. D-Linking and Bound Variable Anaphora

While the so-called overt pronoun *kare* typically fails to be construed as a bound variable, it has been pointed out that expressions such as *sore* 'it/that' and *sou* 'he/that guy' may be construed as bound variables. Nishigauchi (1986, p. 272, fn. 3) notes that "some speakers might find [(24)] with the overt pronoun only mildly unacceptable."¹⁶

(24) (Nishigauchi's (7) on p. 240)
 [Dono teema]i-ga [{"sore}i-o/ej] eranda gakusei-ni
 which theme-NOM it-ACC chose student-DAT
 mottoo yuueki-desi-ta ka?
 most profitable-was-Q
 '[which research topic]i was most profitable to the students who chose iti?'

I agree with Nishigauchi and find the bound reading for *sore* in (24) to be acceptable. It is not clear, however, that the acceptable binding in (24) establishes the possibility of bound variable construal for *sore* as compared to the impossibility for such construal for *kare*. The reason for this is related to Pesetsky's (1987) D-linking analysis of certain *wh*-phrases. Pesetsky (1987) argues that the lack of Superiority effects in (25b), as contrasted to (26b), is due to the difference between a *which*-phrase and the "normal occurrence" of *who* or *what*.

(25) (Pesetsky's (29))

- a. Mary asked [which man_i [c_i read which book]]?
- b. Mary asked [which book_k [which man read c_k]]?

(26) (Pesetsky's (21))¹⁷

- a. Mary asked [who_i [c_i read what]]?
- b. *Mary asked [what_k [who read c_k]]?

Pesetsky (1987, pp. 107-8) characterize the difference as follows:

Roughly, *which*-phrases are *discourse-linked*(D-linked), while *who* and *what* are normally not D-linked. When a speaker asks a question like *which book did you read*, the range of felicitous answers is limited by a set of books both speaker and hearer have in mind. If the hearer is ignorant of the context assumed by the speaker, a *which*-question sounds odd (except in "quiz show" contexts). Similarly, in a multiple *which*-question like *Which man read which book?* the speaker assumes that both speaker and hearer have a set of men and a set of books in mind, and that the members of ordered man-book pairs in a felicitous answer will be drawn from the sets established in the discourse. No such requirement is imposed on *wh*-phrases like *who*, *what*, or *how many books*. These phrases may be *non-D-linked*.

He argues that D-linked *wh*-phrases are able to receive a Baker-style (i.e., a version of COMP indexing) interpretation, without movement, thereby becoming able to escape the Nested Dependency Condition given in (27) (which is assumed to be responsible for the Superiority effects), which is a condition on movement.

(27) (Pesetsky's (24))¹⁸

Nested Dependency Condition

If two wh-trace dependencies overlap, one must contain the other.

Pesetsky (p.108) concludes that D-linked wh-phrases are not quantifiers and hence need not occupy an A'-position.¹⁹

Pesetsky further argues that apparent violation of the subjacency condition in Japanese wh-questions, discussed in Lasnik and Saito (1984), can be attributed to the property of Japanese wh-phrases. That is, even nani 'what' and dare 'who', can be D-linked, more easily than English what and who hence need not be raised at LF.²⁰

According to this view, then, dare 'who' may not be a quantifier. This in turn means that kare may be bound by dare when the latter is not a quantifier (and hence need not raise to an A'-position). The relevant judgments are not clear, but it appears that (28) is better than (29).

(28)

(John, Bill and Paul work in a research institute. It has become clear that one of them has sent his research paper to the CIA. Mary asks Susan if she knew who sent his research paper to the CIA. Susan responds:)

^{??}Watasi-wa [dare_i-ga kare_i-no kenkyuu ronbun CIA-ni okutta ka]
I-TOP who-NOM he-GEN research paper-ACC CIA-to sent Q
sitteru yo
know

'I know who_i has sent his_i research paper to the CIA.'

(29)

(It has become clear some male researcher from some research institute in this country has sent his research paper to the CIA; but no one seems to know who that person is. Susan asks Mary:)

*[ittai dare_i-ga kare_i-no kenkyuu ronbun CIA-ni okutta ka]
on earth who-NOM he-GEN research paper-ACC CIA-to sent Q
sitteru?
know

'Do you know who_i on earth has sent his_i research paper to the CIA?'

In (29), ittai is added, which, as pointed out by Pesetsky, seems to make the wh-phrase to which it is added "aggressively non D-linked". Both (28) and (29) are acceptable if zibun is used in place of kare. Thus the contrast between (28) and (29), if real, constitutes support for Pesetsky's hypothesis that dare may in fact be D-linked as well as for the hypothesis that kare may not be bound by a quantifier.²¹ If dare 'who' may be D-linked more easily than English who, as suggested by Pesetsky, then dono-phrase, i.e. which-phrases, in Japanese may be considered as "aggressively D-linked". In fact, (30a) seems more readily acceptable than (30a), as pointed out in Hoji (1984, forthcoming).^{22, 23}

(30)

a. dono nooberu syoo zyusyoo sakkai-ga [NP [S' eck kare_i-ni toohyoo sita]
which Nobel prize awardee author-NOM he-DAT voted
sinsain_k-ni orei-no denwa-o kakemasita ka
judge-DAT gratitude phone call-ACC made Q
'Which Nobel Prize winning author_i made (a) phone call(s) to thank the judge(s) who voted for him_i?'

b. *?dare_i-ga [NP [S' eck kare_i-ni toohyoo sita] sinsain_k-ni
who-NOM he-DAT voted judge-DAT
orei-no denwa-o kakemasita ka
gratitude phone call-ACC made Q
'Who_i made (a) phone call(s) to thank the judge(s) who voted for him_i?'

Let us now return to Nishigauchi's example in (24), which is repeated below.

(24) (Nishigauchi's (7) on p. 240)

[Dono teema_i]-ga [[*sore_i-o/e_i] eranda gakusei]-ni
which theme-NOM it-ACC chose student-DAT
mottomo yuueki-desi-ta ka?
most profitable-was-Q
'[which research topic]_i was most profitable to the students who chose it_i?'

The binder in (24) is an "aggressively D-linked" dono-phrase. Since kare too may be bound by a dono-phrase, as in (30), the fact that sore is bound by a dono-phrase in (24) does not crucially differentiate sore from kare with respect to their possibility of bound variable construal.²⁴

Yoshimura (1987, 1989, forthcoming) considers a range of structures in which what appear to be quantificational NP's bind sore 'it/that', soko 'there/that place', soitu 'the guy/that guy' and so on.²⁵ The type of "quantificational" NP's that Yoshimura considers include (in addition to dare 'who' and dono-phrases) daremo 'everyone', NP ka NP 'NP or NP', NP to NP 'NP and NP', and wh-phrases with ittai; cf. Hoji (1985, Ch. 4). Some of the relevant examples are given below.

(31) (based on Yoshimura's examples)

[[Ittai dare]_i-ga [NP [S' ekk soitu_i-ni tyotto sawatta dake no]
 on earth who-NOM the guy-ACC a little touched only
 hito_k]-o uttacta no
 person-ACC sued Q
 'Who_i on earth has sued [the person who touched the guy_i just a little]?'

With ittai 'on earth' the wh-phrase in (31) is supposedly non D-linked, and, according to Pesetsky (1987), it is a quantifier. Thus one may conclude that the association between wh-phrase and soitu 'the guy' in (31) is indeed that of bound variable. The fact that the use of kare in place of soitu makes the binding unacceptable seems to support this view.

However, it is not quite clear that soitu may indeed be construed as a bound variable, in light of the fact that the binding in (32) is rather marginal, where the antecedent of soitu is clearly plural.

(32)

a. *?[zimintoo-no giin-ga zenin]_i [S' Newsweek-ga
 LDP-GEN dietperson-NOM all Newsweek-NOM
 [zibun_i/*?soitu_i]-ni interview-o moosikonde kita to]
 self/the guy-DAT interview-ACC requested that
 happyoosita (koto)
 announced
 '[the LDP (Liberal Democratic Party) dietpersons]_i have all_i
 announced that Newsweek requested for an interview with
 self_i/the guy_i'

b. *?(sono hotei-de-wa) [subete-no seizilian]_i-ga
 (at the court) all-GEN political prisoner-NOM
 [zibun_i/*?soitu_i]-no seizi rin-en-ni tuite katatta
 self/the guy-GEN political philosophy-about talked"
 (at the court) [all the political prisoners]_i stated self_i's/the guy_i's
 political philosophy'

Now, consider (33).

(33) (based on Yoshimura's examples)

a. [Mac SE to Mac Plus]_i-ga [NP [NP [S' ekk sore_i-o tyuumonsita]
 Mac SE and Mac Plus-NOM it-ACC ordered
 hito]-no uti]-ni suguni todoita (koto)²⁶
 person-GEN house-at right away arrived
 '[Mac SE and Mac Plus]_i (each) arrived quickly at the house of the
 people who had ordered them_i'

b. subete-no oote syoosya_i-ga [NP [S' ekk kyonen soko_i-ni haitta]
 all-GEN major trading company-NOM last year there-to entered
 zyosisyain]-o kubinisita (koto)
 female employee-ACC fired
 '[all the major trading companies]_i fired the female employees who
 had entered there_i'

Here, the subject NP that clearly is plural (in meaning) may bind sore 'it' and soko 'there'. Hence, sore and soko seem to be better candidates than soitu for categories that may function as bound variables in Japanese. For confirmation, compare the sentences in (34) below with those in (32) above.

(34)

a. [oote zidoosyagaisya-ga zensya]_i [S' Newsweek-ga soko_i-ni
 major auto company-NOM all Newsweek-NOM it-DAT
 interview-o moosikonde kita to] happyoo sita (koto)
 interview-ACC requested that announced
 '[the major auto companies]_i have all_i announced that Newsweek
 requested an interview of it_i'

b. (sono kaigi-de-wa) [subete-no kaisya]_i-ga
 (at that meeting) all-GEN companies-NOM
 [soko_i-no uriage hoosin]-ni tuite happyoo sita
 it-GEN sales policy-about announced
 '(at that meeting) all the companies made an announcement about
 it_i's sales policy'

c. [arayuru syurui-no compyuutaa]i-ga [NP [NP [S' ~~cek~~ sorei-o tyuumonsita]
 all kind-GEN computer-NOM it-ACC ordered
 hito]-no uti]-ni tyanto todokerareta²⁷
 person-GEN house-to correctly was delivered
 'all kinds of computers] were delivered correctly to the house of the
 person who had ordered it'

We have seen that soko 'there' and sore 'it' may be construed as bound variables more readily than soitu. In fact, there seems to be gradation as indicated in (35) in terms of how readily these expressions may be construed as bound variables, as noted in Itoji (forthcoming).

(35) soko 'there/sore' 'it' > soitu 'the guy' > sono hito 'the person' > kare 'he'

It seems that soko and sore may be construed as bound variables more easily than any other non-anaphoric overt categories in Japanese. As we have seen, kare 'he' may take a wh-phrase as its "antecedent" (when they are D-linked?).²⁸ In the ensuing discussion on bound variable construal in Japanese, we will concentrate on soko/sore and to a somewhat lesser degree soitu.

4.4.2. No Student

Recall that the "clearest cases of bound variable anaphora" are said to "involve antecedent like every man and no man which are singular in form but do not refer to individuals" in Partee (1978). The two relevant examples are repeated here.

- (36)
 a. Every man_i put a screen in front of him_i.
 b. No child_i will admit that he_i is sleepy.

Japanese sentences in (33) and (34) seem to exemplify a case analogous to (36a). Although the binders in these examples clearly are plural in meaning, the bindee seems to be singular. I will argue in the next section that the bindees in these examples must be singular.

In regard to (36b), it is not easy to identify its Japanese counterparts, which would most likely involve bound variable anaphora. Iwakura (1974, p. 68) points out that Japanese does not have an NP that corresponds to the subject NP in (37) in English.

(37) [No student in the class] can answer the question.

One might consider the Japanese sentence in (38) as comparable to the English sentence in (37). As Iwakura notes, however, (38) corresponds more closely to the ungrammatical English sentence like (39).²⁹

(38) (Iwakura's (2.161))
 sono kurasu-no dono gakusei-mo sono situmon-ni kotaerarenai.
 that class-GEN which student-ALSO that question-DAT cannot answer

(39) (Iwakura's (2.162))
 *Any student in the class cannot answer the question.

As is clear from the discussion in Kuroda (1965, Ch. 3) and subsequent works, the phrase that no is attached to in (38) is not a negative polarity item. Thus sentences such as (40) are acceptable.

(40)
 sono kurasu-no dono gakusei-mo sono situmon-ni kotaerareru.
 that class-GEN which student-ALSO that question-DAT can answer
 'any student in that class can answer that question'

It seems that the subject NP in (41a) or the object NP in (41b) must be expressed in Japanese by means of a "floating quantifier", as indicated in (42).³⁰

- (41)
 a. No students praised Mary.
 b. Mary did not praise any students

(42)
 a. gakusei-ga hitori-mo Mary-o homenakatta (koto)
 student-NOM one-ALSO Mary-ACC did not praise
 'not a single student praised Mary'
 b. Mary-ga gakusei-o hitori-mo homenakatta (koto)
 Mary-NOM student-ACC one-ALSO did not praise
 'Mary did not praise any student'

As is well known, the combination of the numeral "one", a classifier and the particle *mo*, as in *hitori-mo* in (42), requires the presence of the negation within the minimal S that dominates it.³¹ Thus if the verb *homenakatta* 'did not praise' in (42) is changed to *hometa* 'praised', the resulting sentences are not acceptable.³² It seems that what are sometimes considered as Japanese analogues of *no one* (or *not ... anyone*) and *nothing* (or *not ... anything*) are also instances of this construction. Consider the following.³³

- (43)
- a. *daremo Mary-o homenakatta (koto)*
'no one praised Mary'
- b. *Mary-ga daremo homenakatta (koto)*
'Mary praised no one'

Notice that corresponding to the sentences in (43) are those in (44), as pointed out in Hasegawa (1986?), for example.

- (44)
- a. [*hito/gakusei*]-ga *daremo Mary-o homenakatta (koto)*
person/student-NOM none Mary-ACC did not praise
'(roughly) {no one/none of the students} praised Mary'
- b. *Mary-ga [hito/gakusei]-o daremo homenakatta (koto)*
Mary-NOM person/student-ACC none did not praise
'(roughly) Mary praised {no one/none of the students}'

This means that the sentences in (43) may be analyzed as involving the zero pronoun, as indicated in (45).³⁴

- (45)
- a. *pro daremo Mary-o homenakatta (koto)*
'none of them praised Mary'
- b. *Mary-ga pro daremo homenakatta (koto)*
'Mary praised none of them'

I will thus assume that *daremo* in (43) is indeed an adjunct (not occupying an argument position) and that the structure schematically indicated in (45) is correct. Given this assumption, let us consider the sentence in (46).

- (46)
- pro_i daremo karera_i-no kuruma-o arawanakatta (koto)*
they-GEN car-ACC did not wash
'[none of {them}]_i washed their_i car'

This sentence apparently gives the reading indicated by its translation; but it is not clear that it also yields the bound variable interpretation indicated in (47).³⁵

- (47) [no one]_i washed his_i car

If *karera* cannot be construed as a bound variable, just as *kare* cannot, then this result is expected.³⁶ Notice that the only reading that (48) below gives is the one in which *kare* refers to some specific individual salient in the context of discourse.

- (48)
- pro daremo kare-no kuruma-o arawanakatta (koto)*
'no one washed his car'

Given the earlier discussion, we expect that *soitu* may, to some extent, be able to be construed as a bound variable. Consider (49) below.

- (49)³⁷
- ??pro_i daremo_i soitu_i-no kuruma-o arawanakatta (koto)*
'no one washed the guy's car'

While the status of the bound variable interpretation for *soitu* 'the guy' in (49) is uncertain, it is clearly better than the bound reading with *kare*. The sentence in (50) illustrates the three-way contrast.

- (50)³⁸
- susi syokunin_i-ga hitori-mo_i [zibun_i/??soitu_i/*kare_i]-no naifu-o*
sushi chef-NOM one-ALSO self/the guy/he-GEN knife-ACC
mottekonakatta (koto)
did not bring
'[none of the sushi chefs]_i has brought {self_i's/the guy_i's/his_i} knife'

When we make the subject NP clearly plural, however, the status of the bound variable reading for *soitu* deteriorates.

(51)³⁹

(sono) susi shokunin-tatij-ga hitori-mo; [zibun;/*soitu;/*kare;]-no naifu-o
that sushi chef-PL-NOM one-ALSO self/the guy/he-GEN knife-ACC
mottekonakatta (koto)
did not bring
'[none of {the/those} sushi chefs]i has brought {self's/the guy's/his;} knife'

In fact, since the relevant dependency as indicated by the coindexation in (51) obtains only with the bound variable reading for the bindee, the sentence with soitu (and with kare as well) is unacceptable with the coindexation indicated there. Interestingly, if soitu in (51) is replaced by soitu-tati 'the guys/the guy and others', as in (52), the sentence becomes acceptable.

(52)

(sono) susi syokunin-tatij-ga hitori-mo; soitu-tatij-no naifu-o
that sushi chef-PL-NOM one-ALSO the guy-PL-GEN knife-ACC
mottekonakatta (koto)
did not bring
'[none of {the/those} sushi chefs]i has brought the guys' knife'

However, since the substitution of karera 'they' for soitu-tati 'the guys' in (52) also results in an acceptable sentence, it may be the case that (52) is acceptable on the reading in which (sono) susi syokunin-tatij '(the/those) sushi chefs' and soitu-tati 'the guys' are coreferential.

We have seen earlier that soko 'there/it' and sore 'it' yield bound variable construal more easily than soitu 'the guy'. This generalization holds also in the structure of the sort under discussion. Thus, the sentences in (53) are acceptable, to be compared with (51).

(53)

a. sono kaigi-no sanku kigyoo;ga {issya-mo;/hitotu-mo;}
that meeting-GEN participating company-NOM 1 company-ALSO/1-ALSO
soko;no keiei hoosin-ni tuite happyoo-o sinakatta (koto)
there-GEN management policy-about announcement-ACC did not
'[none of the participating companies]i in that meeting made an announcement regarding it's management policy.'

b. konpyuutaa-ga itidai-mo [NP [s' eek sore;o tyoomonsita] hito;]-no
computer-NOM 1-ALSO it-ACC ordered person-GEN
uti-ni todoiteinai (koto)
house-at has not arrived
'[none of the computers]i has arrived at the house of the person who ordered it'

The discussion on the sentences that have the Japanese analogue of no one, no company, and so on thus confirms the earlier generalization that soko and sore may be construed as bound variables (and that soitu may too, to a less extent).

The relevant data in this section are summarized below.

(54)

		B	I	N	D	E	E	S
	B I N D E R S	kare	soitu	soko ⁴⁰	sore			
		'he'	'the guy'	'there'	'it'			
A-1	dono otoko 'which man'	√	√					
A-2	dono kaisya 'which company'			√				
A-3	dono hon 'which book'							√
B-1	dare 'who'	*?? ⁴¹	√					
B-2	doko ⁴² 'where'			√				
B-3	nani 'what'							√
C-1	ittai dare 'who on earth'	*	√					
C-2	ittai doko 'where on earth'			√				
C-3	ittai nani 'what on earth'							√
D-1	subete no gakusei 'all the students'	*	??					
D-2	subete no kaisya 'all the companies'							√
D-3	subete no hon 'all the books'							√
E-1	gakusei-ga hitori-mo 'student-NOM 1-ALSO'	*	??					
E-2	gakkoo-ga ikkoo-mo 'school-NOM 1-ALSO'							√
E-3	hon-ga issatu-mo 'book-NOM 1-ALSO'							√

F-1 (sono) gakusci-tati- * *
 ga hitorimo
 '(that) student-PL-NOM 1-
 ASLO'

F-2 (✓)
 '(that) school-PL-NOM 1-
 ALSO'

F-3 (✓)
 '(that) book-PL-NOM 1-
 ASLO'

G-1 John to Bill * *43
 'John and Bill'

G-2 MIT to Harvard⁴⁴ ✓
 'MIT and Harvard'

G-3 Mac SE to Mac Plus ✓
 'SE and Plus'

The chart given here covers some cases that have not been noted while not covering some cases that have been discussed in the preceding text.

Notice that the binders for soko and sore are missing in (F). As indicated in (F-1), soitu may not be bound by the phrase that roughly corresponds to "none of those students", whose plurality is clearly indicated; cf. (E-1). The reason why the binders of soko and sore are not supplied in (F) is that non-human (or inanimate) nouns do not have "plural markers" in Japanese. Thus while the context makes it clear that the binder is plural (cf. xx) it is not reflected in form. Based on (G), however, we can conclude that the significant generalization is that soko and sore may be construed as bound variables even with plural antecedents, while soitu may not be bound by a plural antecedent. Recall, however, the "plural" form of soitu 'the guy', i.e. soitu-tai, may be bound by the binder in (F-1). (It has been pointed out that it is not clear that what is involved in such cases is indeed bound variable anaphora or simply coreference.) What is interesting in this connection is that soko and sore do not seem to have their "plural" forms. This then raises the following two possibilities: (i) that what is involved in (F) and (G) in the case of soko and sore is coreference rather than bound variable anaphora or (ii) that the bound variable anaphora for soko and sore in (F) and (G) are possible because they are indeed plurals. In the next section, I will argue that soko and sore are indeed singular.

4.4.3. Split Antecedence and the Plurality of Soko/Sore

While kare 'he' has its "plural" form karera 'they', soko 'there' and sore do not have plural forms.⁴⁵ One might assume, therefore, that soko and sore may in fact be singular or plural. Given this assumption, it is not clear whether sore and soko in (55) are indeed construed as bound variables..

(55) (=xx) in section x)

a. [Mac SE to Mac Plus]_i-ga [NP [NP [S' ekk sore_i-o tyuumonsita]
 Mac SE and Mac Plus-NOM it-ACC ordered
 hito]-no uti]-ni suguni todoita (koto)⁴⁶
 person-GEN house-at right away arrived
 '[Mac SE and Mac Plus]_i (each) were delivered immediately to the
 house of the people who had ordered them;'

b. subete-no oote syoosya_i-ga [NP [S' ekk kyonen soko_i-ni haitta]
 all-GEN major trading company-NOM last year there-to entered
 zyoosiyain]-o kubinisita (koto)
 female employee-ACC fired
 '(roughly) [all the major trading companies]_i fired the female
 employees who had entered there;'

The argument that sore and soko yield bound variable construal in (55) crucially relies on the assumption that sore and soko are singular. If they can also be plural, then, as noted at the end of the previous section, the sentences in (55) may be argued to be cases of "coreference" analogous to (56).

(56) Everyone_i came. They_i were (all) very happy.

The dependency in (56) must be that of coreference holding between the referent of they and the set of individuals which every quantifies over. Since the set which every quantifies over must contain more than one member, this type of "coreference" is possible with they, but not with he. Thus, as is well known, he in (57b) below must refer to a specific individual salient in the context of discourse.

(57)

a. Everyone_i came. He_{i/k} was very happy.
 b. Everyone_i said that he_i was happy.

When he is c-commanded by everyone, on the other hand, the bound variable construal for it is allowed, as in (57b); cf. Chomsky (1976, pp. 196-9). In this section, I will present evidence indicating that soko and sore are indeed singular and that they may not be plural.

First, consider the English sentence in (58), taken from Lasnik (1986).

(58) John₍₁₎ told Bill₍₂₎ that they_(1,2) should leave.

Since they may be used as a pragmatic (i.e. referential) pronoun, the sentence in (58) must allow coreference between they on the one hand and John and Bill on the other.⁴⁷ As indicated in (59), karera 'they' in Japanese may have split antecedence, as in the case of (58).⁴⁸

(59)

a. John₍₁₎-ga Bill₍₂₎-ni [s' karera_(1, 2)-ga issyoni benkyoo subeki da to]
John-NOM Bill-DAT they-NOM together study should do that
teian-sita (koto)
proposed
'John₍₁₎ proposed to Bill₍₂₎ that they_(1,2) should study together'

b. John₍₁₎-ga Bill₍₂₎-ni [s' Mary-ga karera_(1, 2)-ni ainikita to]
John-NOM Bill-DAT Mary-NOM they-DAT came to see that
tugeta (koto)
told
'John₍₁₎ told Bill₍₂₎ that Mary came to see them_(1,2)'

If soko 'there, {the/that} {place/institution}' may be plural, (60) would be as good as (59).

(60)

a. *Toyota₍₁₎-ga Nissan₍₂₎-ni [s' soko_(1, 2)-no jyuugyooin-ga
Toyota-NOM Nissan-DAT SOKO-GEN employee-NOM
issyoni pikunikku-o subekida to] teian-sita
together picnic-ACC should do that suggested
'Toyota₍₁₎ has suggested to Nissan₍₂₎ that their_(1,2) employees
should have a picnic together'

b. *Toyota₍₁₎-ga Nissan₍₂₎-ni [s' Amerika-no oote kigyoo-ga
Toyota-NOM Nissan-DAT America-GEN major company-NOM
soko_(1, 2)-to zyointo ventyaa-o sitagatteiru to] tugeta
SOKO-with joint venture-ACC want to do that told
'Toyota₍₁₎ has told Nissan₍₂₎ that a big American corporation
wants to do joint venture with them_(1,2)'

The fact that the sentences in (60) are not acceptable with the intended readings indicates, clearly, that soko cannot be plural. If it were able to be plural, we would wrongly predict that the coreference between soko on the one hand and Toyota and Nissan on the other were possible, just as in the case of the coreference between karera 'they' and John and Bill in (59). This in turn means that the sentences in (55b) above and (61) below are acceptable not on the coreference reading but on the bound variable reading.

(61)

a. [Toyota to Nissan]-ga soko_i-no zyuugyooin-ni
Toyota and Nissan-NOM SOKO-GEN employec-DAT
kirokutekina boonasu-o dasita (koto)
record-breaking bonus-ACC gave
'[Toyota and Nissan]_i gave record-breaking amount of bonuses to
soko_i's employees.'

b. [Toyota to Nissan]-ga [s' Amerika-no oote kigyoo-ga soko_i-to
Toyota and Nissan-NOM America-GEN major company-NOM SOKO-with
zyointo ventyaa-o sitagatteiru to] happyoo sita (koto)
joint venture-ACC want to do that announced
'[Toyota and Nissan]_i have announced that major American
corporations want to do joint ventures with soko_i'

In (61) soko functions as a variable bound to the conjoined NP, which acts as a quantified NP.⁴⁹

As noted above, given the data in (61) alone, it is possible to analyze these sentences as analogous to the English sentences in (62) and (63).

(62)

a. [Toyota and Nissan]_i gave record-breaking bonuses to their_i
employees.
b. Toyota₍₁₎ and Nissan₍₂₎ gave record-breaking bonuses to their_(1,2)
employees.'

(63)

- a. [Toyota and Nissan]_i have announced that major American corporations want to do joint ventures with them_i.
- b. Toyota₍₁₎ and Nissan₍₂₎ have announced that major American corporations want to do joint ventures with them_(1,2).

The (b) examples indicate coreference and the (a) examples indicate bound variable reading. We have, however, seen that soko cannot be plural ((60)). Hence, the sentences in (61) must correspond to the ungrammatical English sentences in (64), rather than to (62) and (63).⁵⁰

(64)

- a. *[Toyota and Nissan]_i gave record-breaking amount of bonuses to it_i's employees.
- Cf. [Each of Toyota and Nissan]_i gave record-breaking bonuses to it_i's employees.
- b. *[Toyota and Nissan]_i has announced that major American corporations want to do joint ventures with it_i.
- Cf. [Each of Toyota and Nissan]_i has announced that major American corporations want to do joint ventures with it_i.

Consider now the sentence in (65).

(65)

*John-ga [sorc_(1,2)-ga tukaiyasuku naru] yoo-ni
 John-NOM it-NOM easy to use become so that
 IBM PC₍₁₎-ni Mac SE₍₂₎-o tikazuketa (koto)
 IBM PC-to Mac SE-ACC made near
 'John put the Mac SE₍₂₎ near the IBM PC₍₁₎ to make it easier to use them_(1,2)'

If sore is coreferential with IBM PC or with Mac SE, the sentence is acceptable. The unacceptable status of (65) thus indicates that sore cannot be plural.⁵¹ This then means that (55a), repeated below, exhibit bound variable anaphora rather than coreference.

(55b)

- a. [Mac SE to Mac Plus]_i-ga [NP [NP [S' sore sore_i-o tyuumonsita] Mac SE and Mac Plus-NOM it-ACC ordered hito]-no uti]-ni suguni todoita (koto)
 person-GEN house-at right away arrived
 '[Mac SE and Mac Plus]_i (each) arrived quickly at the house of the people who had ordered them_i'

I thus take the preceding evidence as strong confirmation of Nishigauchi's and Yoshimura's claim that soko and sore may be construed as bound variables. We are now in a position to examine the predicted paradigms with soko, in regard to the availability and the unavailability of bound variable construal for it, depending on its structural relation with the quantified "antecedent".

4.4.4. Soko as a Bound Variable

We have seen that soko clearly may function as a bound variable. Recall that we have noted earlier the paradigms in (66) as illustration of bound variable anaphora in contrast to coreference.

(66)

- a. No one_i recommended his_i teacher.
- b. *His_i teacher recommended no one_i.
- c. John_i recommended his_i teacher.
- c. His_i teacher recommended John_i.

(67) (Cf. Chomsky (1976).)

- a. Every soldier_i has his_i orders.
- b. *Every soldier_i is armed, but will he_i shoot?
- c. *If every soldier_i is armed, then he'll shoot.
- d. John_i is armed, but will he_i shoot?
- e. If John_i is armed, then he_i will shoot.

The sentences in (66a) and (67a) illustrate a typical bound variable anaphora, in which his is c-commanded by no one and every soldier. Recall that we are assuming the structural condition for bound variable anaphora given in (68), following Evans (1977), Partee (1978) and Reinhart (1976, 1983).⁵²

(68) A category X must be c-commanded by a quantified NP Y at S-structure in order for X to be construed as a variable bound by Y.

When *he/his* is not c-commanded by the quantified NP, as in (66b), (67b) and (67c), the bound variable construal is not possible. Since the coreference option is not available in these sentences, the sentences themselves are unacceptable. When the "antecedent" is referential, coreference is possible between *he/his* and the "antecedent, even when the latter is not c-commanded by the former, as illustrated in (66c), (67d) and (67e).

Having confirmed that *soko* and *sore* can be construed as bound variables, we expect that the paradigms in (66) and (67) can be reproduced in Japanese. As we will see, this is exactly the correct prediction.

First of all, we have already seen that *soko* and *sore* be bound by quantified NP's that c-command them, taking care of the case of bound variable anaphora corresponding to that in (66a) and (67a).

Consider the sentences in (69), which are of the structure analogous to (66b).⁵³

(69)⁵⁴

- a. *[?]soko_i-no jyuugyoo_i-ga [Toyota to Nissan]_i-o uttaeta (koto)
SOKO-GEN employee-NOM Toyota and Nissan-ACC sued
'It_i's employees sued [(each of) Toyota and Nissan]_i'
- b. *[NP [s' eck zyuu nen-izyoo-mo mae-kara soko_i-de hatariteita]
10 years-more-even before-since SOKO-at were working
hito]_{ga} kyuu-ni [Toyota to Nissan]_i-o yameta (koto)
person-NOM suddenly Toyota and Nissan-ACC quit
'(some) people who had been working there_i for over 10 years
suddenly quit [(each of) Toyota and Nissan]_i'

As indicated above, the bound anaphora reading is not possible; hence the sentences are unacceptable. These sentences must be compared with those in (70), in which *soko* is c-commanded by the conjoined NP (thus the structure corresponding to (66a) and (67b)).

(70)⁵⁵

- a. [Toyota to Nissan]_i-ga soko_i-no jyuugyoo_i-o kubinisita (koto)
Toyota and Nissan-NOM SOKO-GEN employee-ACC fired
'[(each of) Toyota and Nissan]_i fired (some of) it_i's employees'
- b. [Toyota to Nissan]_i-ga soko_i-no jyuugyoo_i-ni uttaerareta (koto)
Toyota and Nissan-NOM SOKO-GEN employee-DAT was sued
'[(each of) Toyota and Nissan]_i has been sued by it_i's employees'

- c. [Toyota to Nissan]_i-ga [NP [s' eck zyuu nen-izyoo-mo mae-kare
Toyota and Nissan-NOM 10 years-more-even ago-since
soko_i-de hatariteita] hito]_o kyuu-ni kubinisita (koto)
SOKO-at were working person-ACC suddenly fired
'[(each of) Toyota and Nissan]_i suddenly fired (some) people who
had been working there_i for over 10 years'

Recall that (66d) (which allows coreference), as compared to (66b) (which does not allow coreference), is acceptable. I repeat (66b) and (66d) below for ease of reference.

(66)

- b. *His_i teacher recommended no one_i.
c. His_i teacher recommended John_i.

As we expect, the coreference of the sort exemplified in (66d) is indeed possible in Japanese as well. The sentences in (71) below are obtained by replacing the conjoined NP *Toyota to Nissan* in (69) by the singular *Toyota*.

(71)

- a. soko_i-no jyuugyoo_i-ga Toyota_i-o uttaeta (koto)
SOKO-GEN employee-NOM Toyota-ACC sued
'It_i's employees sued Toyota and Nissan_i'
- b. [NP [s' eck zyuu nen-izyoo-mo mae-kara soko_i-de hatariteita]
10 years-more-even before-since SOKO-at were working
hito]_{ga} kyuu-ni Toyota_i-o yameta (koto)
person-NOM suddenly Toyota-ACC quit
'[(some) people/the person] who had been working there_i for over
10 years suddenly quit Toyota_i'

As indicated, the coreference is possible in (71), confirming our prediction.

Similarly, when the conjoined NP fails to c-command *soko*, as in the case of (67b) and (67c), the bound variable construal is not possible. This is illustrated in (72).

(72)

a. *{GM to Ford}_i-ga tubure soodesu; [NP [S' eck soko_i-no atarasii GM and Ford-NOM go bankrupt seems SOKO-GEN new koozyoo-de hataraitairu] hitotati]-wa daizyoobu desyoo ka? factory-at are working people-TOP all right be Q '[(each of) GM and Ford]_i [seem/seems] to be going bankrupt; will the people who are working at it_i's new {factory/factories} be all right?'

b. *?{GM to Ford}_i-ga tubureta-ra, [NP [S' eck soko_i-no koozyoo-de GM and Ford-NOM go bankrupt-if SOKO-GEN factory-at hataraitairu] hitotati]-wa taihendesyoo are working people-TOP will have a hard time 'If [(each of) GM and Ford]_i [go/goes] bankrupt, the people who are working at it_i's new {factory/factories} will have a hard time.'

As we expect, if we replace the conjoined NP in (72) by a singular NP, the resulting sentences allow coreference, as illustrated in (73).

(73)⁵⁶

a. GM_i-ga tubure soodesu; [NP [S' eck soko_i-no atarasii GM-NOM go bankrupt seems SOKO-GEN new koozyoo-de hataraitairu] hitotati]-wa daizyoobu desyoo ka? factory-at are working people-TOP all right be Q 'GM_i seems to be going bankrupt; will the people who are working at it_i's new {factory/factories} be all right?'

b. GM_i-ga tubureta-ra, [NP [S' eck soko_i-no koozyoo-de GM-NOM go bankrupt-if SOKO-GEN factory-at hataraitairu] hitotati]-wa taihendesyoo are working people-TOP will have a hard time 'If GM_i goes bankrupt, the people who are working at it_i's new {factory/factories} will have a hard time.'

The Japanese sentences in (72a), (72b), (73a) and (73b) correspond, in the relevant structural respects, to the English sentences in (67b), (67c), (67d) and (67e), respectively: I repeat (67b-e) below.⁵⁷

(67)

- b. *Every soldier_i is armed, but will he_i shoot?
- c. *If every soldier_i is armed, then he'll shoot.
- d. John_i is armed, but will he_i shoot?
- e. If John_i is armed, then he_i will shoot.

The paradigm of Japanese sentences given above perfectly mirrors the paradigm of English sentences in (66) and (67), rendering further confirmation that soko may behave precisely like English he in terms of its ability to be construed as a bound variable (as well as of its ability to be used referentially).

Several more examples of bound variable anaphora are given below, with the quantified antecedent being subete-no zidoosyagaisya 'all the auto companies'.

(74) (Cf. (69).)

a. *soko_i-no zyuugyooin-ga subete-no zidoosyagaisya_i-o uttaeta (koto) SOKO-GEN employee-NOM all-GEN auto companies-ACC sued 'their_i employees sued all the auto companies_i'

b. *{NP [S' eck zyuun-izyoo-mo mae-kare soko_i-de hatariteita] 10 years-more-even before-since SOKO-at were working hito]-ga kyuu-ni subete-no zidoosyagaisya_i-o yameta (koto) person-NOM suddenly all-GEN auto companies-ACC quit 'some people who had been working there_i for over 10 years suddenly quit all the auto companies_i'

(75) (Cf. (71).)

a. subete-no zidoosyagaisya_i-ga soko_i-no zyuugyooin-o kubinisita (koto) all-GEN auto companies-NOM SOKO-GEN employee-ACC fired 'all the auto companies_i fired (some of) their_i employees'

b. subete-no zidoosyagaisya_i-ga soko_i-no zyuugyooin-ni all-GEN auto companies-NOM SOKO-GEN employee-DAT uttaerareta (koto) was sued 'all the auto companies_i have been sued by their_i employees'

c. subete-no zidoosyagaisya_i-ga [NP [S' eck zyuun-izyoo-mo mae-kare all-GEN auto companies-NOM 10 year_i-more-even ago-since soko_i-de hatariteita] hito]-o kyuu-ni kubinisita (koto) SOKO-at were working person-ACC suddenly fired 'all the auto companies_i suddenly fired (some) people who had been working there_i for over 10 years'

(76) (Cf. (72).)

- a. *subete-no zidoosyagaisya_i-ga tubure soodesu;
 all-GEN auto companies-NOM go bankrupt seems
 [NP [s' eck soko_i-no koozyoo-de hataraiteru] hitotati]-wa
 SOKO-GEN factory-at are working people-TOP
 daizyoobu desyoo ka?
 all right be Q
 'all the auto companies_i seem to be going bankrupt; will the
 people who are working at it_i's new {factory/factories} be all
 right?'
- b. *subete-no zidoosyagaisya_i-ga tubureta-ra,
 all-GEN auto companies-NOM go bankrupt-if
 [NP [s' eck soko_i-no koozyoo-de hataraiteru] hitotati]-wa
 SOKO-GEN factory-at are working people-TOP
 taihendesyoo
 will have a hard time
 'If all the auto companies_i go bankrupt, the people who are
 working at it_i's new {factory/factories} will have a hard time.'

4.5. "Reconstruction" and "Parasitic Gaps"

Among the Japanese sentences considered in the previous section are those that correspond to (77) in the relevant structural respects.

(77)

- a. everyone_i sued (the) person(s) who hit him_i
 b. *(the) person who had hit him_i apologized to everyone_i

We have observed that the availability of bound variable interpretation for soko 'there' depends upon whether it is c-commanded by its "antecedent", analogously to that of bound variable interpretation for him in (77).⁵⁸ In Hoji (1985) the same generalization is argued to hold in the relevant paradigm that involves the zero pronoun (pro). Consider the sentences in (78).

(78) (Cf. Hoji (1985, Ch. 2; 1987).)⁵⁹

- a. {John_i/daremo_i}-ga [vp[NP[s e_k pro_i butta] hitok_k]-o uttaeta] (koto)
 John/everyone-NOM hit person-ACC sued
 '[John_i/everyone_i] sued (the) person(s) who had hit him_i'
- b. [NP[s e_k pro_i butta] hitok_k]-ga [vp [John_i/*daremo_i]-ni ayamatta] (koto)
 hit person-NOM John/everyone-DAT apologized
 '(the) person(s) that had him_i apologized to John_i/everyone_i'

The coreference between John and pro is possible, regardless of whether the former c-commands the latter (as long as the latter does not c-command the former); cf. the discussion in chapter 2). When the "antecedent" for pro is a quantified NP such as daremo 'everyone', subete-no gakusei 'all the students', John to Bill 'John and Bill' and dare 'who', on the other hand, pro must be c-commanded by the "antecedent", as indicated by the acceptability of (78a) and the unacceptability of (78b) (with daremo 'everyone').

Two more constructions are discussed in Hoji (1985, Chs 2 and 3) in connection with bound variable anaphora for the empty categories in Japanese. We can obtain sentences of such constructions by preposing the object NP in (78) to the sentence-initial position, as given in (79).

(79)

- a. [NP[s e_k e_i butta] hitok_k]-o_j [John_i/daremo_i]-ga [vp t_j uttaeta] (koto)
 hit person-ACC John/everyone-NOM sued
 '[(the) person(s) who had hit him_i]_j [John_i/everyone_i] sued t_j'
- b. [John_i/daremo_i]-ni [NP[s e_k e_i butta] hitok_k]-ga [vp t_j ayamatta](koto)
 John/everyone-DAT hit person-NOM apologized
 'John_i/everyone_i, (the) person(s) that had him_i apologized to'

As indicated, the bound variable reading REMAINS possible in (79a), and BECOMES possible in (79b).

Sentences of the type in (79a) (with the quantified NP) have been referred to as instances of "reconstruction" because of its resemblance to the typical so-called "reconstruction" example in English as given in (80); cf. Engdahl (1980), van Riemsdijk and Williams (1981) and others.⁶⁰

(80)

a. (Engdahl's (1980, p. 140) (140))⁶¹

Which one of his_i books does every author_i usually recommend?

b. (Cf. Engdahl (1980, p. 33).)

Which pictures of himself_i does everyone_i like most?

The generalization is that sentences like (80) allow bound variable anaphora as though the relevant c-commanded requirement were satisfied; in other words, the sentences in (80) exhibit the bound variable construal for his and himself, in essentially the same way as (81) below.

(81)

a. Every author_i usually recommends the most recent one of his_i books.

b. Everyone_i likes black and white pictures of himself_i most.

Given the analogy between (79a) and (80), and given the assumption that soko functions very much like he in English, we would expect to find the "reconstruction" effects with soko as well. As discussed in Tada (1988, 1990), the prediction is indeed borne out by the (b) examples in (82) through (85) given below. The (b) examples below seem to be as acceptable as the pre-preposed (a) examples.

(82)

a. [[[dono zidoosya gaisya]_i/ittai doko_i]-ga soko_i-no zyuugyooin-o
which auto company on earth where-NOM there-GEN employee-ACC
uttacta ka]-ga mondai da
sued Q-NOM problem is
'[[Which auto company_i/where_i (i.e. which place/institution) on
earth] sued it_i's employees] is the problem.'

b. [soko_i-no zyuugyooin]_k-o [[dono zidoosya gaisya]_i/ittai doko_i]-ga
ik uttacta ka ga mondai-da..

(83)

a. [[Toyota to Nissan]_i/[subete-no zidoosyagaisya]_i]-ga
Toyota and Nissan all-GEN auto company-NOM
[soko_i-no zyuugyooin]-ni kirokutekina boonasu-o dasita (koto).
there-GEN employee-DAT record breaking bonus-ACC gave
'[[Toyota and Nissan]_i/all the auto companies_i] gave record
breaking bonuses to it_i's employees'

b. [soko_i-no zyuugyooin]_k-ni [[Toyota to Nissan]_i/[subeta no
zidoosyagaisya]_i]-ga ik kirokutekina boonasu-o dasita (koto)

(84)

a. [[Toyota to Nissan]_i/[subete-no zidoosyagaisya]_i]-ga
Toyota and Nissan all-GEN auto companies-NOM
[NP [S' eck nizyuu nen-izyoo-mo soko_i-de hataraitcita]
20 years-more-even SOKO-at were working
tyuukan kanrisyokusya_k]-o tairyooni kubinisita (koto)
middle-class managerial personnel-ACC in quantity fired
'[[Toyota and Nissan]_i/all the auto companies_i] fired by a large
number [(the) managerial personnel who had been working there;
for over 20 years]'

b. [NP [S' eck nizyuu nen-izyoo-mo soko_i-de hataraitcita]
tyuukan kanrisyokusya_k]-o
[[Toyota to Nissan]_i/[subeta no zidoosyagaisya]_i]-ga
tairyooni ij kubinisita (koto)

(85)

a. oote zidoosyagaizya_i-ga issya-mo_i
major auto company-NOM 1 company-ASLO
[NP[S' eck soko-o kyooohaku siteita] yakuzak]-ni kane-o
it-acc was blackmailing gangster-DAT money-ACC
harawanakatta (koto)
did not pay
'no major auto company paid money to the gangster who was
blackmailing it_i'

b. [NP[S' eck soko-o kyooohaku siteita] yakuzak]-ni
oote zidoosyagaizya_i-ga issya-mo_i ik kane-o harawanakatta (koto)

The bound variable construal indicated in the (b) examples above, especially those in (83), (84) and (85), confirms the status of soko as a category that can function as a bound variable.

The example in (79b) (with daremo 'everyone'), a slightly modified version of which is given below as (86a), are called "parasitic gap" constructions in Japanese in Hoji (1985, 1987).⁶²

(86)

a. (Cf. (79b).)

[daremo_i/subete-no hito_i]-ni [NP[s ϵ_k ϵ_i butta] hito]-ga
 everyone/all the people-DAT hit person-NOM
 [VP ι_i ayamatta](koto)
 apologized

'[everyone_i/all the people], [(the) person(s) that had hit
 {him_i/them_i} apologized to'

b. *[NP[s ϵ_k ϵ_i butta] hito]-ga [VP {daremo_i/subete-no hito_i]-ni
 hit person-NOM everyone/all the people-DAT
 ayamatta] (koto)
 apologized

'[(the) person(s) who had hit {him_i/them_i} apologized to
 {everyone_i/all the people_i}'

The example in (86a) allows bound variable reading for the embedded object, ϵ_i , unlike the pre-scrambled sentence in (86b). The bound variable anaphora is possible in (87a) as well, while it is not in (87b).

(87)

a. dare_i-ni [NP[s ϵ_k ϵ_i butta] hito_k]-ga [VP ι_i ayamatta] (koto)
 who-DAT hit person-NOM apologized
 'who_i did [(the) person(s) that had hit {him_i/them_i}] apologized to'

b. *[NP[s ϵ_k ϵ_i butta] hito_k]-ga [VP dare_i-ni ayamatta] no
 hit person-NOM who-DAT apologized Q
 '[(the) person(s) that had hit {him_i/them_i}] apologize to who_i?''

Notice that the sentences in (86) and (87a) resemble Swedish sentences such as (90) below, which Engdahl (1980, pp. 228-31; 1983) discusses as "parasitic gap constructions"; cf. also Taraldsen (1981, Ch. 6), Chomsky (1982) and many subsequent works.

(88) (Engdahl's (1980, p. 229) (39'))

Vilken film_j tyckte de flesta som sett $_j$ bra om $_j$?
 Which film_j did most people who saw $_j$ like $_j$?

The structure of (87a) in Japanese is identical to that of (88). Engdahl (1980, p. 229) states that "[t]he English counterpart (i.e. the English sentence in (88)--III) is, not surprisingly, not particularly good. The Japanese sentence in (87a) is quite good. To the extent

that English sentences of the type in (88) are "not particularly good", it appears that Japanese is more similar to Swedish than to English.⁶³

There is yet another striking similarity between Swedish (as reported in Engdahl (1980)) and Japanese. In discussing (88) above, Engdahl indicates that the parasitic gap, i.e. the leftmost gap, in this example can be replaced by an overt pronoun den, as in (89).

(89)

Vilken film_j tyckte de flesta som sett den_j bra om $_j$?

(90)

*?Which film_j did most people who saw it_j like $_j$?

The sentence in (90), which is the English version of (89), is a typical case (of so-called weak crossover) in which bound variable anaphora fails to obtain.⁶⁴ Yoshimura (1989, forthcoming) observes that the Japanese sentences that correspond to (89) and (90) (and (i) in footnote xx (immediately above) as well) allow the bound variable construal. Her examples can be obtained by replacing the embedded empty object in (87a) above by soitu 'the/that guy'.

(91) (based on Yoshimura's (forthcoming) xx) (Cf. (8'a).)

dare_i-ni [NP[s ϵ_k ϵ_i soitu_i-o butta] hito]-ga [VP ι_i ayamatta] no
 who-DAT the guy-ACC hit person-NOM apologized Q
 'who_i did [(the) person(s) that had hit the guy_i] apologized to?'

Yoshimura argues that sentences of the pattern in (91) are generally acceptable, providing a range of examples with different quantified NP's. She argues, following a suggestion made in Saito and Fukui (1987), and based on Kuroda, that scrambling is an A-movement. She thus argues that (91) does not involve an A'-movement. According to this view, the possibility of bound variable construal for soitu is as expected, just as the binding of his by who in (92) is.

(92)

Who_i seemed to his_i teacher ι_i to be the best student at the beginning of the year?

Notice that if the analogy between Swedish (89) and Japanese (91) is correct, and if one adopts Yoshimura's analysis of (91), one might conclude that the movement involved in Swedish (89) must also be an A-movement (a controversial result, to say the least).

There is, however, another way to capture the analogy between Swedish (89) and Japanese (91). Engdahl's Swedish example in (89) has a *which*-phrase, as in most other Swedish examples that she discusses. Recall that *which*-phrases are considered "D-linked" and that *date* in Japanese is "D-linked" more easily than *who* in English, according to Pesetsky (1987). One might thus suggest, given Pesetsky's "D-linking" analysis, that what appears to be bound construal in Swedish (89) and Japanese (91) (and English (92) for some speakers) is in fact coreference. In fact, as pointed out in footnote xx, some speakers accept (90) repeated below.

(90)

*?Which film_j did most people who saw it_j like _{-j}?

According to this alternative, (89), (90) and (91) are acceptable with "coreference" not with "bound variable construal". The fact that even those who accept (90) tend to reject (93) below seems to support this view.

(93)

*What_j the hell did most people who saw it_j like _{-j}?

In order to see whether the relevant structure as given in (91) indeed yields bound variable construal, we must therefore consider sentences with quantified NP that strongly disallows such "pseudo-coreference" reading. According to the discussion given above, the coreference between *soko*, which we have seen is singular, cannot be in a coreference relation with A to B "A and B" or subete-no N "all the N". We have also seen that Japanese expressions that roughly correspond to "no N" do not allow coreference with *soko*. Let us thus consider whether bound variable anaphora is possible in relevant sentences which contain these quantifiers.

First consider (94).

(94)

a. (?) [Toyota to Nissan]_i-o [NP[S' *ek* zutto mae-kara *soko*_i-o
Toyota and Nissan-ACC since long ago there-ACC
ooensite-ita] seizika_k-ga kyuuni _i hihansihazimeta (koto)
was supporting politician-NOM suddenly started to criticize
'[Toyota and Nissan]_i, (the) politicians who had been supporting
it_j suddenly started criticize _i'

b. (?) [Toyota to Nissan]_i-ni [NP[S' *ek* *soko*_i-ni hairitagatteiru]
Toyota and Nissan-DAT it-DAT want to enter
hito_k-ga takusan _i osikaketa (koto)
person-NOM many rushed
'[Toyota and Nissan]_i, many people who wanted to join there;
visited _i'

It seems that the bound variable reading for *soko* 'there' is possible in (94).

Some speakers might find (94) somewhat less acceptable than (95), in which *soko* 'there' is replaced by an empty category.

(95)

a. [Toyota to Nissan]_i-o [NP[S' *ek* zutto mae-kara *ec*_i(-o) ooensite ita]
seizika_k-ga kyuuni _i hihansihazimeta (koto)
b. [Toyota to Nissan]_i-ni [NP[S' *ek* *ec*_i(-ni) hairitagatteiru] hito_k-ga
takusan _i osikaketa (koto)

One might suggest that the sentences in (95) are acceptable WITH COREFERENCE rather than with bound variable anaphora analogously to the sentences in (96).

(96)

a. [NP[S' *ek* zutto mae-kara *ec*_i(-o) ooensite ita] seizika_k-ga
kyuuni [Toyota to Nissan]_i-o hihansihazimeta (koto)
'(the) politicians who had been supporting them_j suddenly started
criticize [Toyota and Nissan]_i'
b. [NP[S' *ek* *ec*_i(-ni) hairitagatteiru] hito_k-ga takusan. [Toyota to
Nissan]_i-ni osikaketa (koto)
'many people who wanted to join them_j visited [Toyota and
Nissan]_i'

Notice that in (96) *ec*_i is not c-commanded by *Toyota to Nissan*. Hence, the bound variable reading for *ec* should not be possible. In fact, if we replace the *ec*_i by *soko*_i in (96), the bound reading for *soko* is clearly not available. The sentence in (96a) is acceptable on the reading that a particular politician who had been supporting both Toyota and Nissan suddenly started criticizing these two companies. Similarly, (96b) is acceptable on the reading that those who wanted to join both Toyota and Nissan (or, either Toyota or Nissan) came to these two companies, but not on the reading that each of Toyota and Nissan is such that many people who wanted to join it_j visited it_i.

While the use of the zero pronoun in (95) might make the relevant judgment less clear than one wishes them to be (due to the absence of the marking for the singularity), it nevertheless seems clear enough that the bound variable construal is possible in (95), unlike in (96). The use of the singular *soko* in (94) makes it clear that the relevant dependency there must be that of bound variable anaphora, as the discussion in the preceding section indicates.

A paradigm with *subete-no zidoosyagaisya* 'all the auto companies', given in (97) and (98) seem to exhibit essentially the same contrast.

(97)

a. [subete-no zidoosya gaisya]_i-o
all-GEN auto company-ACC
[NP [S' ek zutto mae-kara [eci/(?)soko]_i-o ooensite ita] seizika_k]-ga
since long ago it-ACC was supporting politician-NOM
kyuuni _{ij} hihansihazimeta (koto)
suddenly started criticizing
'[all the auto companies]_i, (the) politicians who had been supporting
it_i suddenly started criticize _{ij}'

b. [subete-no zidoosya gaisya]_i-ni
all-GEN auto company-DAT
[NP [S' ek [eci/(?)soko]_i-ni hairitagatteiru] hito_k]-ga takusan _{ij}
there-DAT want to enter person-NOM many
osikake(teki)ta (koto)
visited
'[all the auto companies]_i, many people who wanted to join there;
visited _{ij}'

(98)

a. * [NP pro zutto mae-kara [eci/soko]_i-o ooensite ita seizika]-ga
kyuuni [subete-no zidoosya gaisya]_i-o hihansihazimeta (koto)
'(the) politicians who had been supporting it_i suddenly started
criticize [all the auto companies]_i'

b. * [NP pro [eci/soko]_i-ni hairitagatteiru hito]-ga takusan [subete-no
zidoosya gaisya]_i-ni osikake(teki)ta (koto)
'many people who wanted to join there_i visited [all the auto
companies]_i'

The scrambled sentences in (97), in contrast to the unscrambled (98), seems to yield the bound reading (although I continue to find the

bound reading with the zero pronoun slightly easier than that with *soko*).⁶⁵

Yoshimura (forthcoming) in fact reports that the sentences such as (94) allow bound variable construal. It thus appears that the bound variable construal is indeed possible in (94) (and (97)).⁶⁶ No matter how the bound variable construal in these examples might eventually be explained, it seems clear that the data considered above render further confirmation for Nishigauchi's and Yoshimura's claim that *sore* and *soko* may be construed as bound variables: cf. Yoshimura (forthcoming) for extensive discussion on this topic.⁶⁷

4.6. *Kare, Sore and the Japanese Demonstrative Paradigms*

4.6.1. The So-called Overt Pronouns and Sono hito 'that person'

We have seen in the preceding sections that while the so-called overt pronoun *kare* 'he' cannot be construed as bound variables, expressions such as *sore* 'it/that' and *soko* '{the/that} place, there' can; cf. Nishigauchi (1986) and Yoshimura (1989, forthcoming). I have also noted that *soitu* 'the/that guy' and *sono hito* 'the/that person' may appear to be bound by a quantified NP more readily than *kare* 'he' does; cf. Hoji (1984, forthcoming).

In English, the use of personal pronouns such as *he* as bound variables is attested to in abundance, as has been noted above. Regarding the "bound variable use" of "singular terms", Evans (1977, p. 273) notes:

[w]e should realize that many expressions other than pronouns, strictly, so called may be used exactly as pronouns are used. For example, 'that logician' is functioning like a bound pronoun in [(99)].

(99) (Evans (1977, p. 273))

Every logician was walking with a boy near that logician's house.

It has, furthermore, been observed in Hornstein and Weinberg (1987) that expressions such as *the bastard* and *the man*, which are called "anaphoric epithets" (Lasnik (1976, 86)) or "incomplete descriptions" (Higginbotham (1983)) may function as bound variables (in the context that Reinhart (1987) calls "SPEC binding."⁶⁸ Thus sentences like (100) seem basically acceptable.⁶⁹

(100)

- a. Every syntactician's mother thinks that the poor s.o.b._i has chosen the wrong field.
b. (?) No syntactician's mother thinks that the poor s.o.b._i has chosen the right field.

It seems therefore, the pronouns in English may be construed as bound variables as readily as, if not more readily than, "descriptions" such as the poor s.o.b., the guy and that man.

Given the English translations that have so far been assigned to these expressions, it is, therefore, somewhat puzzling that kare 'he', which is generally treated in literature as an overt pronoun in Japanese, is less susceptible to bound variable interpretation than soitu 'the/that guy' and sono hito 'the/that man'. Equally puzzling is the fact that the "overt pronoun" kare 'he' behaves radically differently from the other "overt pronouns" ore 'it/that' and soko 'there', if the latter two are considered to be "overt pronouns, as in Nishigauchi (1986, footnote 3, p. 272). Notice furthermore that ore 'it/that', soko 'there', soitu 'the/that guy' and sono hito 'the/that man' all begin with so. This cannot be a coincidence.

In this section, I will try to reduce the puzzles regarding these so-called overt pronouns to a more general problem that has to do with the relation between demonstrativity and bound variable construal. It must be noted, first of all, that the so is one of the four members of the so-called ko, so, a, do "this, that, that, which" system, established in Sakuma (1936), which we might call the Japanese demonstrative system.

It will be observed (i) that the so 'that' system is susceptible to bound variable interpretation while a 'that' system is not and (ii) that kare is closely related to the a system. The first observation is reminiscent of Mikami's (1953, p. 52) remark that Japanese does not yet have personal pronouns like English it and that the so paradigm is closest to becoming a personal pronoun like English it.⁷⁰ This remark of Mikami's anticipates Kuroda's (1965, pp. 104-106, pp. 121-123) conclusion that "those Japanese nouns which are generally called personal pronouns (watasi 'I', kimi 'you', kare 'he', etc.) are not considered here to be personal pronouns."⁷¹

4.6.2. The Japanese Demonstrative System

Let us now turn to the Japanese demonstrative system and consider how kare 'he' is related to this system. As described by Sakuma (1936), Japanese possesses an extremely productive system of deictics, the so-called ko, so, a, do paradigm. Consider the paradigms given below.

(101) nominals

- a. ko 'this (thing)' as in "I like this." (close to the speaker)
b. so 'that (thing)' (far from the speaker and close to the hearer)
c. a 'that (thing)' (far from both the speaker and the hearer)
d. do 'which (thing)' (among 3 or more)

(102) pronominal modifiers

- a. kono 'this' as in "I like this book."
b. sono 'that'
c. ano 'that'
d. dono 'which'
Cf. John-no X '[NP John's X]'

(103) 'place'

- a. koko 'here' 'this place'
b. soko 'there' 'that place'
c. a(s)ko 'there' 'that place'
d. doko 'where' 'which place'

(104) 'manner'

- a. ko 'in this way'
b. so 'in that way'
c. a 'in that way'
d. do 'in what way' 'how'

In each of these paradigms, ko, so, a and do are followed by a distinct morpheme. In (102), they are followed by no, which is identical to the so-called genitive case marker. The distinction between so and a noted in (101) applies, regardless of what morphemes follow them.

They can be followed by a few other morphemes, yielding expressions such as doitu 'which guy/thing (derogatory when used for a person) and konnani 'this much'. In fact, soitu and aitu, which we have considered in the preceding sections in this chapter and in chapters 2 and 3, respectively, are members of the paradigm in (105).

- (105)
- a. koitu 'this guy' 'this thing'
 - b. soitu 'that guy'
 - c. aitu 'that guy'
 - d. doitu 'which guy'

We will now concentrate only on the so and a systems since the ko and do systems do not concern us here.

4.6.3. The Δ and Σ Demonstrative Paradigms

As claimed in Mikami (1970, p.149), while a must be used deictically, so may be used either deictically or non-deictically.⁷²

One peculiarity of the so system that Mikami notes is its idiomatic use, as illustrated in (106).

- (106) (Mikami (1955, p. 182))
- a. sorewa sorewa 'extremely'
 - b. sorega 'however'
 - c. soreni 'in addition'
 - d. soretomo 'or'

Such expressions do not have the deictic sense and they do not have counterparts of the a system. Thus the forms in (107) are all unacceptable, (with the intended meanings).

- (107)
- a. *arewa arewa 'extremely'
 - b. *arega 'however'
 - c. *areni 'in addition'
 - d. *aretomo 'or'

A few more examples of this nature are provided in (108).

- (108)
- a. sono hi gurasi
that day life
'a hand-to-mouth life'
 - b. sono ta 'etc.'
 - c. sono mukasi 'a long time ago'
 - d. sono uti ni 'in a short while'
 - e. soretonaku 'indirectly'

If we substitute a for so in (108), the resulting phrases are completely unacceptable.

- (109)
- a. *ano hi gurasi
 - b. *ano ta
 - c. *ano mukasi
 - d. *ano uti ni
 - e. *aretonaku

It has thus been illustrated that the so system, unlike the a system, can be used non-deictically. If the a system must always be deictic, then one might expect that the members of this system can never yield bound variable anaphora while being able to be used to express coreference. As is illustrated in (110) below, this is indeed the case.

- (110)
- a. hon-ga issatu-mo [NP[S' eci {sorek/*arek}-o tyuumonsita]
hitoj]-no
book-NOM 1 volume-ALSO -ACC ordered
person-GEN uti-ni(-wa) todokanakatta (koto)
house-to did not arrive
'no books_i were delivered to the house of (the) person(s) who had ordered {it_i/that_i}'
 - b. Dono baka-ga [S' Mary-ga {soitui/*aitui}-ni horetsiru to] itta no
which fool-NOM Mary-NOM -DAT love that said Q
'Which fool_i said that Mary loved {the guy_i/that guy_i}?'

c. Nani_i-ga [NP[S' ec_i (sore_k/*are_i)-o tyuumsita] hito_i]-no uti_i-ni
 what-NOM -ACC ordered person-GEN house-to
 todoita no
 arrived Q
 'What_i was delivered to the house of (the) person(s) who had
 ordered [it_i/that_i]?'

d. Daremo_i-ga {?sono hito_i/ano hito_i}-no hon-o suteta (koto)
 everyone-NOM -GEN book-ACC throw away
 'Everyone_i threw away (the person_i's/that person_i's) book.'

Coreference on the other hand is possible with the members the a system, as discussed in earlier chapters. I provide a few examples below.⁷³

(111)

a. John-no bakai-ga [S' Mary-ga aitui-ni horeteiru to] itta (koto)
 John-GEN fool-NOM Mary-NOM -DAT love that said
 'John_i (the fool) said that Mary loved that guy_i'

b. ano kaisyai/Nissan_i-ga [NP [S' ec_k kyonen asoko_i-ni haitta] hito_i]-o
 that company/Nissan-NOM last year -DAT entered person-ACC
 zenin kubinisita (koto)
 all fired
 '(that company_i/Nissan_i)-NOM fired everyone who had joined
 there_i last year'

We have thus seen that it is in fact not an accident that the nominal expression discussed in section xx that can be construed as bound variables all start with so. It therefore seems that, whatever might be the ultimate reason for it, it is because they belong to the system of so that those nominals can function as bound variables.

4.6.4. Kare and the A system

Now, what is the relation between kare 'he' and these paradigms? One would notice first of all that kare has the morpheme re, which is attached to one of the paradigms of ko, so, a, do, given earlier, and repeated here.

(112) nominals

- a. kore 'this (thing)' as in "I like this." (close to the speaker)
- b. sore 'that (thing)' (far from the speaker and close to the hearer)
- c. are 'that (thing)' (far from both the speaker and the hearer)
- d. dore 'which (thing)' (among 3 or more)

It seems therefore reasonable to hypothesize that kare is related to the paradigm in (112).

Yasuda (1928, p.327 in Hattori et.al. (1979)) in fact places kare in the same slot as are 'that (thing)' in his deictic chart. In the chart given in Mikami's (1955, published as Mikami (1972b, p.174)) as well, kare is treated along the line with the members of the a system. In the 1977 edition of Sanseido's Dictionary of Classical Words, for example, ka is "defined" simply as are (p. 208).⁷⁴ Mikami's (1972a, p. 50) chart in (113), which combines members of the classical demonstrative system and those of the modern day system, is also suggestive.⁷⁵

(113) (Mikami (1953/72, p. 50))

ware
nare
kore — sore — (k)are — dore
tare?

Now consider the examples in (114), which illustrates the alternation between kano and ano.

(114)

{kano/ano} yuumeina Chomsky-ga kita (koto)
 famous -NOM came
 '(that) famous Chomsky came'

The substitution of ano for kano in (114) does not seem to affect the meaning of the sentence although it results in some stylistic change.⁷⁶ ka differs from ko, so, a, and do in modern day Japanese in that it does not allow a full range of morphological combination, as

indicated by the illicit expressions in (115).

(115)

- a. *ka(so)ko (intended as: a(so)ko 'that place')
- b. *katira (intended as: atira 'that way')
- c. *kaa (intended as: aa 'in that way')
- d. *kannani (intended as: annani 'that much')

The well-formed expressions such as kano (ka + no) as in (114), although highly limited in modern day Japanese, seem to be a clear indication of the deictic status of ka, and in particular its resemblance to a.⁷⁷

Let us now turn to data from modern day Japanese that indicate that ka in kare is closely related to a in are. In discussing the so-called "anaphoric" use of a and so, Kuno (1973) states the following.⁷⁸

The a-series is used only when the speaker knows that the hearer, as well as the speaker himself, knows the referent of the anaphoric demonstrative. The so-series, on the other hand, is used either when the speaker knows the referent but thinks that the hearer does not or when the speaker does not know the referent. (Kuno; 1973, p. 283)

As observed by Kuno, certain contexts force a particular choice between ano hito 'that person' and sono hito 'that person.' Consider (116) and (117), taken from Kuno (1973, pp. 283-284) for the illustration.

(116)

A. Kinoo Yamada-san ni aimasita. Ano (*sono) hito itumo genki desu ne.
'Yesterday, I met Mr. Yamada. That man is always in high spirits.'

B. Hontoo ni soo desu ne.
'Indeed so.'

(117)

A-1. Kinoo Yamada to yuu hito ni aimasita. Sono (*ano) hito, miti ni mayotte komatte-ita node, tasukete agemasita.
'Yesterday, I met a man by the name of Yamada. Since he lost his way and was having difficulties, I helped him.'

B-1. Sono (*ano) hito, hige o hayasita tyuunen no hito desyoo?
'Isn't that person a middle-aged man with a beard?'

A-2. Hai, soo desu.
'Yes, that's right.'

B-2. Sono/Ano hito nara, watasi mo sitte-imasu yo. Watasi mo sono/ano hito o tasukete ageta koto ga arimasu.
'I know him, too. I have helped that man, too.'

In (116) and (117), each occurrence of ano hito 'that person' can be replaced naturally by kare. On the other hand, the replacement of sono hito by kare (i.e. the use of kare in places where ano hito is not natural) tend to result in unnaturalness. This is illustrated in (118) and (119), which must be compared with (116) and (117), respectively.

(118)

A. Kinoo Yamada-san ni aimasita. Kare itumo gerki desu ne.
'Yesterday, I met Mr. Yamada. That man is always in high spirits.'

B. Hontoo ni soo desu ne.
'Indeed so.'

(119)

A-1. Kinoo Yamada to yuu hito ni aimasita. *?Kare, miti ni mayotte komatte-ita node, tasukete agemasita.⁷⁹
'Yesterday, I met a man by the name of Yamada. Since he lost his way and was having difficulties, I helped him.'

B-1. *?Kare, hige o hayasita tyuunen no hito desyoo?
'Isn't that person a middle-aged man with a beard?'

A-2. Hai, soo desu.
'Yes; that's right.'

B-2. Kare nara, watasi mo sitte-imasu yo. Watasi mo kare o tasukete ageta koto ga arimasu.
'I know him, too. I have helped that man, too.'

The observation above, based on Kuno's (1973), thus confirms the relationship between kare and ano hito, as compared to that between kare and sono hito, and hence for the relation between ka

and a, as compared to that between ka and so. To the extent that ka is closely related to a, its inability to be construed as a bound variable is now reduced to a more general problem of the inability of the members of the a system to be so construed.

4.7. The So-Called Overt Pronouns in Japanese

If kare is basically analogous to ano hito 'that person', as is indicated above, it seems reasonable to assume that kare is not a (personal) pronoun in Japanese. I have in fact made this assumption in 2.9.6, in which I have argued that no overt categories in Japanese has [+p] feature. Given that kare is NOT a pronoun, its inability to be construed as a bound variable, as compared to expressions like soitu 'the/that guy', for example, is no longer problematic.

It has in fact been pointed out or hinted at in many past works that Japanese does not have personal pronouns (e.g. Sakuma (1936/83) Mikami (1955/72), Kuroda (1965), Martin (1975/85), Kuno (1978) and C. Kitagawa (1979, 1981)). The 'most frequently mentioned basis for this view is the "multiplicity of the so-called personal pronouns in Japanese." (Kuroda (1965, p. 105).

Kuroda (1965, p. 123) states:

The fact that there is more than one so-called personal pronoun for the same grammatical person is probably related to their nominal character. Thus watakusi, (watasi), ore, temae, boku, sessya, zibun, and perhaps some others, are listed as first person pronouns in Kindaiti (1952) (i.e. a Japanese dictionary, Meikai Kokugo Ziten--HH), and anata, kimi, omae, temae as second person pronouns. Each of these has a particular connotation for the speaker and listener. Choosing one of them is much like choosing an appropriate ordinary noun to denote some entity. Specialization in meaning in the so-called personal pronouns is certainly incompatible with the highly syntactic nature of the anaphoric use of the real personal pronoun. Indeed it suggests that these items are, instead, members of a major category, i.e., noun.

Mikami (1955/72, p. 184) also points out that "while the vocabulary of pronouns in any language tends to be rather rigid and stable, Japanese "I" and "you" are extremely liberal." By "liberal" he means not only "multiplicity" but the fact that historical shifts of "meanings"

are not uncommon at all. Thus several words for "you", for example, come to be used to mean "I", in the course of historical change. According to the classical Japanese dictionary referred to earlier, ware used to mean either "you" or "I". He even notes that "one cannot deny the possibility that yanu 'you' and mii 'me' will someday incorporated into the Japanese lexicon, very much like papa and mama."⁸⁰

Martin (1975/87, p. 1074) states, regarding the Japanese counterparts of the English third-person pronouns, that "[w]hen modified by demonstratives, the more general words for 'person' (such as hito 'person' and ko 'child', HH) often function like the third-person pronouns of English 'he/him, she/her, it, they/them'....", referring to expressions like (120) and (121).

(120)
a. kono hito 'this person'
b. sono hito 'that person'
c. ano hito 'that person'

(121)
a. kono ko 'this kid'
b. sono ko 'that kid'
c. ano ko 'that kid'

Sakuma (1951/1983, p. 22) states that there are no third person pronouns in Japanese, that kono, sono and ano are added to hito 'person', kata 'person (honorific)', otoko 'man', onna 'woman', ko 'child' and so on, which express 'humans'. He also adds that due to the need for translation the word kare 'he' is sometimes used with a tone of translation, in some places (itibudewa).⁸¹

Kuno (1978, p. 127) describes the state of affairs regarding the pronouns in Japanese as follows. (I used '->' in place of Kuno's '-' for the clear indication of the "derivation.")

Japanese lacks authentic pronouns for any grammatical persons. Most existing forms that correspond to pronouns in other languages are derived from nominal expressions: boku '(your) servant -> I', watakusi 'personal -> I', kimi 'lord -> you', anata 'far away -> you', omae 'honorable (person in) front (of me) -> you', kare 'thing far away -> he', kanozyo, 'far away woman -> she', karera 'far away + Plural -> they'.

Not only do these considerations confirm that kare 'he' is not a pronoun but they also indicate, strongly, that even the members of the so system are not pronouns.

4.8. Demonstrativity and Bound Variable Construal

Given the conclusion, made in 2.9.6 and confirmed in the preceding section, that none of kare, aitu (or any member of the a system), and soitu (or any member of the so system) is [+p], the difference between kare and aitu on the one hand and soitu on the other with respect to bound variable construal must be derived independently of the [+p] feature; cf. the discussion in 2.9.6. Recall that we have earlier reduced kare's inability to be construed as a bound variable to aitu's inability to be so construed. One might relate this to Mikami's (1970, p.149) remark that 'only the so paradigm can be anaphoric as well as deictic.⁸² According to such a view, (i) bound variable interpretation is not possible for kare or for the members of the a system since they are unambiguously demonstrative, and (ii) the members of the so system may be construed as bound variables because they need not be demonstrative (i.e., they are ambiguous between "demonstrative" and "anaphoric").⁸³ Although this view is taken in Hoji (to appear), I will argue in the following that it is not correct.

First of all, as pointed out to me by O. Jaeggli (p.c.), it is not clear why demonstrativity for a category X precludes bound variable interpretation for X. It is noted in Evans (1977) that the sentence in (122) is acceptable, despite the fact that that logician is bound by every logician; cf. xx above.⁸⁴

(122) (Evans (1977, p. 273))

Every logician_i was walking with a boy near that logician_i's house.

Hornstein and Weinberg (1987) provides examples of the form as illustrated in (123), indicating that the English epithets can be construed as bound variables.⁸⁵

(123)

every linguist_i's mother thinks that the poor s.o.b._i has chosen the wrong field

Some speakers accept the bound variable interpretation for that poor s.o.b. in addition to that for the poor s.o.b. The relevant sentence is provided together with two other examples with that logician.⁸⁶

(124)

- a. ?every linguist_i's mother thinks that that poor s.o.b._i has chosen the wrong field
- b. every logician_i's wife admires that logician_i's work very much
- c. every logician_i tends to fall in love with any woman who passes by that logician_i's house

In Hoji (to appear), it is reported that even for those speakers who can marginally accept (124a), the bound reading in (125b), as compared to that in (125a), is not possible.

(125)

- a. ?no linguist_i's mother thinks that the poor s.o.b._i has chosen the wrong field
- b. *no linguist_i's mother thinks that that poor s.o.b._i has chosen the wrong field

However, I have subsequently learned that some speakers accept the bound variable interpretation in (125b) as well. These speakers even accept (126).

(126)

no logician_i's wife would fall in love with any woman who passes by that logician_i's house

Others do not accept (125b) or (126) while accepting (124) and (125a).

It thus appears that that N's, such as that logician, can function as a bound variable, to varying degrees (among speakers). This is in sharp contrast with the situation with respect to the members of the a system in Japanese. The bound variable construal for them is flatly rejected, as noted in the examples given in xx above. There is no variation. In the case of kare, there is some variation, as noted earlier, with respect to whether it can be bound by some "non-referential antecedents".⁸⁷ It has, however, been pointed out that there are no cases in which kare is bound by negative polarity items such as NP-ga i-mo. Hence, the possibility of the bound reading for that N in English, as described above, indicates that demonstrativity is not sufficient to account for the total inability of the members of

the a system in Japanese and the general inability of kare to be construed as a bound variable.

In fact, the observation in English noted above seems to be mirrored by what we find in Japanese with some members of so, such as sono gengogakusya 'that linguist'. Thus consider (127a) and (127b).

(127)⁸⁸

a. dono gengogakusya_i-mo [NP_{sono} gengogakusya]_i-no
 which linguist-ALSO that linguist-GEN
 daigaku-o kenasiteita (koto)
 university-ACC was criticizing
 'every linguist_i was criticizing that linguist's university'
 '(Cf. Nishigauchi (1986).) no matter which linguist_i may be under
 discussion), (he_i) was criticizing that linguist's university'

b. ??gengogakusya_i-ga hitori-mo [NP_{sono} gengogakusya]_i-no
 linguist-NOM 1 person-ALSO that linguist-GEN
 daigaku-o kenasanakatta (koto)
 university-ACC did not criticize
 'no linguist_i criticized that linguist's university'

The bound reading is quite acceptable in (127a); by contrast, the bound reading in (127b) is somewhat marginal, reminding us of the situation in (125) and (126).⁸⁹

Recall that soko 'there' can be construed as a bound variable even in a context like (127b).⁹⁰ It is also possible for soko to be bound by a conjoined NP; cf. 4.4.3 and 4.4.4. Unlike soko, sono gengogakusya cannot be bound by a conjoined NP. Neither can it be comfortably bound by subete no N 'all (the) N', unlike soko. These points are illustrated in (128) and (129).

(128)

a. Furansu-no gengogakusya_i-ga [NP_{sono} gengogakusya]_i-no
 France-GEN linguist-NOM that linguist-GEN
 daigaku-o kenasiteita (koto)
 university-ACC was criticizing
 '(the/a) French linguist_i was criticizing that linguist's university'

b. *[Furansu-no gengogakusya to Itariya-no gengogakusya]_i-ga
 France-GEN linguist and Italy-GEN linguist-NOM
 [NP sono gengogakusya]_i-no daigaku-o kenasiteita (koto)
 that linguist-GEN university-ACC was criticizing
 '[(the/a) French linguist and (the/an) Italian linguist]_i were
 criticizing that linguist's university'

c. [Furansu-no daigaku to Itariya-no daigaku]_i-ga
 France-GEN university and Italy-GEN university-NOM
 [NP soko_i-no gengogakusya]-o tairyooni kubinisita (koto)
 there-GEN linguist-ACC many fired
 '[(the/a) French university and (the/an) Italian university]_i fired
 it_is linguists by a large number'

Cf. *[Furansu-no daigaku to Itariya-no daigaku]_i-ga
 France-GEN university and Italy-GEN university-NOM
 [NP sono_i daigaku-no gengogakusya]-o tairyooni kubinisita (koto)
 that university-GEN linguist-ACC many fired
 '[(the/a) French university and (the/an) Italian university]_i fired
 that university's linguists by a large number'

(129)

a. *?subete-no gengogakusya_i-ga [NP_{sono} gengogakusya]_i-no
 all-GEN linguist-NOM that linguist-GEN
 daigaku-o kenasiteita (koto)
 university-ACC was criticizing
 '[all the linguists]_i were criticizing that linguist's university'

b. subete-no daigaku_i-ga [NP_{soko}_i-no gengogakusya]-o
 all-GEN university-NOM there-GEN linguist-ACC
 kubinisita (koto)
 fired
 '[all the universities]_i fired it's linguists'

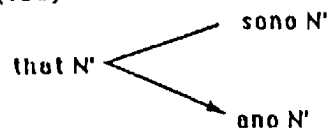
Cf. *?subete-no daigaku_i-ga [NP_{sono} daigaku_i-no gengogakusya]-o
 all-GEN university-NOM that university-GEN linguist-ACC
 kubinisita (koto)
 fired
 '[all the universities]_i fired that university's linguists'

We have indicated that that linguist in English and ano gengogakusya 'that linguist' do not correspond to each other. While the former can be bound by quantified NP's such as every N, the latter cannot. In

fact, as we have seen, no members of the *a* system can have quantified NP's as their antecedents. Thus the substitution of *asoko* 'there' in (128c) and (129b) results in total unacceptability.

It thus appears that there is some correspondence as indicated in (130). (*X --> Y* means that *X* has a function as *Y*, and *X --Y* means that the functions of *X* is equivalent to *Y*.)

(130)



That N' that corresponds to sono N' may be bound by a quantified NP, but that N' corresponding to ano N' cannot. One might consider sono N' and ano N' roughly as corresponding to that N' and that N' over there" (or that N' under discussion) respectively; cf. C. Kitagawa (1981). Notice that while that linguist may be bound by every linguist/which linguist, that linguist over there cannot, as indicated in (131) and (132).

(131)

- a. (?)Every linguist_i has a tendency to cite any article that favorably refers to that linguist_i.
- b. Which linguist_i used to cite any article that favorably refers to that linguist_i?

(132)

- a. *Every linguist_i has a tendency to cite any article that favorably refers to that linguist_i over there.
- b. *Which linguist_i used to cite any article that favorably refers to that linguist_i over there?

Notice further that that linguist can always be used in place of that linguist over there, but the reverse is not true.

4.2. Condition B Effects and Bound Variable Anaphora

It has been pointed out that condition B effects in Japanese are not as strong as in English (the observation originally due to Y. Kitagawa (p.c.)). Thus Japanese sentences like (133a) seem to be significantly more acceptable English sentences like (133b).

(133)

- a. ?John_i-ga kare_j-o suisensita (koto)
John-NOM he-ACC recommended
'John_i recommended him_j.'

- b. *John_i recommended him_j.

The typical reaction of the native speakers of Japanese to (133a) is not flat rejection although they detect varying degrees of "unnaturalness". Some speakers find the coreference indicated in (133a) quite acceptable, as compared to the reaction of the native speaker of English to (133b), according to which the indicated coreference is much more uniformly rejected.⁹¹ Thus condition B effects for coreference are not observed in Japanese as clearly as in English.

Let us now consider whether condition B effects are clearly observed in the case of bound variable anaphora. Consider the examples in (134)

(134)

- a. *[Toyota to Nissan]_i-ga soko_j-o suisensita (koto)
Toyota and Nissan-NOM it-ACC recommended
'[Toyota and Nissan]_i recommended it_j.'

- b. [Toyota to Nissan]_i-ga soko_j-no zyuuyaku-o suisensita (koto)
Toyota and Nissan-NOM it-GEN executive-ACC recommended
'[Toyota and Nissan]_i recommended it_j's executives.'

The unacceptability of (134) is in sharp contrast with the acceptability of (134b). It further contrast with the (135), which is accepted by speakers, to varying degrees.

(135)

(??) Toyota_i-ga soko_i-o suisensita (koto)
Toyota-NOM it-ACC recommended
'Toyota_i recommended it_i.'

The weakness (or the absence) of condition B effects in the case of coreference is also indicated in (136).

(136)

Sono kaisy_i-ga soko_i-o suisensita
that company-NOM it-ACC recommended
'That company_i recommended it_i.'

In comparison to (135) and (136), the unacceptability of (134a) is quite clear. Sentences like (134) thus indicate that condition B effects are clearly observed in Japanese when bound variable anaphora is relevant.

There are, however, some complications when we consider NP's such as that logician and sono gengogakusya 'that linguist'. As noted in (131), repeated below, that linguist may be bound by every linguist and which linguist.

(131)

- a. (?) Every linguist_i has a tendency to cite any article that favorably refers to that linguist_i.
- b. Which linguist_i used to cite any article that favorably refers to that linguist_i?

If what is involved is bound variable anaphora in (131), we would expect the relevant construal to become impossible in the condition B context. It is, however, not clear that this is a correct prediction. Consider (137).

(137)

- a. *??/ (?) Every linguist_i recommended that linguist_i.
- b. Which linguist_i recommended that linguist_i?

The judgments on (137a) seem to fluctuate. But (137) seems acceptable to most speakers. To the extent that the sentences in (137) are acceptable, it is not clear any more that the relevant reading in (131) is that of bound variable anaphora. For if it were, (137) should be as offensive as (138) below (and (134a) above).

(138)

*Every linguist_i recommended him_i.

Japanese sentences like (139) are also acceptable.

(139)

dono gengogakusya_i-mo sono gengogakusya_i-o suisensita
which linguist-ALSO that linguist-ACC recommended
'every linguist_i recommended that linguist_i'

As indicated earlier, a more accurate English translation of (139) is something like "no matter which linguist we may want to discuss, that linguist recommended that linguist; and it is under this type of interpretation that sentences like (131a) and (137a) becomes most readily acceptable. Given the assumptions that bound variable anaphora clearly exhibits the effects of condition B and that condition B regulates [-a] categories, the data in (139) and (137) (at least the (b) example, if not the (a) example) indicate that bound variable anaphora is not involved in these sentences.

Recall that it is not clear whether nominals like sono kaiya 'that company' in (140) below can be bound by a conjoined NP, in contrast to soko.⁹²

(140)

[[itibu zyoozyoo-no seitetugaisya] to [nibu zyoozyoo-no kookoku
first listed-GEN steel company and second listed-GEN advertising
dairiten]]_i-ga [soko_i/*??/??[sono kaisy_a]]_i-no raineido-no
agency-NOM it that company-GEN nest year-GEN
saiyoo hoosin-o happyosita (koto)
hiring policy-ACC announced
"[[the/a] steel company that is listed in the first Tokyo Stock
Exchange] and [[the/a] advertising firm that is listed in the second
Tokyo Stock Exchange]]_i made announcements regarding [it_s/that
company_i's] hiring policy for the coming year'

Notice that the marginal acceptability of (140) with sono kaisy_a disappears in the condition B context, as indicated in (141).⁹³

(141)

*[[itibu zyoozyoo-no seitetugaisya] to [nibu zyoozyoo-no kookoku first listed-GEN steel company and second listed-GEN advertising dairiten]]i-ga [soko/sono kaisya]i-o suisensita (koto) agency-NOM it that company-o recommended '[[the/a] steel company that is listed in the first Tokyo Stock Exchange] and [the/a] advertising firm that is listed in the second Tokyo Stock Exchange]i recommended [it/that company]i'

The contrast between (140) and (141) suggests that the relevant dependency is that of genuine bound variable anaphora if a singular term (or what appears to be one) is bound by a conjoined NP.⁹⁴

One might thus be tempted to use the same test in English, in an attempt to answer the question whether that N' in English can indeed function as a bound variable; cf. (131)). Unfortunately, the requirement of number agreement makes it impossible to conduct this test in English. This means that we need to conduct some other operational test before we can definitively conclude whether nominal expressions like that N' and sono N' can indeed function as bound variables. We will discuss such an operational test in Ch. 5.

4.10. Summary

This chapter is the first of two consecutive chapters in which I attempt to identify the overt non-anaphoric nominal categories in Japanese that can function as bound variables, differentiating, as clearly as possible, between cases of coreference and those of bound variable anaphora, based on the distinction made in Partee (1978); cf. Keenan (1971).

We began the discussion in this chapter with a well-known observation that the so-called overt pronoun kare 'he' (and kanozyo 'she') cannot be construed as bound variables. We have then considered Nishigauchi's (1986) and Yoshimura's (1989, forthcoming) observation that overt nominals such as sore 'it' and soko 'there' can be construed as bound variables. After pointing out some complications with identifying as "genuine" bound variable construal the relevant interpretations in some of the cases that are discussed in the works cited above, I presented confirming evidence that such expressions as sore and soko can indeed function as bound variables.

The argument is crucially based on the cases in which sore and soko are each bound by a conjoined NP. Split antecedence is not possible for sore and soko. This indicates that these expressions are

singular. Hence the fact that a conjoined NP can bind sore or soko has been taken as compelling evidence that the relevant interpretation there is indeed that of bound variable anaphora. Following Hoji's (1985) paradigms with the zero pronoun, I have then provided confirmation for this conclusion based on data that have been identified as structures of weak crossover, "reconstruction" and "parasitic gaps"; cf. Yoshimura (1989, forthcoming) and Tada (1989).

In 4.6, we returned to the question of why kare 'he' cannot be construed as a bound variable while sore and soko can. There, the Japanese demonstrative paradigms (ko, so, a, and do) were introduced and it was noted that while the members of the a systems are strictly deictic (including "contextual demonstrativity"), the members of the so system need not be; cf. Mikami (1955, 1970), for example. I have suggested that the fact that some members of this system allow bound variable construal is related to this aspect of the so system. By contrast, it is noted that kare is related to the a system, and hence the inability of kare to be construed as a bound variable has been (largely) reduced to the inability of the members of the a system to be so construed.⁹⁵ In 4.7, I have endorsed the claim made in a number of past, generative and non-generative, works that Japanese does not possess overt (personal) pronouns. This in turn corroborates the claim made in chapter 2, in discussing the effects and the acquisition of the [+/-p] feature, that there is no non-anaphoric overt category in Japanese that is [+p].

It is pointed out in 4.8 that English NP's with a demonstrative, such as that logician may be bound by a quantified NP (Evans (1977)). This indicates that the inability of kare and of the members of the a system to be construed as bound variables may not be simply attributable to their "demonstrativity". It must, however, be noted that sono gogakusya 'that/the linguist' cannot be bound by a conjoined NP despite the fact that soko 'there' can, indicating the possibility that the former cannot function as a "genuine" bound variable after all. This leads us to question whether that logician can indeed function as a "genuine" bound variable (or functioning essentially on a par with the E-type pronoun of Evans (1977)).⁹⁶

We have observed in 4.9 that condition B effects are clearly detected when bound variable anaphora is involved, as in the cases in which a conjoined NP binds soko. It was pointed out in that section, however, the condition B effects are not clearly observed when that logician is bound by which logician (and to a lesser degree, by every logician). The fact that that logician may be locally bound by every logician makes one further doubt that that logician can function as a bound variable. (Recall that the status of the sentence

in which that logician is bound by no logician is unclear.) To examine whether that logician (and, similarly, sono gengogakusya 'that/the linguist') can indeed function as bound variable, we thus need to have a further operational test.

The correlation between bound variable construal and the sloppy identity reading as in the "discourse deletion" contexts has been pointed out in Keenan (1971), Sag (1976), Williams (1977), Partee (1978) and Reinhart (1983). Another way to test the "genuine" bound variablehood of relevant nominal expressions such as that linguist, sono gengogakusya, soko and sore is to consider the availability of the sloppy identity reading for them. We will therefore examine the sloppy identity reading in the next chapter.

Notes to Chapter Four

¹ Partee follows Montague's practice and uses subscripted pronouns rather than x's and y's.

² She states (p. 80):

Ignoring some complicated cases that I will discuss later, we may say that at the level of purely linguistic description, such pronouns function like free variables which are not bound at all at the semantic level. A sentence containing one expresses a determinate proposition only relative to a particular choice of value for the variable, such as a sentence containing the word now expresses a determinate proposition only relative to a particular time of evaluation. Such choices depend on the context of use of the sentence, which is why I call this a pragmatic use of pronouns.

I believe that there are no absolute rules governing the choice of referent for pragmatic uses of pronouns, but that there are discoverable strategies and principles governing the relative likelihood or preference among choices. ... For example, in most contexts, the probable referent of the he in [(4b)] is Elliot; but one can easily enough imagine a context where speaker and hearer are most interested in figuring out where Max is, and being unable to reach Elliot is a good clue to Max's being in Boston; then he may be intended and understood as referring to Max. What matters most seems to be the salience and relevance of a particular individual, and I see no reason to draw any theoretical line between cases where that salience comes from the linguistic context as opposed to the non-linguistic context.

... The bound variable use is best described at the level of syntactic form and semantic interpretation of single sentences, and the relevant question is not what the pronoun refers to, but what quantifier phrase is binding. The pragmatic use is best described at the pragmatic level, where the full context of the sentence in use is considered; on the syntactic level, these pronouns are really no different from proper names, and at the semantic level, they can be viewed as free variables or as dummy names.

The distinction Partee (1978) draws is adopted in Reinhart (1983, Ch. 7). In chapter 6, I will discuss some implications of this view for the analysis of definite NP anaphora presented in chapters 2 and 3.

³ In fact, I have argued in chapter 2 that none of the relevant nominals in Japanese has the [+p] feature. See the discussion in chapter 2, section xx as well as that in chapter 6.

⁴ The distinction between the two types of referential association by means of these terms is made in Reinhart (1983, 1986).

⁵ An attempt will be made in chapter 6 to account for the difference between (6) and (7).

⁶ Recall that, when kare is not bound locally, the resulting sentences are acceptable, as indicated by (i) and (ii).

(i) John_j-ga kare_j-no gakusei-o suisensita
John-NOM he-GEN student-ACC recommended
John_j recommended his_j student'

(ii) John_j-ga kare_j-no gakusei-ni itikaseta
John-NOM he-GEN student-DAT told
'John_j told his_j student (something).'

⁷ I will return to this distinction in chapter 6.

⁸ The representative works include xxx. The works that directly deal with the relevant phenomenon in Japanese are xxx.

⁹ In his footnote 34 as well as in the text p. 197, Chomsky notes the gradation of acceptability depending on the choice of quantifiers. "As has often been observed," the scope of any is not limited to the minimal clause that

dominates it." Thus (i) gives the interpretation in (ii).

(i) (Chomsky's (86))

If any soldier is armed, then he'll shoot.

(ii) (Chomsky's (89))

for all x, x a soldier, if x is armed then x will shoot

If every is replaced by each in [(17)], then "the construal of the structures in the intended sense is perhaps somewhat easier, at least in (a) and (c)."

"Replacement of every by all makes the structures still more deviant in the intended sense." Cf. also Hornstein (1984, Ch. 2).

¹⁰ Several more structures will be considered in a later section that MAY identify the categories that serve as bound variables.

¹¹ Similarly, the so-called plural form of kare, i.e. karera, unlike English they, cannot be used with a generic interpretation, as noted in C. Kitagawa (1981). Thus (i) cannot have the generic interpretation that (ii) has.

(i) (C. Kitagawa's (31))

Karera-wa kono yoo na uti-o moo tate-na-i
they-TOP this such be house-ACC any longer build-not-pres
'They (in question) do not build a house like this any more.'

(ii) (C. Kitagawa's (30))

They don't build a house like this any more.

As the translation in (i) indicates, karera refers to specific individuals, rather than "people in general".

¹² Similarly, even if we replace kare in (19) and (20) by kare ka kanozyo 'he or she', the relevant binding does not seem to improve, as illustrated in (i) and (ii).

(i)

a. *{douna hito/|dare/|}-ga [kare ka kanozyo/|]-no zyoosi-ni
what kind of person/who-NOM he or she-GEN boss-DAT
sukaraimasita ka
rebelled Q
'What kind of a person/Who/| rebelled against [his or her/| boss?'

b. *{subete-no gakusei/|onoono-no gakusei/|}-ga sensei-ni
all-GEN student /each-GEN student-NOM teacher-DAT
[NP [S' [kare ka kanozyo/|]-ga tukutta] kikui-o miseta (koto)
he or she-NOM made machine-ACC showed
'[all the students/each student/|] showed the professor the machine that he/| made.'

(ii)

*daremo/|}-ga [S' [kare ka kanozyo/|]-no ronbun-ga hiban ni to]
everyone-NOM he or she-GEN paper-NOM must good that
omotte ita (koto)

thought

'everyone/| thought that [his or her/|] paper was the best'

One might detect slight improvement in (i) and (ii) over (19) and (20), respectively. If there is indeed some improvement in (i) and (ii), this may be related to the fact that kare kanozyo 'he or she' is less determinate than kare 'he'. But the judgment here seems to be too hazy to conclude from it that kare ka kanozyo may function as a bound variable. As we will see later, there is reason to believe that it cannot function as a bound variable.

¹³ According to C. Kitagawa (1981, p. 71), "kare must inherently refer to a specific referent, and that it cannot function as a variable bound to a non-specific noun phrase." Nakai's (1976, p. 34a) states the relevant generalization as in (i).

(i) (Nakai's (2.32))

Unspecific Antecedent Condition:

A full-pronoun (i.e. kare and kanozyo -I/H) cannot be coreferential with an NP if the NP refers to an unspecific person when the full-pronoun and the NP are in the same sentence.

We will return in a later section to the question of why kare cannot function as a bound variable.

¹⁴ Kinship terms such as hahaoya 'mother' might have an argument position and hence the postulation of the empty possessive pro. may be justified as in pro hahaoya 'pro's mother'. Cf. xx. But this, even if it is indeed justified, does not extend to the cases in which the no-marked NP has the loose relation, often called relation R, with the head N.

¹⁵ According to Huang (1984), the empty nominals in the object position in languages like Chinese and Japanese are not pronominals but variables bound by (empty) topic NP. While Huang assumes the existence of pro (i.e. the so-called pure empty pronominal) in the subject position in these languages, Hasegawa (1984) argues that Japanese does not have pro at all.

¹⁶ Recall that I have argued that Japanese does not have categories that have the [+p] feature. In this sense, neither kare 'he' nor sono 'it' is a pronoun for me, despite the English translation given for them. Such translations as 'he' and 'it' are only for the purposes of exposition.

¹⁷ Pesetsky attributes the contrast of the sort between (25b) and (26b) to Chomsky (1980), who in turn attributes it to Richard Kayne. See Pesetsky's footnote 8 and Chomsky's (1980) footnote 43.

¹⁸ Cf. Kuno and Robinson (1972), Dordelois (1974), Fodor (1978) and Pesetsky (1982) for relevant discussion on this condition. As indicated in Pesetsky (1987, footnote 5), the contrast in (26) cannot solely be due to the ECP because of the contrast in (i), in which both wh-phrases originate in the lexically governed position.

(i) (Pesetsky's (20))

a. Who/| did you persuade e/| to read what?
b. ??What/| did you persuade who(m) to read e/|?

Pesetsky notes that the use of "D-linked" wh-phrases make the contrast in (i)

disappear.

(ii) (Pesetsky's (28))

- a. Which man_i did you persuade e_j to read which book?
b. Which book_i did you persuade which man to read e_j?

19 The principle in (i) is assumed here.

(i) (Pesetsky's (8))

Every quantifier (operator) occupies an A'-position (nonargument position) at LF.

Non D-linked *wh*-phrases are assumed to be quantifiers and they must occupy A'-positions at LF, in accordance with (i).

20 Cf. Hasegawa (19867), Itoji (1985, Appendix B) and Nishigauchi (1986) for further discussion.

21 Given the correlation between D-linking and the bindability of *kare* by a *wh*-phrase, we expect that in the cases of apparent LF subjacency violation with *dare*, the binding of *kare* by *dare* is allowed. It appears that such binding is basically as acceptable as that in (28), although the judgements are again not very clear.

(i)

??[NP [S' dare_i-ga kare_i-no gakusei-to kuita] ronbun]-ga monbu daizin
syoo-o
who-NOM lic-GEN student-with wrote paper-NOM Education Minister
Award-ACC
moratta ndesuka
received Q
'The paper that who_i wrote with his_i student got the Education Minister's
Award?'

The correlation in question, however, does not seem to be complete since it is not clear that when the binding of *kare* by a *wh*-phrase is NOT possible, the subjacency also may NOT be violated.

22 Itoji (1984) was written based on a 1984 oral presentation of Pesetsky (1987).

23 Given a context analogous to that given for (28), the binding in (30b) seems to become more acceptable.

24 Nishigauchi (1986, Ch. 6) also uses *sore* in his Japanese Donkey sentences. It is, however, not clear that the donkey anaphora does indeed involve bound variable anaphora, as indicated by much controversy on this issue (e.g. Geach (1962), Evans (1977), Partee (1978), Heim (1982, 1990)). I will briefly return to the Japanese Donkey sentences in a later section.

25 Tada (1988, 1990) also discuss the phenomena of variable binding by using such overt categories; cf. also Hoji (forthcoming).

26 Based on the operational tests used in Miyagawa (1988, 1989) and Tada (1988) (and further discussed in Itoji, Miyagawa and Tada (1989)), such as numeral quantifier floating and quantifier scope, *totok* 'to get delivered, to arrive' is an ergative verb, and the sentence in (32) involves NP movement.

That is, the surface subject originates in a position adjacent to the verb. Such refinement of the structure does not affect the point at issue, however, as long as the bound variable reading for *sore* is allowed in (32). This remark applies also to (33).

27 I am suppressing NP trace in this example.

28 We will see some categories in a later section that cannot even take D-linked *wh*-phrase as their antecedent.

29 For discussion of the construction that involve *wh*-phrases with *mo*, as in (38), see Kuroda (1965, Ch. 3), McGloin (1976) and Nishigauchi (1986).

30 See xx, Miyagawa (1989) and xx for discussion of the so-called quantifier floating in Japanese. Sentences of the sort in (42) are discussed in Kato (1985, Ch.8); cf. also the references therein.

It seems that the most natural way to express in Japanese what is expressed by English quantified NP's is by means of this type of "floating" construction. In this type of construction, the "restriction" is given in an argument position and the "quantifier" is expressed in an adjunct position (as an adverbial?). Thus, the Japanese versions of (i) would all be acceptable while English has a rather limited use of the structure to express "quantification".

(i)

- a. The students have all come.
b. *(The) students have some come.
c. *(The) students have none come. (=*(The) students have not any come.
d. *(The) students have three come.
f. *(The) students have only three come.

31 For the time being, let us assume that the relevant level of representation at which this requirement must be met is D-structure. I will abandon this assumption in chapter 6, where I discuss the interaction between Negative Polarity Licensing and condition D, in the spirit of Lebeaux's (1990) analysis of "anti-reconstruction."

32 The "pre-floated" versions of these seem (to me) to be somewhat marginal, if acceptable at all.

(i) ??hitori-no gakusei-mo Mary-o homenakatta (koto)

(ii) ??Mary-ga hitori-no gakusei-mo homenakatta (koto)

33 As noted in Kato (1985, Ch. 8), the negative polarity item (NPI) *daremo*, which can never be followed by case-markers, has the tone pattern of LHHH (Low High High), whereas *daremo* with the meaning of "everyone", which can be followed by case-markers, has the tone pattern of HLL. This "no accent" pattern in the negative polarity items (in the so-called standard dialect) seems to be quite general and extends to other NPI's such as *hitorimo*, as indicated in Kato (ibid.).

34 (I may delete this footnote eventually.) The fact that these NPI's typically fail to cooccur with case markers seems to confirm the view that these NPI's are indeed like adverbials rather than like arguments. There are, however, cases where NPI's do occur with postpositions (which one might argue are realization of oblique cases), as pointed out in Suh (forthcoming) in

connection with the status (as arguments) of the NPI's in Korean. Thus (i) is acceptable.

- (i) (Kato (1985, p. 147))
doko-e-mo ikanai
where-to-ALSO do not go
'(I) don't go anywhere/(I) am not going anywhere.'

(*Dokoemo* in (i) has the LIIIII pattern, and with this pattern it requires negation.)

Thus the absence of case-marker or post position may not be a sufficient reason for treating the NPI's in the text as adverbials, insofar as the *to* in (i) is realized onto an argument rather than onto an adjunct.

It is interesting to note, in this connection, that along with (i) we do have (ii).

- (ii)
John-ga [NP [S' reiboo-no nai] tokoro]-e-wa
John-NOM air conditioning-GEN does not have place-to-WA
doko-e-mo ikanakatta (koto)
where-to-ALSO did not go
'(roughly) John did not go to any place that did not have air conditioning'

The construction of this type seems related to the construction that Kuroda (forthcoming) calls the "mini topic"; cf. also Tachishi (1989) for interesting discussion of certain Topic construction in Japanese, which may be related to (ii).

35 The sentence in (46) may be paraphrased as (i).

- (i) [pp karera-no uti] daremo karera-no kuruma-o arawanakatta
they-GEN among they-GEN car-ACC did not wash
'(lit) among them, none washed their car'

36 Dul, Alkawa (forthcoming) suggests that *karera* behaves somewhat differently from *kare* in that the former yields bound variable interpretation more easily than the latter. While the relevant judgments are not completely clear to me, I tend to agree with her that the binding by a non-specific NP is easier of *karera* than of *kare*. This difference is in fact consistent with Mikami's (1977) remark that *karera* is somewhat closer to English personal pronouns than *kare* is. More discussion on this topic will be provided later.

37 To indicate the relevant bound variable reading, I coindex the "bindee", the quantifier and the argument that serves as the "restriction". The exact syntactic analysis of the argument NP and the quantifier and how it is to be mapped to the right semantics is not clear to me; cf. Miyagawa (1989) for a proposal on the numeral quantifiers.

38 As implied by the remarks in footnote x, the literal translation of (50) seems to be more like the ungrammatical (i).

- (i) (the) sushi chefs have [not a single one] brought his knife

One might give (ii) rather than (iii) as the translation for (50).

- (ii) [no sushi chefs]_i have brought their_i knife.
(iii) (the translation given in (50))
[none of the sushi chefs]_i has brought his_i knife

The choice between (ii) and (iii) is somewhat unclear, reflecting the subtlety of the semantic distinction between (ii) (with the individual bound variable reading) and (iii). Since the intended reading of (50) is that of individual bound variable reading and since (ii), but not (iii), allows other readings (e.g., the group bound variable reading), I have chosen to use (iii). The example in (51) with *sono* seems to justify the "partitive" translation more than that in (50), because of the clear indication of a definite set of sushi chefs in (51).

39 It is somewhat misleading to identify the morpheme *tai* (in N(P)-*tai*) as a plural marker since the semantic contribution that it makes is that of *and others* (in NP and others) more typically than the plural marking (such as N's), as pointed out in Hinds (1972) thesis and Martin (1975/85, p. xx). Thus *John-tai* most naturally means "John and others" rather than "(more than one) John's", although forms like *gakusei-tai* can indeed mean 'students'.

40 As has been implied in the preceding discussion, *soko* may refer to any institution, organization, shop, etc. The translation of 'the/that place' has sometimes been given for this word, for this reason. Thus *soko* and its *wh*-counterpart *doko* may be used as in (i).

- (i) doko_i-ga soko-no zyuugyooin-o zenin kubinisimasita ka
which place the place-GEN employee-ACC all fired Q
'Which place_i (i.e. which company?) fired all of its employees?'

On the other hand, *sore* cannot be used to refer to an institution, an organization and the like that are characterized in terms of their geographic (in a very broad sense) location. *Sore* must instead refer to an object. In this sense, both *soko* and *sore* may sometimes be translated into "it".

41 The status of the binding here depends on how D-linked the *dare* 'who' is.

42 See footnote xx.

43 Since proper names cannot bind *soitu* (for independent reasons), as indicated in (i), the unacceptability here may be independent of the issue of bound variable construal.

- (i) John-ga [kare_i/*soitu_i]-no hon-o mottekita
John-NOM he/the guy-GEN book-ACC brought over
'John_i brought over his_i/the guy's book'

We will return to this later.

44 See the footnote xx.

45 Since the so-called plural marker *tai* is reserved basically for human (or animate) nouns, the forms in (i) are simply not acceptable; cf. footnote xx for some qualification on the status of *tai* as a plural marker.

- (i) a. *soko-tai b. *sore-tai

There is another "plural" marker *-ra* (which seems to me to be a better candidate for a real "plural" marker than *[ai]*). While the forms in (ii) are acceptable, they do not seem to be the plural form of *[soko]NP* and *[sore]NP*.

(ii) a. *soko-ra* b. *sore-ra*

The form in (ii) means something like "somewhere around there" "somewhere around that place" rather than "[those/the] places". As to the form in (iib), it seems that this form is acceptable only in the prenominal position such as in (iii), but not as an NP such as in (iv).

(iii) *sore-ra-no mondai* 'those problems'
Cf. *sono mondai* 'the/that problem'

(iv) a. *? *sore-ra-ga koko-ni todoita (koto)* 'they/those arrived here.'
Cf. *sore-ga koko-ni todoita (koto)* 'it/that arrived here'

b. *? *John-ga sore-ra-o teiansita (koto)* 'John suggested them/those'
Cf. *John-ga sore-o teiansita (koto)* 'John proposed it/that'.

46 Based on the operational tests used in Miyagawa (1988, 1989) and Tada (1988) (and further discussed in Itoji, Miyagawa and Tada (1989), such as numeral quantifier floating and quantifier scope, *todok* 'to get delivered, to arrive' is an ergative verb, and the sentence in (1a) involves NP movement. That is, the surface subject originates in a position adjacent to the verb. Such refinement of the structure does not affect the point at issue, however, as long as the bound variable reading for *sore* is allowed in (55a). This remark applies also to (55b).

47 Lasnik (1986) demonstrates that the split antecedence in (58) cannot simply be that of coreference, based on the split antecedence in (i), in which coreference is presumably irrelevant.

(i) Every violinist₍₁₎ told some pianist₍₂₎ that they_(1, 2) should play a duet.

Sentences such as (ii) make the irrelevance of coreference even clearer.

(ii)

a. No violinist₍₁₎ told any pianist₍₂₎ that they_(1, 2) should play a duet.

b. No one₍₁₎ told anyone₍₂₎ that they_(1, 2) should play a duet.

48 Recall that it is not clear that *karera* can be construed as a bound variable. We will eventually see that it cannot, when we consider the sloppy identity test in Japanese; but cf. footnote xx above.

49 I tend to get some contrast between (a) and (b) and find (b) better than (a). While I have no account for this contrast, this might be related to the fact that *soko* is clearly an argument in (b) while it is most likely an adjunct in (a).

50 The reason why *Toyota to Nissan* 'Toyota and Nissan' can bind singular *soko* while *Toyota and Nissan* cannot bind it in English is not clear. The difference cannot be entirely reduced to the lack of (obligatory) (number) agreement in Japanese since *John to Bill* 'John and Bill' cannot bind *he*'. It appears that when *soko* is construed as a bound variable, its "antecedent" may be plural. Given the assumptions that the "direct antecedent" for *soko* is a

variable left by the LF raising of the "quantified NP" *Toyota to Nissan* 'Toyota and Nissan' and that the variable is "singular", this state of affairs seems rather natural. Given these assumptions, however, impossibility of (64) in English seems problematic. Related to this issue is perhaps a more general question that has to do with the interaction between the plurality in semantics and that in syntax; cf. xxx.

51 Sentences like (i) are acceptable.

(i) *John-ga A(1)-ni B(2)-o tasi-te, sosite sore(1,2)-o utta (koto)*
John-NOM A-DAT B-ACC add-TE and SORB-ACC sold
'John added B(2) to A(1), and then sold it(1,2).'

I do not think that this is an instance of "split antecedent", however. It seems that *sore*, being singular, refers either to an object (i.e. a package of some sort) that consists of A and B or to the A that is the result of the addition of B to it. In this sense the coindexation given in (i) is misleading. For if we indeed could use *sore* as plural, then (65) would be acceptable; but it is not. Furthermore, we can construct similar examples with *soko* 'there' as well, which we have observed cannot be plural.

(ii) *John-ga A-sya(1)-ni B-sya(2)-o gappcisasite,*
John-NOM company A-DAT company B-ACC made merge
sosite soko-no syatyoo-ni natta (koto)
and SOKO-GEN president became
'John made company B into company A and became its president'

Here too, the referent of *soko* is most likely some entity that results from the merger.

52 The condition in (68) fails to account for the cases of the so-called SPEC binding, as in (i).

(i) Whose_i father loves him_i?

The status of sentences like (i) has been reported to be somewhat murky; cf. Lasnik (1976), Higginbotham (1983), Reinhart (1983, 1987) among others. But many speakers seem to accept them. Kang (1988) discusses the so-called donkey sentences in languages like Japanese and Korean (identified as such in Nishigauchi (1986) and in Hasegawa (1986)) and argues that they may be accounted for by generalizing Reinhart's SPEC binding. Cf. also Haik (1984) and Heim (1982). For our present purposes, we need not be concerned with this type of binding. A brief discussion will be given on this topic in a later section.

53 The antecedent of *sore* 'it' cannot be an "agent" or an "experiencer". (Recall that when a company or some institution is referred to, *soko* 'there/the place' is used.) This makes it somewhat difficult to construct the relevant examples with *sore* in the following discussion. For this reason, *soko*, but not *sore*, is used in most of the examples to be provided below.

54 The examples of the sort given in (69) and (70) are discussed in Yoshimura (forthcoming).

55 As noted earlier in footnote xx, I tend to find the bound variable

construal in (b) easier than in (a). When soko is in the subject position (of an unergative predicate?), as in (i), the bound variable construal for it also seems somewhat difficult to obtain, as compared to (70b), in which soko is not in the subject position.

- (i) ?[T to N]_i-ga [NP [S' soko_j-ga zyuun-en-izyoo-mo mae-ni yatotta] hito]_o
 T and N-NOM SOKO-NOM 10 years-more-even ago-in hired
 person-ACC
 kyuuni kubinisita (koto)
 suddenly fired
 '[(each of) T and N] suddenly fired (some) people who it_i had hired over 10 years ago'

It seems to me that the generalization about this subtle contrast carries over to the cases in which soko is embedded in an S' complement to verbs like happyoosu 'announce'. I will not attempt an account of these subtle contrasts. In the ensuing discussion, I will suppress them.

56 In case soko is referential, its use has independent restrictions, to which we will turn in a later section. Due to such restrictions, some speakers might prefer soko over soko in (73), although I find the sentences in (73) acceptable. I will discuss the a system of Japanese demonstratives later, which soko 'there/that place' is a member of.

57 The literal Japanese translations of (67d) and (67e) do allow coreference between John and karu 'he'. The failure of bound variable anaphora in the literal Japanese translations of (67b) and (67c), however, does not confirm the condition in (68). Recall that karu cannot be construed as a bound variable even when it is c-commanded by a quantified NP.

58 Recall that we are ignoring more complicated cases such as SPEC binding.

59 Hoji (1987) was written before Hoji (1985), and chapter 2 of the latter is based on the former. Many more examples are provided there. Cf. footnote xx for some complications with the use of the zero pronoun in paradigms like this.

60 In Hoji (1985, p. 118 and footnotes 5 and 11 in chapter 3), I have explicitly stated that I am not committing myself to adopting the syntactic process of "reconstruction". The term "reconstruction" is used there "as a cover term for the phenomenon in question." (footnote 5 therein) More discussion on this phenomenon will be given in the next chapter.

61 Engdahl provides the Swedish version of this sentence as well.

62 The relevant phenomenon is first discussed and the terminology "parasitic gap" is introduced independently by Engdahl (1980, p. 228) and Taraldsen (1981, p. 494). Taraldsen (1981) is cited in Engdahl (1980) as Taraldsen (1980); cf. her footnote 6 (p. 233).

The possibility of analyzing sentences like (88) as "parasitic gap" constructions" was pointed out to me by M. Saito (p.c). In Hoji (1985, Ch. 2; 1987) and Saito (1985, pp. 105-113) sentences like (i) are also considered as instances of "parasitic gaps", analogous to (ii) in English.

(i) (Cf. Hoji (1985, p.80) and Saito (1985, p. 105).

[Itai nani_i-o John-ga [Mary-ga gi yomu]-maeni ji suteta ka]-ga

on earth what-ACC John-NOM Mary-NOM read-before discarded Q-NOM
 mondai da
 problem is

'[What_i on earth John threw away ji before Mary read gi] is the problem.'

(ii) What_i did John throw away ji before Mary read gi?

It is, however, not quite clear that the scrambled object NP has originated in the position of ji in (i). That is, it might be the case that at D-structure Itai nani is to the left of the adjunct and c-commands it. This possibility is plausible if adjunction is freely allowed, not only at S-structure but also at D-structure in Japanese, as suggested in Fukui (1986, Ch. x); cf. also Lebeaux (1988, 1990). If this is the case, then (i) can be reanalyzed as (iii).

(iii)

[Itai nani_i-o John-ga ji [Mary-ga gi yomu]-maeni suteta ka]-ga
 on earth what-ACC John-NOM Mary-NOM read-before discarded Q-NOM
 mondai da
 problem is

'[What_i on earth John threw away ji before Mary read it_i] is the problem.'

The gi in (iii) is predicted to be acceptable, with the gi being pro, as its pre-scrambled version (iv) is acceptable.

(iv)

[John-ga Itai nani_i-o [Mary-ga gi yomu]-maeni suteta ka]-ga
 John-NOM on earth what-ACC Mary-NOM read-before discarded Q-NOM
 mondai da
 problem is

'[John threw away [what_i on earth] before Mary read it_i] is the problem.'

Such 'reanalysis' is not possible for the "parasitic gap" constructions given in the text, since the relevant phrases are all arguments, and there is much evidence for the basic order of the argument NP's at the level of D-structure. That is, the ga order and the ni ga order (in the non-ergative constructions) are derived by syntactic movement. Cf. Harada (1977), Saito (1985) and Hoji (1985) and many subsequent works. For discussion of the "ergative" (i.e. "unaccusative") constructions in Japanese, see Miyagawa (1989) and the references therein.

63 It is, however, not clear how bad the English sentence in (88) really is. It has been often reported, since Taraldsen (1981), that English sentences like the one given in (i) are more or less acceptable.

(i)

a. (Taraldsen's (69) (p. 491))

Han er en mann som alle som kjenner, beundrer.

He is a man who everybody who knows - admires

Taraldsen's (1981) seems to intend the English sentence in (i) as a translation of his Norwegian sentence; the grammatical status of the English sentence in (i) is not clearly indicated there. Subsequent works, however, seem to indicate

that English sentences like (i) are indeed acceptable, as indicated in (ii).

(ii) (Chomsky's (1982) (69b) and (69c))

- a. this is the type of book that no one who has read \bar{g} would give \bar{i} to his mother
b. he is a man whom everyone who meets \bar{g} admires \bar{i}

Kayne (1983, pp. 169-170) provides examples like (90) as basically acceptable.

(iii) (Kayne's (1983) (15), (17a) and (18a))

- a. ?a person who people that talk to usually end up fascinated with
b. ?a person that people who read a description of usually end up fascinated with
c. ?a book that people that discover the first chapter of usually end up liking

Regarding the "?" on these examples, Kayne suggests in his footnote 1 that it is not relevant.

... On the "?" of ... such parasitic gap sentences (which is not relevant to our discussion, insofar as the differential judgments ("?" vs. "**") (between (iii) above and (iv) below--III) that we shall try to account for are sharp), see Chomsky [(1982)], 36-38.

(iv) (Kayne's (1983) (16a), (17b) and (18b))

- a. *a person who people that talk to usually end up fascinated with him
b. *a person that people to whom descriptions of are read usually end up fascinated with
c. *a book that people that discover the first chapter of missing usually end up disliking

The "parasitic gap" examples of this type that have been given in literature typically involve relative clause construction rather than WH-movement. Thus it is not clear how acceptable the wh-movement version of (ii) and (iii) are. Some speakers seem to accept (v).

(v)

- a. What kind of food did most people who ate at the party like?
b. Which dish did most people who saw like?

If sentences like (v) are grammatical, then the English sentence in (88) must also be grammatical. If that is the case, the status of the sentences of the form in (88) no longer differentiates Japanese and Swedish on the one hand and English on the other. Even those speakers who tend to accept (v), however, do not seem to accept sentences like (vi).

(vi)

- ?*What the hell did most people who [saw/ate] (at the party) like?

The observations above, together with the Japanese data to be given below (in footnote xx) seem to raise the possibility that the so-called parasitic gap constructions are allowed only when there is some kind of "coreference", being related, but not totally reducible, to Pesetsky's D-linking.

64 Some speakers seem to accept (90). But even these speakers do not seem to accept (i).

- (i) *What the hell did most people who [saw/ate] \bar{i} like \bar{i} ?

See the discussion below.

65 As must be clear from the earlier discussion in this chapter (cf. xx), the sentences in (98) are acceptable to the extent that the "coreference" between the set of auto companies under discussion and the "referential" (and plural) \bar{e} is possible.

66 The slight contrast between the zero option and the overt \bar{sok} option may be attributed to the fact that \bar{sok} has use as a demonstrative, as will be discussed in the next section, while such demonstrative use is not evident at all in the case of the zero pronoun (although it is possible to use the zero pronoun referentially, as pointed out in Kuroda (1965, p. 114); cf. also Hoji (1987).

67 One last paradigm to check is given in (i).

(i)

- a. sensyuu-no kaigi-de(-wa)
last week-GEN meeting-at (-TOP)
Nihon-no oote zidoosyagaisysai-o issya-i-mo
Japan-GEN major auto company-ACC I company-ASLO
[NP[S' eek izen-kara zutto [ei/?soko_i]-o hihansiteita] zyoongiink-ga
since before always it-ACC was criticizing Senators-NOM
 \bar{i} hihansinakatta (koto)
did not criticize
'(At last week's meeting) [none of the major Japanese auto companies]_i, (the) Senators who had been criticizing \bar{i} for a long time did not criticize \bar{i} '

- b. *sensyuu-no kaigide(-wa)
[NP [S' eek izen-kara zutto [e_i/soko_i]-o hihansiteita] zyoongiink-ga
Nihon-no oote zidoosyagaisysai-o issya-i-mo
hihansinakatta (koto)
'(At last week's meeting) (the) Senators who had been criticizing \bar{i} for a long time did not criticize [none of the major Japanese auto companies]_i'

As indicated above, scrambling clearly makes available the bound variable reading for the zero pronoun, which is not available in the prescrambled sentence. (The remark about the "coreferential reading" given in footnote xx (below (98)) applies to (ii) as well.) The bound reading for \bar{sok} in (ib), on the other hand, does not seem to be as readily available as the result of the scrambling of the matrix object NP, as indicated in (1a). This, together with the observation made in footnote xx (on which vs. what the hell as the PG licenser), might be taken as indicating that "parasitic gap constructions" are allowed only in the cases where the relevant dependency may be that of "coreference" of the sort under discussion. (I cannot pursue this possibility further in this work, however.)

It must also be noted that when \bar{issya} - \bar{mo} stays to the right of the subject NP, the relevant bound variable interpretation seems even harder to obtain.

(ii) (Cf. (i).)

*7sensyuu-no kaigi-de(-wa) [Nihon-no oote zidoosyagalsysa]i-o
[NP{S' eck izen-kara zutto soko-i o hihansiteita} zyoongiink]-ga [issya-i
mo/hitotui-mo]
Li hihansinakatta (koto)
'(Lit) (At last week's meeting) [the major Japanese auto companies]i, (the)
Senators who had been criticizing it; for a long time did not criticized nonei'

If soko is replaced by a zero pronoun, (ii) becomes acceptable, but, it seems, only on the "coreference" reading. If the contrast between (ia) and (ii) is real, this might be due to the interaction between "reconstruction" and Negative Polarity Licensing, which will be discussed in chapter 5.

68 The the "SPEC binding" construction is used in place of the "regular" c-command binding because of the effects of condition C. Thus sentences in (i) tend to be judged unacceptable.

- (i)
a. *Every syntactician thinks that the poor s.o.b. has chosen the wrong field.
b. *No syntactician thinks that the poor s.o.b. has chosen the right field.

The sentence in (99), as it is reported to be acceptable by Evans, needs an explanation. I will return to this issue later.

69 For those speakers who tend to disallow the binding in (i), the binding in (100) would most likely not be possible.

(i) whose_i father loves him_i;

See Lasnik (1976), Higginbotham (1983) and Reinhart (1987) among others for discussion.

70 It is also noted in Mikami (1970, p.149) that only the so paradigm can be anaphoric as well as deictic.

71 Kuroda (1965, p. 122) assumes that there is only one personal pronoun and that it is never phonetically realized, i.e. the zero pronoun.

72 The so-called "anaphoric use" of a, discussed in Kuno (1973), is included in the "deictic use" here, as in Mikami (1970). Mikami uses the terms "Ganzen sizi" (before (your) eye demonstration) and "bunmyaku sizi" (contextual demonstration) for the two "types" of demonstrative usages. See the discussion below.

73 There are restrictions on the use of so and a, independent of what we have considered so far, that influence the status of the sentences with the indicated coreference. For example, in (111) soitu cannot be used. This seems related to the restriction that Kuno (1973) discusses. We will return to this shortly. Perhaps because of the same considerations (due to Kuno (1973), to be discussed below), the coreference in (111b) might be slightly less natural with Nissan than with ano kaisya.

74 It characterizes kare as ensyoo no daimcisi 'demonstrative pronoun in

reference to objects far". This classical Japanese dictionary defines are, characterizing it also as a pronoun, as follows. (The examples are not included.)

(1) (from the listing in the 1977 edition of Sansendo's Dictionary of Classical Words 9p. 56)

- a. A word that refers to an object far from the speaker. It may be close to the hearer. The present day are.
b. A word that refers to a place that is far from the speaker and the hearer. asoko, asuko.
c. soko
d. second person pronoun. anata
e. third person pronoun. kare, ano hito

75 Ware is "I/you", nare is "you" and tare is "who/which", in classical Japanese. The form ware is still used as "I/you" in certain styles or dialects. Notice that the so-called wh-words, which Kuroda (1965, p. 91) calls "indeterminate pronouns", such as dare 'who' and doko 'where', can now be viewed as consisting of two morphemes. The first members of these belong to the set of ko, so, a, do or the set of wa, na, (ka), (ta/ta) (with the voicing of (1)) and the second members belong to the set of morphemes that can follow these "demonstratives"; cf. (112) and the other demonstrative paradigms given earlier. It therefore seems plausible that the tendency of the so-called Japanese wh-phrases to be "D-linked" is due to the fact that they always contain a form of which (i.e., a variation of do/ta) in them.

It have replaced Mikami's "l" by "r" for consistency in transcription.

76 The kano form is more formal.

77 The other (more or less idiomatic) usages of ka, other than kare, in modern day Japanese include:

- (1)
a. kare kore 'approximately (referring to time)
b. dokomo kasiko mo 'everywhere/anywhere' Cf. daremo kare mo 'everyone/anyone'
c. nan no kan no (itte mo) '(even if (you) say this and that (all those things)'
d. nani kani tukete 'with respect to this and that'

It must be noted that expressions like these seem to confirm the analysis that treats ka along with ko, so, a, do. Notice that kasiko in (b) is analogous to asoko 'there/that place'. (In some dialects, asuko is used in place of asoko, suggesting the plausibility of treating siko in kasiko as the same of soko in asoko. The form in (d) indicates, furthermore, that it is not implausible to analyze na in nani on a par with ka in kani, hence ka in kare, and hence a in are. See Mikami's chart given in (113) above.

78 Kitagawa (1979) argues that the so-called "anaphoric" use of a and so is an extension of their deictic use. How the so-called "anaphoric" use of a and so is derived from their deictic use does not affect the point at issue here, which is to establish the correspondence between ka in kare 'he' and a in are 'that (thing)' and ano hito 'that person'. Cf. also Kuroda (1979).

79 If one forces it hard, A-1 in (119) might improve a little. The forced

context would be one in which the speaker, upon getting to know Mr. Yamada, became very close to him within the matter of a day. Interestingly, A-1 in (117), with ano hito 'that person', does not improve even in this "forced" context. It therefore seems that kare can be less deictic than ano hito. As we will see shortly, this is consistent with an observation (to be made below) that kare and ano hito differ somewhat in terms of their ability to take apparently non-referential "antecedents".

80 The translation of the relevant passage is not easy, mainly because of Mikami's style of writing. The relevant paragraph from Mikami (1955/72, p. 184) is:

Daimcisi-no vocabulary-wa nani-go demo kokusuiteki-de dotyakusci-no tuyoimono daroo. Tokoroga na to (wa) to-wa syuutino toori kenson kanyoo dearu. Syuzin to mesitukai-o imisuru maisi-kara kimi to hoku-ga umare, kimi-mo hokusuu-de-wa kan'on-de syokun to nari, sarani nihonka site huku-hukusu syokunra tomo raru. Sono syokun-mo minasan-mo aite-o sasu bakari dewanai. Tyuugokubuu-no kika ya syoosci-mo mada ikitciru si. you to me-ga papa ya mama-no gotoku nihongo-ni kika suru kanoosci-mo naito-wa icnai. Doosite konoyooni musessoo nanoka? Sore-wa sootoona mondai-de aruga, tomokakumo musessoo dearu.

Sono kawarini ko so a do no sizidaimcisi-wa zituni kengo-de utukusii talkei-o nasiteiru. ...

81 The following is the relevant passage from Sakuma (1951/1983, p. 22)

Tasyoo matawa sanninsyooto sitewa, gannrai tokubetuno ninnsyoodaimcisi-ga nakute, 'kono, sono, ano' o 'hito' ya 'kata' ya 'otoko' ya 'onna' ya 'ko' to yuu yoona hitogara o simesu gosini tsukete tukaimasuga, honyakujyoono yookyuukara, 'kare' to yuu tangoga, itibudewa--honyakutyooowo obite motiirarerukotomo arimasu.

82 In Mikami (1953, p. 52) it is already stated that Japanese does not yet have personal pronouns like English it and that the so paradigm is closest to becoming a personal pronoun like English it.

83 That kare is not like personal pronouns in English has been noted in the literature. Kuroda (1965) claims that kare is more like a Name. Ficngo and Haruna (1987) also claim that kare in Japanese is not a pronoun.

Kitagawa (1981, p. 71) in fact attributes the "specific reading" of kare to its demonstrative nature and states "a historically more accurate rendering of kare may be 'that one in question' rather than 'he.'"

84 Note that (i) shows the typical condition D effects.

(i) *he_i was walking with a boy near John_i's house

This indicates that that logician is c-commanded by every logician in (i). Hence (122) appear to violate condition C, given the assumption that that logician is on a par with Names ([-a, -p]). I will return to this in Ch. 6, where I argue, following Reinhart (1983), that condition C is not a grammatical principle.

85 I am not concerned here with how the QP in the Spec of NP can "bind"

the category that the entire NP c-commands. See Reinhart (1987) as well as Heim (1984) and Heim (1982).

86 The speakers reactions differ. In general, the sentences in (124b) and (124c) tend to be accepted more readily than (124a).

87 Recall, however, that those cases might involve "pseudo coreference" in the sense discussed above.

88 For the discussion of the construction of this type, see Kuroda (1965, Ch. 3), Nishigauchi (1986). Cf. also Itoji (1985, appendix C).

89 I suspect that there will be variation of judgments on sentences of this type among the speakers, analogous to the sentences in (125b) and (126).

90 The substitution of soitu 'that guy' in place of sono genrogakusya improves the status of (127b), as noted earlier.

91 I will return to the relevant difference between Japanese and English in Ch. 6.

92 (25b) seems somewhat less acceptable than (i), which we obtain by replacing sono kaisya 'that company' with soko 'the place/that place/it'.

(i)

See the discussion in Ch. 4, xx.

93 To the extent that sono kaisya 'that company' is considered as a so-called R-expression, rather than a pronoun, the data in (141), together with those in (140) confirm the conclusion in Ch. 2 that condition B is not restricted to pronouns.

(i) A [-a] category must be free in its local domain.

Note that this conclusion was made in Ch. 2, regarding coreference. The preceding discussion, however, indicates that condition B holds of bound variable anaphora but not of coreference, as is argued for in Reinhart (1983, Ch. 7). I will return to the Japanese data that motivated condition B for coreference in 6.5.

94 The same type of contrast is observed in sentences in which the binder is subete no N 'all (the) N'. The non-locally binding of sono N by subete no N is marginal but not impossible; but the local binding is impossible.

95 As noted earlier, there is some difference between kare and members of the a system. While it is totally impossible for the latter to be bound by quantified NP's, it is marginally possible for kare to be so bound. Some speakers consistently accept bound variable construal for kare as long as the c-commanding antecedent is masculine and singular (in meaning) (S. -Y. Kuroda (p.c.).)

96 If "E-type pronouns" is defined as "singular terms whose reference is fixed by description" (Evans (1977, p. 274), then the logician in Evans examples give earlier seems to fall under this category. On the other hand, if "E-type pronouns" are "singular terms whose denotation is fixed by a description recoverable from the clause containing the quantifier antecedent" (Evans (ibid., p. 279)), the status of that logician in the example in question as an "E-type pronoun" is less clear. Cf. Kripke (1972).

Given the generalization in (188) and given the fact that the so-called Korean overt pronoun ku is indeed a member of the ku system, in fact the ku itself, we can now reduce the puzzle noted at the outset of this appendix (i.e. the fact that the so-called Korean overt pronoun ku can, but the so-called Japanese overt pronoun kare cannot, be construed as a bound variable) to a more general problem of how to explain the difference between the so/ku system on the one hand and the a/ce system on the other, in regard to the possibility of bound variable construal. The relevant generalizations are summarized in (194) and (195).

(194)

The a/ce system is more deictic/demonstrative than the so/ku system.

(195)

The members of the so/ku system can yield bound variable construal but those of the a/ce system cannot.

We have seen in the last section of this chapter that being deictic/demonstrative does not necessarily preclude bound variable construal. The example in (196) given in (Evans (1977, p. 273)).

(196)

Every logician_i was walking with a boy near that logician_i's house.

This means that (195) does not necessarily follow from (194). This in turn means that the reduction of the initial puzzle at the outset of the appendix to the generalization in (194) still needs an explanation.

¹ PNE in (180c) stands for the "prenominal ending marker".

² Hong's original examples contains the trace of the matrix subject NP, indicating that his structures represent the LF representations of the relevant sentences, given the assumption that these NP's do undergo LF raising. The trace is suppressed in (181).

³ Kang's statement is somewhat tentative. He states (p. 195-196):

I just want to indicate that there are many cases in which the bound variable reading of Korean pronominal ku is acceptable, some exceptions (such as (ii)--HH), being I suspect, controlled by possibly pragmatic factors that are poorly understood at this point.

Notice that the Hong's examples in (181) has the verb "think" and ku occupies

the embedded subject position, reminding us of the cases that we have discussed earlier with respect to the effects of "point-of-view" and "logophoricity"; cf. xx.

⁴ It is noted in Kang (1988, p. 196):

[t]he use of Korean pronominal ku, whether bound variable or referential, creates some marginality in colloquial speech, and is avoided in general. This is presumably because the independent use of Korean pronominal ku is a fairly recent development in Korean language, dating back to 1920s, even though the ku as a specifier (as in ku + N') has a long history in Korean. Due to this historical fact, Korean speakers are in general less accustomed to the usage of the pronoun in colloquial speech, so that the language learners in their early stage are not frequently exposed to the usage of the pronoun ku.

As noted earlier, the situation of kare is somewhat analogous; cf. the references given in section xx. Piengo and Haruna (1987, p. 116) states:

... the fact that Japanese lacked pronouns until recently is suggestive, as is the fact that Japanese speakers frequently report the intuition that somehow kare/kanozyo give sentences the flavor of having been translated from an Indo-European language.

⁵ As noted above; even among the members of the so system there is gradation with respect to how easily they can be bound by a non-referential NP. It is least easy for [NP sono + N']. Notice that sono, soko and soitu are not phrasal (they consist of two bound morphemes) while [NP sono + N'] is obviously phrasal (whatever occurs as N' may occur independently as an NP). This distinction is most likely related to the relevant difference in question.

It is not clear, however, at this point, that this gradation indeed is the gradation of "acceptability" of bound variable construal or what I have called earlier as "pseudo coreference."

⁶ The division of labor between ku and ce seems quite analogous when the object/individual in question is physically present.

unlike the so-called overt pronoun *kare* 'he'.⁵ We have initially related this to the fact that the *so* series, unlike the *a* series, can be used non-deictically, based in part on the observations made in Mikami (1955/72, 1970), and to the fact that *kare* is related to the *a* system. The fact that English demonstrative NP's such as *that logician* can be construed as bound variables (Evans (1977)) has later forced us to abandon this view, however. The correlation, nevertheless, seems significant between how strictly deictic the members of the *so* system and the *a* system are and whether they may be construed as bound variables.

One might then suspect that there is perhaps a significant difference between the members of the *ku* system and the member of the *ce* system that is analogous to that found between *so* and *a* in Japanese. It indeed appears to be the case that there is such a difference, in fact somewhat more striking than the difference between *so* and *a*. Ko (1984, pp. 18-23) points out that when the object/individual in question is physically absent, the *ku* system is most naturally used even in the environments where the *a* system would be used in Japanese. It thus appears that what Kuno (1973, Ch. 24) calls the "anaphoric use" of *ko*, *so* and *a* is rather restricted with the members of the *ce* system.⁶ We might informally state the generalization as (188).

(188) The *ce* system is more deictic than the *ku* system.

Recall that there are expressions with *so* that do not have any deictic flavor, such as those in (189) and (190), to be contrasted with those in (191) and (192), respectively.

(189) (Mikami (1955, p. 182)

- | | |
|-------------------------|---------------|
| a. <i>sorewa sorewa</i> | 'extremely' |
| b. <i>sorega</i> | 'however' |
| c. <i>soreni</i> | 'in addition' |
| d. <i>soretomo</i> | 'or' |

(190)

- | | |
|--------------------------|------------------------|
| a. <i>sono hi gurasi</i> | |
| | that day life |
| | 'a hand-to-mouth life' |
| b. <i>sono ta</i> | 'etc.' |
| c. <i>sono mukasi</i> | 'a long time ago' |
| d. <i>sono uti ni</i> | 'in a short while' |
| e. <i>soretonaku</i> | 'indirectly' |

(191)

- | | |
|------------------------|---------------|
| a. <i>*arewa arewa</i> | 'extremely' |
| b. <i>*arega</i> | 'however' |
| c. <i>*areni</i> | 'in addition' |
| d. <i>*aretomo</i> | 'or' |

(192)

- | | |
|--------------------------|--|
| a. <i>*ano hi gurasi</i> | |
| b. <i>*ano ta</i> | |
| c. <i>*ano mukasi</i> | |
| d. <i>*ano uti ni</i> | |
| e. <i>*aretonaku</i> | |

It seems that the *ku* may be used in some of the Korean counterparts in (189) and (190) but *ce* is as impossible as *a* in (191) and (192). Since the expressions in (189) and (190) are more or less idiomatic, it is not surprising that not all of them have well-formed Korean counterparts. It is, however, significant that the Korean counterparts of (191) and (192) are all impossible. The informal generalization in (188) seems to be confirmed by this observation.

As is easily expected, bound variable anaphora is never possible with the members of the *ce* system. Thus Korean sentences corresponding to (193) yield the bound variable interpretation with members of the *ku* system (to varying degrees among speakers), they never yield such bound reading with members of the *ce* system.

(193)

- | |
|---|
| a. Every computer _i was delivered to (the) person who had ordered that computer _i . |
| b. Which linguist _i brought that person _i 's students to this conference? |

This, of course, is completely parallel to the observation made earlier in Japanese.

Appendix to Chapter 4

The so-called overt pronoun in Korean

It has been suggested in Kang (1988, pp. 193-196) that the so-called Korean overt pronoun ku 'he' is able to function as a bound variable; cf. also Suh (1989, forthcoming). Recall that we have observed that the so-called Japanese overt pronoun kare cannot be construed as a bound variable. In light of a great deal of similarities between Korean and Japanese elsewhere in their syntax, this difference between Korean ku and Japanese kare seems to present itself as a puzzle. In this appendix, I will argue that this state of affairs is, contrary to the surface appearance, essentially as expected, given the observation made in chapter 4 regarding the possibility of bound variable construal for the various nominal expressions in Japanese.

Kang (1988, pp. 193-196) indicates that the so-called Korean overt pronoun ku can be construed as a bound variable, providing the sentences in (180).

(180) (Kang's (34), (35), (36) and (37))¹

a. Chelsu-ka nuku-cke [ku-ka mǝngcheni-la-ko] malha-ss-ni?
 NOM who-DAT he-NOM fool-COP-COMP say-PAST-Q
 'To whom did Chelsu say that he is a fool?'

b. Chelsu-nun nuku-cke-na [Yenghi-ka ku-lul ttacli-l kes-ila-ko]
 TOP everyone-DAT -NOM he-ACC hit-will-COMP
 malha-ess-ta
 say-PAST-DEC
 'Chelsu said to everyone that Yenghi would hit him.'

c. nukuna [ku-lul ccocha-o-nun salam]-lul silh-e ha-n-ta
 everyone he-ACC chase-come-PNE person-ACC hate-IMPERF-DEC
 'Everyone hates the person who chases him.'

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d. nukuna ku-uy emeni-lul coaha-n-ta
 everyone he-GEN mother-ACC like-IMPERF-DEC
 'Everyone likes his mother.'

Contrary judgments are reported in Hiong (1985, pp. 95-101) (and presumably in Choe (1988) as well). Hiong (1985) provides the following sentences with the judgments indicated.

(181)²

a. (Hiong's (1985, p. 95) (50b) with the judgment reported there)
 *nukunai kij-ka toktokhata-ko sangakhanta
 'Everyone_i thinks that he_i is intelligent.'

b. (Hiong's (1985, p. 101) (55c) with the judgment reported there)
 *nui-ka kij-ka toktokhata-ko sengakha-ci
 who-NOM he-NOM be smart-COMP think-Q
 'Who_i thinks that he_i is smart?'

Kang (1988, p. 193) provides the sentence in (182), which has the identical structure as Hiong's (181), and states that "[i]n this particular example, the bound variable reading of ku 'he' is very marginal, in contrast to the case where a name, say John, replaces nuku-na," in which case, he states, the coreference between John and ku is acceptable.

(182) (Kang's (33))

??Nuku-na [ku-ka hyuummyungha-tako] saengkakha-n-ta
 everyone he-NOM wise-DEC-COMP think-IMPERF-DEC
 'Everyone thinks that he is wise.'

Stating that most speakers accept the bound variable interpretation for ku in sentences in (180), Kang seems to claim that Korean ku can in general be construed as a bound variable.³

In the following discussion, I will base my discussion on the judgments reported in Kang (1988) (and Suh (1989, forthcoming)). It must be noted that it is not crucial for my argument below that the bound variable construal in (180) is completely acceptable, as long as there is a significant difference between Korean ku and Japanese kare in their ability to be construed as bound variables.⁴

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Recall that we have related the inability of kare to be construed as a bound variable to the fact that ka in kare is analogous to a in the ko, so, a do demonstrative paradigm in Japanese, reducing the puzzle of kare's inability to be construed as a bound variable to the inability of the members of the a system to be so construed. One might thus hypothesize that the ability to ku to be construed as a bound variable is related to the Korean demonstrative system. As we will observe directly, this indeed seems to be the case.

Consider the demonstrative paradigms in Korean as given in (183) and (184).

(183)

- a. i chayk 'this book' (corresponding to kono hon in Japanese)
- b. ku chayk 'that book' (corresponding to sono hon in Japanese)
- c. ce chayk 'that book' (corresponding to ano hon in Japanese)
- d. inu chayk 'which book' (corresponding to dono hon in Japanese)

(184)

- a. i koss 'this thing/this one' (corresponding to kore in Japanese)
- b. ku koss 'that thing/that one' (corresponding to sore in Japanese)
- c. ce koss 'that thing/that one' (corresponding to are in Japanese)
- d. inu koss 'which thing' (corresponding to dore in Japanese)

Two types of 'that' are distinguished in Korean, just as in Japanese, depending on the relative distance of the referent from the speaker and the hearer. The Korean counterparts of Japanese expressions kore 'this', sore 'that' and are 'that' are literally 'this thing' and 'that thing,' without the pronominal modification marker (or the genitive marker). Thus the literal translation of ku saram 'that/the person' in Japanese is unacceptable *so hito. Furthermore, and crucially, the literal Japanese translation of the so-called overt pronoun in Korean ku is ungrammatical *so.

The relevant correspondence between Japanese and Korean is illustrated in (185), (186) and (187).

(185)	<u>Japanese</u>	<u>Korean</u>
a. this (thing)	kore	i koss
b. that (thing) (far from the speaker and close to the hearer)	sore	ku koss
c. that (thing) (far from both the speaker and the hearer)	are	ce koss
d. which (thing)	dore	inu koss

(186)

	<u>Japanese</u>	<u>Korean</u>
a. this book	kono hon	i chayk
b. that book (far from the speaker and close to the hearer)	sono hon	ku chayk
c. that book (far from both the speaker and the hearer)	ano hon	ce chayk
d. which book	dono hon	inu chayk

(187)

	<u>Japanese</u>	<u>Korean</u>
a. this person	kono hito	i saram
b. that person (far from the speaker and close to the hearer)	sono hito	ku sa'am
c. that person (far from both the speaker and the hearer)	ano hito	ce sarim
d. which person	dono hito	inu saram

It must thus be borne in mind that Korean ku corresponds to Japanese *so, which, one might speculate, would be somewhat analogous to sore and soko.

As noted above, the members of the so series such as sore 'it/that' and soko 'there' in Japanese can function as bound variables.

Chapter Five

Sloppy Identity in Japanese

5.1. Introduction

Consider the sentences in (1) discussed in Ross (1967, p. 189).¹

- (1)
a. John scratched his arm, and so did Bill.
b. John scratched his arm, and Bill did, too.

As has been noted and discussed in Ross (1967), Keenan (1971), Sag (1976), Williams (1977) and others, the sentences in (1) allows the following three interpretations.

- (2)
a. John scratched John's arm, and Bill scratched Bill's arm.
b. John scratched John's arm, and Bill scratched John's arm.
c. John scratched Mike's arm, and Bill scratched Mike's arm.

What is indicated in (2c) is the interpretation in which he refers to some individual salient in the context of discourse, for example, "Mike". Because he can be used pragmatically (i.e. referentially), the interpretation of this sort is always possible. What concerns us in this chapter is the interpretations given in (a) and (b), and I will hence disregard the type of interpretation illustrated in (c) in most parts of the ensuing discussion. The interpretation in (a) and that in (b) have often been called the "sloppy" reading and the "strict" reading (of (1)); and these terms will be employed here to refer to them.

It has been recognized that the important distinction between the (a) reading and the (b) reading is that between coreference and bound variable anaphora; cf. Keenan (1971), Sag (1976), Williams (1977), Partee (1978), Reinhart (1983) and others. The disambiguation of (1) into (1a) and (2b) is typically achieved by

representing the first conjunct of (1) as in (3a) or (3b), at some relevant level of representation.

- (3) (Cf. Sag (1976, p. 89), Williams (1977, 119), for example.)²
a. John_i, $\sqrt{x(x \text{ scratched } x\text{'s arm})}$
b. John_i, $\sqrt{x(x \text{ scratched his}_i \text{ arm})}$.

The representation in (3a) corresponds to the sloppy reading, and that in (3b) to the strict reading. As indicated in (3), the sloppy reading is indeed bound variable anaphora while the strict reading is coreference.

We have observed in chapter 4 that while kare 'he' and the members of the demonstrative a system cannot yield bound variable construal, members of the s system such as soko 'there' and sore 'it' can, as noted in Nishigauchi (1986, Ch. 6) and Yoshimura (1989, forthcoming). This means that the constructions that potentially yield the sloppy reading in Japanese will provide confirmation for the analysis of these Japanese nominal expressions given in chapter 4. That is, we predict that the sloppy reading is possible with soko and sore, but not with kare (or any members of the a system).

Furthermore, we also expect to check whether the type of bound variable anaphora in the case of the sloppy reading is indeed identical to the type of bound variable anaphora observed in sentences with quantified NP's. For example, we expect to learn whether expressions such as sono gengogakusya 'that/the linguist', can yield the sloppy reading.³

To the extent that there are some structural restrictions on the availability of the sloppy reading, as will be indicated shortly, the discussion of the sloppy reading in Japanese would then be suggestive also in regard to the validity of such structural restrictions as well as to the structural properties of the Japanese sentences.

Although the exact analysis of the sloppy reading is not our concern here, it is profitable to review the "standard" analysis of it. In 5.2, therefore, I will illustrate how the sloppy and the strict readings are accounted for in the "standard" analysis of the VP Deletion, such as in Williams (1977). I will then review in 5.3 Ueda's and Fukui's discussion of the sloppy reading in Japanese based on the so-called Japanese do so construction, and argue that the test based on this construction is not reliable.

In 5.4, I will introduce another construction that has been discussed in the context of the sloppy reading, i.e. Stripping, first discussed in Hankamer (1971/1979). Reinhart's (1983; Ch. 7, 1986)

discussion of this construction with respect to the sloppy reading is then reviewed. The Japanese analogue of this construction is identified and a number of predictions will be made, based in part on Reinhart's discussion. It will first be shown that none of those predictions are borne out. It will then be pointed out that the Japanese stripping, unlike the English stripping, need not observe the subjacency condition. The remainder of this section is devoted to the demonstration that, when we identify the Japanese stripping that observes the subjacency, we can also verify the predictions that we have made regarding the sloppy/strict readings.

In 5.6, ...

5.2. A Standard Analysis of the Sloppy/Strict Readings

A summary of the standard VP Deletion analysis is given below, following the exposition in Reinhart (1986).

(4) Felix kissed his dog after Max did.

(5) DVPR (Derived VP Rule, proposed in Partee (1973))

(Due to the font limitations, I use \sqrt{x} in stead of the symbol for lambda.)

Felix (\sqrt{x} (x kissed his dog)) after Max did

(6) Pronoun interpretation: I \sqrt{x} (x kissed his=_{Felix} dog)
 II \sqrt{x} (x kissed x's dog)
 III \sqrt{x} (x kissed his=_z dog)
 (z=someone in the context of discourse)

The operation illustrated in II is what is called (the rule of) A(naphora) in Chomsky (1976, p. 202).

(7) Copy of predicate: I after Max (did) \sqrt{x} (x kissed his=_{Felix} dog)
 II after Max (did) \sqrt{x} (x kissed x's dog)
 III after Max (did) \sqrt{x} (x kissed his=_z dog)

The step in (7) shows Williams's LF rule that copies the interpreted \sqrt{x} predicate into the empty VP slot, and, consequently, the interpretations allowed are only those that are possible for the first conjunct. In Sag's analysis the same is obtained by deletion of the identical predicate in the second conjunct.

Crucially, therefore, the interpretation for (8) as indicated below is not available for (4).

(8) Felix_i kissed his_z dog after Max_k kissed his_i dog.

Presumably, anaphors such as himself obligatorily undergoes the rule of A illustrated in (7 II). Hence, for (9), the steps in (10), (11) and (12) follow.

(9) John kicked himself after Bill did.

(10) DVPR

John (\sqrt{x} (x kicked himself)) after Bill did

(11) Pronoun interpretation: II \sqrt{x} (x kicked x)

(12) Copy of predicate: II after Bill (did) \sqrt{x} (x kicked x)

Thus the lack of the strict reading in (9) is predicted by the obligatoriness of the rule of A in the case of anaphors.⁴

5.3. Soo Su (Do So)

Since the construction that has been used in the discussion of the phenomena of sloppy identity in Japanese is the soo su 'do so' construction, I will first discuss this construction as a candidate for sloppy reading test.

5.3.1. Kare

Ueda (1984, p. 21) uses the soo su construction for testing the sloppy reading in Japanese. Consider the examples in (13) from Ueda (1984).

(13) (his (30))
 John-wa kare-no kuruma-ni not-ta
 -TOP he-GEN car-in ride-PAST

Bill-mo soo si-ta
 -also so do-PAST
 'John got in his car. Bill did so, too.'

Ueda claims that the second conjunct in (13) is not ambiguous, unlike English, and that it allows only the strict reading. He attributes this to the well-known fact that kare cannot be construed as a bound variable.

While I tend to agree with Ueda's judgments here, it is, however, not clear how impossible it is to use the second conjunct in (13), representing a situation in which Bill got in Bill's car. Consider the example in (14).

(14)
 Johni-ga karej-no ronbun-o LI-ni okuru-to
 John-NOM he-GEN article-ACC LI-to sent-when
 Bill-mo suguni soo sita
 Bill-ALSO immediately so did
 'When Johni sent hisj article to LI, Bill immediately did so too.'

The second part of this sentence seems consistent with the situation in which Bill sent Bill's article to LI as well as that in which Bill sent John's article to LI. A discourse like (15) also illustrate the same point.

(15)
 A: Johni-wa ano kooen-de karej-no inu-ni esa-o ageta yo
 John-TOP that part-at he-GEN dog-DAT food-ACC gave
 'Johni fed hisj dog in that park.'
 B: Bill-mo soo sita yo
 Bill-ALSO so did
 'Bill did so too.'

The utterance in (15 B) is consistent either with a situation in which Bill fed Bill's dog or with the one in which Bill fed John's dog.

Recall that the members of the a series of the Japanese demonstrative paradigms resist bound variable construal even more strongly than kare. The examples in (16) and (17), which are obtained by replacing kare by aitu 'that guy', however, indicates that what appears to be sloppy reading is available even with the members of the a series.

(16)
 Johni-ga aitu-j-no ronbun-o LI-ni okuru-to
 John-NOM that guy-GEN article-ACC LI-to sent-when
 Bill-mo suguni soo sita
 Bill-ALSO immediately so did
 'When Johni sent that guyi's article to LI, Bill immediately did so too.'

(17)
 A: Johni-wa ano kooen-de aitu-j-no inu-ni esa-o ageta yo
 John-TOP that part-at that guy-GEN dog-DAT food-ACC gave
 'Johni fed that guyi's dog in that park.'

B: Bill-mo soo sita yo
 Bill-ALSO so did
 'Bill did so too.'

The part Bill-mo soo sita 'Bill did so too' seems to have exactly the same "ambiguity" in (16) and (17) as in (14) and (15), respectively.

These observations indicate, clearly, that the soo su, the so-called Japanese "Do so" is NOT a reliable test for identifying the sloppy and the strict readings in Japanese.

5.3.2. Zibun

Ueda (1984) in fact points out an apparent problem with the use of soo su as an operational test for the sloppy/strict reading. He observes that the strict reading is possible with zibun in (18).⁵

(18) (Ueda's (1984) (30a).)
 Johni-ga [NP [s' zibunj-ga katteiru] inu]-o naguru to
 John-NOM self-NOM is keeping dog-ACC hit when
 Bill-mo soo sita
 Bill-ALSO so did
 'When Johni hit the dog that hej kept, Bill did so, too.'

The strict reading for zibun is also observed in (19).

(19)
 A: Johni-ga ana kooen-de zibunj-no inu-ni esa-o atacta (yo)
 John-NOM that park-in self-GEN dog-DAT food-ACC gave
 'Johni fed selfj's dog in that park.'

B: Bill-mo soo sita (yo)
 Bill-ALSO so did
 'Bill did so too.'

Given the assumption, made in Williams (1977), that reflexives never yield strict readings, i.e., that reflexives never participate in coreference relations, the availability of the strict reading in (18) and (19) is unexpected as long as Japanese soo su is analyzed as having the same syntactic/semantic properties as English VP-deletion/substitution forms.

Cho (1990a) points out that the strict reading for zibun in (18) and (19) (and for Korean caeki in similar contexts) is not totally unexpected in light of the observation made in Bouchard (1984) and Lebeaux (1984) that the strict reading is available for the non-local instances of English reflexives discussed, as indicated in (20).

(20)
 A: John thought that pictures of himself were on sale.
 B: So did Bill.

It is in fact not completely clear that the strict reading for the local instances of zibun/zibunzisin is completely impossible, as in the case of (21).

(21)
 A: John_i-wa sono yakusyoku-ni {zibun_i/zibunzisin_i}-o totemo
 John-TOP that position-for self-ACC very
 tuyoku osita (sooda ne)
 strongly recommended (I heard)
 'John_i recommended himself very strongly for that position (I heard).'

B: (Dakara) Bill_i-mo (kekkyoku) soo sita (nda yo)
 that is why Bill-ALSO (after all) so did
 '(That is why) Bill did so (after all).'

Sag (1976, pp. 100-102) in fact points out that sentences like (22) allow the sloppy as well as the strict readings.⁶

(22) (Sag's (1976, p. 101) (2.2.55))
 Betsy couldn't imagine herself dating Bernie, but Sandy could.

5.3.3. On the Nature of Soo Su

While the status of the strict reading for zibun (and English reflexives) is not clear, it seems reasonable to conclude that Japanese soo su cannot be used as a reliable operational test for identifying the sloppy/strict readings.

It must be recalled that so is one of the Japanese demonstrative paradigms. As is pointed out in Ch. 4, soo literally means 'that way'. The so-called ko/so/a/do paradigm, followed by oo, yields (23).

(23)
 a. koo '(in) this way'
 b. soo '(in) that way'
 c. aa '(in) that way'
 d. doo 'in which way, how'

Thus, as one expects, all of the forms in (24) are acceptable, including soo su.

(24)
 a. koo su 'do this way'
 b. soo su 'do that way'
 c. aa su 'do that way'
 d. doo su 'do in which way, do how'

This then suggests that what appears to be the sloppy reading for (25), repeated from earlier discussion, might not involve bound variable construal at all.

(25) (= (xx))
 John_i-ga kare_j-no ronbun-o LI-ni okuru-to
 John-NOM he-GEN paper-ACC LI-to sent-when
 Bill-mo suguni soo sita
 Bill-ALSO immediately so did
 'When John_i sent his_j paper to LI, Bill immediately did so too.'

The translation for this sentence should be closer to (26).

(26) When John_i sent his_j paper to LI, Bill immediately did the same.

Notice that (27) seems to allow what appears to be the sloppy reading, to the extent that condition C effects are weak.

(27)

- a. When John_i sent John_i's paper to LI, Bill immediately did the same.
- b. John_i fed John_i's dog in that park, and Bill did the same.

While the second part of the sentences in (27) seems to be able to mean "Bill immediately sent Bill's paper to LI" and "Bill fed Bill's dog in that park," we do not want to claim that John in the first part of the sentences are construed as a bound variable.

The preceding discussion thus strongly suggests that soo in soo su may be "referential" or more like a deep anaphora in the sense of Hankamer and Sag (1976). Consider now the examples in (28).

(28)

- a. I do not buy anything made in Japan any more and I hope you do the same.
- b. *I do not buy anything made in Japan and so does John/ and John does too.

As we expect, soo su in Japanese behaves more like do the same rather than like the English VP-deletion.

(29)

- a. Watasi-wa nihonsei-no mono-wa issai kawanai kara
I-TOP Japanese-made-GEN thing-CONT all will not buy since
kimi-mo soo su-bekidesu
you-ALSO that way do-should
'(Since) I don't buy anything made in Japan anymore, you should [do the same/take the same action/ behave in the same way].'
- b. Sono party-de John-ga nihonjin-to-wa hitorimo
that party-at John-NOM Japanese-with-CONT not a single one
kuti-o-kikanakatta node Bill-mo soo sita
did not talk to since Bill-ALSO that way did
'At that party, since John did not talk to any Japanese at all, Bill [did the same/behaved in the same way]'

Notice that the English translations for (29) would be unacceptable if we use VP-deletion, as indicated in (30).

(30)

- a. *Since I don't buy anything made in Japan anymore, you should too.
- b. *At that party, since John did not talk to any Japanese, Bill did too.

If VP-deletion is to be used, negation must be used in the second conjunct, as indicated in (31).⁷

(31)

- a. Since I don't buy anything made in Japan anymore, you shouldn't either.
- b. At that party, since John did not talk to any Japanese, and Bill did not either..

The sentences in (32) illustrate that if the negation is removed, it is possible to use VP-deletion with too.

(32)

- a. Since I buy anything made in Japan, you should too.
- b. At that party, since John talked to every Japanese, Bill did too.

The array of data noted above is expected, given the parallelism between Japanese soo su and English do the same, and it provides further confirmation that soo su should not be treated on a par with English VP-deletion.⁸

Recall, however, the earlier conclusion in Ch. 4 that the members of the so system can be used non-deictically. This leads one to suspect that soo su, unlike aa su, may be used in a non-deictic way, which in turn indicates that it is possible to use soo su in a way analogous to do so in English. I do not deny this possibility, and there are in fact some data that indicate that this is so. It must, however, be borne in mind that our present task is to identify (i) linguistic environments that allow the sloppy reading (as well as the strict reading), (ii) those that force only the sloppy reading, (iii) those that disallow the sloppy reading (but allow the strict reading). The possibility of soo su to be "deictic" always makes the strict reading available, in principle. This obviously makes it difficult to conduct the relevant experiments, as we have seen in this section. It would therefore be much more preferable if we have another construction that can be used as an operational test for identifying the sloppy/strict readings in Japanese. We will start considering one candidate in the next section.

5.4. Stripping

5.4.1. The Sloppy Reading in Stripping

Reinhart (1983, p. 152) notes that "sloppy identity shows up also in cases where the antecedent is not the subject (and where the relevant 'deletion' is not VP-deletion) as in [(33)]."

(33) (Reinhart's (18))

- a. We paid the professor his expenses, but not the assistant.
- b. The nurse referred Siegfried to his doctor, and Felix too.
(meaning: she referred Felix ... too.)
- c. You can keep Rosa in her room for the whole afternoon, but not Zelda.

The construction illustrated in (33) and (34) below has been called Stripping in Hankamer (1971/1979).⁹

(34) (Reinhart (1986))

- a. Ben talked to Linda about his problem, and to Rosa too.
- b. Ben talked to Linda about his problem, and about politics too
- c. I enjoy reading science-fiction books in the morning, but not novels.
- d. Lucie smiled and Sonya too.
- e. Max gave Rosa a rose, and Sonya too.

Now consider (35).

(35) John_i likes his_i car, and Bill too.

Reinhart (1983, 1986) observes that leaving aside the interpretation in which the second conjunct means "John likes Bill," the sentence in (35) is ambiguous exactly as (36) is.

(36) John_i likes his_i car, and so does Bill.

Both (35) and (36) yield the two readings given in (37).

(37)

- a. John likes John's car, and Bill likes Bill's car. (Sloppy)
- b. John likes John's car, and Bill likes John's car. (Strict)

What is significant is her observation that the sloppy reading in the stripping construction is available precisely when the first conjunct is

acceptable with a quantified NP replacing the R-expression, as indicated below. Consider (38) and (39).

(38)

- a. *His_i father likes no one_i.
- b. No one_i likes his_i father.

(39)

- a. His_i father likes John_i, and Bill too.
"John's father likes Bill." (Strict)
≠ "Bill's father likes Bill." (Sloppy)
- b. John_i likes his_i father, and Bill too.
"Bill likes John's father." (Strict)
"Bill likes Bill's father." (Sloppy)

The example in (38a) is a typical case of weak crossover, in which his is NOT c-commanded by no one. When his is NOT c-commanded by John, as in (39a), the sloppy reading is not possible in the second conjunct.¹⁰ By contrast, just as the bound reading is possible in (38b), so the sloppy reading in the second conjunct in (39b) is possible. Notice that in (38b) and (39b) his is c-commanded by its "antecedent".

Reinhart (1983) further observes that this generalization extends beyond the cases in which the "antecedent" is in the subject position. In (40a) the sloppy reading is possible while in (40b) it is not.

(40)

- a. Mary introduced John_i to his_i new teacher, and Bill too.
"Mary introduced Bill to John's new teacher." (Strict)
"Mary introduced Bill to Bill's new teacher." (Sloppy)
- b. Mary introduced his_i new teacher to John_i, and to Bill too.
"Mary introduced John's new teacher to Bill." (Sloppy)
≠ "Mary introduced Bill's new teacher to Bill." (Sloppy)

The contrast in (40) parallels the contrast in (41); cf. Barss and Lasnik (1986).

(41)

- a. Mary introduced everyone_i to his_i new teacher.
- b. *Mary introduced his_i new teacher to everyone_i.

Lasnik (1976, 1989 p. 105), citing examples like (42), also notes that "[by] and large, it appears that deletion under sloppy identity is only possible when the antecedent of the deleted pronoun both precedes and kommands the pronoun."¹¹

(42) (Lasnik's (A22))

The woman who emulated Harry believes he is intelligent and the woman who emulated Bill does too. (no sloppy reading)

Given the correlation between the sloppy reading and bound variable construal, we make the following predictions.

(A)

1. Sloppy reading is possible for those categories that can be construed as bound variables.
2. Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

In the next section, we will consider how these predictions are borne out in Japanese.¹²

5.4.3. The Stripping in Japanese

The stripping in Japanese is illustrated in (43b). The pair of examples in (43) and similar examples below are intended as representing a discourse.

(43)

a. John-ga Bill-o syootaisita (tte)
 -nom -acc invited (I heard)
 'John invited Bill (I heard).'

b. Paul-mo da (yo)
 -also be
 'Paul too.'

The utterance in (43b) is ambiguous just as its English translation is. It means either "Paul also invited Bill" or "John also invited Paul."

We have seen that kare cannot be construed as a bound variable, as illustrated again in (44) below.

(44)

a. Daremo-i-ga [s' John-ga {pro-i/zibun-i/*kare-i}-o butta to] itteiru
 everyone-nom -nom self he-acc hit COMP is saying
 'Everyone_i is saying that John hit him_i.'

b. Daremo-i [NP[{pro-i/zibun-i/*kare-i}-ga pro-i tukutta] sushi]-o tabenakatta
 no one self he-nom made sushi-acc did not eat
 'No one_i ate the sushi that he_i made.'

We therefore predict, in accordance with (A-1), that kare cannot induce the sloppy reading in the stripping construction.

5.4.3.1. The Predictions Fail

Contrary to our expectation, the sloppy reading seems to be possible with kare. Consider (45).

(45)

a. John-i-ga [NP[{s' pro-i {pro-i/kare-i}-o butta] otoko-i]-o uttaeta (tte)
 -nom -acc hit man -acc sued (I heard)
 'John_i sued the man who hit him_i (I heard).'

b. Bill/Mary-mo da (yo)
 -also be
 'Bill/Mary too.'
 (The sloppy reading seems possible with kare as well as with pro.)

As indicated, it appears that (3b), with Mary, may be uttered in a situation depicted in (46a) or in (46b).¹³

(46)

- a. Mary sued the person who had hit John.
- b. Mary sued the person who had hit Mary.

It thus appears that the prediction in (A-1) is not borne out.

It further appears, surprisingly, that the "c-command requirement" need not be satisfied for the sloppy reading to obtain in the stripping construction in Japanese. Consider (47).

(47)

a. [NP [s' eek hitome pro-i mita] hitok]-ga John-i-o sukininatta (tte)
 one glance saw person-nom -acc fell-in-love
 'The person who took a glance at him_i fell in love with John_i.'

b. Bill-mo da (yo)
 Bill-ALSO be
 'Bill too.'

In (47a) *pro_i* is not c-commanded by *John* and the substitution of a quantified NP for *John* in (47a) results in a typical instance of weak crossover. Thus (48) does not yield bound variable interpretation for the embedded object *pro*, as noted in Hoji (1985, Ch. 2).¹⁴

(48)
 *_{[NP[S eck hitome pro_i mita] hitok]-ga onnanoko_i-o 2-3-nin sukininatta (tte)}
 one glance saw person-nom girls-acc 2-3-CL fell-in-love
 '(some) person who took a glance at *pro_i* fell in love with [a few girls]_i'

Despite the unavailability of the bound variable construal in (48), however, it seems possible to utter (47b) in a situation depicted by (49).

(49) The/some person who took a glance at Bill fell in love with Bill.

Furthermore, it also seems possible to interpret (50b) as representing the situation indicated in (49).

(50)
 a. _{[NP [S eck hitome kare_i-o mita] hitok]-ga John_i-o sukininatta (tte)}
 one glance he-ACC saw person-nom -ACC fell-in-love
 'The person who took a glance at him_i fell in love with John_i.'

b. Bill-mo da (yo)
 Bill-ALSO be
 'Bill too.'

In (50), the relevant binder is *kare*, which is NOT c-commanded by *John*. The apparent availability of the sloppy reading in (45b), (47b) and (50b) may be considered as a serious problem for adopting simultaneously (i) the standard view that equates sloppy reading with bound variable construal and (ii) for our generalization that *kare* cannot be construed as a bound variable. One may attempt to avoid this problem by analyzing the stripping in Japanese differently from the stripping in English. It will in fact be argued below that while the stripping in English involves syntactic movement of some sort (as argued in Reinhart (1986)), the stripping in Japanese need not. It will be argued that the predictions in (A) are indeed borne

out when we consider instances of the stripping in Japanese that obligatorily involve syntactic movement.

5.4.4. The Subjacency

Reinhart (1986, p. 5) notes that the stripping construction (unlike VP-deletion) obeys island constraints. The examples in (51) exhibit the typical subjacency violation (i.e. the complex NP violation of Ross (1967)).¹⁵

(51)
 a. *we found [the letters Max wrote to Matilda]/[two of Max's letters to Matilda in his desk, but not to Rosa. (Reinhart (1986))
 b. *The fact that her new novel is boring is surprising, but not her new play (Reinhart's (1986) (50a))
 c. *Mary praised the conference where she met with John, but not with B (intended as "but Mary did not praise the conference where she met with Bill")

As noted in Reinhart (1986), the stripping differ from the VP deletion in that while former exhibits sensitivity to island constraints the latter does not. Thus, there is a contrast between (51b) and (51c) on the one hand and (52a) and (52b) on the other.

(52)
 a. The fact that her new novel is boring is surprising, but her play is certainly not [e]. (Reinhart's (1986) (49a))
 b. Mary praised the conference where John presented a paper, but she did not praise the one where Bill did [vp ec]

Reinhart (1986) attributes the unacceptability of (51) to the subjacency violation, as in the case of the standard cases of subjacency violation illustrated in (53).¹⁶

(53)
 a. *Who_i did you find [the letters Max wrote to ll] in the library? (Reinhart (1986))
 b. *What is the fact that l is boring surprising?
 c. *With whom did Mary praise [the conference where she met ll]?

I will now briefly illustrate Reinhart's (1986) account of Stripping, indicating how the subjacency effects noted above and the sloppy/strict readings are captured in her analysis; cf. Sag (1976) and Pesetsky (1982, pp. 640-659) for earlier analyses of Gapping that share some of the features of Reinhart's analysis.¹⁷ Reinhart presents "a summary of the LF formation rules needed in a theory assuming classical-logic analysis of quantifiers" as in (54), where 'adjoin' is 'Chomsky-adjoin' and 'attach' is sister-adjoin.

(54) (her (23))

LF formation rules (ordered)

- A. CR (Constituent Raising) = Adjoin a constituent to S
- B. QR = Attach a quantifier (Q) node to S (Heim 1982)
- C. Binding (bind coindexed variables; e.g. traces):
 - I. If a Q attached to S is available, translate it as an operator
 - II. Otherwise, introduce a $\sqrt{\quad}$ operator

Reinhart's C(onstituent) R(aising) optionally adjoins any constituent to S at LF.¹⁸ It is thus more general than May's (1977) rule of Q(uantifier) R(aising). According to this analysis, the LF representations in (57) and (58) would correspond to the S-structure in (55) and (56), respectively. (Free indexation is assumed here.)

(55) Lucie_i kissed Rosa_i

(56) Lucie_i kissed every woman_j

(57)

- a. [S Lucie_i kissed Rosa_i]
- b. [S Lucie_i [S t_i kissed Rosa_i]]
- c. [S Rosa_j [S Lucie_i kissed t_i]]
- d. [S Rosa_j [S Lucie_i [S t_i kissed t_i]]]
- e. [S Lucie_i [S Rosa_j [S t_i kissed t_i]]]

(58)

- a. [S Lucie_i kissed every woman_i]
- b. [S Lucie_i [S t_i kissed every woman_i]]
- c. [S [NP every woman]_j [S Lucie_i kissed t_i]]
- d. [S [NP every woman]_j [S Lucie_i [S t_i kissed t_i]]]
- e. [S Lucie_i [S [NP every woman]_j [S t_i kissed t_i]]]

(58a) and (58b) would presumably be ruled out as instances of vacuous quantification. The rule in (54b) would turn (58c), for example, into (59).¹⁹

(59)

[S [Q every] [NP t woman]_j [S Lucie_i kissed t_i]]

When the rule in (54c) applies to (59), its output is as in (60).²⁰

(60) [S [Q every x] [NP woman (x)]_i [S Lucie_i kissed t_i]]

When (54c) applies to (57b), for example, its output is as in (61).²¹

(61) [S Lucie_i [\sqrt{x} [S x kissed Rosa_i]]]

What is crucial for our discussion here is the rule of CR and the rule in (54c), which introduces a $\sqrt{\quad}$ operator, as in (61). According to Reinhart's (1986) analysis, (62), with Sonya being interpreted as a subject, has the derivation as indicated in (63). (I ignore the details such as INFL, following Reinhart.)

(62) Lucie kissed Rosa, and Sonya too

(63)

- a. DS and SS:
Lucie kissed Rosa, and too Sonya kissed Rosa.
- b. LF (after CR)
[S Lucie_i [S t_i kissed Rosa]], and too [S Sonya_i [S t_i kissed Rosa]]
- c. LF (after Binding)
Lucie (\sqrt{x} (x kissed Rosa)) and Sonya (\sqrt{y} (y kissed Rosa))

When Sonya is taken as an object, the derivation for (62) proceeds as in (64).

(64)

- a. DS and SS:
Lucie kissed Rosa, and too Sonya kissed Rosa
- b. LF (after CR)
[S Rosa_j [S Lucie_i kissed t_i]], and too [S Sonya_i [S Lucie_i kissed t_i]]
- c. LF (after Binding)
Rosa (\sqrt{x} (Lucie kissed x)) and Sonya (\sqrt{y} (Lucie kissed y))

According to Reinhart's analysis, since both conjuncts in (63c) and (64c) have the identical predicates (except for the alphabetical variation) (at LF), the second conjunct can be deleted (at PF).²² Reinhart adopts a deletion analysis for Stripping (analyzed as an instance of Gapping) as well as for the VP deletion. In this sense, her analysis is more in line with Sag (1976) than with Williams (1977). As pointed out in Reinhart (1986, p. 11), Stripping (as well as Gapping and VP-deletion) can be analyzed in terms of copying i.e. copying the relevant predicate at LF as in Williams (1977). Pesetsky (1982, pp. 640-659) in fact presents an analysis of the Gapping construction in terms of copying. A copying analysis of Stripping then would base-generate Sonya as a bare argument in the second conjunct, e.g. as indicated in (65); cf. Pesetsky's (1982, p. 651) and Sag (1976).²³

(65)

a. DS:

Lucie kissed Rosa and [S' [COMP Sonya] [S ec]], too

b. LF (after CR)

[S Rosa_i [S Lucie kissed t_i]], and [S' [COMP Sonya] [S ec]] too

One may introduce the \checkmark operator in the first conjunct, in accordance with (54c), and apply the copy rule, obtaining (66). (I leave aside some details here.)

(66)

Rosa (\checkmark x (Lucie kissed x)) and Sonya (\checkmark y (Lucie kissed y))

While I leave the deletion v.s. copying issue open, I will adopt the copying analysis, mainly because of the consideration given in footnote xx (where I talk about a PF operation referring to LF information.) While differing from Reinhart (1986) in adopting the copying analysis over the deletion analysis, I nevertheless follow her in regard to the CR and the introduction of the \checkmark operator. ²⁴

With the essentials of Reinhart's analysis of Stripping being thus introduced, let us now consider how her analysis, translated into the copying analysis, accounts for the subjacency effects in the Stripping construction. I will refer to the modified version of Reinhart's (1986) analysis of Stripping under discussion as RR (Revised version of Reinhart's analysis). Consider again the unacceptable (51a), repeated as (67).

(67)

*we found [NP the letters Max wrote to Matilda] in his desk, but not to Rosa. (Reinhart (1986))

According to RR, (67) must have the LF representation in (68) before the \checkmark introduction and the copying take place.

(68).

[S [to Matilda]_i [S we found [NP the letters Max wrote to Matilda] in his desk, but not [CP [COMP to Rosa] [S ec]]

The movement of to Matilda into the sentence-initial position, however, violates the subjacency; cf. (53a). Thus the stripping construction in (67) is not well-formed. Compare (67) with (69).²⁵

(69)

John once claimed [that Mary said that Bill had sent flowers to Bush as a joke], but not to Reagan. (intended as "but John did not claim that Mary said that Bill had sent flowers to Reagan as a joke.)

The acceptable stripping construction in (69) then corresponds to the well-formed wh-question in (70).²⁶

(70)

whom did John once claim [that Mary said that Bill had sent flowers to t_i as a joke]

Before moving on to the discussion of the subjacency effects in the Japanese stripping, let us first consider how the sloppy/strict readings are captured under RR. Consider again the familiar example reproduced in (71).

(71)

John_i loves his_i father, and Bill too.

As noted above, the second conjunct, with Bill being taken as a subject, allows the two readings in (72).

(72)

- a. Bill loves John's father.
- b. Bill loves Bill's father.

Reinhart (1986, p. 19) accounts for the ambiguity of this sort by optionally translating a pronoun that is Λ -bound by an operator P into a variable bound by P. Thus according to her (p. 19) exposition, the relevant ambiguity of (71) would be represented as in (73).

(73)
John (\sqrt{x} (x loves [his (=John)/x's] father, and Bill (\sqrt{x} (x loves [his (=John)/x's] father

According to the exposition in Reinhart (1983, Ch. 7), only indexed pronouns (including anaphors (i.e. R(eflexive) pronouns)) will be translated into a variable, and the ambiguity of (71) is accounted for by making optional the indexing (more precisely, coindexing with "an antecedent") of a pronoun. In either approach, the ambiguity is obtained by optionally translating the pronoun into a variable.²⁷

In RR, the lack of the sloppy reading in (74) is assimilated to the weak crossover effects in (75); cf. Reinhart (1983, Ch. 7), Partee (1978) and Evans (1977).²⁸

(74) His_i father loves John_i, and Bill too.
(cannot mean 'Bill's father loves Bill.')

(75) *his_i father loves no one_i

Notice that his fails to be c-commanded by John in (74) and by no one in (75). According to RR, the failure of c-command of this sort at the level of SS blocks the pronoun to be translated into a variable. After the CR, (74) would look like (76).

(76) John_i [S his_i father loves t_i], and [S' [COMP Bill]] [S ec]]

After the $\sqrt{\quad}$ operator is introduced, the first conjunct will be mapped onto (77).

(77) John_i (\sqrt{x} (his_i father loves x))

Due to the failure of c-command noted above, his in (77) fails to be translated into a variable, bound by the $\sqrt{\quad}$ operator. Thus after the copying of the predicate (\sqrt{x} (his_i father loves x)) to the second conjunct, the only reading that results is the strict reading, i.e. 'John's father loves Bill.' Since the coreferential option is not available in (75) (no one is not referential), the sentence is unacceptable.

5.4.4.1. The Subjacency Violation

Let us now consider whether Japanese stripping observes the subjacency. Recall that the English stripping does observe this condition, as illustrated below.²⁹

(78)
*?People who make French cuisine come here often, (but not Italian cuisine/Italian cuisine too)

(79)
A: People who make French cuisine come here often.
B: ?*Italian cuisine, too.

(80) (Cf. Reinhart (1986).)
*Many people found [articles in which philosophers criticized Chomsky] in the library, (but not Halle/and Halle too)

(81)
A: Many people found [articles in which philosophers criticized Chomsky] in the library.
B: *Halle too.

The Japanese counterpart of (79 B) and (81 B), by contrast, seems to be relatively acceptable, as indicated below.³⁰

(82)
A: NP[S' pro_i furansu ryoori-o tukururu hito]-ga yoku koko-ni kuru
French cuisine-acc makepeople-nom often here-to come
'People who make French cuisine come here often.'

B: Itariya ryoori-mo da
Italian cuisine-also be
'Italian cuisine, too.' ('People who make Italian cuisine (also) come here often.')

(83)

A: Takusan-no hito-ga tosyokan-de [NP [S' tetugakusya-ga
 many-GEN people-NOM library-in philosopher-NOM
 Chomsky-o hagesiku hihansiteiru] ronbun]-o mituketa
 Chomsky-ACC harshly criticize article-ACC found
 'Many people found [articles in which philosophers criticized
 Chomsky] in the library.'

B: ?Ialle-mo da
 Ialle-ALSO be
 'Ialle too'

The subjacency effects of the sort that is found in the English stripping, are not thus clearly observed in the Japanese stripping. One may, therefore, conclude that the Japanese stripping and the English stripping should not, after all, be treated on a par with each other. If this is a correct conclusion, then the discussion of the sloppy reading in the Japanese stripping construction must be placed in a fundamentally different domain than that in which we discuss the sloppy/strict reading in the English stripping construction. Before adopting this conclusion, however, let us first review how the subjacency effects are observed in Japanese.

5.4.5. The Subjacency in Japanese

Saito (1985), following Harada's (1977) lead, analyzes scrambling in Japanese as an instance of Move alpha. He proposes, specifically, that it is a syntactic adjunction operation and points out that it obeys the subjacency condition, as indicated in (84).

(84) (Saito's (1985, Ch. 3, (146a) with his judgment there)

?*Ano hon-o_i [S John-ga [NP [S e_j katta] hito]_j-o
 that book-ACC John-NOM bought person-ACC
 sagasite iru rasi
 looking-for seem
 'It seems that John is looking for the person who bought that book.'

As compared to examples like (84), Saito provides examples like (85) as grammatical.³¹

(85) (Saito's (1985, p. 255) (161))

Sono hon-o_i [S John-ga [S' [S minna-ga [S' [S Mary-ga _i katta] to]
 that book-ACC John-NOM all-NOM Mary-NOM bought COMP
 omotte iru] to] itta] (koto)
 thinks COMP said fact
 'that book_i, John said that everyone thought that Mary had bought _i.'

It is not clear that the example in (85) necessarily illustrates the long-distance scrambling. That is, sono hon 'that book' may have originated in the matrix S, as indicated in (86).

(86)

Sono hon-o_i [S John-ga _i [S' [S minna-ga [S' [S Mary-ga pro_i katta] to]
 that book-ACC John-NOM all-NOM Mary-NOM bought COMP
 omotte iru] to] itta] (koto)
 thinks COMP said fact
 'that book_i, John said (of/about) _i that everyone thought that Mary
 had bought it_i'

As noted in Kuno (1976, p. x) and Saito (1983, p. xx), verbs such as omow 'think' and iw 'say' can take NP and S', as indicated in (87).

(87)

Watasi-wa Yamada(-no koto)-o [S' kare_j-ga mutasi yakuza data to]
 I-TOP Yamada(-GEN)-ACC he-NOM before gang was that
 [omotta/itta]
 thought/said
 'I (thought of/said of) Yamada_j; that he_j was a gang member before.'

The existence of sentences like (87) means that (86) is a possible representation. In fact, the pre-scrambled version of (86) is acceptable, as indicated in (88).

(88)

[S John-ga sono hon-o_i [S' [S minna-ga [S' [S Mary-ga {pro_i/sore_i}-o
 John-NOM that book-ACC all-NOM Mary-NOM it-ACC
 katta] to] omotte iru] to] itta] (koto)
 bought COMP thinks COMP said fact
 'John said of that book_i that everyone thought that Mary had bought it_i'

With the choice of pro, it is possible to analyze (88) as being derived by the scrambling of sono hon 'that book' from the most deeply embedded object position. If sore is chosen, however, such a

derivation is not possible for (88), given Saito's (1985) observation that the resumptive pronoun is not allowed for scrambling.³²

Contrasts analogous to that between (84) and (85), however, also obtain when the sentence-initial phrase that is related to the argument position in the most deeply embedded S is marked by ni (the Dative marker), as indicated in (89).³³

(89)

a. *Chomsky-ni_i [S John-ga [NP [S ni ai nikita] hito]_j-o
 Chomsky-DAT John-NOM came to see person-ACC
 sagasite iru (koto)
 looking-for
 'Chomsky, John is looking for the person who came to see.'

b. Chomsky-ni_i [S John-ga [S' [S minna-ga [S' [S Mary-ga ni ai nikita] to] Chomsky-DAT John-NOM all-NOM Mary-NOM came-to-see COMP omotte iru] to] itta] (koto)
 thinks COMP said fact
 'Chomsky_i, John said that everyone thought that Mary had come to see ni.'

Since the ni-marked phrase cannot occur in place of the o-marked phrase in (87), Chomsky-ni 'Chomsky-DAT', unlike sono hon-o 'that book-ACC' in (85), must come from the position designated by ni in (89). In the ensuing discussion, I will therefore assume that Saito's (1985) analysis of scrambling is correct; cf. the discussion in 3.5.2.

5.4.5.1. The Topic Constructions

Having seen the subjacency effects in scrambled sentences in Japanese, we now turn to the subjacency effects in topic constructions in Japanese. (We eventually want to discuss more in depth the subjacency effects in the Japanese stripping construction. Thus the discussion in this subsection is a step toward that goal.)

Corresponding to the example in (90), there is a sentence given in (91).³⁴

(90)

John-ga susi-o tabeta
 John-NOM sushi-ACC ate
 'John ate sushi.'

(91)

Susi-wa John-ga cc tabeta
 sushi-TOP John-NOM ate
 'Sushi, John ate'
 'As for sushi, John ate it.'

Two competing analyses of the so-called Japanese topic construction, as exemplified in (91), have been offered in the past literature in the generative tradition. One analysis, advocated in Kuroda (1965), assumes the movement of the wa-marked phrase from the object position to the sentence-initial position. According to this (movement) analysis, (91) is represented as (92).

(92)

Susi_i-wa John-ga ni tabeta
 'Susi_i, John ate ni.'

The other analysis, advocated in Kuno (1973), assumes the base-generation of the sentence-initial wa-phrase. According to this (base-generation) analysis, (91) is represented as (93), with the object position being occupied by the zero pronoun instead of a trace.

(93)

Susi_i-wa John-ga pro_i tabeta
 'As for susi_i, John ate it_i.'

Kuno's analysis is motivated mainly by the existence of sentences like (94), in which there is, apparently, no gap corresponding to the wa-phrase.

(94)

a. (Kuno (1973))
 Sakana-wa tai-ga ii
 fish-TOP red snapper-NOM good
 "As for fish, red snapper is good."

b. (observation due to H. Teramura)

Kono kusuri-wa atama-ga yokunaru
 this medicine-TOP brain-nom becomes better
 "As for this medicine, the intellect (of the person who takes it) increases."

Saito (1985, Ch. 4) proposes that topic NP's can either be base-generated at the sentence-initial position or be moved there by syntactic movement. His argument is based on certain properties of PP topic constructions. He observes that while NP "topicalization" does not exhibit subadjacency effects, PP "topicalization" does.

Consider first the examples in (95) and (96), taken from Saito (1985, Ch. 4).

(95)

a. John-ga Pekin-o yoku sitteiru
John-NOM Peking-ACC well know
'John knows Peking well.'

b. Pekin-wa John-ga yoku sitteiru
Peking-TOP John-NOM well knows
'As for Peking, John knows it well.'

(96)

a. John-ga Pekin-ni nandomo itta
John-NOM Peking-to many times went
'John went to Peking many times.'

b. Pekin-ni-wa John-ga nandomo itta
Peking-to-TOP John-NOM many times went

(95b) is an example of an NP topic while (96b) is an example of a PP topic.³⁵ In Saito (1985), the (b) examples in (97) and (98) below are intended to illustrate that PP "topicalization" as well as NP "topicalization" are possible "out of" an embedded S' as long as it is not "out of" a syntactic island.

(97)

a. John-ga [S Bill-ga Pekin-o yoku sitteiru to] omotteiru
John-NOM Bill-NOM Peking-ACC well knows COMP is thinking
'John thinks that Bill knows Peking well.'

b. Pekin-wa_i John-ga [S Bill-ga e_i yoku sitteiru to] omotteiru
Peking-TOP John-NOM Bill-NOM well knows COMP is thinking
'As for Peking, John thinks that Bill knows it well.'

(98)

a. John-ga [S Bill-ga Pekin-ni nandomo itta to] omotteiru
John-NOM Bill-NOM Peking-to many times went COMP is thinking
'John thinks that Bill has been to Peking many times.'

b. Pekin-ni-wa_i John-ga [S Bill-ga e_i nandomo itta to]
Peking-to-TOP John-NOM Bill-nom many times went COMP
omotteiru
is thinking

The example in (99) (as well as earlier examples xx in the preceding subsection) indicates that the sentence-initial wa-phrase can be associated with a gap that is embedded more deeply than one S'.

(99) (based on Saito's (71b) in chapter 4)

Hirosima-kara-wa_i [S minna-ga [S hito-ga e_i oozei
Hiroshima-from-TOP all-nom person-nom many
kuru daroo to] yosoosite ita]
come will COMP anticipating was
'Everyone was anticipating that many people would come from Hiroshima.'

The crucial difference between the NP-topic and the PP-topic that Saito observes is illustrated by the contrast between (100b) and (101b), which are based on Saito's (1985, pp. 332-333) (72), (73) and (74).

(100)

a. John-ga [NP [S e_i Pekin-o yoku sitteiru] hito_i-o] sagasiteiru
John-NOM Peking-ACC well knows person-ACC is looking for
'John is looking for a person who knows (about) Peking well.'

b. Pekin-wa John-ga [NP [S e_i e_j yoku sitteiru] hito_i-o]
Peking-TOP John-NOM well knows person-ACC
sagasiteiru
is looking for
'As for Peking, John is looking for a person who knows (about) it well.'

(101)

a. John-ga [NP[s_i Pekin-ni nandomo itta] hito_i]-o
John-NOM Peking-to many times went person-ACC
sagasiteiru
is looking for
'John is looking for a person who has been to Peking many times.'

b. *Pekin-ni-wa_j John-ga [NP[s_i wa_j nandomo itta] hito_i]-o
Peking-to-TOP John-NOM many times went person-ACC
sagasiteiru
is looking for

The ungrammaticality of (101b), Saito argues, is analogous to that of (102), in which the subjacency is violated by the movement of Pekin-o 'Peking-ACC and Pekin-ni 'Peking-to', out of the complex NP.

(102) (based on Saito's (72))

a. *?[s Pekin-o_j [s John-ga [NP[s_i wa_j yoku sitteiru] hito_i]-o
Peking-ACC John-NOM well knows person-ACC
sagasiteiru] (koto)
is looking for
(*Peking_i, John is looking for a person who knows _i well.)

b. *?Pekin-ni_j John-ga [NP[s_i wa_j nandomo itta] hito_i]-o
Peking-to John-NOM many times went person-ACC
sagasiteiru (koto)
is looking for
'To Peking_i, John is looking for a person who has been _i many times.'

Saito suggests that the reason why (100b) is grammatical while (101b) is ungrammatical is that NP-(wa), but not PP-(wa), can be base-generated at the sentence-initial position, to be licensed there by standing in the "aboutness relation" with the following S. Thus, according to Saito, (100b) is grammatical because it need not involve syntactic movement of the wa-phrase out of the relative clause. On the other hand, (101b) is ungrammatical because PP-wa, not being able to be base-generated sentence-initially, must have been moved from inside the complex NP, violating the subjacency. Mainly based on this observation, Saito concludes that PP-wa in examples like (96b), (98b) and (99) must have been also preposed to the sentence-initial position by syntactic movement. He further concludes that as far as NP-wa in (95b) and (97b) are concerned, they can either be base-generated, holding an "aboutness relation" with the following S,

or be preposed to the sentence-initial position from the "preverbal" position. (Recall that base-generation is the only option in (100b) since the gap corresponding the NP-wa is in the complex NP.)

The examples in (103) also illustrate the NP 'topicalization' that does not involve movement.

(103)

a. (Kuno; 1973, 249)
Sono sinsij-wa [NP[s_i wa_j pro_j kiteiru] yoohukuj]-ga yogoreteiru
that gentleman-TOP is wearing clothes-nom are dirty
'As for that gentleman_i, the clothes that he_i is wearing are dirty.'

b. (Saito's (1985, 332) (73b))³⁶
Russellj-wa John-ga [NP[s_i wa_j pro_j atta-koto-ga aru] nihonjinj]-o
Russell-TOP John-NOM have met Japanese-ACC
oozei sitteiru
many know
'As for Russell_j, John knows many Japanese who have met him_j.'

The example in (104) is, on the other hand, is another instance of PP "topicalization" that violates the subjacency.

(104) (Saito's (1985, p. 333) (73d))

*?[Russell-ni]pp-wa_j John-ga [NP[s_i wa_j pro_j atta koto-ga aru] nihonjinj]-o
Russell-to-TOP John-NOM have met Japanese-ACC
oozei sitteiru
many knows
'*With Russell_j, John knows many Japanese who have met _i.'

Saito's discussion of the Japanese "topicalization" thus clearly indicates that a sharp line be drawn between NP topics and PP topics. Crucially, NP topics can be "licensed" by an aboutness relation of some sort. Hence they can be base-generated at the sentence-initial position, being coreferential with pro in the embedded sentence, as illustrated above.³⁷ PP topics at the sentence-initial position, on the other hand, must have been preposed to that position by syntactic movement.

It is argued in Hoji (1986) that the Japanese cleft construction exhibits essentially the same dichotomy between the PP focus and the NP focus. In fact, the relevant distinction has been argued there to be more general than that between NP and PP. We will therefore turn briefly to the cleft construction in Japanese, before returning to the Japanese stripping.

5.4.5.2. The Cleft Construction

It is observed in Hoji (1986) that, analogous to the topic construction, PP's and NP's behave differently in the cleft construction in Japanese. As indicated in (105), the NP in the focus position, i.e. the position immediately preceding the copula in the matrix S, may be associated with a "gap" in an island.

(105)

a. [[NP[s e_i pro_j tabeta] hito_i]-ga byooki ni natta] no wa [kono sakana]_j da
eat person-nom became sick this fish be
"It is this fish_j that those who ate e_i became sick."

b. (based on Saito's (1985) topic examples)

[John-ga [NP[s e_i pro_j atta-koto-ga-arū] nihonjin_i]-o oozei sitteiru] no wa
John-NOM have met Japanese-ACC many knows
Russell_j da
Russell be
"It is Russell_j that John knows many Japanese that have met e_i."

c. [kaisya-ga [NP[s e_i Mary-ni pro_j miseta] otoko_i]-o kubinisa] no wa
company-nom Mary-DAT showed man-acc fired
[kono syorui]_j da
this document be
"It is this document_j that the company fired the person who showed e_i."

Thus the subjacency effects are not observed with the NP focus, i.e. with the bare NP focus.

On the other hand, if a PP (or NP-ni) is used in the focus position, the dependency between the phrase in the focus position and the gap that it is associated with observes the subjacency, as illustrated in (106).

(106)

*?²[John-ga [NP[s e_i I_j atta-koto-ga-arū] nihonjin_i]-o oozei sitteiru] no wa
John-NOM have met Japanese-ACC many knows
Russell_j-ni da
Russell-DAT be
"It is with Russell_j that John knows many Japanese that have met e_i"

As indicated in (107), NP-ni may appear in the focus position.

(107)

Yamada-ga atta no wa Russell-ni da
Yamada-NOM met Russell-DAT be
"It was with Russell that Yamada met."

Hence, the unacceptability of (106) cannot be attributed to the presence of ni in the focus position. In fact, more complicated examples like (108) are acceptable, as long as the gap that is associated with the "focussed phrase" is not in a syntactic island.

(108)

[John-ga [s²Mary-ga kinoo t_i sono syorui-o miseta to]
John-NOM Mary-NOM yesterday that document-ACC showed that
omotteiru] no wa [ano CIA agent_i-ni] da
think that CIA agent-DAT be
'It is to that CIA agent that John thinks Mary showed that document yesterday.'

Leaving aside, for the time being, exactly what is being moved and where it is moved to, the contrast noted above strongly suggests the following. When NP-ni appears in the focus position, the cleft construction must involve syntactic movement, and when a bare NP appears in the focus position, on the other hand, it need not involve syntactic movement. This distinction has been indicated by the use of pro in (105) and that of t(race) in (106) and (108). This is completely analogous to the situation that is described in Saito (1985, Ch. 4) with respect to the Japanese topic construction. Following Saito's (1985, Ch. 4) suggestion on the Japanese topic construction, I therefore assume that the bare NP in the focus position in the cleft construction may be licensed by an aboutness relation of some sort, but that NP-ni (which Saito (1985) assumes to be PP) in the same position, cannot be licensed in this way and must be licensed by syntactic movement.

It is pointed out in Hoji (1986) that the relevant contrast is not limited to that between NP and PP. The crucial observation is that when the NP in the focus position in (105a) and (105c) is marked with the accusative marker o, the resulting sentences are no longer acceptable. This is illustrated in (109a) and (109b), which differs minimally from (105a) and (105c), respectively.

(109)

- a. *[[NP[S ϵ_j μ_{10j} tabeta] hito_i]-ga byooki ni natta] no wa
eat person-nom became sick
[kono sakana]_j-o da
this fish-ACC be
"It is this fish_j that those who ate ϵ_j became sick."

- b. *[kaisya-ga [NP[S ϵ_i Mary-ni μ_{10j} miseta] otoko_i]-o kubinisita] no wa
company-nom Mary-DAT showed man-acc fired
[kono syorui]_j-o da
this document-ACC be
"It is this document_j that the company fired the person who showed ϵ_j ."

As indicated in (110), μ -marked NP's may appear in the focus position in the cleft construction.³⁸

(110)

- a. Yamada-ga hihansita no wa Tanaka-o da
Yamada-NOM criticized Tanaka-ACC be
"It was Tanaka that Yamada criticized."
- b. ?[John-ga [S-Sue-ga kinoo μ_i hihansita to] omotteiru] no wa
John-NOM Sue-NOM yesterday criticized that thinks
Tanaka_i-o da
Tanaka-ACC be
"It was Tanaka that John thinks that Sue criticized yesterday."

It therefore seems that the relevant contrast is between bare NP's and case-marked NP's, including NP-DAT, which Saito (1985) considers as PP's.³⁹

We have thus seen that bare NP's which appear in the topic position or in the cleft focus position may be "licensed" by some "aboutness" relation while case-marked NP's occurring there, including the object of P, cannot.⁴⁰

5.4.5.3. The Japanese Stripping Revisited

With respect to the Japanese stripping construction, all the examples that we have considered above involve the form in (111a) rather than that in (111b) or (111c).

(111)

- a. NP mo da
ALSO be
- b. NP-ni mo da
- c. NP-o mo da

Recall (i) that the form in (111a) does not yield the subjacency effects, unlike its English counterparts and (ii) that our predictions regarding the sloppy/strict readings, repeated in (112) below, have failed with NP-mo da.

(112) Predictions (= (xx) on p.x)

- a. Sloppy reading is possible for those categories that can be construed as bound variables.
- b. Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

Based on the preceding discussion of the Japanese topic and cleft constructions, one might suspect that the subjacency effects show up in the Japanese stripping construction if the form in (111b) or (111c) is used. One might further suspect that the predictions given in (112) will in fact be borne out if we use a case-marked NP before mo da, as in (111b) and (111c). I will now argue that this is indeed the case.

5.4.6. The Subjacency in the Japanese Stripping

We have seen earlier that while (113b) in English is not acceptable, (113a) in Japanese is.⁴¹

(113)

- a: People who make French cuisine come here often.
- b: ?*Italian cuisine, too.

(114)
 a: NP[s' pro furansu ryoori-o tukuru] hito]-ga yoku koko-ni kuru
 French cuisine-ACC make people-NOM often here-to come
 "People who make French cuisine come here often."

b: Itariya ryoori-mo da
 Italian cuisine-also be
 'Italian cuisine too'

Similarly, (115b) seems acceptable.

(115)
 a: [Bill-ni deki-ru gaikokugo]-ga kokuren-no kooyoogo-ni natita
 Bill-DAT can do foreign lang-NOM U.N.-GEN official lang-DAT became
 "The language that Bill can speak has become an official language in the
 U.N."

b: John-mo da
 John-ALSO be
 'John too'

In accordance with the preceding discussion on the topic and cleft constructions in Japanese, we expect that the utterances in (114b) and (115b) would become unacceptable if Itariya ryoori 'Italian cuisine' and John are case-marked. Indeed, (116) and (117) seem unacceptable as response to (114a) and (115a), respectively.

(116) (in response to (114a))
 *Itariya ryoori-o-mo da
 Italian cuisine-ACC-ALSO be
 'Italian cuisine too'
 intended as "People who make Italian cuisine (as well as those who make French cuisine) come here often."

(117) (in response to (115a))
 *John-ni-mo da
 John-DAT-ALSO be
 'John too.'
 intended as "The language that John can speak (as well as the one that Bill can speak) became official in the U.N."

Examples in (118), (119) and (120) show that NP-o and NP-ni can occur in the stripping construction, when the phrase that corresponds to them in the first conjunct (or in the utterance preceding it) is not in a syntactic island.

(118)⁴²
 a. John-ga Furansu ryoori-o tukutta (tte)
 John-NOM French cuisine-ACC made (I heard)
 'John made French cuisine (I heard).'

b. Itariya ryoori-o-mo da (yo)
 Italian cuisine-ACC-ALSO be
 'Italian cuisine, too.'

(119)
 a. Mary-(wa/ga) [s' Yamada-ga Chomsky-ni atta to] itteita (yo)
 Mary-TOP/NOM Yamada-NOM Chomsky-DAT met that was saying
 'Mary was saying that Yamada had met Chomsky.'

b. Halle-ni-mo da (yo)
 Halle-DAT-ALSO be
 'Halle, too.'

(120)
 a: Bush-wa [s' Nakasone-ga [s' Nihon-ga Amerika-ni noo-to
 Bush-TOP Nakasone-NOM Japan-NOM America-DAT "NO"
 yuubekida to] itta to] omotteiru (yo)
 should say that said that thinks
 'Bush thinks that Nakasone said that Japan should say "NO" to the
 United States.'

b: Furansu-ni-mo da (yo)
 France-DAT-ALSO be
 'To France, too.'

The unacceptable status of (116) and (117) (as response to (114a) and (115a), respectively) thus confirms our expectation that the case-marked NP in the stripping construction exhibits the subadjacency effects, as in the case of the English stripping construction.

5.4.7. The Sloppy Reading in the Japanese Stripping

Recall the predictions we have made earlier, which are repeated below.

(121) Predictions (= (xx) on p.x)

- a. Sloppy reading is possible for those categories that can be construed as bound variables.
- b. Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

In chapter 4, we have seen that while *kare* cannot be construed as a bound variable, *sore* can. Thus the prediction in (121) means (i) that *kare* cannot yield sloppy reading but *sore* can. We have seen earlier that, contrary to this expectation, what appears to be a sloppy reading is possible with *kare* in the Japanese stripping construction. We have furthermore seen that what appears to be a sloppy reading obtains even when the relevant c-command requirement is not satisfied. What is used in the relevant stripping examples above is bare NP's, rather than case-marked NP's.

Given the result in the preceding subsection that bare NP's do not exhibit the subjacency effects, but case-marked NP's do, we expect that the predictions in (121) might indeed be borne out if we use case-marked NP's instead of bare NP's.

Let us first consider the c-command requirement. In xx, we have noted that the utterance in (122b) seems consistent with the situation depicted in (123).

(122) (= (xx))

a: [NP [s eck hitome pro_i mita] hito_k]-ga John_i-o sukininata (tte)
 one glance saw person-NOM John-ACC fell-in-love
 'The/a person who took a glance at him_i fell in love with John_i.'

b: Bill-mo da (yo)
 Bill-ALSO be
 'Bill too.'

(123) a person who took a glance at Bill fell in love with Bill.

We now expect that (124), as a response to (122a), is inconsistent with the situation in (123).

(124) (as a response to (122a))
 Bill-o-mo da (yo)
 Bill-ACC-ALSO be
 'Bill, too.'

The utterance in (124) indeed does not allow the reading given in (123).

Similarly, the sloppy reading does not seem possible in (125b).

(125)

a: [NP [ei (mukasikara zutto) pro_j aitagatteita] hito_i]-ga
 (since long ago) wanted-to-meet person-nom
 (yatto) John_j-ni acta (tte)
 (finally) -with was able to meet
 "The person who had long wanted to meet him_i was finally able to meet John_j."

b: Paul-ni-mo da (yo)
 Paul-DAT-ALSO be
 'Paul, too.'

The utterance in (125b), as a response to (125a), allows the strict reading illustrated in (126a) but not the sloppy reading illustrated in (126b).⁴³

(126)

- a. The person who had long wanted to meet John was finally able to meet Paul as well." (Strict Reading)
- b. The person who had long wanted to meet Paul was finally able to meet Paul as well." (Sloppy Reading)

Notice that (122a) and (125a) do not satisfy the relevant c-command requirement for a sloppy reading (i.e. bound variable construal, by assumption) since *John* does not c-command *pro*. If the relevant c-command requirement is satisfied as in (127a), the sloppy reading is possible, even with case-marked NP in the "second" conjunct.⁴⁴

(127)

a: Mary-ga John_j-ni [NP[pro_i e_j aitagatteita] hito_j]-o yookaisita (tte)
 Mary-NOM John-DAT wanted-to-meet person-acc introduced (I heard)
 Mary introduced to John_j the person that he_i wanted to meet."

- b: Bill-ni-mo da (yo)
 Bill-DAT-ALSO be
 'To Bill, too'

The utterance in (127b) seems to allow the reading in (128a) or (128b).⁴⁵

(128)

- a. Mary introduced to Bill the person that John wanted to meet.
 (Strict Reading)
 b. Mary introduced to Bill_i the person that Bill_i wanted to meet.
 (Sloppy Reading)

Let us now consider the availability of sloppy and strict readings with soko. We have seen in Ch. 4 that soko may function as a bound variable. We thus predict that soko would yield a sloppy reading, as long as the relevant c-command requirement is satisfied. The prediction seems borne out, as indicated by the following examples.

(129)

- a: John-wa Toyota_i-ni [NP soko_i-ni hairitagatteita hito]-o syookaisita
 John-TOP Toyota-DAT there-DAT wanted to join person-ACC introduced
 'John introduced to Toyota_i (the/a) person(s) who wanted to join it_i.'

- b: Nissan-ni-mo da
 Nissan-DAT-ALSO be
 'To Nissan, too.' (the sloppy reading allowed)

(130)

- a. John-wa [NP soko_i-ni hairitagatteita hito]-ni
 John-TOP there-DAT wanted to join person-DAT
 Toyota_i-(no koto-o/-ni tuite) tazuneta
 Toyota-{GEN matter-ACC/-about} asked
 'John asked (the/a) person(s) who wanted to join it_i about Toyota_i.'

- b: Nissan-{no koto-o/-ni tuite}-mo da
 Nissan-{GEN matter-ACC/-about}-ALSO be
 'About Nissan, too.' (the strict reading only)

As indicated above, the sloppy reading is possible when the relevant c-command requirement is satisfied (in the "first conjunct") as in (129). On the other hand, when Toyota does not c-command soko as

in (130a), the sloppy reading is not possible for (130b).

Observe that the contrast between (129) and (130) is analogous to the contrast of the sort noted earlier between (131a) and (131b).

(131)

- a. John-wa [[Toyota to Nissan]_i/subete-no zidoosya gaisya_i]-ni
 John-TOP Toyota and Nissan/ all-GEN auto company-DAT
 [NP soko_i-ni hairitagatteita hito]-o syookaisita
 there-DAT wanted to join person-ACC introduced
 'John introduced to [[Toyota and Nissan]_i/every auto company_i]
 (the/a) person(s) who wanted to join it_i.'

- b. *John-wa [NP soko_i-ni hairitagatteita hito]-ni
 John-TOP there-DAT wanted to join person-ACC
 [[Toyota to Nissan]_i/subete-no zidoosya gaisya_i]-{no koto-o/-ni tuite}
 Toyota and Nissan/ all-GEN auto company-{GEN matter-ACC/-about}
 tazuneta
 asked
 'John asked (the/a) person(s) who wanted to join it_i about [[Toyota
 and Nissan]_i/every auto company_i].'

Notice, furthermore, that the use of asoko in place of soko in (129) makes the sloppy reading completely impossible despite the fact that the relevant c-command requirement is satisfied. This is illustrated in (132).⁴⁶

(132)

- a: John-wa Toyota_i-ni [NP asoko_i-ni hairitagatteita hito]-o
 John-TOP Toyota-DAT there-DAT wanted to join person-ACC
 syookaisita
 introduced
 'John introduced to Toyota_i (the/a) person(s) who wanted to join
 it_i.'

- b. Nissan-ni-mo da
 Nissan-DAT-ALSO be
 'To Nissan, too.' (the strict reading okay)

It seems that the sloppy reading is not allowed in (132). This is as expected since we independently know that asoko 'there' cannot function as a bound variable and that the substitution of asoko for soko in (131a) results in unacceptability; cf. Ch. 4.⁴⁷

So far in this subsection, we have seen that, when a case-marked NP (instead of a bare NP) appears in the stripping construction, (i) the relevant c-command requirement must be satisfied in order for the sloppy reading to obtain and (ii) while soko 'there/that place/the place' and pro yield a sloppy reading, asoko 'there/that place' does not. The result in (i) is as expected, given the standard view (which we adopt) that equates a sloppy reading to bound variable construal. The result in (ii) is also expected, given our earlier conclusion that while soko (and pro) can function as a bound variable, asoko, a member of the a series, cannot. These two results can thus be taken as confirming evidence for the predictions recorded in (121), repeated below.

(121) Predictions (= (xx) on p.x)

- a. Sloppy reading is possible for those categories that can be construed as bound variables.
- b. Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

What remains to be demonstrated is that kare does not yield sloppy reading in the stripping construction with case-marked NP's. This is expected, given the earlier conclusion that kare cannot function as a bound variable. This prediction seems to be borne out, as indicated below, although the judgments are somewhat unclear. First, consider (133) and (134).⁴⁸

(133)

a. linkai-wa Toyota_i-o [s' soko-ga yakuza-to kettakusite committee-TOP Toyota-ACC it-NOM Yakuza-with joining in force kokein-no yunyuu-o siteita to] happyoosita cocaine-GEN import-ACC was importing that' announced 'The committee has announced of Toyota_i that it has been working with Yakuza (gang organizations) and has been importing cocaine.'

b: Nissan-o-mo da
Nissan-ACC-ALSO be
'Nissan, too.'

(134)

a: Yamada-si-wa manga bunkai-o [s' sorei-ga Nihon-o Mr. Yamada-TOP comic culture-ACC it-NOM Japan-ACC horobosu-koto-ni-naru to] omoikondeiru (yo) end up ruining that believe 'Mr. Yamada believes of the [comic culture]_i that it_i will end up ruining Japan.'

b: Rokkun rooru-o-mo da (yo)
rock'n role-ACC-ALSO be
'Roke'n role, too.'

To the extent that they are acceptable, the (b) examples in (133) and (134) seem to yield the sloppy reading for soko and so-re.⁴⁹ This contrasts with (135), in which the relevant bindee is kare.

(135)

a. linkai-wa Yamada moto syusyooi-o [s' karei-za yaguza-to committee-TOP Ex-Prime Minister Yamada-ACC he-NOM Yakuza-with kettakusite kokein-no yunyuu-o siteita to] happyoosita joining in force cocaine-GEN import-ACC was doing that announced 'The committee has announced of Ex-Prime Minister Yamada_i that he_i has been working with Yakuza (gang organizations) and has been importing cocaine.'

b: *?Yamamoto moto zoosyoo-o-mo da
Ex-Finance Minister Yamamoto-ACC-ALSO be
'Ex-Finance Minister Yamamoto, too.'

The (b) example in (135) does not seem to give the sloppy reading. Since the strict reading for it, as indicated in (136), is pragmatically odd, the utterance in (135b) itself is quite marginal; cf. footnote x (the one on someone falling love with Bill as the result of seeing John.)

(136) The committee has announced of Ex-Finance Minister Yamamoto that Ex-Prime Minister Yamada has been working with Yakuza (gang organizations) and has been importing cocaine

If kare in (135) is replaced by pro, as in (137), the sloppy reading seems possible.

(137)

a: Iinkai-wa Yamada moto syusyooi-o [s' pro_i yaguza-to
 committee-TOP Ex-Prime Minister Yamada-ACC Yakuza-with
 kettakusite kokein-no yunyuu-o siteita to] happyoosita
 joining in force cocaine-GEN import-ACC was doing that announced
 'The committee has announced of Ex-Prime Minister Yamada_i that
 he_i has been working with Yakuza (gang organizations) and has
 been importing cocaine.'

b: Yamamoto moto zoosyoo-o-mo da
 Ex-Finance Minister Yamamoto-ACC-ALSO be
 'Ex-Finance Minister Yamamoto, too.'

In (137), the embedded subject is represented as *pro*. It is thus assumed in (137) that *pro* is acting as a bound variable when the utterance in (b) yields the sloppy reading. One might, however, argue that the the surface string represented in (137a) need not have *pro* in the embedded S and that the *Q*-marked NP, i.e. *Yamada moto syusyooi* is in the embedded subject position, constituting the so-called exceptional case-marking construction. One might thus argue that if this latter possibility cannot be denied, it is not yet established that (137b) indeed yields the sloppy reading.

Let us thus consider a case in which the embedded subject is overtly expressed. Consider (138).

(138)

a: Iinkai-wa aru syuugin giin-i-o
 committee-TOP a certain member of the Upper House-ACC
 [s' soitui-ga yaguza-to kettakusite kokein-no yunyuu-o
 the guy-NOM Yakuza-with joining in force cocaine-GEN import-ACC
 siteita to] happyoosita
 was doing that announced
 'The committee has announced of [a certain member of the Upper
 House]_i that the guy_i has been working with Yakuza (gang
 organizations) and has been importing cocaine.'

b: Aru gensyoku-no daizin-o-mo da
 certain incumbent-GEN minister-ACC-ALSO be
 'One incumbent minister, too.'

In (138b), the sloppy reading seems possible.

The data given in (133) through (138) thus indicate that, when *Q*-marked NP's rather than bare NP's are used in the stripping

construction, the sloppy reading is not possible with *kare*, while it is with *soitu* 'the guy'. These results are precisely as we expect, given the discussion presented above.

When we use *ni*-marked NP, the judgments are somewhat less clear. Nevertheless, the data indicate that *kare* tends to favor the strict reading. Consider the example in (139).

(139) (Cf. (127).)

a: Mary-ga kinoo Johni-ni [NP[s' (*pro*/aitui-ga/karei-ga)
 Mary-NOM yesterday John-DAT that guy-NOM/he-NOM
 zutto mae kara *Q* hosigatteita] kabinj-i-o ageta (tte)
 since long ago wanted-to-have vase-ACC gave (I heard)
 'Mary gave to John_i the vase that he_i had wanted to have for a long
 time.'

b: Bill-ni-mo da (yo)
 Bill-DAT-ALSO be
 'To Bill, too'

With *kare*, it appears that the strict reading is preferred. But what appears to be the sloppy reading does not seem impossible here. It is interesting to note that the sloppy reading, appears possible not only with *pro* but with *kare* and *aitu* in (139).

Recall that we have seen earlier (i) that the members of the *a* system fail to function as bound variables and (ii) that *asoko* 'that place' fails to yield the sloppy reading in the stripping construction with case-marked NP's as in . This indicates that what appears to be the sloppy reading in (139b) may actually be independent of bound variable construal.

5.4.7.1. Sloppy Reading without Bound Variable Construal

This possibility has in fact been implied, although we did not discuss it explicitly, since the beginning of 5.4.3.1, where we have observed, contrary to the two predictions we have made in 5.4.1, that *kare* yields the sloppy reading, regardless of whether the relevant c-command requirement is satisfied. Consider (140) and (141), repeated from 5.4.3.1.

(140)

a. Johnj-ga [NP[S proj [proj/karej]-o butta] otokoj]-o uttaeta (tte)
-nom he-acc hit man-acc sued (I heard)
'Johnj sued the man who hit himj (I heard).'

b. Bill/Mary-mo da (yo)

Bill/Mary-ALSO be
'Bill/Mary too.'

(The sloppy reading seems possible with kare as well as with pro.)

(141)

a. [NP [S eek hitome karej-o mita] hitok]-ga Johnj-o sukininatta (tte)
one glance he-ACC saw person-nom -ACC fell-in-love
'The person who took a glance at himj fell in love with Johnj.'

b. Bill-mo da (yo)

Bill-ALSO be

'Bill too.' (The sloppy reading seems possible.)

The apparent availability of the sloppy reading in (140) and (141) is contrary to the predictions made earlier and repeated below once again.

(121) Predictions (= (xx) on p.x)

a. Sloppy reading is possible for those categories that can be construed as bound variables.

b. Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

(140) illustrates that (121a) is not borne out, and (141) indicates that both (121a) and (121b) fail to be confirmed.

We have subsequently observed, however, that the Japanese stripping construction with bare NP's do not obey the subjacency, unlike the English stripping construction. The Japanese stripping construction with case-marked NP's, on the other hand, have been shown not only to observe the subjacency but to confirm the predictions in (121).

We therefore want to maintain that what appears to be sloppy reading in the utterances in (140b), (141b) and, to a lesser degree, in (139b), is not related to bound variable construal.

Recall the suggestion made in Saito (1985, Ch. 4) that bare NP topics may be "licensed" by an aboutness relation. Recall also the

observation, made in an earlier subsection, that bare NP's in the cleft focus position may be "licensed" by an aboutness relation. I suggest that bare NP's in the stripping construction may also be "licensed" by an aboutness relation. The notion of "aboutness" has not, however, been made explicit in the preceding discussion. In the case of the stripping construction, I want to relate the "aboutness" licensing to a particular syntactic form. Take (140b) and (141b), for example, which are repeated below.

(140b) Bill/Mary-mo da (yo)

Bill/Mary-ALSO be
'Bill/Mary too.'

(141b) Bill-mo da (yo)

Bill-ALSO be
'Bill too.'

It is possible to replace (140b) and (141b), which are in response to (140a) and (141a), with (142) and (143), respectively.

(142) (in response to (140a))

Sore-wa Bill/Mary-mo da
it-TOP Bill/Mary-ALSO be
(Lit.) 'As for that, Bill/Mary, too'

(143) (in response to (141a))

Sore-wa Bill-mo da
it-TOP Bill-ALSO be
(Lit.) 'As for that, Bill, too'

Consider a discourse in (144) below, which consists of (141a) and (143).

(144)

a: [NP [S eek hitome karej-o mita] hitok]-ga Johnj-o sukininatta (tte)
one glance he-ACC saw person-nom -ACC fell-in-love
'(The/A) person who took a glance at himj fell in love with Johnj.'

b: Sore-wa Bill-mo da

it-TOP Bill-ALSO be

(Lit.) 'As for that, Bill, too'

The apparent availability of the sloppy reading in (144) in Japanese in fact can be witnessed in English, as well. We have earlier noted Reinhart's (1983, Ch. 7) observation that, while the second conjunct of (145) can have the sloppy reading, that of (146) cannot; but cf. footnote xx.

(145)

- a: John loves his father. (Cf. No one_i loves his_i father.)
b: Bill too. (The sloppy reading is possible.)

(146)

- a: His father loves John. (Cf. *His_i father loves no one_i.)
b: Bill too. (The sloppy reading is not possible.)

In contrast to (146b), (147b) appears to have the sloppy reading.

(147)

- a: His father loves John.
b: (Well) The same thing can be said of Bill, too.

The discourse in (147) in English thus seems quite analogous to that in (144) in Japanese. The relevant c-command requirement is NOT satisfied either in (147a) or in (144a). Yet (144b) is consistent with the situation described in (148), and (147b) the situation described in (149).

(148)

(The/A) person who took a glance at Bill fell in love with Bill.

(149)

Bill's father loves Bill.

I thus assume that the apparent possibility of the sloppy reading in (144b) and (147b) are due to the same reason.

Note that the fact that the utterances in (144b) and (147b) are consistent with the situations depicted in (148) and (149), respectively, does not immediately warrant a conclusion that (144b) and (147b) yield sloppy readings. If the relevant readings in (144b) and (147b) are indeed the sloppy readings, we would have to abandon our, otherwise well motivated, assumption that the sloppy reading involves bound variable construal. Given the data in (144) and (147), we may alternatively assume that the relevant readings for (144b) and (147b) do not involve bound variable reading and

hence are not instances of "genuine sloppy reading".

It is not clear to me, at this point, how we can formally capture the fact that (144b) and (147b) are consistent with the situations depicted in (148) and (149), respectively; and I will not attempt to provide an answer to this question. This is, however, indication that some non-syntactic factor is involved in the apparent availability of the sloppy reading in the case of the stripping construction with bare NP's, not only in Japanese but also in English. Consider again the discourse in (150).

(150)

- a: His_i students admire John_i.
b: Bill, too.

According to Reinhart (1983, Ch. 7), the sloppy reading in (150) is not allowed. (Recall that Reinhart attributes this to the fact that John does not c-command his in (150).) As first pointed out to me by Robert May (p.c. spring, 1988), however, (150b) does not seem to some speakers to be completely inconsistent with the situation depicted in (151).

(151) Bill's students admire Bill, too.

An utterance like (152), as a response to (150a), seems to be somewhat more readily consistent with the situation indicated in (151).

(152) Well, Bill, too.

The same seems to hold in the case of (153) as well.

(153) ((b,c) as responses to (c))

- a: His_i students often talks to John_i.
b: Bill, too.
c: Well, Bill, too.

Now, it is interesting to note that when a PP appears in the stripping construction as in (154b) or (154c), the sloppy reading is much more strongly disallowed.

- (154) ((b,c) as responses to (a))
 a: His_i students often talks to John_j.
 b: To Bill, too.
 c: Well, to Bill, too.

That is, (154b) and (154c) are simply hopeless with the interpretation in (155).

- (155) Bill's students talked to Bill, too.

This is in contrast with the fact that (153b') may be understood as consistent to a degree with the same situation.

It seems that the contrast under discussion, which is analogous to the NP/PP (or more accurately, bare NP v.s. case-marked NP) distinction in Japanese, is due to the fact that to Bill is to be interpreted unambiguously as an object of talk whereas Bill need not be taken unequivocally as the object of admire/talk to. To the extent that (154b) and (154c) are, no matter how marginally, compatible with the situation in (155), Bill in such utterances seems to be taken not as the object to admire/talk to but as something like an NP that corresponds to Bill in (156b).⁵⁰

- (156)
 a. His_i students often talk to John_j.
 b. The same thing can be said of Bill, too.
 c. *The same thing can be said of to Bill, too.

Let us now return to Japanese. The relevant generalization seems to be as follows.

(157) Generalization

The unexpected "sloppy reading" (i.e. (i) with categories that cannot function as bound variables and/or (ii) in configurations that do not satisfy the c-command requirement) is possible in (I) when (IIa) and (IIb) are possible.

- (I) X-mo da
 ALSO be 'X, too'

- (II) a. sore-wa X-mo da
 that-TOP ALSO be
 'As for that, X, too.'

- b. X-mo soo da
 ALSO that way
 'X is also in that way'
 'That also holds of X, too.'

Recall that the utterance in (b) in the following discourse does not seem to totally disallow the sloppy reading, despite the use of NP-ni.

(139) (Cf. (127).)

- a: Mary-ga kinoo John-ni [NP[S' {pro_i/aitu_j-ga/kare_j-ga]
 Mary-NOM yesterday John-DAT that guy-NOM/he-NOM
 zutto mac kara e_j hosigatteita] kabinj_j-o ageta (tte)
 since long ago wanted-to-have vase-ACC gave (I heard)
 'Mary gave to John_j the vase that he_j had wanted to have for a long time.'

- b: Bill-ni-mo da (yo)
 Bill-DAT-ALSO be
 'To Bill, too'

In light of the generalization in (157), we might expect that the apparent availability of the sloppy reading in (139b) fails under the generalization in (157). It indeed appears the case that (158c) and (158d) are better than (159c) and (159d).

(158) ((b,c,d) are intended as responses to (a).

- a: Mary-ga John-ni ningyoo-o ageta/kaesita (tte)
 Mary-NOM John-DAT doll-ACC gave/returned
 'Mary gave/returned a doll to John.'

- b: Bill-ni-mo da (yo)
 Bill-DAT-ALSO be
 'To Bill, too'

- c: *?/? Sore-wa Bill-ni-mo da (yo)
 that-TOP Bill-DAT-ALSO be
 '*That is true of to Bill too.'

- d: *? Bill-ni-mo soo da (yo)
 Bill-DAT-ALSO that way be
 'Bill is that way too.'
 'The same is true of Bill, as well.'

(159)

a: Mary-ga John-ni ningyoo-o ageta/kaesita (tte)
Mary-NOM John-DAT doll-ACC gave/returned
'Mary gave/returned a doll to John.'

b: Hana-o-mo da (yo)
flower-ACC-ALSO be
'Flowers, too.'

c: *Sore-wa Hana-o-mo da (yo)
that-TOP flowers-ACC-ALSO be
'That is true of flowers, too.'

d: *Hana-o-mo soo da (yo)
flower-ACC-ALSO that way be
'Flowers were also that way.'
'The same was true of flowers, as well.'

If we delete *ni* and *o* in the (c) and (d) examples in (158) and (159) they seem to become fully acceptable.⁵¹ What is of importance is the fact that (158c) and (158d) are better than (159c) and (159d). I suggest that this is related to the apparent availability of the sloppy reading in (139).

It in fact appears to be the case that the degree of the apparent availability of the sloppy reading correlates with the acceptability of the form given in (II) of (157). Consider (160).⁵²

(160)

a: Sensei-ga John-ni [pro_i/kare_i-no heya]-o soozisasete (tte)
teacher-NOM John-DAT he-GEN room-ACC criticize-caused
'The teacher made John criticize his room, (I heard)'

b: Bill-ni-mo da (yo)
Bill-DAT-ALSO be
'Bill, too'

The degree to which the speakers find the utterance in (b) compatible with the situation depicted in (161) seems to correlate with the degree to which these speakers find (162a) and (162b) acceptable as a response to (160a).

(161) The teacher made Bill criticize Bill's room, as well.

(162) (as a response to (160a))

a: *?Sore-wa Bill-ni-mo da (yo)
that-TOP Bill-DAT-ALSO be
'That is true of Bill, as well.'

b: *?Bill-ni-mo soo da (yo)
Bill-DAT-ALSO that way be
'Bill was also in that way.'
'The same is true of Bill, as well.'

It thus seems reasonable to assume that the sloppy reading is apparently possible in examples like (139), (162), (160) and (141) for the same reason. While it is not clear to me what the reason is, I want to assume that it is more pragmatic than syntactic.

5.4.7.2. Summary

The examination of the Japanese stripping with the case-marked NP has thus revealed that the predictions recorded in (121) above, repeated below again, are indeed borne out.⁵³

(121) Predictions (= (xx) on p.x)

- Sloppy reading is possible for those categories that can be construed as bound variables.
- Sloppy reading is possible, precisely in those configurations in which bound variable construal is possible (the c-command sensitivity).

In particular, we have seen that while *soko* 'the place', a member of the *so* system, yields sloppy readings, *asoko* 'that place', a member of the *a* system, and *kare* cannot. This is in accordance with the prediction in (121a). We have also observed that the c-command requirement is crucial for the sloppy reading to obtain, as predicted in (121b). The Japanese data examined in this section thus confirm not only the standard view that the sloppy reading involves bound variable construal but the earlier conclusions we reached in chapter 4 regarding the status of nominal categories in Japanese with respect to bound variable construal.

What has proven to be crucial in the preceding discussion is the distinction between bare NP's and case-marked NP's. The distinction (as that between NP v.s. PP) was first observed in Saito (1985, Ch. 4) to be relevant in identifying a syntactic movement in the case of the

Japanese topic construction. The preceding discussion has demonstrated that the distinction between bare NP's and case-marked NP's plays an important role in identifying syntactic movement in the Japanese stripping construction, as well as in the Japanese cleft construction. The relevant generalization is schematized below. In the following, a case-marked NP is represented below as NP-CASE and a PP is treated as an instance of a case-marked NP.

(163) The Topic Construction

- a. NP-wa [s ...] (An aboutness licensing is possible.)
- b. NP-CASE-wa [s ...] (Syntactic movement is obligatory.)

(164) The Cleft Construction

- a. [s' ... no]-wa NP da (An aboutness licensing is possible.)
- b. [s' ... no]-wa NP-CASE da (Syntactic movement is obligatory.)

(165) The Stripping construction

- a. ... NP-mo da (An aboutness licensing is possible.)
- b. ... NP-CASE-mo da (Syntactic movement is obligatory.)

Following Saito (1985, Ch.4), I assume that the structures in (a) above MAY involve syntactic movement. What is crucial is that these structures NEED NOT involve syntactic movement. Roughly speaking, the (a) structures MAY be pragmatically licensed while the (b) structures MUST be syntactically licensed. In the next section, I will point out that such a distinction between (165a) and (165b) corresponds to Hankamer and Sag's (1976) distinction between deep and surface anaphora.

5.5. "Deep and Surface Anaphora"

Hankamer and Sag (1976) (=H&S) distinguishes "syntactically controlled anaphora" and "pragmatically controlled (or deictic) anaphora". Consider their examples given below for illustration of this point.⁵⁴

(166) (H&S's (5))

Hankamer: I'm going to stuff this ball through this hoop.
Sag: It's not clear that you'll be able to.

(167) (H&S's (6))

- a. [Sag produces a cleaver and prepares to hack off his left hand]
Hankamer: #Don't be alarmed, ladies and gentlemen, we've rehearsed this act several times, and he never actually does.
- b. [Same context]
Hankamer: He never actually does it.

H&S argue that the VP Deletion is a syntactically controlled anaphora and thus requires a linguistic antecedent, as indicated by the contrast between (166) and (167a). Since it can be deictic (i.e., since Do it is a pragmatically controlled anaphora), H&S argue, (167b) is acceptable even without a linguistic antecedent. The crucial difference is thus whether a given "anaphoric element" requires a linguistic antecedent or not. Those that require linguistic antecedents are called "syntactically controlled" anaphora and those that do not are called "pragmatically controlled" anaphora.⁵⁵

In this section, I will point out, based on this operational test of H&S's, that the bare NP stripping in Japanese may be a pragmatically controlled anaphora while case-marked NP stripping must be a syntactically controlled anaphora. I will also point out that the so-called Japanese Do So, i.e. soo shi, may indeed be a pragmatically controlled anaphora, based on the same operational test.

Before we discuss the relevant Japanese examples, let us consider a few more paradigms from H&S, given in (168) through (171).

(168) (H&S's (83))

I did not ride a camel, but Ivan must have done so, and now our office is infested with its fleas.

(169) (H&S's (86))

[Hankamer again attempting to pass 12" ball through 6" hoop]
Sag: #I don't think you can do so.

(170) (H&S' (46))

Hankamer: Listen, Ivan, he's playing the William Tell Overture on the recorder.
Sag: Yeah, but not very well.

(171) (H&S's (47))

[Sag plays William Tell Overture on recorder]

Hankamer: #Yeah, but not very well.

The examples in (168) and (170) illustrate the do so construction and those in (170) and (171) the stripping.⁵⁶

We have seen in 5.4 that, when appearing in the "focus" position of the stripping construction, case-marked NP's exhibit radically different properties from bare NP's, with respect to the phenomenon of sloppy identity. Recall also that the subjacency is observed in the stripping construction with a case-marked NP, but not with a bare NP. It has been argued, based on these observations, that the stripping with a case-marked NP must involve syntactic movement while that with a bare NP need not. It seems reasonable to relate this distinction to H&S's distinction between syntactically controlled and pragmatically controlled anaphora. Given the assumption that the stripping with a case-marked NP must be an instance of syntactically controlled anaphora and that with a bare NP may be a pragmatically controlled anaphora, we expect that the stripping with a case-marked NP requires linguistic antecedent, while that with a bare NP as in (174) and (175) do not. This indeed seems to be the case, as will be illustrated by the paradigms given below.

Let us first consider the utterance in (172).

(172)

[Taroo and Yoko are observing Mr. Smith speak fluent Japanese on the screen]

Taroo: Tyuugokugo-mo desu (yo)
Chinese-ALSO be
"Chinese, too."
(intended as "Mr. Smith speaks Chinese very well, too.")

The acceptability of the utterance in (172) indicates that the Japanese stripping with a bare NP may be pragmatically controlled, in contrast to what is reported about English stripping in H&S; cf. (171) above.⁵⁷ The acceptability of the utterance in (173) makes the same point. (I follow H&S with the use of "#".)

(173)

[Same context as (172)]

Taroo: Musuko san-mo desu (yo)
son-ALSO is
"His son, too."
(intended as "His son can speak Japanese very well, too.")

Notice that when a case-marked NP is used, as in (174) and (175), then the utterance seems unacceptable without a linguistic antecedent.

(174)

[Same context as (172) and (173)]

Taroo: #Tyuugokugo-o-mo desu (yo)
Chinese-ACC-ALSO be
"Chinese, too."
(intended as "He speaks Chinese very well, too.")

(175)

[Same context]

Taroo: #Musuko san-ni-mo desu (yo)
son-DAT-ALSO is
"His son, too."
(intended as "His son can speak Japanese very well, too.")

When "linguistic antecedents" are provided as in (176) and (177), the utterances in (174) and (175) become acceptable.

(176)⁵⁸

Yoko: Smith-san-wa nihongo-o totemo zyoozun hanasimasu yo
Mr. Smith-TOP Japanese-ACC very much fluently speak
'Mr. Smith speaks Japanese very well, you know.'
Taroo: #Tyuugokugo-o-mo desu yo
Chinese-ACC-ALSO be
'Chinese, too.'

(177)

Yoko: Smith san-ni-wa nihongo-ga dekimasu yo
Mr. Smith-dat(-top) Japanese-nom is capable of
'Mr. Smith can speak Japanese.'

Taroo: Musuko san-ni-mo desu (yo)
son-DAT-ALSO is
'His son, too.'

Taroo's utterances in (176) and (177), without *o* (ACC) or *ni* (DAT) are also acceptable. The observations in (172)-(177) thus indicate that while the stripping with a case-marked NP is a syntactically controlled anaphora, that with a bare NP is not, confirming the conclusion in 5.4 that the former must involve syntactic movement and the latter need not.

Let us now consider the so-called Japanese *do so*. We have seen in 5.3 that the *soo* in the *soo su* construction is one of the members of the *so* paradigm and its basic meaning is "in that way". It must therefore be the case that *soo su* must be able to mean 'do (something) in that way', even if it may also be used "anaphorically". We thus expect that *soo su*, in contrast to English *do so* as described in H&S, can be used without linguistic antecedents. This indeed seems to be a correct prediction, as illustrated in (178).

(178)
[After a meal, John put his hands together in front of his face, showing gratitude]
Yoko: Ara, watasi-no haha-mo itumo soo suru wa
Hey I-GEN mother-ALSO always so do
'Hey, my mother always does so too.'

While the Japanese utterances in (178) are perfectly natural, its English counterpart given as the translation above is odd, having the status of H&S's #. The utterance in (179) is acceptable in the same context.

(179) Hey, my mother always does that too.

This observation constitutes confirmation that *soo* can be used as deictic.⁵⁹ This result is completely in accord with the earlier observation made in 5.3.

In accordance with H&S's operational test that distinguishes between syntactically controlled anaphora and pragmatically controlled anaphora, the Japanese paradigms considered in this section confirm that (i) stripping with a bare NP can be an instance of pragmatic anaphora and (ii) stripping with a case-marked NP must be an instance of syntactic anaphora and (iii) *soo su* can be an

instance of pragmatic anaphora. These results, as indicated above, are completely in accordance with the conclusions drawn in the preceding sections.

Examples like (180) might be offered as counterexamples to the generalization noted above.

(180)
[The waiter brings John a glass of water.]
Mary: Watasi-ni mo
I-DAT ALSO
'(For) me, too.'

Cases like these correspond to the apparent counterexamples to H&S, which H&S discuss in their footnote 19. Citing cases like (181) and (182), they point out that "in each of these cases the illocutionary force is not declarative."

(181) (S&H's (i))
Not in my wastebasket, you don't.

(182) (S&H's (ii))
[Hankamer brandishes cleaver, advances on Sag]
Sag: Don't! My God, please don't.

They indicate that the requirement of syntactic control appears to hold only for strictly declarative sentences, sentences with the illocutionary force of statement. The acceptability of cases like (180) and the unacceptability of the stripping construction with a case-marked NP noted above indeed confirm their claim.

Recall that the distinction between bare NP's and case-marked NP's that is utilized above, is a generalized version of Saito's (1985, Ch. 3) distinction between PP and NP (i.e. PP topics and NP topics in the context of his discussion there). James Huang (p.c., spring of 1987) suggested that the relevant difference may be more general. He suggested that it may be between those phrases that need be licensed sentence-internally and those that need not. Consider now the examples in (183) and (184) below.

(183)

[Taroo is making sushi]

Ziroo: #Boku-yori {zyoozuni/umaku} da yo
I-than skillfully be
(intended as '[You make/He makes] sushi more skillfully than I do (I tell you).')

(184)

Yoko: Taroo-ga susi-o tukutta no?

Ziroo: Boku-yori {zyoozuni/umaku} da yo

'More skillfully than me (I tell you).'

(intended as 'He made sushi more skillfully than me (I tell you).')

As indicated, Ziroo's utterance in (183) is not acceptable without a linguistic antecedent; cf. the H&S's example in (170). Notice further that (185), which does not have the form of stripping, is acceptable.

(185)

[Same context as (183)]

Ziroo: Boku-yori {zyoozuni/umaku} tukuru yo

I-than skillfully make

'He makes sushi more skillfully than I do (I tell you).'

The array of data given in (182)-(185) can be accounted for if we assume that the so-called adverbial form of an adjective, as well as case-marked NP's, must be licensed sentence-internally (maybe by some sort of government by INFL and/or Verb), along the lines of Huang's suggestion noted above.⁶⁰

In the previous section we have observed contrasts that confirm the distinction made in 5.9 between bare NP's and case-marked NP's. It appears that there is a contrast also between adverbials and adjectives. Notice, first, that the utterance in (186) below is not acceptable, unless there is a linguistic antecedent as in (187), being analogous to H&S's example in (170) and (171) above.

(186)

[Taroo is making sushi]

Ziroo: #Boku-yori {zyoozuni/umaku} da yo

I-than skillfully is

'More skillfully than me (I tell you).'

(intended as '[You make/He makes] sushi more skillfully than me (I tell you).')

(187)

Yoko: Taroo-ga susi-o tukutta no?

Taroo-NOM sushi-ACC made Q

'Did Taroo make sushi?'

Ziroo: Boku-yori {zyoozuni/umaku} da yo

I-than skillfully is

'More skillfully than me (I tell you).'

(intended as 'He made sushi more skillfully than me (I tell you).')

Notice that when the adjectival forms replaces the adverbial forms, the utterance is acceptable even without the linguistic antecedents.

(188)

[Same context as (186)]

Ziroo: Boku-yori {zyoozu-da yo/umai} yo

I-than skillful skillfull

'More skillfully than me (I tell you).'

(intended as '[You make/He makes] sushi more skillfully than me (I tell you).')

5.6. The Structure of the Stripping Construction

5.6.1. Two Types of Stripping

In 5.4 and 5.5 we have observed that there are two types of stripping construction in Japanese, as schematized in (189).⁶¹

(189)

a. NP(-mo) da

-ALSO be

b. NP-CASE(-mo) da

According to the preceding discussion, the most notable difference between (189a) and (189b) is that the latter typically involves syntactic movement while the former need not. Related to this distinction, we have observed the following:

- (i) (189b), but not (189a), observes the subjacency (in the relevant sense, discussed earlier).
- (ii) (189b), but not (189a), exhibits the expected properties (expected in accordance with the predictions recorded in xx) with respect to the availability of the sloppy reading; cf. xx in 5.4.
- (iii) (189a), but not (189b), can alternate with forms such as sore-wa NP(mo) da or NP-(mo/-ga) soo da. These differences are summarized in (190).

(190)	Subjacency	Sloppy Reading	Sore/Soo Alternation
NP(-mo) da	need not observe	not as expected	possible
NP-CASE da	must observe	as expected	not possible

It has been indicated in 5.4 that the differentiation of (189a) and (189b) must be related to the different clusterings of these properties.

We have, however, so far left vague what structures the two types of stripping have. In this section, I will propose two different structures for them.

5.6.2. A Proposal

I propose that the structures for (189a) and (189b) are as in (191a) and (191b), respectively.

- (191)
- a. *pro* NP(-mo) da
 - b. [*s*' ...] NP-CASE(-mo) da

Let us first consider the structure in (191a). Notice, first of all, that the proposed structure in (191a) is identical to (192), with which it can alternate, given the assumptions that Japanese has an

empty pronominal and that it may be referential, just as sore may, as proposed in Kuroda (1965, pp. xx).

- (192)
- Sore-wa NP(-mo) da
that-TOP
'That is true of NP (as well).'

To the extent that (192) is a well-formed structure in Japanese, (191a) must be as well. For, by assumption, there is no distinction between pro and sore (at least when they are referential). With the proposed structure in (191a) for (189a), all the properties of (189a) are now reducible to those of (192).

We have observed that the utterance in (193b), as a response to (193a), is acceptable. (NP_i and NP_k are meant to correspond to each other in the sense relevant to our discussion here.)

- (193)
- a: ... [syntactic island ... NP_i ...] ...
 - b: NP_k (-mo) da.

One concrete example is repeated here. The italics represent what correspond to NP_i and NP_k.

- (194) (=xx) in 5.4.6)
- a: NP[*s*' pro *furansu ryoori-o* [ukuru] hito;]-ga yoku koko-ni kuru
French cuisine-ACC make people-NOM often here-to come
'People who make French cuisine come here often.'

- b: *Itariya ryoori-mo* da
Italian cuisine-also be
'Italian cuisine too'

According to the proposed structure for the bare NP stripping given in (191a), (194b) must have the structure like (195).

- (195) (as a response to (194a))
- pro* *Itariya ryoori-mo* da
Italian cuisine-ALSO be
'That is true of Italian cuisine, too.'

(195a) is in turn essentially identical to (196): (The *pro* in (195) is referential.)

(196) (as a response to (194a))
Sore-wa Itariya ryoori-mo da
Italian cuisine-ALSO be
'That is true of Italian cuisine, too.'

One might raise a question as to what *sore* in (195) and *pro* in (196) refer to. It appears that they refer to whatever *that* or *the same thing* in (197b) in English refer to.

(197)
a: People who make French cuisine come here often.
b: (That/The same thing) is true of Italian cuisine, as well'

Intuitively, *that/the same thing* seems to refer to "some property of an object such that people who make it come here often". In this sense, the utterance in (197b) is a structure in which this property is predicated of 'Italian'. I will call what appears to be the sloppy reading in (197b) "predicational sloppy reading" and differentiate it from the sloppy reading that obtains with case-marked NP's, which I call "bound variable sloppy reading." The relevant readings in (195) and (196) are then the predicational sloppy reading.

The English example in (198b) also illustrates the predicational sloppy reading.

(198)
a: His_i students admire John_i.
b: That is true of Bill, as well.

We have observed that despite the fact that *John* does not c-command *his* in (198a), (198b) is consistent with the situation depicted in (199).

(199) Bill's students admire Bill.

I would like to suggest that (200b) below, unlike (198b), allows a bound variable sloppy reading, which is typically represented as in (201) (Sag (1976), Williams (1977), Reinhart (1983)).

(200)
a: John_i admires his_i teacher.
b: Bill, too.

(201) Bill \sqrt{x} (x admire x's teacher)

The proposed structure in (191a) for (189a), by assumption, accounts for the fact that (189a) alternates with forms such as (191a).

With the proposed structure given above, we account for all the properties that (189a) exhibits as summarized in (190). As I noted, how one obtains the predicational sloppy reading for (189a) remains to be a problem. The problem, however, is not restricted to Japanese. It also includes the problem of accounting for how the "unexpected" sloppy reading may be obtained for (192) in English.

Let us now turn to the structure in (191b), repeated below, which is proposed for the stripping construction with case-marked NP's.

(191b) [S' ...] NP-CASE(-mo) da

I assume that the structure inside the S' is "reconstructed" by means of a copying operation, analogous to Williams' (1977) and Piengo and May's (1990) treatment of VP-deletion in English. As an illustration, let us consider (202).⁶²

(202)
a: [S John-ga susi-o tabeta] (tte)
John-NOM sushi-ACC ate
'John ate sushi.'

b: [S' [S ec]] [NP Tempura]-o-mo da (yo)
Tempura-ACC-ALSO be
'Tempura, too.'

When the rule of constituent raising (CR) of Reinhart (1986, 1989), i.e. the generalized QR, applies to *susi-o* in (202a), the resulting LF representation for it is as in (203).

(203)
[S susi-o_i [S John-ga t_i tabeta]]
susi-ACC John-NOM ate

When the \checkmark operator is introduced into (203) and the trace of susi-o is translated into a variable, we have (204).

(204)
[S susi-o [S \checkmark x [S John-ga x tabeta]]]

Now, the S that immediately dominates the \checkmark operator can be copied onto the S in (202b), yielding (205).⁶³

(205)
[S' [S \checkmark x [S John-ga x tabeta]] [NP tempura]-o-mo da

Let us assume that in a structure like (205) the \checkmark operator assumes the function of an empty operator, being analogous to the empty operator in the cleft construction. As the result, the structure in (205) will be equivalent to that in (206).⁶⁴

(206)
[S' [COMP OP_i] [S John-ga i tabeta]] (no wa) [NP tempura]_i-o-mo da

In (206), which represents the structure of the Japanese cleft construction, OP and i form a chain. I assume that there is a mechanism that relates the OP and the focus NP tempura. This mechanism, which is sometimes argued to be subsumed under a rule of predication (e.g. Williams (1980)), (i) licenses the OP by determining its range and (ii) licenses the case-marking on the focus NP. Notice that the case-marking on the focus NP is, so to speak, controlled by the verb in the embedded S.⁶⁵ The appearance of the Q marking in a "dislocated" place, under this assumption, is licensed by means of the relationship established between the OP and the phrase in the focus position.

The proposed analysis of the Japanese stripping construction with a case-marked NP makes use of Reinhart's (1986, 1989) rule of CR, which is a generalized version of QR, and of a copying operation.⁶⁶ This analysis provides straightforward accounts for the subadjacency effects and the WCO effects observed in this construction, just as it accounts for such effects in the English stripping construction, as shown in Reinhart (1986).

Recall that (207b) is not an acceptable response to (207a).

(207) (= (xx in 5.4.6))

a: [NP [S' pro furansu ryoori-o tukuru] hito]-ga yoku koko-ni kuru
French cuisine-ACC make people-NOM often here-to come
'People who make French cuisine come here often.'

b: *Itariya ryoori-o-mo da
Italian cuisine-ACC-ALSO be
'Italian cuisine too'
(intended as 'People who make Italian cuisine, as well as those who make French cuisine, come here often.'

According to the analysis adopted above, (207b) is represented as (208) at D-structure and at S-structure.

(208)
[S' [S ec]] [NP Itariya ryoori]-o-mo da

Notice that the presence of the Q marking on Itariya ryoori 'Italian cuisine' in (207b) necessitates the link between the focus NP and an operator inside the S'. That is, unless Itariya ryoori is related to the verb inside the S, the Q-marking cannot be licensed. It is for this reason, formally speaking, that (207b) cannot be represented as in (209); cf. the structure given in (191a).

(209)
pro Itariya ryoori-o-mo da
'That is true of Italian cuisine, as well.'

A way to relate Itariya ryoori to the verb inside the S is by "reconstructing" the structure inside the S. This, we are assuming, can be done by a copying operation at LF. Such a derivation, however, violates the subadjacency, as we can see below.

For (207b)'s intended reading to be possible, the LF copying must yield a structure like (210) for (207b).

(210)
[S' [S \checkmark x [S [NP [S' pro x .tukuru.] hito]-ga yoku koko-ni kuru]]
make person-NOM often here-to come
[NP Itariya ryoori]-o-mo da
Italian cuisine-ACC-ALSO be

In order for it to be possible to copy the S that directly dominates the \checkmark operator as in (210), the rule of CR must raise *Furansu ryoori* 'French cuisine' in (207a) to the matrix S, as in (211), violating the subadjacency.

(211)
 [S' [S Furansu ryoori-*ok* [S [NP [S' *pro*_i *ik* .tukuru.] hito_j]-ga
 French cuisine-ACC make person-NOM
 yoku koko-ni kuru]]
 often here-to come

After the introduction of the \checkmark operator and the subsequent translation of the trace into a variable, as in (212), the S that immediately dominates the \checkmark operator would be copied onto the S in (208), yielding the representation in (210).

(212)
 [S' [S Furansu ryoori-o [S \checkmark x [S [NP [S' *pro*_i x .tukuru.] hito_j]-ga
 French cuisine-ACC make person-NOM
 yoku koko-ni kuru]]
 often here-to come

Thus, the derivation of (210) violates the subadjacency.

The WCO effects in the stripping with a case-marked NP can be accounted for in essentially the same way as Reinhart (1983, 1986) accounts for the WCO effects in the English stripping construction. Consider (213), for example.

(213) (Cf. 5.4.6.)
 a: [NP [S *cek* hitome *pro*_i mita] hito_k]-ga John_i-o sukininata (tte)
 one glance saw person-NOM John-ACC fell-in-love
 '(The/a) person who took a glance at him_i fell in love with John_i.'

b: Bill-o-mo da (yo)
 Bill-ACC-ALSO be
 'Bill, too.'

It has been pointed out that (213b) does not yield the sloppy reading, as indicated in (214).

(214) [The/a] person who took a glance at Bill fell in love with Bill.

We have also observed that the sloppy reading does not seem possible in (215b).

(215)
 a: [NP [_i (mukasikara zutto) soko-o_j yametagaita hito_j]-ga
 (since long ago) the place-ACC wanted-to-quit person-nom
 (yatto) Toyota_j-o yameta (tte)
 (finally) Toyota-ACC quit
 '(The/a) person who had long wanted to leave the place_i finally quit Toyota_j.'

b: Nissan-o-mo da (yo)
 Nissan-ACC-ALSO be
 'Nissan, too.'

Thus (215b) does not seem to yield the reading indicated in (216).

(216) [The/a] person who had long wanted to leave Nissan finally quit Nissan.

Recall, furthermore, that when the relevant c-command requirement is satisfied in the first utterance in (213) and (215), i.e., if *John* and *Toyota* c-command *pro* and *soko*, respectively, the sloppy reading is possible.

In accordance with the preceding analysis, the WCO effects observed in (213) and (215) can be captured as in the following. (This account draws directly from Reinhart (1983, 1986), in its relevant respects.). In order for (213b) and (215b) to have the sloppy reading, their LF representations must be of the form given in (217).

(217) [S' [S \checkmark x [S [NP ... x ...] x]]] [John/Nissan]-o-mo da

As in Reinhart (1983, 1986), I assume that the translation of *pro/soko* into a variable bound by an operator \checkmark is possible only when the relevant c-command requirement is satisfied. That is, while *pro/soko* in (218a) may be translated into (219), those in (218b) cannot.

(218)
 a. [S' [S O_i [S I_i [VP ... [NP ... [*pro/soko*]_i ...] ...]]]]
 b. [S' [S O_i [S [NP ... [*pro/soko*]_i ...] [VP ... I_i ...]]]]

One may want to achieve this effect by imposing the c-command requirement directly on the translation procedure. Alternatively, one may impose a condition on the coindexing procedure; see the discussion in Reinhart (1983, p. 158). No matter how we encode this c-command requirement in the theory, the absence of the sloppy reading in (213b) and (215b) must be due to the failure of John and Toyota to c-command pro and soko, respectively. This is the insight made in Reinhart (1983); cf. also Lasnik (1976, pp. xx). Thus by analyzing the Japanese stripping construction with a case-marked NP by means of the copying operation at LF, as indicated above, we can naturally generalize the availability and the unavailability of the sloppy reading in this construction with the standard instances of WCO.

In this section, I have proposed two structures for what has been considered above as the Japanese stripping construction. The instance of the stripping with a bare NP, I have argued, may have the structure as in (219).

- (219) *pro* NP-mo da
 -ALSO be
 'That is true of NP, as well.'

The instance of the stripping with a case-marked NP, on the other hand, must be represented, at D-structure, as in (220).

- (220) [*s* [*s* ec]] NP-CASE-mo da

I have argued that the structure in (220), when "reconstructed" at LF, looks very much like a cleft construction. We have in fact seen that the properties of the two types of the stripping construction have their counterparts in the "two types" of cleft constructions in Japanese; cf. Hoji (1987).⁶⁷ The "two types" of clefts in Japanese in turn have their topic counterparts; cf. Saito (1985). To the extent that the bare topic construction MAY (but NEED NOT) involve syntactic movement (Saito's (1985) conclusion) and to the extent that the bare cleft construction MAY (but NEED NOT) involve syntactic movement (Hoji's (1987) conclusion), one might expect that the bare NP stripping MAY also involve syntactic movement. Thus the schematic representation of the "two types" topic, cleft and stripping constructions in Japanese given earlier (pp. xx), repeated in (221), (222) and (223) must be slightly modified as in (224), (225) and (226).

(221) The Topic Construction

- a. NP-wa [*s* ...] (An aboutness licensing is possible.)
 b. NP-CASE-wa [*s* ...] (Syntactic movement is obligatory.)

(222) The Cleft Construction

- a. [*s*' ... no]-wa NP da (An aboutness licensing is possible.)
 b. [*s*' ... no]-wa NP-CASE da (Syntactic movement is obligatory.)

(223) The Stripping construction

- a. ... NP-mo da (An aboutness licensing is possible.)
 b. ... NP-CASE-mo da (Syntactic movement is obligatory.)

(224) The Topic Construction

- a. NP_i-wa [*s* ... (pro)_i ...] (An aboutness licensing is possible.)
 b. NP_i-(CASE)-wa [*s* ... *ti* ...] (Syntactic movement is involved and the aboutness licensing is not possible.)

(225) The "Cleft" Construction

- a. [NP [*s* .. (pro)_i ...] [NP no_i]]-wa NP_i da (An aboutness licensing is possible.)
 b. [*s*' OP_i [*s* ... *ti* ...] no]-wa NP_i-(CASE) da
 (Syntactic movement is obligatory and the aboutness licensing is not possible.)

(226) The "Stripping" construction

- a. *pro* NP-mo da (An aboutness licensing is possible.)
 b. [*s*' [*s* ec]] NP-(CASE)-mo da (Syntactic movement is obligatory and the aboutness licensing is not possible.)

What have been considered as two types of clefts have turned out to be a combination of a standard equation sentence, analogous to NP is NP, and the cleft construction. Similarly, one of the two types of the stripping has also turned out to be analogous to NP is N'.

5.6. The Structure of the Stripping Construction

5.6.1. Two Types of Stripping

In 5.4 and 5.5 we have observed that there are two types of stripping construction in Japanese, as schematized in (189).⁶⁸

(189)
a. NP(-mo) da
-ALSO be

b. NP-CASE(-mo) da

According to the preceding discussion, the most notable difference between (189a) and (189b) is that the latter typically involves syntactic movement while the former need not. Related to this distinction, we have observed the following:

- (i) (189b), but not (189a), observes the subadjacency (in the relevant sense, discussed earlier).
- (ii) (189b), but not (189a), exhibits the expected properties (expected in accordance with the predictions recorded in xx) with respect to the availability of the sloppy reading; cf. xx in 5.4.
- (iii) (189a), but not (189b), can alternate with forms such as sore-wa NP(mo) da or NP(-mo/-ga) soo da. These differences are summarized in (190).

(190)	Subadjacency	Sloppy Reading	Sore/Soo Alternation
NP(-mo) da	need not observe	not as expected	possible
NP-CASE da	must observe	as expected	not possible

It has been indicated in 5.4 that the differentiation of (189a) and (189b) must be related to the different clusterings of these properties.

We have, however, so far left vague what structures the two types of stripping have. In this section, I will propose two different structures for them.

5.6.2. A Proposal

I propose that the structures for (189a) and (189b) are as in (191a) and (191b), respectively.

(191)
a. pro NP(-mo) da
b. [s' ...] NP-CASE(-mo) da

Let us first consider the structure in (191a). Notice, first of all, that the proposed structure in (191a) is identical to (192), with which it can alternate, given the assumptions that Japanese has an empty pronominal and that it may be referential, just as sore may, as proposed in Kuroda (1965, pp. xx).

(192)
Sore-wa NP(-mo) da
that-TOP
'That is true of NP (as well).'

To the extent that (192) is a well-formed structure in Japanese, (191a) must be as well. For, by assumption, there is no distinction between pro and sore (at least when they are referential). With the proposed structure in (191a) for (189a), all the properties of (189a) are now reducible to those of (192).

We have observed that the utterance in (193b), as a response to (193a), is acceptable. (NP_i and NP_k are meant to correspond to each other in the sense relevant to our discussion here.)

(193)
a: ... [syntactic island ... NP_i ...] ...
b: NP_k (-mo) da.

One concrete example is repeated here. The italics represent what correspond to NP_i and NP_k.

(194) (=xx in 5.4.6)
a: NP[S' PRO *furansu ryoori-o* (tuku) hito]-ga yoku ko'ko-ni kuru
French cuisine-ACC make people-NOM often here-to come
"People who make French cuisine come here often."

b: *Itariya ryoori-mo da*
Italian cuisine-also be
'Italian cuisine too'

According to the proposed structure for the bare NP stripping given in (191a), (194b) must have the structure like (195).

(195) (as a response to (194a))
pro *Itariya ryoori-mo da*
Italian cuisine-ALSO be
'That is true of Italian cuisine, too.'

(195a) is in turn essentially identical to (196). (The *pro* in (195) is referential.)

(196) (as a response to (194a))
Sore-wa Itariya ryoori-mo da
Italian cuisine-ALSO be
'That is true of Italian cuisine, too.'

One might raise a question as to what *sore* in (195) and *pro* in (196) refer to. It appears that they refer to whatever that or the same thing in (197b) in English refer to.

(197)
a: People who make French cuisine come here often.

b: {That/The same thing} is true of Italian cuisine, as well'

Intuitively, that/the same thing seems to refer to "some property of an object such that people who make it come here often". In this sense, the utterance in (197b) is a structure in which this property is predicated of 'Italian'. I will call what appears to be the sloppy reading in (197b) "predicational sloppy reading" and differentiate it from the sloppy reading that obtains with case-marked NP's, which I call "bound variable sloppy reading." The relevant readings in (195) and (196) are then the predicational sloppy reading.

The English example in (198b) also illustrates the predicational sloppy reading.

(198)
a: His_i students admire John_i.
b: That is true of Bill, as well.

We have observed that despite the fact that John does not c-command his in (198a), (198b) is consistent with the situation depicted in (199).

(199) Bill's students admire Bill.

I would like to suggest that (200b) below, unlike (198b), allows a bound variable sloppy reading, which is typically represented as in (201) (Sag (1976), Williams (1977), Reinhart (1983)).

(200)
a: John_i admires his_i teacher.
b: Bill, too.

(201) Bill \sqrt{x} (x admire x's teacher)

The proposed structure in (191a) for (189a), by assumption, accounts for the fact that (189a) alternates with forms such as (191a).

With the proposed structure given above, we account for all the properties that (189a) exhibits as summarized in (190). As I noted, how one obtains the predicational sloppy reading for (189a) remains to be a problem. The problem, however, is not restricted to Japanese. It also includes the problem of accounting for how the "unexpected" sloppy reading may be obtained for (192) in English.

Let us now turn to the structure in (191b), repeated below, which is proposed for the stripping construction with case-marked NP's.

(191b) [*S'* ...] NP-CASE(-mo) da

I assume that the structure inside the S' is "reconstructed" by means of a copying operation, analogous to Williams' (1977) and Fiengo and May's (1990) treatment of VP-deletion in English. As an illustration, let us consider (202).⁶⁹

(202)

a: [s John-ga susi-o tabeta] (te)
John-NOM sushi-ACC ate
'John ate sushi.'

b: [s' [s ec]] [NP Tempura]-o-mo da (yo)
Tempura-ACC-ALSO be
'Tempura, too.'

When the rule of constituent raising (CR) of Reinhart (1986, 1989), i.e. the generalized QR, applies to susi-o in (202a), the resulting LF representation for it is as in (203).

(203)

[s susi-o_i [s John-ga t_i tabeta]]
susi-ACC John-NOM ate

When the \checkmark operator is introduced into (203) and the trace of susi-o is translated into a variable, we have (204).

(204)

[s susi-o [s \checkmark x [s John-ga x tabeta]]]

Now, the S that immediately dominates the \checkmark operator can be copied onto the S in (202b), yielding (205).⁷⁰

(205)

[s' [s \checkmark x [s John-ga x tabeta]] [NP tempura]-o-mo da

Let us assume that in a structure like (205) the \checkmark operator assumes the function of an empty operator, being analogous to the empty operator in the cleft construction. As the result, the structure in (205) will be equivalent to that in (206).⁷¹

(206)

[s' [COMP OP_i] [s John-ga t_i tabeta]] (no wa) [NP tempura]_i-o-mo da

In (206), which represents the structure of the Japanese cleft construction, OP and t_i form a chain. I assume that there is a mechanism that relates the OP and the focus NP tempura. This mechanism, which is sometimes argued to be subsumed under a rule of predication (e.g. Williams (1980)), (i) licenses the OP by determining its range and (ii) licenses the case-marking on the focus

NP. Notice that the case-marking on the focus NP is, so to speak, controlled by the verb in the embedded S.⁷² The appearance of the \checkmark marking in a "dislocated" place, under this assumption, is licensed by means of the relationship established between the OP and the phrase in the focus position.

The proposed analysis of the Japanese stripping construction with a case-marked NP makes use of Reinhart's (1986, 1989) rule of CR, which is a generalized version of QR, and of a copying operation.⁷³ This analysis provides straightforward accounts for the subjacency effects and the WCO effects observed in this construction, just as it accounts for such effects in the English stripping construction, as shown in Reinhart (1986).

Recall that (207b) is not an acceptable response to (207a).

(207) (=xx in 5.4.6)

a: [NP [s' pro_i furansu ryoori-o tukuru] hito]_i-ga yoku koko-ni kuru
French cuisine-ACC make people-NOM often here-to come
'People who make French cuisine come here often.'

b: *Itariya ryoori-o-mo da
Italian cuisine-ACC-ALSO be
'Italian cuisine too'
(intended as 'People who make Italian cuisine, as well as those who make French cuisine, come here often.'

According to the analysis adopted above, (207b) is represented as (208) at D-structure and at S-structure.

(208)

[s' [s ec]] [NP Itariya ryoori]-o-mo da

Notice that the presence of the \checkmark marking on Itariya ryoori 'Italian cuisine' in (207b) necessitates the link between the focus NP and an operator inside the S'. That is, unless Itariya ryoori is related to the verb inside the S, the \checkmark -marking cannot be licensed. It is for this reason, formally speaking, that (207b) cannot be represented as in (209); cf. the structure given in (191a).

(209)

pro Itariya ryoori-o-mo da
'That is true of Italian cuisine, as well.'

sloppy reading, their LF representations must be of the form given in (217).

(217) [S' [S' \sqrt{x} [S [NP ... x ...] x]]] [John/Nissan]-o-mo da

As in Reinhart (1983, 1986), I assume that the translation of *pro/soko* into a variable bound by an operator *Q* is possible only when the relevant c-command requirement is satisfied. That is, while *pro/soko* in (218a) may be translated into (219), those in (218b) cannot.

(218)
 a. [S' [S O_i [S I_i [VP ... [NP ... [*pro/soko*]_i ...] ...]]]]
 b. [S' [S O_i [S [NP ... [*pro/soko*]_i ...] [VP ..._i ...]]]]

One may want to achieve this effect by imposing the c-command requirement directly on the translation procedure. Alternatively, one may impose a condition on the coindexing procedure; see the discussion in Reinhart (1983, p. 158). No matter how we encode this c-command requirement in the theory, the absence of the sloppy reading in (213b) and (215b) must be due to the failure of *John* and *Toyota* to c-command *pro* and *soko*, respectively. This is the insight made in Reinhart (1983); cf. also Lasnik (1976, pp. xx). Thus by analyzing the Japanese stripping construction with a case-marked NP by means of the copying operation at LF, as indicated above, we can naturally generalize the availability and the unavailability of the sloppy reading in this construction with the standard instances of WCO.

In this section, I have proposed two structures for what has been considered above as the Japanese stripping construction. The instance of the stripping with a bare NP, I have argued, may have the structure as in (219).

(219) *pro* NP-mo da
 -ALSO be
 'That is true of NP, as well.'

The instance of the stripping with a case-marked NP, on the other hand, must be represented, at D-structure, as in (220).

(220) [S' [S ec]] NP-CASE-mo da

I have argued that the structure in (220), when "reconstructed" at LF, looks very much like a cleft construction. We have in fact seen that the properties of the two types of the stripping construction have their counterparts in the "two types" of cleft constructions in Japanese; cf. Hoji (1987).⁷⁴ The "two types" of clefts in Japanese in turn have their topic counterparts; cf. Saito (1985). To the extent that the bare topic construction MAY (but NEED NOT) involve syntactic movement (Saito's (1985) conclusion) and to the extent that the bare cleft construction MAY (but NEED NOT) involve syntactic movement (Hoji's (1987) conclusion), one might expect that the bare NP stripping MAY also involve syntactic movement. Thus the schematic representation of the "two types" topic, cleft and stripping constructions in Japanese given earlier (pp. xx), repeated in (221), (222) and (223) must be slightly modified as in (224), (225) and (226).

(221) The Topic Construction
 a. NP-wa [S ...] (An aboutness licensing is possible.)
 b. NP-CASE-wa [S ...] (Syntactic movement is obligatory.)

(222) The Cleft Construction
 a. [S' ... no]-wa NP da (An aboutness licensing is possible.)
 b. [S' ... no]-wa NP-CASE da (Syntactic movement is obligatory.)

(223) The Stripping construction
 a. ... NP-mo da (An aboutness licensing is possible.)
 b. ... NP-CASE-mo da (Syntactic movement is obligatory.)

(224) The Topic Construction
 a. NP_i-wa [S ... (pro_i) ...] (An aboutness licensing is possible.)
 b. NP_i-(CASE)-wa [S ... I_i ...] (Syntactic movement is involved and the aboutness licensing is not possible.)

(225) The "Cleft" Construction
 a. [NP [S .. (pro_i) ...] [NP no_i]]-wa NP_i da (An aboutness licensing is possible.)
 b. [S' OP_i [S ... I_i ...] no]-wa NP_i-(CASE) da (Syntactic movement is obligatory and the aboutness licensing is not possible.)

(226) The "Stripping" construction

- a. pro NP-mo da (An aboutness licensing is possible.)
b. [s' [s ec]] NP-(CASE)-mo da (Syntactic movement is obligatory and the aboutness licensing is not possible.)

What have been considered as two types of clefts have turned out to be a combination of a standard equation sentence, analogous to NP is NP, and the cleft construction. Similarly, one of the two types of the stripping has also turned out to be analogous to NP is NP.

5.7. The Sloppy Reading in the Japanese Comparative

In this section, I will point out that the generalizations regarding the sloppy reading in Japanese are observed in the comparative construction as well. Let us first consider the sloppy reading in the English comparative construction; cf. Reinhart (1989) and xx.

(227)

- a. John_i loves his_i mother more than Bill.
(Bill_i loves Bill's mother.)
b. His_i mother loves John_i more than Bill.
≠(Bill_i's mother loves Bill_i)

As indicated, while the sloppy reading is possible in (227a), it is not in (227b). This mirrors the situation that we have observed in the case of the stripping.

Now consider the Japanese comparative constructions given in (228).

(228)

- a. seifu-ga Nissan-ni yori (mo) sakini Toyota-ni
government-NOM Nissan-DAT than early Toyota-DAT
[NP [s' pro_i kyonen soko-ni haitta] Amerikazini]-o yame-saseta (koto)
last year it-DAT joined American-ACC fire-caused
'the government made Toyota fire [the Americans who had joined it last year] earlier than Nissan'
(The sloppy reading is possible.)

- b. [NP [s' pro_i kyonen soko-ni haitta] Amerikazini]-ga
last year it-DAT joined American-NOM
[Nissan-ni yori (mo)] sakini Toyota-ni monku-o itta (koto)
Nissan-DAT than early Toyota-DAT complaint-ACC said

'[the Americans who had joined it last year] complained to Toyota earlier than to Nissan'
(The sloppy reading is not possible.)

As indicated, the sloppy reading is possible in (228a) whereas it is not in (228b). While a precise analysis of Japanese comparatives cannot be presented here, it seems reasonable to assume that the contrast in (228) is directly related to the fact that soko is c-commanded by Toyota in (a) but not in (b).

As is expected, the substitution of asoko for soko in (228a), as indicated in (229), results in the unavailability of the sloppy reading.

(229)

- seifu-ga Nissan-ni yori (mo) sakini Toyota-ni
government-NOM Nissan-DAT than early Toyota-DAT
[NP [s' pro_i kyonen asoko-ni haitta] Amerikazini]-o yame-saseta (koto)
last year that place-DAT joined American-ACC fire-caused
'the government made Toyota fire [the Americans who had joined that place last year] earlier than Nissan'

The strict reading of (229) is pragmatically odd; it yields the interpretation as given in (230), under the coreference between Toyota and asoko 'that place/that organization'.

(230)

The government made Toyota_i fire [the Americans who had joined it last year] earlier than the government made Nissan fire [the Americans who had joined it last year].

Only under a situation in which Nissan is able to fire Toyota's employees is the strict reading indicated in (230) possible. Yet, the only reading possible for (229) is a strict reading such as indicated in (230). (It is, of course, possible to interpret asoko as referring to a company other than Toyota, including Nissan.)

Given the earlier discussion on the distinction between kare 'he' and soitu 'the guy/that guy', we also expect that soitu yields a sloppy reading more readily than kare does. The contrast in (231) suggests that this is indeed the case.

(231)

a. keisatu-ga John-ni yori mo saki Bill-ni kare-no kenzyuu-o
 police-NOM John-DAT than early Bill-DAT he-GEN gun-ACC
 kaesita (koto)
 returned
 'The police returned his hand gun to Bill earlier than to John.'

b. keisatu-ga Tokyo-no yakuza-ni yori mo saki
 police-NOM Tokyo-GEN gang member-DAT than early
 Osaka-no yakuza-ni soitu-no kenzyuu-o kaesita (koto)
 Osaka-GEN gang member-DAT the guy-GEN gun returned
 'The police returned'

It seems that the sloppy reading is not possible in (231a) while it is much more readily available in (231b).⁷⁵
 Consider finally the sentence in (232).

(232)

Yamada sensei-ga John-ni yori mo sakini Bill-ni
 Prof. Yamada-NOM John-DAT than early Bill-DAT
 zibun-no kenkyuusitu-o soozis-aseta (koto)
 self-GEN office-ACC clean-caused
 'Prof. Yamada made Bill clean self's office earlier than Bill.'

Leaving aside the reading in which *zibun* and *Yamada sensei* are conindexed, the sentence in (232) yields only the sloppy reading, as indicated in (233).

(233) 'Prof. Yamada made Bill clean Bill's office earlier than Prof. Yamada made John clean John's office.'

This is as expected under the assumption that *zibun* must always be interpreted as a bound variable; but see Sag (1976, pp. xx) and the earlier discussion in xx. The use of *kare* in place of *zibun* results in the availability of strict readings as well as the basic unavailability of the sloppy reading. This is indicated in (234).

(234)

Yamada sensei-ga John-ni yori mo sakini Bill-ni
 Prof. Yamada-NOM John-DAT than early Bill-DAT
 kare-no kenkyuusitu-o soozis-aseta (koto)
 he-GEN office-ACC clean-caused
 'Prof. Yamada made Bill clean his office earlier than Bill.'

Kare may refer to some particular individual, and Prof. Yamada, John and Bill are among the possibilities. But once the reference of *kare* is determined, the sentence in (234) implies 'Prof. Yamada made both John and Bill clean that particular individual's office.'

As admitted at the outset of this section, it is not clear how the relevant Japanese comparative construction is to be analyzed. The observations reported above, nevertheless, seem to constitute corroborative evidence for the conclusion that has been drawn in the preceding discussion; namely, (i) that the c-command requirement is relevant for the sloppy reading, (ii) that while the members of the *so* system yield bound variable construal (and hence the sloppy reading), the member of the *a* system (and *kare*) do not.

5.8. Condition B Effects and Sloppy Reading

I have now identified a construction in Japanese that yields a sloppy reading. In Ch. 4, we have seen that condition B effects in Japanese are observed more clearly in cases that involve bound variable construal than in cases that involve coreference, being consistent with Reinhart's (1983) view of binding theory. Given the assumption that sloppy reading is to be analyzed as an instance of bound variable construal, we expect that the effects of condition B would be equally clear in Japanese when the sloppy reading is attempted. In this section, I will illustrate that this is indeed the case.⁷⁶ The result in this section thus corroborates the Reinhartian view, which I adopt, that condition B regulates bound variable anaphora, but not coreference.

In Ch. 4, it is observed that condition B effects in Japanese are not as strong as in English (the observation originally due to Y. Kitagawa (p.c.)). Thus Japanese sentences like (235a) seem to be significantly more acceptable English sentences like (235b).

(235)

a. ??John_i-ga kare_i-o suisensita (koto)
John-NOM he-ACC recommended
'John_i recommended him_i.'

b. *John_i recommended him_i.

The typical reaction of the native speakers of Japanese to (235a) is not flat rejection although they detect varying degrees of "unnaturalness". Some speakers accept (235a) with the coreference indicated. The reaction of the native speaker of English, on the other hand, is much more uniform. They typically judge (235b) as "unacceptable" with the indicated coreference.

It is also observed also in Ch. 4 that when bound variable construal is at stake, condition B effects are much more clearly observed. The example in (236a) illustrates this:

(236)

a. *[Toyota to Nissan]_i-ga soko_i-o suisensita (koto)
Toyota and Nissan-NOM it-ACC recommended
'[Toyota and Nissan]_i recommended it_i.'

b. [Toyota to Nissan]_i-ga soko_i-no zyuuyaku-o suisensita (koto)
Toyota and Nissan-NOM it-GEN executive-ACC recommended
'[Toyota and Nissan]_i recommended it_i's executives.'

In (236b) Toyota to Nissan can bind soko, yielding the bound variable construal for the latter. In (236a), on the other hand, in which soko is locally bound by Toyota to Nissan, cannot yield the bound variable construal for soko. The lack of the bound variable construal in (236a), and hence the resulting unacceptability of it, must be compared with the somewhat acceptable (237).

(237)

a. ??Toyota_i-ga soko_i-o suisensita (koto)
Toyota-NOM it-ACC recommended
'Toyota_i recommended it_i.'

b. ??[Amerika-no kaisya]_i-ga soko_i-o suisensita (koto)
America-GEN company-NOM it-ACC recommended
'[[The/an] American company]_i recommended it_i.'

As noted in Ch. 4, the status of (237) seems basically the same as (235a). Some speakers accept it and others find it somewhat unnatural.

Given the assumption that condition B effects are clearly observed in the case of bound variable construal, it must be the case that the acceptability of (237) arises only under the coreference reading rather than on the bound anaphora reading. Given the understanding of the phenomenon of sloppy identity obtained in the preceding discussion, we should be able to check whether this is indeed the case by means of the sloppy identity test.

The relevant discourse should be something like the following.

(238)

a: Sei_ihu-{ga/wa} Nissan_i-ni soko_i-o suisens-aseta (tte)
government-NOM/TOP Nissan-DAT it-ACC recommend-caused
'The government made Nissan_i recommend it_i.'

b: Toyota-ni-mo da (yo)
Toyota-DAT-ALSO be
'Toyota, too.'

(239)

a: Sei_ihu-{ga/wa} Amerika-no kaisya_i-ni soko_i-o
government-NOM/TOP America-GEN company-DAT it-ACC
suisens-aseta (tte)
recommend-caused
'The government made [[the/an] American company]_i recommend it_i.'

b: Furansu-no kaisya-ni-mo da (yo)
France-GEN compan-DAT-ALSO be
'[The/A] French company, too.'

While the coreference indicated in (238a) and (239a) has the same status as that in (237), the sloppy reading in (238b) and (239b) seems rather difficult to obtain. This contrasts with (240b) and (241b), in which the sloppy reading is readily available.

(240)

a: Sei_ihu-{ga/wa} Nissan_i-ni soko_i-no zyuuyaku-o
government-NOM/TOP Nissan-DAT it-GEN executive-ACC
suisens-aseta (tte)
recommend-caused
'The government made Nissan_i recommend it_i's executives.'

- b: Toyota-ni-mo da (yo)
 Toyota-DAT-ALSO be
 'Toyota, too.'

(241)

- a: Seihu-[ga/wa] Amerika-no kaisyai-ni soko-no
 government-NOM/TOP America-GEN company-DAT it-GEN
 zyuuyaku-o suisens-aseta (tte)
 executive-ACC recommend-caused
 'The government made [(the/an) American company] recommend
 its executives.'

- b: Furansu-no kaisyai-ni-mo da (yo)
 France-GEN company-DAT-ALSO be
 '[The/a] French company, too.'

The contrast between (238) and (239) on the one hand and (240) and (241) on the other thus confirms that condition B effects show up more clearly in the case of bound variable construal than in the case of coreference.⁷⁷

It seems that the same contrast is observed also in the comparative construction in Japanese, which is briefly discussed in the preceding section.⁷⁸ Thus while (242) allows the sloppy reading, (243) does not.

(242)

- a. Seihu-[ga/wa] Nissan-ni yori(mo) sakini Toyota-ni
 government-NOM/TOP Nissan-DAT than early Toyota-ni
 soko-no zyuuyaku-o suisens-aseta (tte)
 it-GEN executive-ACC recommend-caused
 'The government made Nissan recommend its executives earlier
 than Toyota.' (The sloppy reading is possible.)
- b. Seihu-[ga/wa] Amerika-no kaisyai-ni yori(mo) motto tuyoku
 government-NOM/TOP America-GEN company-DAT than more strongly
 Furansu-no kaisyai-ni soko-no zyuuyaku-o suisens-aseta (tte)
 France-GEN company-DAT it-GEN executive-ACC recommend-caused
 'The government made [(the/an) American company] recommend its
 executives more strongly than [(the/a) French company].'
 (The sloppy reading is possible.)

(243)

- a. Seihu-[ga/wa] Nissan-ni yori(mo) sakini Toyota-ni
 government-NOM/TOP Nissan-DAT than early Toyota-DAT
 soko-o suisens-aseta
 it-ACC recommend-caused
 'The government made Nissan recommend it earlier than Toyota.'
 (The sloppy reading is not possible.)
- b. Seihu-[ga/wa] Amerika-no kaisyai-ni yori(mo) motto tuyoku
 government-NOM/TOP America-GEN company-DAT than more strongly
 Toyota-ni soko-o suisens-aseta
 Toyota-DAT it-ACC recommend-caused
 'The government made [(the/an) American company] recommend it
 more strongly than [(the/a) French company].'
 (The sloppy reading is not possible.)

While the nature of the comparative construction given here is not clear, the contrast between (242) and (243) seems to clearly indicate the condition B effects when the sloppy reading is at stake, i.e., when bound variable anaphora is relevant.

In 4.9, it remained unclear whether *that N'* in English and *sono N'* in Japanese can function as bound variables. The problem can be illustrated by the English examples in (244) and the Japanese examples in (245).

(244)

- a. Which linguist_i always recommends articles that refers to that
 linguist_i's work?
 b. Which linguist_i always recommends that linguist for good
 positions?

(245)

- a. dono gengogakusya_i-mo sono gengogakusya_i-no gakusei-o suisensita
 which linguist-ALSO that linguist-GEN student-ACC recommended
 'every linguist_i recommended that linguist_i's student'
- b. dono gengogakusya_i-mo sono gengogakusya_i-o suisensita
 which linguist-ALSO that linguist-ACC recommended
 'every linguist_i recommended that linguist_i'

Thus the apparent violation of condition B in the (b) examples indicates that the (b) examples do not involve bound variable anaphora. (It is logically possible that the (a) examples are well-formed either with or without bound anaphora.

We are now in a position to see whether the sloppy identity test reveals the status of these nominals more clearly.

First let us examine whether these nominals allow sloppy readings when they are bound non-locally. Consider first the sentences in (246).

(246)

- a. The Harvard logician_i recommended that logician_i's best student.
- b. (sono) Haabaado-no ronrigakusya-ga sono ronrigakusya_i-no gakusei-o that Harvard-GEN logician-NOM that logician-GEN student-ACC suisensita (koto) recommended
'[that/the/a] Harvard logician_i recommended that logician_i's student'

Now, let us construct the context for sloppy readings. Consider (247).

(247)

The Harvard logician_i recommended that logician_i's best student; and [the MIT logician did too/so did the MIT logician].

The judgements do not seem entirely clear. But the sloppy reading seems to be acceptable, to varying degrees.

(248)

ronrigakusya kumiai-ga Haabaado-no ronrigakusya-ni yorimo
logician union-NOM Harvard-GEN logician-DAT than
sakini MIT-no ronrigakusya-ni sono ronrigakusya_i-no gakusei-o
earlier MIT-GEN logician-DAT that logician-GEN student-ACC
suisens-ase-ta (koto)
recommend-cause-PAST
'the union of logicians made [the/a] MIT logician_i recommend that logician_i's student' earlier than (it made) [the/a] Harvard logician_k (to)'

(249)

a: Smith kyoozy-ga Haabaado-no ronrigakusya-ni
Prof. Smith-NOM Harvard-GEN logician-DAT
sono ronrigakusya_i-no gakusei-o suisensita (tte)
that logician-GEN student-ACC recommended
'The union of logicians recommended that logician_i's student to [the/a] Harvard logician_k' (I heard)'

b: MIT-no ronrigakusya-ni mo da (yo)
MIT-GEN logician-DAT ALSO be
'[The/An] MIT logician, too.'

In (248) and (249b), the sloppy reading seems somewhat marginal, but does not seem to be totally unacceptable, being analogous to the unclear judgments on (247) in English.

Now, the sloppy reading in (250) seems simply impossible.

(250)

The Harvard logician_i recommended that logician_i; and [the MIT logician did too/so did the MIT logician].

Similarly, the marginally acceptable status of the sloppy reading in (248) and (249) seems to be reduced to total unacceptability in (251) and (252), respectively.

(251)

ronrigakusya kumiai-ga Haabaado-no ronrigakusya-ni yorimo
logician union-NOM Harvard-GEN logician-DAT than
sakini MIT-no ronrigakusya-ni sono ronrigakusya_i-o
earlier MIT-GEN logician-DAT that logician-ACC
suisens-ase-ta (koto)
recommend-cause-PAST
'the union of logicians made [the/a] MIT logician_i recommend that logician_i earlier than (it made) [the/a] Harvard logician_k (to)'

(252)

a: Smith kyoozy-ga Haabaado-no ronrigakusya-ni
Prof. Smith-NOM Harvard-GEN logician-DAT
sono ronrigakusya_i-o suisensita (tte)
that logician-GEN student-ACC recommended
'The union of logicians recommended that logician_i to [the/a] Harvard logician_k' (I heard)'

b: MIT-no ronrigakusya-ni mo da (yo)
 MIT-GEN logician-DAT ALSO be
 '(The/An) MIT logician, too.'

The unacceptability of the sloppy reading in (250), (251) and (252) can be accounted for by condition B regulating bound variable anaphora, which the sloppy reading necessarily involves. It must in turn be the case that the acceptable examples in (246) do not involve bound variable anaphora. For if they did, they should be as unacceptable as the sloppy reading is for (250), (251) and (252). The marginal status of (247), (248) and (249), I suggest, is due to the fact that *that N'* and *sono N'* are not as qualified as *it* and *soko* are to be construed as bound variables. That is, *that N'* and *sono N'* may only marginally be used as genuine bound variables. Notice that when the antecedent is singular or when the sloppy reading is not involved, then NP's may be bound by the quantified NP's. But it is not clear that those are instances of bound variable anaphora; they may be instances of something like the E-type pronoun. It is when their antecedent is a plural (e.g. a conjoined NP) or when the sloppy reading is involved that these NP's must be interpreted as genuine bound variables. It is precisely under these circumstances that they cannot be bound locally, and can only marginally be bound non-locally. I will turn to the question regarding differences among *it*, *soko*, *that N'* and *sono N'* in Ch. 6.

5.9. Summary

The purpose of this chapter is to consider whether the phenomenon of sloppy identity in Japanese provides confirming evidence for the Reinhartian view that condition B holds for bound variable anaphora (but not for coreference).

Given the standard assumption that the sloppy reading involves bound variable anaphora, and given the conclusion in Ch. 4 that the members of the *so* system, such as *soko* 'the place/it' and *soitu* 'the guy', may function as bound variables while the member of the *a* system and *kare* cannot, it is expected that the sloppy reading is possible with *soko* and *soitu* but not with *asoko* and *kare*. It was pointed out in 5.3 that the tests based the *soo su* 'do so' construction fails to confirm this expectation. It was also pointed out that what appears to be a sloppy reading was possible; irrespective of the c-command configuration, which typically characterized the configuration in which bound variable construal may arise.

In 5.4 the Japanese analogue of the stripping construction was examined in detail. Our expectations were initially not fulfilled when we considered the stripping construction with a bare NP. I then related the stripping construction with the topic and the cleft construction and started examining the stripping with a case-marked NP. Once we used case-marked NP's rather than bare NP's, we started witnessing a number of properties in the stripping construction that are expected, in light of the English stripping construction. The subadjacency effects, for example, are now observed, with a case-marked NP in the stripping construction. Our expectations regarding the availability and the unavailability of the sloppy reading based on what item is used as the relevant binder are also borne out. The c-command requirement reappeared, with the use of a case-marked NP.

The unexpected instances of sloppy readings have been argued not to involve bound variable construal. While a satisfactory account is not yet provided, instances of such apparent sloppy readings, which I have called "predicational sloppy reading", as opposed to "bound variable sloppy reading", have been identified not only in Japanese but in English.

In 5.5 I pointed out that the operational test that is used in Hankamer and Sag (1977) in distinguishing between "deep" and "surface" anaphora clearly differentiates the bare NP stripping and the case-marked NP stripping, thereby indicating that the former is a "deep", i.e. pragmatic and referential anaphora, while the latter is a "surface", i.e. syntactic anaphora.

In 5.6 the two types of stripping were assigned two distinct structures. The bare NP stripping has in fact been identified with none other than a regular equation sentence, with the first NP being *pro* (an empty referential pronoun.) The case-marked NP stripping, on the other hand, has been argued to involve an empty *S'*. The copying operation, as in Williams (1977), and the rule of Constituent Raising of Reinhart (1986) has been argued to be responsible for the proper reconstruction of the missing *S* in the stripping construction. How the subadjacency effects and the WCO effects in the case-marked NP stripping are captured were briefly illustrated, heavily drawing from Reinhart's (1986) account of the English stripping construction.

In 5.7 I argued that the Japanese comparative construction seems to provide additional confirmation for the predictions that we made at the beginning of the chapter.

In 5.8 it was revealed, exactly as we expected, that while coreference may be insensitive to condition B, the availability of the sloppy reading is constrained by condition B (among other

conditions), thus confirming the view that condition B holds of bound variable anaphora but not of coreference. The status of that N in English and sono N in Japanese were then discussed. Recall that it was unclear in 4.9 whether these categories can function as genuine bound variables. The uncertain status of these nominals remained as even after the sloppy identity test in 5.8. The sloppy identity test, however, provided interesting confirmation of two of the claims that have been made in this book. They are (i) condition B holds of bound variable anaphora but not coreference (Reinhart (1983, Ch. 7)) and (ii) condition B holds of [-a] categories but not of [+p] categories.

¹ Ross's original example is (i).

(i) (his (5.132))
John scratched his arm and (so did Mary/Mary did (so) too).

To avoid the possible complication in the data that Sag (1976, p. 132) notes, i.e. the fact that the "discrepancy of gender" seems to create some restriction on the interpretations that are otherwise possible, I have changed Mary to Bill in (i), following Sag (1976). See Sag's (p. 132) footnote 15.

² Sag (p. 89) acknowledges that his theory of VP Deletion "incorporates the insight of Keenan's (1971-III) approach."

³ Recall that sono nonpokusya can be bound by what appear to be "singular" quantified NPs, just as that politician in English can; cf. Evans (1977).

⁴ But see Sag (1977, pp. 100-102) and the discussion in a later section.

⁵ In his footnote 21, Ueda states that "[the] non-sloppy reading [for zibun in (18)-III] is problematic to our analysis, but we leave this problem open here."

⁶ Regarding sentences like (i):

(i) (his 2.253)
a. John liked himself, and Bill did, too.
b. John liked himself before Bill did.

Sag (1976, p. 101) states as follows:

Some informants find such cases unambiguously "sloppy", i.e. they interpret the second conjunct of (1a) only as Bill liked himself. For other speakers, sentences like these are always ambiguous, except, of course, for sentences like the following, which, for lexico-semantic, or perhaps for purely pragmatic reasons, are unambiguously "sloppy".

(2.254) John perjured himself, and Bill did, too.

Following the sentence in (22), Sag notes:

The judgments are not entirely clear in the above cases. However, in cases like this, where some people claim a sentence lacks a reading that others find perfectly natural (or, more often than not, it seems to me, there is no "dialect variation" involved (see Hindle and Sag 1975), Labov (1972) for more discussion of this point). Rather, the prudent conclusion in many such cases is that extraneous factors affect people's introspective judgments in a way that compels them to reject interpretations that are actually possible. This being the case, we should be reluctant to conclude that sentences like (2.253a,b) are unambiguous for any speakers, and we will presume that our rules should assign them "sloppy" and non-sloppy" readings.

I will briefly return to this issue in a later section.

⁷ It is interesting to note that Japanese does not have distinction that corresponds to the either/or distinction in English and an 'also' is used with or without negation.

⁸ I am suppressing the differences between VP-deletion constructions such as (i) and the Do-So anaphora; cf. Ross (1967), Sag (1976) and Hankamer and Sag (1976).

(i) a. John did too.
b. So did John.

⁹ This construction is discussed in Hankamer (1971/1979, pp. 238-244, pp. 393-396) and Hankamer and Sag (1976). (Hankamer (1971/1979) calls cases like (33c) "Wrong." Reinhart (1986) calls this "Bara-Argument" structure and considers it as "a subtype of gapping". I will continue to call the construction Stripping.

¹⁰ As first pointed out by Robert May (p.c. spring, 1983). It is not clear that the second conjunct in (39a) is completely inconsistent with the situation depicted by the "sloppy reading" in (39). In light of the discussion to be given below, it might be the case that what appears to the sloppy reading for the second conjunct of (39a) is in fact available in principle. More discussion on this issue will be provided later in this chapter.

¹¹ Lasnik also gives (i) and states that this sentence "seems to lack a sloppy reading." (With respect to (42) (his (A22)), by contrast, he states that "[it] has no sloppy reading".)

(i) (his (A23)) Mary's mother believes he is intelligent, and Bill's mother does too.

Lasnik's judgment here is consistent with the judgment on sentences like (ii) that he gives in the same paper.

(ii) (his (A9)) *Everyone's/No one's mother doubts that he will succeed.

Lasnik thus indicates that the bound reading for *he* is not possible in (ii).

As noted in chapter 4, many speakers accept binding in sentences like (iii); cf. Reinhart (1987) and references therein for discussion of binding of this type.

(iii) Every syntactician's mother thinks that *he* is a genius.

Furthermore, many speakers accept the sloppy reading for sentences like (i). I will return to this issue in a later section.

¹² That a version of the prediction in (A-1) is borne out in Spanish is indicated in Lujan (1986). (I owe O. Jaeggli for bringing this work to my attention and for helping me construct the relevant examples to be given in (iv) below.) In Montalbetti (1984) it is observed that, simplifying slightly, the overt pronoun in Spanish cannot be construed as a bound variable when the empty pronoun may be used instead, proposing the "Overt Pronoun Constraint", which states that overt pronouns cannot link to formal variables if the alternation overt/empty obtains (p. 94).¹² He reports the contrast as indicated in (i).

(i) (Montalbetti (1984))
Nadie cree que *el/pro* es inteligente.
nobody thinks COMP he is intelligent
'No body' thinks that *he* is intelligent.'

When the matrix subject in (i) is an R-expression such as *John*, the embedded subject position may be occupied either by the overt pronoun *el* or *pro*. When such alternation obtains, Montalbetti (1984) claims, the overt pronoun cannot be construed as a bound variable, as reported in (i).

Lujan (1986) reports that in (ii) below the sloppy reading is possible with *pro* but not with *el*.

(ii) Lujan (1986)
Juan cree que *el/pro* es inteligente; yo Bill también.
thinks COMP he is intelligent and too
'John' thinks that *he* is intelligent and Bill too.'
(The sloppy reading is possible with *pro*, but not with *el*.)

As reported in Montalbetti (1984), when such alternation does not obtain such as in positions for the possessive NP and the propositional object, the overt pronoun can be construed as a bound variable.

(iii)
a. (Muchos estudiantes) creen que sus/*pro* bicicletas son azules.
many students think COMP their bicycles are blue
'Many students' think that their bicycles are blue.'

b. (Muchos estudiantes) quieren que María se case con ellos/*pro*.
many students want COMP marry with them
'Many students' want María to marry them.'

As predicted, the sloppy reading is possible in examples in (iv) below.

(iv)
a. Juan cree que sus bicicletas son azules; y Bill también.
think COMP his bicycles are blue and also
'John' think that his bicycles are blue and Bill too.'
(The sloppy reading is possible.)

b. Juan quiere que María se case con él; y Bill también.
want COMP marry with him and also
'John' wants María to marry him; and Bill too.'
(The sloppy reading is possible.)

¹³ While it is also possible to utter (45b), with *Mary* in a situation depicted in (i), we are not concerned with this possibility.

(i) John sued Mary.

¹⁴ When the quantified NP c-commands *pro*, the bound variable construal is possible as indicated in (i).

(i)
onnano-ko-ga 2-3-nin [NP [S eek hitome pro] mita] hito-ni
girls-NOM 2-3-CL one glance saw person-DAT
sukininarareta (ite)
fall-in-love-PASS-PAST
'(a few girls) had [(some) person who took a glance at *pro*] fall in love with them.'

¹⁵ The examples in (i), also taken from Reinhart (1986), illustrate what Reinhart calls the "Matrix Islands" effects: cf. the sentential subject constraint of Ross (1967), the connectedness condition of Kayne (1983) and the Path Containment Condition of Pesetsky (1982).

(i)
2. **That* Linda argued with *Rosal* is surprising, but not with *Max*.
b. **[reading science-fiction books]* gives me a headache, but not *novels*.

Since the Japanese counterparts of examples like (i) typically turn out to involve complex NPs, I will concentrate on the subjectivity violation, and in particular on the complex NP violation, in the ensuing discussion.

¹⁶ The example in (b) presumably violates the ECP as well as the subjectivity. For Reinhart (1986), it violates the "Matrix Island" condition.
¹⁷

A word of caution must be given here so as not to give a false impression that Reinhart (1986) is committed to the exact formulations and assumptions that are made in her analysis to be summarized below. Reinhart (1986, pp. 2.1-2.2) states:

There are two questions which will remain open here. The first is whether there are other reasons to prefer classical-logic representation of quantification, over a Montague-type, generalized, NP analysis. I am arguing only that the scope and anaphors factors which are most commonly used to support the first view are irrelevant. But there are, possibly, also other factors to consider.

The second question concerns the concept of LF. Note that the assumption that LF is a level of linguistic representation (an intermediate level between SS and Semantic Interpretation) does not necessarily depend on the problem of quantification. Unifying the various scope phenomena, as proposed here, allows, in fact, a more generalized view of the structure and role of this level, than currently assumed. However, I believe that new levels should be introduced to the theory only with due attention to their formal properties, which has not been the case yet. The fact that some version of QR seems necessary does not mean that QR creates a linguistic level, e.g. that it is an obligatory procedure for semantic interpretation, or that there are any interpretive properties, other than scope, which can be captured only at the output of QR. An alternative view is that QR (or any of its equivalents) is a procedure which is needed, specifically, for deriving marked interpretations: either non-compositional Q-scope, or discourse-deletion. But it is not an obligatory stage between SS and SI, i.e. it is not required to apply in the standard, unmarked cases. This view with respect to non-compositional Q-scope is advocated, e.g. in Keenan and Falz (1978).

However, the central points of this paper are neutral with respect to these two questions, and they are consistent with either possible answer. For convenience, I will assume, here, the standard LF framework, and use its notation.

18 Reinhart later discusses cases that indicate that CR may adjoin a constituent to the VP node, referring to May's (1985) argument that "this move is needed independently (of deletion) for capturing Q-scope." (p. 24)

19 Since Reinhart does not provide examples of the output of the application of (54b) at the stage where the rule in (54c) had not applied, it is not clear that the QR in (54b) leaves a trace as indicated in (59). When (59) undergoes the rule in (54c), its output is as in (60); cf. her (24b), which is given as (i) in the following footnote.

20 The representation Reinhart provides is as in (i).

(i) (her (24b)) every x (woman x) (Lucie kissed x)

21 The representation that Reinhart gives is (ii).

(ii) (her (24a)) Lucie ($\forall x$ (x kissed Rosa))

22 Although she does not address the issue, her analysis thus makes a claim that a PP operation can refer to information at LF, a rather controversial position, to say the least. She supposes the LF deletion rule as stated in (i).

(i) (her (40)) Delic in PP on LP constituent, under identity.

23 The placement of λQ not crucial.

24 Pesetsky's (1982) analysis (of Gapping) uses movement into COMP instead of CR. Pesetsky (p. 648) acknowledges that "[the] parallel between a reasonable LP representation of gapping and the LP representation of multiple Interrogations has been pointed out by Sag (1976)."

The choice between the CR and movement into COMP (restated in more recent terms, possibly into the SPEC of COMP) would raise a number of interesting questions. The relevant issues, however, will not be addressed in this work.

25 The judgments on (69) and (70) have not been verified yet by native speakers. If unverified, they will be taken out.

26 Reinhart generalizes the three operations listed in (i).

- (i) a. Syntactic wh movement
- b. Constituent Raising
- c. Quantifier Raising.

Following May (1977), Reinhart assumes that the narrow scope of the relevant quantified NPs in (a) and (b) in (i) is due to syntactic islands.

(i)

a. At least two scholars found [the letters Max wrote to every actress] in the library (narrow scope to every actress)

b. [Reading every book] gave at least two students a headache (narrow scope to every book)

c. Two reviewers recommended reading every book (wide scope possible for every book)

27 One may suggest that, given the optionality of the CR, the strict reading of (71) may also correspond to another derivation, in which the CR has not applied. I will return to this possibility in Ch. 6.

28 As noted earlier in footnote xx, it is not clear that the second conjunct of (74) is completely inconsistent with the situation depicted in (i) below.

(i) Bill's father loves Bill.

29 It appears that the degree of unacceptability differs to some extent among the examples given below. It seems, in particular, that (77) and (81) are slightly better than (78) and (80), respectively. The consideration of the sort to be provided below regarding the relative acceptability of the Japanese counterparts of (78) through (81), therefore, seems to apply to the English cases as well, although to a lesser degree.

30 Some speakers might not readily accept (82 B) and (83 B). I will argue in the next subsection that their acceptability is contingent on the so-called "abouiness" interpretation and that the acceptability of (82 B) and (83 B) basically corresponds to that of (i) and (ii), respectively.

(i) sore-wa itallya ryoodi-mo da
that-TOP Italian cuisine-ALSO be
'That is true also of Italian cuisine.'

(ii) sore-wa italle-mo da
that-TOP italle-ALSO be
'That is true also of italle.'

31 Saito acknowledges that "[this] example is extremely awkward because of its "center-embedding" structure." But he notes that "it seems to me that it is perfectly grammatical." (pp. 255-256) Cf. also his example (151). The cleft construction, which will be discussed later in this section, partially avoids the processing difficulty due to "center-embedding" and we will be able to see the relevant contrast (i.e. that between (84) and (85)) more clearly with this construction.

32 Saito (1985, p.2) assumes this to be related to a condition that generally disallows resumption for adjunction operations, referring to Ross (1967).

33 As indicated in footnote xx (above (85)), the contrast in (89) will become clear when we use the cleft construction and put *Chomsky-ni* in the focus position of that construction. We will see this later in this section.

34 In fact, any major constituent may be marked by *wa* and may appear at the sentence-initial position; cf. Kurada (1965).

35 In Hoji (1985, Ch.3) I relate the PP topic as in (96b) (as well as *wa*-marked phrases inside an S) to the so-called contrastive *wa*. In this work, I will not discuss the distinction between the so-called topic *wa* and the contrastive *wa*.

36 Saito gives a question mark to (103b). The contrast is, however, clear between (103b) and (104) to be given below, as indicated by Saito.

37 The dichotomy between NP and PP in terms of their ability to be licensed by some notion of aboutness has been observed also in some European languages. Cinque (1977), for example, cites the following contrasts.

GERMAN (Rodman (1974))

(i) Fisch, ich esse Hering am liebsten.
'Fish, I (like to) eat herring the best.'

(11)

a. *A Giorgio, ieri ho conosciuto la ragazza che gli ha scritto quelle insolente.
'To Giorgio, yesterday I met the girl who wrote those insolent words to him.'

b. Giorgio, ieri ho conosciuto la ragazza che gli ha scritto quelle insolente.

FRENCH (Hirschbuhler (1975, p. 161))

(11)

a. *A moi, le gars qui me fera peur n'est pas encore né.
'To me, the guy who will frighten me hasn't been born yet.'

b. Ce projet, ceux qui en parlent le plus sont ceux qui en savent le moins.
'This project, those who talk the most about it are those who know the least about it.'

38 For the reason that is noted in xx, it is not clear that in (110b) the gap associated with *Tanaka-ni* is in the embedded object position. To the extent that (i) is acceptable, the relevant gap may be in the matrix S.

(i) ?(John-ga Tanaka-ni (S: Suo-ga kinoo kare-ni hianshisu to) omottotaru
(koto)

John-NOM Tanaka-ACC Sue-NOM yesterday ho-ACC criticized that thinks
'John (thinks of Tanaka) that Sue criticized him yesterday.'

It appears that the construction of NP-Q S' (v think/say) is most natural when the content of S' represents some property of the individual/object represented by the NP. "Sue criticized Tanaka yesterday" is not particularly a good way to describe the "properties of Tanaka". I suspect that this contributes to the somewhat low acceptability of (i).

39 James Huang (p.c. spring of 1987) pointed out the possibility that the relevant contrast is between phrases that need to be licensed sentence-internally and those that do not. Discussion in a later section indicates that this is in fact the case.

40 It is argued in Takezawa (1987, Ch. 4) that this distinction is also observed in the Tough construction in Japanese. His examples include the following:

(i) [pp Sootu kin'yuukikan-kara]-ga (John-nitotte)
such financial agency-from-mom John-for
okane-o kari-nikui
money-acc borrow-hard
'(Lit.) [From such a financial agency] is hard (for John) to borrow money [I].'

(ii) Takezawa (p. 216)

a. ?[pp Sootu kin'yuukikan-kara]-ga (John-nitotte)
such financial agency-from-NOM John-for
[NP(S: ci itumo e] okane-o takusan karite-i-ru] hito]-o
always money-ACC a lot borrow-PRES person-ACC
sin'yoosi-niku-i
trust-hard-PRES
(lit.) '[From such a financial agency] is hard (for John) to trust [NP a person [S' who always loans a lot of money [I]]]'

b. [pp Sootu kin'yuukikan-kara]-ga (John-nitotte)
such financial agency-from-NOM John-for
[S' aru e] okane-o takusan karite-i-ru to] hi-niku-i
money-ACC a lot borrow-PRES COMP say-hard-PRES
(lit.) '[From such a financial agency] is hard (for John) to say that [S' that he has loaned a lot of money [I]]'

41 It is not clear that (113b) is completely impossible. It appears, as first pointed out by Robert May (p.c.), that in English, analogously to Japanese, bare NP stripping is somewhat insensitive to the island violations. Thus, to the extent that the contrast of the sort indicated between (1b) and (1c) (both in response to (1a)) generally obtains, then we might conclude that instances of NP stripping as in (113b) may in fact be acceptable on the reading as indicated in (ii).

(i) a. People who can catch up with Bill eventually succeed.
b. *?John, too.

c. *With John, too.

(ii) It is true of John as well that people who catch up with him eventually succeed.

Cf. also footnote xx in xx.

42 Some speakers might not find (118b) perfectly acceptable. I suspect that this is because the presence of *o* in this construction (as well as in the cleft construction) is most natural in a formal style and the discourse in (118) is not particularly formal. In a discourse like (i), therefore, the use of NP-*o*-*mo* is more readily acceptable.

(i)
Mr. Abe: Amerika-wa waga kuni-no noogyoo seisaku-o tuyoku
hihansihazimeta
America-TOP our country-GEN agriculture policy-ACC strongly started
to criticize
rasil desu
seems
'It seems that the US started to criticize Japan's agricultural policy.'

Mr. Suzuki: Kinyuu seisaku(-o)-mo desu yu
finance policy-ACC-ALSO be
'(Our) financial policy, too.'

43 Even without *ni* (125b) does not seem to be consistent with the situation depicted in (126b). The reason for this will be given in a later section.

44 Based on the considerations given in Hoji (1985, 1987), I assume that the internal structure of the VP is as in (i).

(i) [VP NP-dat [V' NP-acc V]]

Cf. also the argument given in Ch. 2 for the relevance of "c-command" for defining the syntactic domain.

45 Some speakers might find the strict reading for (127b) somewhat less natural. This, I suspect, is due to pragmatics. The strict reading in (128a) must be acceptable in a context in which (i) in English is acceptable is acceptable.

(i) Mary introduced to John_i [(the person/someone) who wanted to meet with him]_i
She (then) introduced (him_k/her_k) to Bill as well.

We have noted that (124), as a response to (122), does not allow the reading given in (123). The reading allowed for (124) is as in (ii).

(ii) [the person/someone] who took a glance at John fell in love with Bill (as well as with John).

This, of course, is odd, pragmatically speaking, to the extent that one does not usually fall in love with a person X as the result of having taken a glance at a person Y. In order for (ii) to be acceptable, there must be a rather particular context. One such context is something like the following. John is Bill's father

and this person in question has tendency to fall in love with someone if his father is very nice looking (believing that anyone whose father is nice looking must be, or must become in the future, very nice looking. Thus this person, upon taking a glance at John, ended up falling love with Bill.

The sloppy reading depicted in (123) is pragmatically more natural than (ii), not requiring particular contexts of the sort just noted above. Yet, (124) does not allow (123). The choice of the pragmatically less natural reading for (124) must thus be dictated by a syntactic principle, rather than pragmatic considerations.

A more natural non-sloppy reading would be available for (122) if the reference of the embedded object *pro* may include *John*. In this case, the relevant reading for the discourse in question could be as in (iii).

(iii) [the person/someone] who took a glance at them_i fell in love with John_i as well as with Bill_j.

46 The choice between *soko* 'there/that place/the place' and *asoko* 'there/that place' affects what must be presupposed; cf. Kuno's (1973) observation on the so-called "anaphoric use" of *so* and *a*, discussed in Ch. 4. Roughly, the choice of *asoko* in (130) seems to imply more familiarity of the speaker and the hearer with *Toyota* than when *soko* is used.

47 The relevant judgments become even clearer when we discuss the sloppy readings in comparatives in a later section in this chapter.

48 See the earlier discussion in Ch. 4, regarding the English translation for *soko*.

49 Some speakers prefer the addition of *koio* after the *o*-marked NP in the matrix S; cf. Kuno (1976, p. x) and Saito (1983, p. x). In the ensuing discussion, I will suppress the effects of not having *koio* on the NP in structure in (i).

(i) [VP NP-o [S' ...] omow/iw]
'(to) think/say of NP S'

50 Notice, incidentally, that while (156b) is grammatical, (156c) is not. The contrast between the (b) and (c) examples in (153) and those in (154) may thus be related to that between (156b) and (156c). I will not, however, pursue this possibility in my present work.

51 They would be as in (i) and (ii). Among these, I find the (b) examples less than perfect.

(i) (in response to (158a))
a. Sore-wa Bill-mo da (yo)
that-TOP Bill-ALSO be
'That is true of Bill, too.'

b. ?Bill-mo soo da (yo)
Bill-ALSO so be
'Bill was that way, too.'
'The same was true of Bill, as well.'

(ii) (in response to (159a))
a. Sore-wa hana-mo da (yo)
that-TOP flower-ALSO be

'That is true of flowers, too.'

- b. ?hana-mo soo da (yo)
flower-ALSO so be
'Flowers was that way, too.'
'The same was true of flowers, as well.'

52 I am suppressing the possible presence of a covert embedded subject in the Japanese causative construction of the sort in (160). Cf. xxx, xx, x, among others, for proposals for the Japanese causatives. Even if there is a covert embedded subject in this structure, in which case the structure would be as in (i) (proposed in xx):

- (i) NP-ga NP_i-ni [S' ccj VP]-sase-TENSE

It does not affect the argument to be given below. That is, the postulation of such an empty category does not induce the type of effects that Montalbetti (1984, pp. xx) discusses in Spanish.

53 In the present work, we leave open exactly what licenses the instances of apparent sloppy reading that arises in the X-mo da 'X, too' that can alternate with Sore-wa X-mo da and X-mo soo da 'That is true of X, as well'. When we consider the structure of the Japanese stripping construction in 5.6, we return to this issue, although we will not be able to provide a solution to the problem.

54 The cross-hatch (#) is used in Hankamer and Sag (1976) to indicate "that the so marked sentence is incompatible with the indicated context (presuming, of course, the absence of any previous significant linguistic context.)" (their footnote 5)

55 Their claim is embedded in the context of the controversy as to whether the relevant constructions are derived by syntactic deletion rules or interpretive rules. If&S argue for the syntactic deletion analysis of the relevant syntactically controlled elliptical constructions. A full discussion of the relevant issues is beyond the scope of this work; cf. Wasow (1972), Williams (1977), Pesetsky (1982), Reinhart (1986, 1989) and Chao (1987), among others.

56 The other elliptical processes that require syntactic control, according to Hankamer and Sag (1976), are Sluicing, Gapping and the cases of "so anaphora" other than do-so. As illustration of Sluicing and Gapping, they note the contrast between (i) and (ii) as well as that between (iii) and (iv).

- (i) (their (42))
Hankamer: Someone's just been shot.
Sag: Yeah, I wonder who.

- (ii) (their (43))
[Hankamer produces a gun, points it offstage and fires, whereupon a scream is heard]
Sag: #Jesus, I wonder who.

- (iii) (their (49))
Hankamer: Ivan is now going to peel an apple.
Sag: And Jorge, an orange.

- (iv) (their (50))

[Hankamer produces an orange, proceeds to peel it, and just as Sag produces an apple, says:]
#And Ivan, an apple.

Later in this section, I will briefly discuss what appears to be the Japanese analogue of these constructions.

57 It is not clear how unnatural the English utterance (provided as the translation) in (172) is. Given the discussion in the preceding section, it seems possible that English stripping, as long as a bare NP is used in it, may be pragmatically licensed, to some extent. If this is indeed the case, the (marginal, but not completely hopeless) acceptability of the English counterparts of (172), for some speakers, is as expected. We also expect, under this assumption, that (i) is more offensive than (ii) without a linguistic antecedent.

- (i) NP, too.

- (ii) PP, too.

58 Taroo's response in (176) is not perfectly natural. This, however, seems to be due to a factor that is independent of the consideration relevant here. That is, the sequence of o-mo, ACC + ALSO, is rather marked, and is most natural in a somewhat formal style, as noted in footnote xx. Thus, unlike in (178), the NP-o-mo in (i) is quite natural.

- (i)

Mr. Abe: Amerika-wa waga kuni-no noogyoo seisaku-o tuyoku
America-TOP our country-GEN agricultural policy-ACC strongly
hihansi-hazimeta rasii desu
criticize-began seems
'It seems that the US has started criticizing our agricultural policy very strongly.'

Mr. Suzuki: Kinyuu seisaku-o-mo desu yo
financial policy-ACC-ALSO is
'(Our) financial policy, too'

The contrast of the sort observed between (178) and (i) is witnessed also in the cleft construction.

59 As noted above, this does not preclude the possibility that soo can also be used non-deictically, i.e. "anaphorically". Given the "anaphoric" use of the member of the so system, we in fact expect this to be possible. It is significant, however, that soo CAN be deictic and hence soo-su CAN be analogous to do-thai, which clearly is an instance of pragmatically controlled anaphora.

60 Examples like (i) and (ii) are also non-stripping constructions and are acceptable.

- (i)

[Same context as (183)]

Ziroo: Boku-yori zyoozu-da yo
I-than skillful
'(You are/He is) more skillful than I am.'

(ii)

[Same context as (183)]

Ziroo: Boku-yori umai yo
'[You are/He is] more skillful than I am.'

(i) happen to have da, but this is not a stripping construction. The da in (i) is part of the adjectival (the so-called keiyoodoosi) zyoosuna 'skillful'. Notice that, while da of the stripping (that must be syntactically licensed) has a peculiar restriction on Tense, da in (i) does not, as illustrated by the contrast between (iii) and (iv).

(iii)

a: John-ga susi-o tukutta (yo)
John-NOM sushi-ACC made
'John made sushi (I tell you).'

b: Bill-yori umaku da (yo)
b': Bill-yori umaku datta (yo)
b'': Bill-yori zyoosu-ni da (yo)
b''': Bill-yori zyoosu-ni datta (yo)
'More skillfully than Bill.'

(iv)

a: John-ga susi-o tukutta (yo)
John-NOM sushi-ACC made
'John made sushi (I tell you).'

b: Bill-yori zyoosu da (yo)
'He is more skillful than Bill.'

b': Bill-yori zyoosu datta (yo)
'He was more skillful than Bill.'

61 As indicated at the end of 5.5, it is not always necessary to have mo 'ALSO' in this construction. Examples like (i) and (ii) also indicate that mo is not necessary in this construction.

(i)

a: John-ga susi-o tabeta (yo)
John-NOM sushi-ACC ate
'John ate sushi.'

b: Iya, tempura(-o) da (yo)
No tempura(-ACC) be
'No, tempura.'

(ii)

a: John-ga gurasu-ni abura-o ireta yo
John-NOM glass-DAT oil-ACC put
'John put oil in a glass.'

b: Iya, koppu-ni da yo
No cup-DAT be
'No, in a cup.'

While it is not clear how acceptable NP-ga is in the stripping construction of this sort, (iiib) seems basically acceptable.

(iii)

a: John-ga susi-o tabeta yo
John-NOM sushi-ACC ate
'John ate sushi.'

b: Iya, Mary-ga da yo
No Mary-NOM be
'No, Mary.'

I thus put mo in the parentheses in (189).

As Barry Shein (p.c) has pointed out to me for a slightly different set of examples, it is not clear that the "stripping" construction without mo may in fact be treated on a par with that without it, since utterances like (iib), for example, seem to involve metalinguistic negation. The inclusion of the parentheses in (189) must, therefore, be understood as tentative.

62 See footnote xx for discussion of the possible unnaturalness of (202b).

63 Precedence is assumed to be irrelevant at LP, following Higginbotham (1983). Hence, the linear order between the S and COMP in (205) is irrelevant. So is the linear order of COMP and S in (206).

64 Although the surface string in (206) might not be fully acceptable, the deletion of mo in tempura-o-mo improves the level of acceptability.

65 I am thus drawing a parallel between the scrambled NP in (i) and the NP that is in the cleft focus position in (ii), in terms of the overt c:sc-marking Q.

(i) susi-o_i John-ga I_i tabeta (koto)
sushi-ACC John-NOM ate
'sushi, John ate'

(ii) [OP_i [John-ga I_i tabeta] no] wa [susi-o da
John-NOM ate sushi-ACC be
'It was sushi that John ate.'

(to be completed)

66 In his analysis of gapping in English, Pesetsky's (1981, p. xx) proposes essentially the same operation as CR. He proposes the relevant L_i' movement is analogous to Focus movement and the R-expressions move into COMP, rather than being S-adjoined.

67 In Hoji (1987), I provide evidence for syntactic movement in the cleft construction in Japanese, indicating, among other things, that the movement involved in the cleft construction indeed licenses the type of dependency that has been called parasitic gaps in Japanese. There are a number of related issues that arise when we consider the cleft construction in Japanese. I will, however, leave such issues undiscussed in this work, due to space and time limitation.

68 As indicated at the end of 5.5, it is not always necessary to have *m.o.* 'ALSO' in this construction. Examples like (i) and (ii) also indicate that *m.o.* is not necessary in this construction.

(i)
a: John-ga susi-o tabeta (yo)
John-NOM sushi-ACC ate
'John ate sushi.'

b: Iya, tempura(-o) da (yo)
No tempura(-ACC) be
'No, tempura.'

(ii)
a: John-ga gurasu-ni abura-o ireta yo
John-NOM glass-DAT oil-ACC put
'John put oil in a glass.'

b: Iya, koppu-ni da yo
No cup-DAT be
'No, in a cup.'

While it is not clear how acceptable NP-ga is in the stripping construction of this sort, (iib) seems basically acceptable.

(iii)
a: John-ga susi-o tabeta yo
John-NOM sushi-ACC ate
'John ate sushi.'

b: Iya, Mary-ga da yo
No Mary-NOM be
'No, Mary.'

I thus put *m.o.* in the parentheses in (189).

As Barry Shein (p.c.) has pointed out to me for a slightly different set of examples, it is not clear that the "stripping" construction without *m.o.* may in fact be treated on a par with that without it, since utterances like (iib), for example, seem to involve metalinguistic negation. The inclusion of the parentheses in (189) must, therefore, be understood as tentative.

69 See footnote xx for discussion of the possible unnaturalness of (202b).

70 Precedence is assumed to be irrelevant at LP, following Higginbotham (19837). Hence, the linear order between the S and COMP in (205) is irrelevant. So is the linear order of COMP and S in (206).

71 Although the surface string in (206) might not be fully acceptable, the deletion of *m.o.* in *tempura-o-m.o.* improves the level of acceptability.

72 I am thus drawing a parallel between the scrambled NP in (i) and the NP that is in the cleft focus position in (ii), in terms of the overt case-marking *ga*.

(i) susi-o John-ga ni tabeta (koto)
sushi-ACC John-NOM ate

'sushi, John ate'

(ii) [OP_i [John-ga ni tabeta] no] wa [susi]-o da
John-NOM ate sushi-ACC be
'It was sushi that John ate.'

(to be completed)

73 In his analysis of gapping in English, Pesetsky's (1981, pp. xx) proposes essentially the same operation as CR. He proposes the relevant LF movement is analogous to Focus movement and the R-expressions move into COMP, rather than being S-adjoined.

74 In Hoji (1987), I provide evidence for syntactic movement in the cleft construction in Japanese, indicating, among other things, that this movement involved in the cleft construction indeed licenses the type of dependency that has been called parasitic gaps in Japanese. There are a number of related issues that arise when we consider the cleft construction in Japanese. I will, however, leave such issues undiscussed in this work, due to space and time limitation.

75 Recall that in Japanese the indirect object NP (marked with DAT) c-commands the direct object NP (marked with ACC), at D-structure.

76 Y. Kitagawa (1989) observes that the distinction between coreference and bound variable anaphora can be detected based on the availability of sloppy reading in the VP deletion context in English. He observes that while (i) may be made acceptable in some way, such as by means of a heavy stress on *him*, the sloppy reading in (ii) is never possible.

(i) John_i recommended HIM_i.

(ii)
a: John recommended him/HIM.
b: Bill did, too.

To the extent that this observation is correct, the observation in Japanese to be given below is a reproduction in Japanese of the relevant contrast in English as given in (i) and (ii).

77 It is not clear whether the "sloppy reading" is totally disallowed in (238b) and (239b). What has been called "predicational sloppy reading" seems to be possible in (238b) and (239b) to the extent that (i) and (ii) are possible, respectively.

(i) (In response to (238a))
Sore-wa Toyota-ni-mo da (yo)
that-TOP Toyota-DAT-ALSO be
'That is true of Toyota-DAT, too.'

(ii) (In response to (239a))
Sore-wa Furansu-no kaisyu-ni-mo da (yo)
that-TOP France-GEN compan-DAT-ALSO be
'That is true of (the/A) French company-DAT, too.'

Most speakers find (i) and (ii) unacceptable and they also find the "sloppy

reading" impossible for (238b) and (239b).

78 Recall that I am leaving aside exactly how the comparatives of this form must be analyzed.

Chapter Six

Coreference, Bound Variable Anaphora and Language Acquisition

6.1. Introduction

This chapter is intended to synthesize the major results from the preceding chapters. The three most significant claims are:

- (1)
 - a. Binding condition B regulates [-a] categories. (Ch. 2)
 - b. Binding condition D is a condition on linking while condition B is a condition on binding. (Ch. 3)
 - c. Binding conditions regulates bound variable anaphora but not coreference. (Chs. 4 and 5)

The claim in (1c), which is made in Reinhart (1983), was motivated in chapters 4 and 5 with respect to condition B. The Reinhartian approach to binding theory entails that not only condition B but the other conditions in Binding Theory regulate only bound variable anaphora but not coreference.

Reinhart (1983, Ch. 7) in fact claims that binding condition A falls under the generalization indicated in (1c).¹

What about conditions C and D? Given the assumption/claim in (1c), which is adopted from Reinhart (1983, Ch. 7), we must conclude that condition C does not exist, at least for coreference. I have indicated in Ch. 2 that the effects of condition C are weak not only in Japanese but also in English; cf. Evans (1977, 1980).² As noted in Ch. 2, many speaker accept sentences such as (2).³

(2)

- a. John_i thinks that Mary admires John_i's work.
- b. John_i ate all the cookies that Mary brought to John_i's apartment.

Since the relevant reading in (2) is clearly that of coreference, in accordance with (1c), Binding Theory does not regulate the coreference options such as observed in (2).

The binding conditions that I adopted at the end of Ch. 2 are as in (3).

(3) (Cf. 2.12.)

- a. Condition A: A [+a] category must be bound in its local domain.
- b. Condition B: A [-a] category must be free in its local domain.
- c. Condition C: A [-a, -p] category must be free.

In Chs. 4 and 5, we have seen the disjointness effects of condition B in the case of bound variable anaphora. We have, however, yet to see the condition C effects for bound variable anaphora. If condition C is a grammatical principle, we expect it to clearly show its effects in the case of bound variable

anaphora.

The claim in (1b) indicates that condition D, considered as a condition on linking, may regulate coreference. The instances of condition D violations we have seen earlier in Chs. 2 and 3 do not involve quantificational NP's and hence the condition D effects observed can be regarded as being on coreference.

In 6.2, I will present an overview of the effects of conditions B, C and D both for coreference and for bound variable anaphora. I will consider in particular whether the claim made in (1c) is applicable to conditions C and D. Reinhart's (1983, Ch. 7) "pragmatic" account of the "effects of binding conditions" for coreference will be introduced in 6.3.

In 6.4, I will consider an array of data consisting of the Japanese adult grammar, the English adult grammar and the English child grammar. I will first note puzzling differences among them and then propose an account for them. In 6.5, I will illustrate how the proposed account works in the cases of what have so far been discussed in the preceding chapters as the effects of conditions B, C and D that involve coreference. Some of the remaining issues will be briefly identified in 6.6, to be followed by the concluding remarks in 6.7.

6.2.1. Coreference

6.2.1.1. Condition B

Let us first consider coreference. The claim in (1a), which is in part based on Oshima (1977), was motivated by the observation that all the

non-anaphoric nominal categories in Japanese seem to be subject to the local disjointness requirement whose effect is identical to that of standard condition B. The standard formulation of condition B is given in (4).

(4) A [+p] category must be free in its local domain.

English examples like (5a) and (5b), in contrast to (5c), (5d), (5e) and (5f), illustrate the effect of condition B, in the standard Binding Theory.

(5)

- a. *John_i recommended him_i.
- b. *John_i consoled him_i.
- c. John_i recommended himself_i.
- d. John_i consoled himself_i.
- e. John_i recommended his_i student.
- f. John_i consoled his_i student.

In Oshima (1977), Japanese examples like (6a), in contrast to (6b) and (6c) were taken as evidence for condition B in this language.⁴

(6)

- a. *John_i-ga kare_i-o nagusameta ({koto/to wa})

John-NOM he-ACC consoled

'John_i consoled him_i

- b. John_i-ga kare_i-no gakusei-o nagusameta ({koto/to wa})

John-NOM he-GEN student-ACC consoled

'John_i consoled his_i student'

c. John_i-ga zibun_i-o nagusameta ({koto/to wa})

John-NOM self-ACC consoled

'John_i consoled himself_i'

The contrast in (6) and (7) is quite generally observed across different "types" of nominal categories in Japanese, such as Names, social titles and epithets; cf. Ch. 2. Thus the contrast in (7) is quite clear.

(7)

a. *John_i-ga John_i-o nagusameta ({koto/to wa})

John-NOM John-ACC consoled

'John_i consoled John_i'

b. John_i-ga John_i-no gakusei-o nagusameta ({koto/to wa})

John-NOM John-GEN student-ACC consoled

'John_i consoled John_i student'

The observation of this sort was one of the primary motivations for the proposal that [-a] categories rather than [+p] categories are subject to Condition B.

It was noted in Ch. 2, however, that there are many sentences that seem to allow the coreference in apparent violation of condition B, as pointed out by Y. Kitagawa (p.c.). Thus most speakers accept sentences like (8), in contrast to those such as (6a).⁵

(8)

John_i-ga kare_i-o suisensita ({koto/to wa})

John-NOM he-ACC recommended

'John_i recommended him_i'

In Oshima (1977), Kuno (1986) and Ch. 2 of this book, it was assumed, in effect, that the data that involve verbs like nagusame 'console' are unmarked while the data that involve verbs like suisens 'recommend' are marked. Given this assumption of the "markedness" of the data, it was concluded that condition B holds in Japanese for coreference.⁶

It must be noted that verbs like suisens 'recommend' are much easier to find than those like nagusame 'console'. It must further be noted that the distinction of the sort reported above seems to be observed in English as well. Thus (9) seems much worse than (10).

(9) *John consoled John.

(10) ??John recommended John.

Consider these sentences in the contexts indicated below.

(11) (So, who was consoling who?)

*?Mary was consoling Mary and John was consoling John.

(12) (So, who was recommending who?)

Mary was recommending Mary and John was recommending John.

Notice that both (13a) and (13b) are acceptable, and so are (14a) and (14b).

(13)

- a. John_i was consoling himself_i.
- b. John_i was recommending himself_i.

(14)

- a. John_i was consoling his_i brother.
- b. John_i was recommending his_i brother.

It thus seems reasonable to assume that the relevant contrast between (9) and (10) is directly related to the contrast we have observed in Japanese between nagusame 'console' and susisens 'recommend'.

Delaying until 6.5 the discussion of why these two types of verbs behave differently, let us first observe the crucial difference between Japanese and English. Consider the following examples.

(15)

- a. John_i-ga John_i-o suisensita (koto/to wa)

John-NOM John-ACC recommended

'John_i recommended John_i.'

- b. John_i-ga kare_i-o suisensita (koto/to wa)

John_i-NOM he_i-ACC recommended

'John_i recommended him_i.'

(16)

- a. ^(?)John_i recommended John_i (and Mary_k recommended Mary_k.)

- b. *John_i recommended him_i (and Mary_k recommended her_k.)

The crucial difference is between (15b) and (16b). (I will return to the difference between (15a) and (16a) in 6.5.) The data in (15) and (16) indicate that kare 'he' behaves like John, not like him. This is somewhat expected given the earlier conclusion that kare is essentially a deictic nominal expression.⁷

In this subsection, I have identified the following two generalizations, regarding the coreference effects of condition B, to which I will return in 6.4..

(17)

- a. While John recommended him does not allow the coreference, the Japanese counterpart does.
- b. While verbs like console strongly induce the "condition B effects" for coreference, verbs like recommend do not.

Let us now move on to "condition C effects" for coreference.

6.2.1.2. Condition C

Recall that condition C effects are very weak or non-existent in Japanese, as observed in Oshima (1977) and discussed in Lasnik (1986); cf. also Kuno (1986). Thus sentences like (18) are acceptable.

(18) (based on Oshima (1979, p. 431))

- a. John_i-ga [S_i Mary_k-ga John_i-o nikunde-iru to] omot-te-i-ru (koto/to wa)

John-NOM Mary-NOM John-ACC hates that thinks
'John_i thinks that Mary hates John_i.'

b. John_i-ga John_i-no hon-o mottekita ({koto/to wa})
John-NOM John-GEN book-ACC brought
'John_i brought John_i's book.'

It has generally been assumed in the literature that sentences like (19) in English disallow the indicated coreference.

- (19)
a. John_i thinks that Mary hates John_i.
b. John_i brought John_i's book.

Many speakers, however, find the coreference in sentences like (19) possible. Sentences like (20) are also typically accepted by these speakers.

- (20) (=2)
a. John_i thinks that Mary admires John_i's work.
b. John_i ate all the cookies that Mary brought to John_i's apartment.

Japanese sentences such as (18) seem to be somewhat more readily acceptable than the English sentences such as (19) and (20). It nevertheless seems to be the case that all these sentences are basically acceptable. I thus conclude at this point that the structures indicated in (18), (19) and (20) are all grammatical. Given this conclusion, it follows that condition C, as formulated in (3c), is irrelevant for coreference.⁸ This, of course, is the

conclusion that Reinhart (1983, Ch.7) draws. I will discuss in 6.2.2 whether condition C is relevant for bound variable anaphora.

Two apparent problems remain to be solved, under the assumption that condition C is irrelevant for coreference. One has to do with the fact that even those speakers who more or less accept (19) and (20) do not in general accept sentences like (21a), in which the bindee is an epithet; cf. Chomsky (1986b (i.e. KofL), pp. 79-80). That is, even those speakers who accept (21a), which Lasnik and Uriagereka (1988 p. 39) marks as ungrammatical, tend to reject (21b).⁹

- (21) (Lasnik and Uriagereka's (1988, p. 39))
a. John_i can't stand John_i's teacher. (L and U gives this "**".)
b. *John_i can't stand the bastard_i's teacher.

Since the same speakers accept (22), the c-command relation seems to be crucial here.

- (22)
a. John_i's teacher can't stand the bastard_i. (Lasnik and Uriagereka's (37b))
b. John_i's teacher can't stand the bastard_i's attitude.

The other problem has to do with the fact that sentences like (23) tend to be judged less acceptable than those in (19) and (20).¹⁰

- (23)
a. *?John_i thinks that John_i is a genius.
b. *?/?John_i confessed that John_i had stolen the money.

The contrast between (19) and (20) on the one hand and (23) on the other is in fact mirrored by the contrast that seems to obtain in Japanese between (18) above and (24) below.

(24)

a. *²John_i-ga [_S John_i-ga tensai da to] omoikondeiru ({{koto/to wa}})

John-NOM John-NOM genius be that believed

'John_i believes that John_i is a genius'

b. *²John_i-ga [_S John_i-ga okane-o nusunda to] kokuhakusita

John-NOM John-NOM money-ACC stole that confessed

({{koto/to wa}})

'John_i confessed that John_i had stolen the money'

I have concluded, with Reinhart (1983, Ch.7), that condition C is irrelevant, at least for coreference. I will consider in 6.2.2 whether condition C is relevant for bound variable anaphora. Two problems have been noted. One has to do with the apparent condition C effects for coreference in the cases in which the bindee is an epithet. The other has to do with the fact that the coreference between two Names tend to be difficult to obtain in certain configurations as indicated in (23) and (24). I will return to these in 6.5.

6.2.1.3. Condition D

The effects of condition D for coreference, unlike those of conditions B and C, have been observed to be rather clear (except for the cases of its

suspension as discussed in Ch. 3). Thus sentences like (25) and their Japanese counterparts are all unacceptable with the indicated coreference.

(25)

a. *he_i recommended John_i's teacher

b. *the bastard_i ate all the cookies that Mary brought to John_i's apartment

c. *the lieutenant_i thinks that the general will adopt Lieut. Smith_i's proposal

As we have seen in Ch. 2, the sentences in (25) and their Japanese counterparts will become acceptable (i) if the binder (i.e. the matrix subject NP) and the bindee are exchanged or (ii) if the binder is embedded in an NP, for example, and no longer c-commands (hence no longer binds) the bindee (i.e. John and Lieut. Smith).

Given the claim in (29c), we expect that condition B (and condition C, if it is indeed part of Binding Theory) do not regulate coreference. As we have observed, the effects of these conditions (for coreference) are rather weak indeed. The effects of condition D, on the other hand, are quite clear cross-linguistically, as pointed out in Lasnik (1986). It has also been reported (xx) that the acquisition studies show the effects of condition D are observed at a very early stage of acquisition, as opposed to the effects of conditions B and C (for coreference). These observations thus constitute supporting evidence for the view proposed in Ch. 3, according to which condition D and condition B are of fundamentally different natures. As stated in (29b), it was claimed in Ch. 3 that condition D is a condition on linking while condition B is a condition on binding. Given this distinction between condition D and condition B, the differences noted just above are not unexpected at all.

6.2.2. Bound Variable Anaphora

In this subsection, I will consider the applicability of conditions B, C and D for bound variable construal.

6.2.2.1. Condition B

In Chs. 4 and 5, we have seen that condition B effects are observed most clearly when the relevant dependency is that of bound variable anaphora rather than coreference. The contrast between bound variable anaphora and coreference that we have seen is summarized in (26).

(26) (Cf. 5.8.)

a. *[Toyota to Nissan]_i-ga soko_i-o suisensita (koto)

Toyota and Nissan-NOM it-ACC recommended

'[Toyota and Nissan]_i recommended it_i.'

b. Toyota_i-ga soko_i-o suisensita (koto)

Toyota-NOM it-ACC recommended

'Toyota_i recommended it_i.'

c. John_i-ga kare_i-o suisensita (koto)

John-NOM he-ACC recommended

'John_i recommended him_i.'

As we saw in Ch. 4, in order for (26a) to be acceptable, the bound variable construal must be possible. (Recall that soko is singular and cannot be

coreferential with the plural NP in the subject position.) Since (26a) is unacceptable, however, the unacceptability has been taken as evidence for condition B effects for bound variable anaphora. In contrast to (26a), the sentences in (26b) and (26c) are judged acceptable to varying degrees.¹¹ Recall that I have argued in Ch. 2 that it is not motivated to identify soko to be [+p]. Given the conclusion in Ch. 2 that soko is simply [-a] (rather than [-a, +p]), the condition B effects in (26a) constitutes evidence for the hypothesis that condition B holds of [-a] categories (the claim in (29c)).

One might suggest that the pair in (27) represents the English analogue of the relevant contrast in (26). (The contrast of this sort is noted in Sportiche (1986, p. x).)

(27)

a. *John_i recommended him_i.

b. **No one_i recommended him_i.

Sportiche (1986, p.x) notes that the acceptability of (27a) may be improved in one way or another but that of (27b) cannot. Since (27a) seems much worse than (26b) and (26c), the better candidate for the English counterpart of the Japanese paradigm in (26) might be the pair in (28).

(28)

a. ??John_i recommended John_i.

b. *No one_i recommended him_i.

Recall the three major claims that have been made in the preceding chapters, which are repeated below.

(29)

- a. Binding condition B regulates [-a] categories. (Ch. 2)
- b. Binding condition D is a condition on linking while condition B is a condition on binding. (Ch. 3)
- c. Binding conditions regulates bound variable anaphora but not coreference. (Chs. 4 and 5)

Given (29a), John, being [-a], is subject to condition B. Due to (29c), however, (28a) should not be ruled out by condition B, since this sentence does not involve bound variable anaphora. Rather it involves coreference. According to (29c), condition B is relevant only in (28b). This means that (28b) must be grammatical. I will argue below that this is in fact the correct interpretation of the data, as indicated in Reinhart (1983, Ch. 7).

6.2.2.2. Conditions C and D

Since strong crossover (SCO) has been analyzed as an instance of condition C violation (Chomsky (1981, pp. 193-196), sentences that exemplify SCO seem to be good candidates for condition C violation for bound variable anaphora. Sentences in (30) and (31) are such examples.

(30) (Chomsky's (1981, p. 193) (26i) and (26ii))

- a. *Who_i did he_i say Mary had kissed t_i?
- b. *Who_i did he_i say t_i had kissed Mary?

(31) (Chomsky's (1981, p. 194) (29i))

*he_i said Mary had kissed everyone_i

Assuming that Names are [-a, -p] and that the binding theoretic features of a trace is that of its antecedent (Barss (1986) and xx), we can rule out (30) and (31) by condition C as given in (3c), repeated below.

(3c) Condition C: A [-a, -p] category must be free.

In this analysis, the contrast between (30) and (31) on the one hand and (2) (repeated below) on the other is that the former involves bound variable construal but the latter involves coreference.

(2)

- a. John_i thinks that Mary admires John_i's work.
- b. John_i ate all the cookies that Mary brought to John_i's apartment.

The sentences in (2) are much better than in (30) and (31). The contrast between (30) and (31) on the one hand and (2) on the other can be considered as analogous to the contrast observed (with respect to condition B) in (26) (and in (27) and (28)).

Notice, however, that he is the binder in (30) and (31). Given the assumption that he is less referential than everyone and the trace of a wh-phrase, (30) and (31) can be considered as violating condition D (as well as the "condition of WCO", which I assume is a licensing condition for bound variable construal, basically as in Reinhart (1983, Ch. 3)).¹² It might appear at this point, therefore, that we cannot determine whether (30) and (31) must be ruled out by condition C or by condition D.

There is, however, evidence that indicates that (30) and (31) must be ruled out by condition D rather than by condition C. Consider the following example from Evans (1977).¹³

(32) (Evans (1977, p. 273)

Every logician_i was walking with a boy near that logician_i's house.

As indicated by the familiar situation in (33), the relevant dependency in (32) seems to be that of bound variable construal.

(33)

Every logician came to the workshop. That logician read a paper.

In (33) that logician may not be construed as a variable bound by every logician (because of the lack of c-command). Neither can it be regarded as an E-type pronoun (i.e. "that logician that came to the workshop").

Since the binding theoretic features for that logician is most likely [-a, -p], it is subject to condition C. In (32), however, that logician is bound by everyone. Hence, we must conclude that that logician is NOT subject to condition C for bound variable anaphora. If [-a, -p] categories, such as that logician, are NOT subject to condition C, then perhaps nothing is subject to condition C. Since we have already seen in 6.2.1 that condition C effects for coreference are weak, the absence of condition C effects for bound variable construal illustrated in (32) indicates that condition C does not exist, as is in fact suggested in Reinhart (1983, Ch. 7).¹⁴

The acceptability of (32) thus means that condition C does not hold even in the case of bound variable anaphora. Given this result, we must

conclude that (30) and (31) cannot be ruled out by condition C operating on bound variable construal. This in turn leads us to suspect that it is condition D that is at work in (30) and (31). This is plausible under the assumptions we have made above regarding the "degrees of referentiality" of the relevant categories.

It is interesting to note that epithets such as that bastard can also be bound by every logician, as indicated in (34).

(34) Every corrupt politician_i would have the nerve to walk with a blond right in front of that bastard_i's house. (Robin Belvin (p.c.))

Examples like (32) and (34) thus suggest the irrelevance of condition C for bound variable anaphora. This result, combined with the conclusion in 6.2.1.2 that condition C is irrelevant for coreference, constitutes evidence that condition C is not a grammatical principle, as noted in the preceding subsection.^{15, 16}

6.2.3. A Summary

In 6.2, I have reviewed the effects of condition B, C and D both for coreference and bound variable anaphora. I have concluded:

(35)

- a. Condition B, which holds of [-a] categories, regulates bound variable anaphora but not coreference. ((29c), which is from Reinhart (1983, Ch.3))
- b. Condition C does not exist, either for bound variable anaphora or for coreference.

c. Condition D holds both for coreference and for bound variable anaphora.

Among the three claims in (35), (35c) is tentative, and I will concentrate on the claims in (35a) and (35b) in the ensuing discussion.

Given the conclusions in (35a) and (35b), our task is then to account for the apparent effects of conditions B and C in the case of coreference. The most notable is the unacceptability of (36).

(36) *John_i recommended him_i.

Recall that the Japanese counterpart of (36), given in (37), is acceptable for many speakers while (36) in English is typically judged unacceptable.

(37)
John_i-ga kare_i-o suisensita ({koto/to wa})
John-NOM he-ACC recommended
'John_i recommended him_i.'

Before proposing an account for (36) and other cases of disjointness effects for coreference, I will first take a look at Reinhart's (1983, Ch.7) "pragmatic account" of the "effects of binding conditions" in the case of coreference.

6.3. Reinhart's "Pragmatic Account" of Disjoint Reference

Reinhart (1983, Ch.7) argues that bound variable anaphora falls

directly under Binding Theory but coreference does not. She proposes the following indexing procedures as part of her theory of anaphora.

(38) (Reinhart's (1983, p. 158) (34))¹⁷

Coindex a pronoun P with a c-commanding NP α (α not immediately dominated by COMP or S') (= α being in an A-position)
conditions: (a) If P is an R-pronoun (anaphors-HH) α must be in its minimal governing category.
(b) If P is non-R-pronoun, α must be outside its minimal governing categories.

Here, "minimal governing category" can be replaced with "local domain" without affecting the content of her proposal; hence I will refer to it as "local domain". The (a) clause assumes the work of condition A and the (b) clause that of condition B. She argues that the interpretive procedure which translates nominal categories in appropriate positions into variables is sensitive to the coindexation. Nominal categories that are not coindexed with a c-commanding NP, in her approach, fail to be translated as variables. The translation procedure for bound anaphora is stated as in (39).

(39) (Reinhart's (p. 160) (37))

$[S' \Phi] \implies [S' \beta (\lambda x (\Phi \beta/x))]$

Reinhart (p. 160) states:

This rule thus operates in the S' domain and λ -abstracts on the antecedent, i.e. that NP in a set of coindexed NPs which c-commands

the others (which can only be pronouns, given the coindexing procedure [(38)]), and converts all other pronouns in this set to variables bound by the λ operator. The antecedent (β in [(39)]) can be any NP (definite, quantified or a pronoun) as long as it c-commands the pronoun it is coindexed with.

Notice that the translation procedure for bound anaphora is contingent upon coindexation. Coindexation is in turn constrained by the domain restrictions as in (38) (i.e. the domain restrictions condition A and condition B). Hence, whether an R-pronoun (i.e. a reflexive) and a non-R-pronoun (i.e. non-reflexive pronoun) may be interpreted as a bound variable is dependent upon the domain restrictions encoded in the indexing procedure in (38).¹⁸

As an illustration of Reinhart's analysis, consider the sentences in (40).

- (40)
- a. John recommended himself.
 - b. *John thought that Mary had recommended himself.
 - c. John recommended him.
 - d. John thought that Mary had recommended him.

In accordance with (38), the possible coindexing that involves John is indicated in (41).

- (41)
- a. John_i recommended himself_i.
 - b. John thought that Mary had recommended himself.

- c. John recommended him.
- d. John_i thought that Mary had recommended him_i.

Since John is outside the local domain of himself (an R-pronoun) in (41b), the coindexation is not possible there. Likewise, since John is inside the local domain of him (a non-R-pronoun) in (41c), the coindexation is not possible in (41c).

The coindexing procedure yields (41a) and (41d). The translation procedure in (39), in turn, applies to (41a) and (41d), yielding (42a) and (42b), respectively.

- (42)
- a. [_S John (λx (x recommended x))]
 - b. [_S John (λx (x thought that Mary had recommended x))]

Since John and himself/him in (41b) and (41c) fail to be coindexed, these sentences cannot be translated as in (43a) and (43b), respectively.

- (43)
- a. [_S John (λx (x thought that Mary had recommended x))]
 - b. [_S John (λx (x recommended x))]

This, of course, is the desired result. (40b) is ungrammatical. (40c) fails to give the bound variable construal as indicated in (43b), in contrast to (40d), which yields the bound reading for him as indicated in (42b).¹⁹

Reinhart (p. 159) assumes that the procedure in (38) is optional. Hence (41a) and (41d) need not be coindexed. The absence of coindexation

results in (44a) and (44b).

(44)

- a. John recommended himself.
- b. John thought that Mary had recommended him.

In this case, (44a) fails to be translated as (42a). Given the assumption that "R-pronouns (reflexives) are interpretable only as variables", Reinhart (p.159) argues that (44a) is uninterpretable. In the case of (44b), the interpretation of the sentence, in particular, the "referential association" between John and him, falls outside of syntax. The sentence may be interpreted as indicating, or being compatible with, the coreferential interpretation between John and him, but not with that of bound variable anaphora.

According to Reinhart's proposal, (44b) and the sentences in (45) have the same status with respect to the translation procedure in (39).

(45)

- a. His teacher recommended John.
- b. The person who was teaching John recommended him.
- c. John recommended him.
- d. He recommended John's student.

Recall that the coindexation procedure in (38) always "co-index a pronoun" with a c-commanding NP. Hence he and John in (45) cannot be coindexed; the c-commanded NP IS NOT a pronoun.²⁰ The absence of the c-command relation between John and his/him in (45a) and (45b) means that these NP's

cannot be coindexed. Because of the domain restriction in (39b), John and him in (45c) cannot be coindexed. Thus, all the sentences in (45) and the one in (44b), in which John and him are not coindexed, are on a par with one another, in that the "referential association" between the relevant NP's falls outside the bounds of syntax.

It is nevertheless clear, however, that among these sentences, only (45c) and (45d) strongly disallows the coreferential interpretation between the two NP's. Reinhart (1983, Ch.7) thus proposes that the disjoint reference effects observed in (45c) and (45d) are due to the pragmatic strategies, as stated in (46).

(46) Reinhart's (1983, Ch. 7) (52)

- a. Speaker's strategy: When a syntactic structure you are using allows bound-anaphora interpretation, then use it if you intend your expressions to corefer, unless you have some reasons to avoid bound anaphora.
- b. Hearer's strategy: If the speaker avoids the bound anaphora options provided by the structure he is using, then, unless he has reasons to avoid bound anaphora, he didn't intend his expressions to corefer.

That "a syntactic structure you are using allows bound-anaphora interpretation" in (46a) presumably means, restricting our discussion to exactly two NPs, that one NP c-commands the other in the structure under discussion. "Use it" in (46a) perhaps means "Insert the appropriate lexical categories under these NP's so that the structure will undergo the translation procedure in (39)." Given this interpretation of the "strategies" in (46), let us

consider what these "pragmatic strategies" are intended to express. Take (45c), for example, which is repeated below.

(45c) John recommended him.

This sentence has the structure in (47).

(47) NP recommended NP

Notice that if the second NP is a reflexive, this structure can be translated into (48), by the procedures in (38) and (39).

(48) [_S NP (λx (x recommended x))]

Thus the strategy in (46a) dictates that the speaker use a reflexive, e.g. himself, as the object NP IF he/she intends the two NP's to corefer. Similarly, the strategy in (46b) "informs" the hearer that the speaker did not intend the coreference if a reflexive were NOT used as the object NP. The unless clauses in (46) are intended to account for the instances of the violation of the binding conditions as noted in Bolinger (xx), Evans (1977, 1980) and Higginbotham (1983) as well as the availability of the strict reading in the elliptical constructions such as VP deletion.

The "pragmatic" account of (45d) is essentially the same as that given for (45c). Consider (45d), repeated below.

(45d) he recommended John's student

The relevant structure of (45d) can be represented as (49).

(49) NP recommended NP's student

If the second NP is a pronoun, this structure may be interpreted as in (50) by the application of (38) and (39).

(50) [_S NP (λx (x recommended x's student))]

Thus, in accordance with (46a), the speaker must use a pronoun for the second NP in (49), if he/she intends the two NP's to corefer. Since a pronoun is not used in (45d), the sentence is considered by the hearer as being intended as not expressing coreference between the two NP's, i.e. he and John.

In Grodzinsky and Reinhart (1990, p. 12), the "pragmatic strategies" in Reinhart (1983) are restated as a rule of "INFERENCE" as given in (51).

(51) Grodzinsky and Reinhart's (1990, p. 12) (17)

Rule I: A free NP, α , can be intended as coreferential with NP β , in the same sentence, iff either

a. it is impossible to replace α with a (distinct) anaphoric expression that can be bound by β .

or

b. The coreference interpretation needs to be distinguished from the bound.

"A free NP" means an NP that is not coindexed with another NP; cf. the coindexing procedure in (38). The (a) clause in (51) takes care of (45c) and (45d) in very much the same way the strategies in (46) do.

The central idea behind the Reinhartian account of disjointness effects for coreference can thus be summarized as follows: Consider the structure in (52).

(52) ... α ... β ... where α c-commands β .

If you intend coreference between α and β , then:

- (i) let β be a reflexive if α is in the local domain of β
- (ii) let β be a pronoun if α is outside the local domain of β .

As we have seen, the account of the non-availability of the coreferential reading in (53) in the Reinhartian approach seems straightforward.

- (53)
- a. John recommended him.
 - b. He recommended John's student.

As acknowledged in Reinhart (1983, p. 170), the Reinhartian approach does not distinguish between the two sentence in (54). (The indices that indicate the coreference are suppressed in (54) and (55) below.)

- (54)
- a. *He recommended John's student.
 - b. ?John recommended John's student.

Neither does this approach distinguish (55a) from (55b).

- (55)
- a. *John recommended him.
 - b. ??John recommended John.

In the terms of the structure in (52), none of these sentences has the appropriate category for β that may serve to indicate "coreference" with a c-commanding NP. In (54), John in the genitive position should be a pronoun if coreference is intended; cf. (52i). Likewise, in (55), the object NP should be a reflexive if coreference is intended; cf. (52ii). Thus the coreference possibility in these sentences must be excluded on a par with each other by (52), which is intended to summarize the pragmatic strategies in (38) (or the rule of inference in (39)).

I have noted earlier that many speakers in fact accept (54b), finding it only slightly awkward, perhaps due to the repetition of the Name.²¹ By contrast, (54a) is an instance of condition D violation. Reinhart (1983, p. 170) in fact notes that "it is much easier to find a context allowing the 'violation' in [sentences like (54b)] than [sentences like (54a)]," claiming that the difference arises because "the reference of a full NP is more easily recoverable than the reference of a pronoun." In the analysis proposed in this work, this difference follows directly from the assumption that (54a), with the relevant coreference, violates condition D, while (54b) does not violate any grammatical principle.

Before critically examining Reinhart's pragmatic account of the disjointness effects for coreference, let us first turn to some puzzling

phenomenon that has to do in part with child language acquisition.

6.4. An Acquisition Puzzle

6.4.1. The Acquisition of Condition B

In the recent years, there has been much debate and discussion on the "acquisition" of binding condition B. One of the interesting results in the acquisition studies is the finding that children tend to accept (56a) while rejecting (56b) (e.g. Chien and Wexler (1988)).²²

(56)

- a. Mama bear_i washed her_i.
- b. *Every bear_i washed her_i.

Grimshaw and Rosen (1990) suggests that the children reject (56b) because they have not mastered bound variable construal, predicting that the children who reject (56b) also reject (57).

(57) Every bear_i washed her_i baby.

Subsequent works, such as Chien and Wexler (1989), however, indicate that the children accept (57) (and (56a)) while rejecting (56b).

Given the Reinhartian conception of binding conditions, the contrast in (56) is not totally unexpected. Notice that while (56b) must involve bound variable anaphora, (56a) need not. That is, the relation between Mama bear

and her may be that of coreference.

An account of the contrast in (56), in accordance with Reinhart (1983), has in fact been proposed in Chien and Wexler (1989) and Grodzinsky and Reinhart (1990); cf. also Montalbetti and Wexler (1984) for the discussion that anticipates the contrast in (56), based essentially, but not exactly, on the Reinhartian view of binding conditions. According to this view, what differentiates the children and the adults is the mastery of the relevant pragmatic strategy of Reinhart (1983, Ch. 7) (or the rule of inference in Grodzinsky and Reinhart (1990)), namely, while the adults have mastered these pragmatic strategies, the children have not.²³

In the following, I will argue that while the essentials of Reinhart's (1983, Ch. 7) approach to binding conditions are correct, the delay of the mastery of the pragmatic strategy cannot be the correct way to distinguish the children's and the adults' responses to the sentences in (56). (Recall that the typical response by adults to (56) is that both sentences are unacceptable.) A more promising way to capture the relevant difference, I will argue, is to resort to the lexical properties of personal pronouns in English. It will further be argued that the transition from the children's lexical specification to the adults' specification of these pronouns corresponds to what appears to be the change that the Japanese and the Korean languages are currently undergoing.

6.4.1.1. Condition B for Coreference and Bound Variable Anaphora

Recall that Japanese sentences like (58) are judged more or less acceptable.

(58)

(?)John_i-ga kare_i-o suisensita (koto)
John-NOM he-ACC recommended
'John_i criticized him_i.'

I have noted in 6.2.1 that (58) contrasts with the unacceptable English example in (59).

(59) *John_i recommended him_i.

Recall that sentences like (59), such as (56a), are accepted by children acquiring English. Thus we have the three way contrast as summarized below.²⁴ ("English Adults" stand for adult speakers of English and "English Children" stand for children who are acquiring English.)

(60) English Adults²⁵

- a. *John_i recommended him_i.
- b. *No one_i recommended him_i.

(61) English Children

- a. John_i recommended him_i.
- b. *No one_i recommended him_i.

(62) Japanese Adults

- a. John_i-ga kare_i-o suisensita (koto)
John-NOM he-ACC recommended
'John_i recommended him_i.'

b. *[Toyota to Nissan]_i-ga soko_i-o suisensita
Toyota and Nissan-NOM it-ACC suisensita
'[Toyota and Nissan]_i recommended it_i.'

Recall that the Japanese version of (60b)/(61b) is not easy to construct; cf. Ch. 4. However, the effect of condition B in the case of bound variable anaphora is clearly observed in (62b); cf. the examples in Ch. 5, xx, that allow bound variable construal for soko 'it' when it is bound non-locally.

It seems plausible that the contrast in (61) and that of (62) may receive the same account. Let us thus proceed under the assumption that a unified account is possible for (61) and (62).

6.4.1.2. Against Reinhart's "Pragmatic Strategies"

Given this assumption, the contrast between (60a) (for adults) and (61a) (for children) cannot be due to the fact that the adults have, but the children have not, mastered the relevant pragmatic strategies of Reinhart (1983, Ch. 7). If it were, then we would have to conclude that Japanese adults have not mastered the pragmatic strategies either, since (62a) is acceptable for the adult speakers of Japanese, indicating that the relevant communicative capability of Japanese adults is comparable to that of "English Children". This does not seem tenable.²⁶ I thus conclude that the pragmatic account of (60a) cannot be maintained, at least as it is stated in xx in 6.3.

6.4.1.3. An Alternative Account: Children's him as deictic

Let us thus consider an alternative account for (60a), (61a) and (62a), while maintaining the basic insight of the Reinhartian approach to Binding Theory. The basic insight of the Reinhartian approach is that (60b), (61b) and (62b) are ruled out by condition B, which regulates bound variable construal. One way to capture (60a), (61a) and (62a) is to assume that condition B IS indeed violated in (60a), but not in (61a) and (62a). This solution, however, is not possible, given the way the effects of condition B are expressed in Reinhart's (1983, Ch.7) system, in particular, given the way the locality condition for condition B is encoded in her system.

Recall that the locality requirement (more precisely, the anti-locality requirement) of condition B is incorporated in the coindexing procedure in Reinhart's analysis. The coindexing procedure is repeated here as (63).

(63) (=xx) (Reinhart's (1983, p. 158) (34))

Coindex a pronoun P with a c-commanding NP α (α not immediately dominated by COMP or S') (= α being in an A-position)

conditions: (a) If P is an R-pronoun (anaphors-HH) α must be in its minimal governing category.

(b) If P is non-R-pronoun, α must be outside its minimal governing categories.

(As noted earlier, "minimal governing category" is equivalent to "local domain" for the purposes of our discussion.) The relevant locality statement for condition B is encoded in the (b) clause in (63). Due to this clause, it is not possible to coindex the two NP's in any of the examples in (60), (61) and (62). In this sense, condition B "applies" equally to all of the examples in (60),

(61) and (62); hence it is NOT possible to differentiate (60a) on the one hand and (61a) and (62a) on the other, if kare is considered to be a pronoun as in the standard practice (Oshima (1979), Kuno (1986) and others).²⁷

I propose that condition B applies at the level after the translation procedure for bound anaphora has taken place, rather than regarding it as being encoded in the coindexing procedure.²⁸ Reinhart's formulation of the translation procedure is repeated in (64) below.²⁹

(64) (=xx) (Reinhart's (1983, p. 160) (37))

$[S' \Phi] \implies [S' \beta (\lambda x (\Phi \beta/x))]$

According to Reinhart's translation procedure in (64), the sentences in (65a) and (65b) are translated, schematically, into (66a) and (66b), respectively.

(65)

- a. John_i recommended himself_i.
- b. John_i recommended his_i student.

(66)

- a. [John[$\lambda x [x [VP V x]]]]$
- b. [John[$\lambda x [x [VP V ... [NP ... x ...] ...]]]]$

Under the assumption that condition B is a filtering condition on representations such as (66) rather than as a "locality specification" encoded in the coindexing procedure in (63), it is possible for sentences like (67) to have the indices as indicated below.³⁰

(67) John_i recommended him_i.

This means that unacceptable (67) and acceptable (65a) will both be translated into (66a) by (64). I propose that it is precisely at this level that condition B must be invoked. This means that we need to distinguish between the two instances of (66a); one that is "derived from" (65a) and one from (67). This in turn means that the [+/- a] feature of an NP, α , must be retained by the variable into which α has been translated.

Given this assumption, the two instances of (66a) can be distinguished as indicated in (68).

(68)

a. [John[λx [x [VP V x]]]]
[-a] [+a]

b. [John[λx [x [VP V x]]]]
[-a] [-a]

Because of condition B, repeated in (69), (68b) will, but (68a) will not, be ruled out.

(69) A [-a] category must be free in its local domain.

Similarly, the ungrammatical (70) is not ruled out at S-structure, according to this proposal.

(70) *John_i thinks that Mary recommended himself_i.

The indexing in (70) is allowed at this level and (70) will be translated into (71); cf. (66b).

(71)

[John[λx [x [VP V ...[S' ... x ...] ...]]]]
[-a] [+a]

The representation in (71) is ruled out by condition A, repeated in (72).

(72) A [+a] category must be bound in its local domain.

(For ease of exposition, I will now refer to the representation that obtains as the result of the application of (64) as a "Bound Variable Anaphora (BVA) representation".) In contrast to (70), the BVA representation of (65b) will be as in (73); cf. (66b).

(73)

[John[λx [x [VP V ...[NP ... x ...] ...]]]]
[-a] [-a]

Neither condition B nor condition A is violated in (73); hence the bound variable construal indicated in (73) is possible for (65b).

Let us thus assume that binding conditions (i.e. conditions A and B, but not condition D) apply at LF (more precisely, on the BVA representations), and consider how (60), (61) and (62) can be accounted for under this assumption.³¹ (60), (61) and (62) are repeated for convenience.

(60) English Adults

- a. *John_i recommended him_i.
- b. *No one_i recommended him_i.

(61) English Children

- a. John_i recommended him_i.
- b. *No one_i recommended him_i.

(62) Japanese Adults

- a. John_i-ga kare_i-o suisensita (koto)
John-NOM he-ACC recommended
'John_i recommended him_i'
- b. *[Toyota to Nissan]_i-ga soko_i-o suisensita
Toyota and Nissan-NOM it-ACC suisensita
'[Toyota and Nissan]_i recommended it_i.'

Under the assumption we have just made, the acceptability of (62a) can be directly attributed to the lexical property of kare. That is, the BVA representation like (74), which would violate condition B, cannot be obtained from (62a) since kare cannot be translated into a variable.

(74)
[John[λ x [x [VP x V]]]
[-a] [-a]

This means that (62a) does not violate condition B.

Given our assumption that the acceptability of (61a) and that of (62a) are due to the same reason, one may argue that him for children cannot be translated into a variable, just as kare cannot, to ensure that (61a) does not get translated into (75).

(75)
[John[λ x [x [VP V x]]]
[-a] [-a]

If (61a) did get translated into (75), it would violate condition B, predicting incorrectly that (61a) is unacceptable for "English Children."

Given a rather natural assumption that the initial use of pronouns for children, such as he, are most likely that as deictics (i.e. pointing to an individual), this conclusion seems to make some intuitive sense. It is also interesting to note that while he/she may be used deictically, it cannot.

(76)
a. (pointing at different individuals)
We should hire him and him and him

b. (pointing at different objects)
*We should buy it and it and it.
Cf. We should buy that and that and that.

If the "deictic use" of him is responsible for the acceptability of (61a), then we expect that children, even when they allow (61a), do not allow sentences like

(77).

(77) *(That/The) computer_i has chosen it_i.

While the relevant experimental results with respect to this prediction are not available to me at the moment, the difference between him and it as indicated in (76) seems to be related to the subtle difference that some adult speakers detect between (78a) and (78b).

(78)

a. *John has chosen him/HIM.

b. **HAL (the computer in "2001") has chosen it/IT.

The relevant difference is that while it seems possible, as noted in Sportiche (1986) and others, to make (78a) marginally acceptable, for example, by stress, it does not seem possible to make (78b) better. It thus appears that we can have a unified account of (61a) (English Children) and (62a) (Japanese Adults), namely that (61a) and (62a) are acceptable since him in the former and kare in the latter do not get translated into variable, thereby not violating condition B, which apply at the level where the translation procedure for bound anaphora has taken place.

6.4.1.4. Problems

Successful as it may appear, this analysis cannot be maintained as it has been presented above. First of all, if him for children is analogous to kare, we expect that him cannot be bound by a quantified NP for children

who accept (61a). As indicated earlier, such is not the case; cf. Chien and Wexler (1989), who report that children who reject sentences like (61b) accept sentences like (79).

(79)

Every mama bear_i washed her_i baby.

Furthermore, if it were him's being deictic that prevents condition B from applying, then (60a) for "English Adults" should be acceptable since the deictic use of him is available for adult speakers as well. (That is, adult speakers are able to use him, pointing to an individual.) It has in fact been pointed out in Ch. 4 that demonstrativity does not seem incompatible with bound variable construal; cf. the discussion in 4.9 and 5.8. The relevant English example, from Evans (1977), is repeated below as (80).

(80) (=xx)

Every logician_i walks with a boy near that logician_i's house.

These considerations indicate that we cannot simply attribute the acceptability of (61a) to him's being deictic for children.

One might suggest at this point that him for children can function either like kare in Japanese or like him for "English Adults". This would account for the acceptability of not only (61a) but of (79), both of which are repeated below.

(61a) John_i recommended him_i.

(79) Every mama bear_i washed her_i baby.

According to this suggestion, (61a) and (79) are acceptable, being analogous to (62a) and (81) below, respectively. The Japanese examples in (62) are repeated here.

(62) Japanese Adults

a. John_i-ga kare_i-o suisensita (koto)

John-NOM he-ACC recommended

'John_i recommended him_i'

b. *[Toyota to Nissan]_i-ga soko_i-o suisensita

Toyota and Nissan-NOM it-ACC suisensita

'[Toyota and Nissan]_i recommended it_i'

(81)

[Toyota to Nissan]_i-ga soko_i-no zyuugyooiin-ni

Toyota and Nissan-NOM it-GEN employee-DAT

kirokutekina boonasu-o dasita (koto)

record-breaking bonus-ACC gave

'[Toyota and Nissan]_i gave its_i employees record-breaking bonuses'

However, in the absence of an account of why these two functions of him are available for children but not for adults, this does not seem to be a particularly insightful description of (61).

Recall that we must assume that him for "English Adults" MUST be translated into a variable in (60a), repeated below, in order to account for its

unacceptability by means of condition B violation.

(60a) Adult English

*John_i recommended him_i

It cannot be the case that him for "English Adults" must always be translated into a variable since he can be used as in (82).³²

(82) (pointing at an individual) Who is he?

6.4.1.5. Children's Him and the Japanese So

In this subsection, I will make a proposal, which eliminates some of (but not all of) the problems noted above for the accounts of (60), (61) and (62) that we have considered so far. It will be argued that this proposal makes it possible to relate the process that may be taking place in the acquisition of English to the process that languages like Japanese and Korean might presently be undergoing.

My proposal can be schematically summarized as in (83).³³

(83) A Chart of the Relevant Nominal Expressions

	Eng. Adults	Eng. Child	Japanese	Korean
A	strongly non-deictic it him/her	it?		
B	weakly non-deictic	him/her	sore/soko	
C	non-deictic or deictic	that N'	sono N'	ku
D	weakly deictic		kare are ano N'	
E	strongly deictic	that N' over there		ce

The basic idea of my proposal is that he/her for children is analogous to sore/soko in Japanese, and together they contrast with he/she for "English Adults." I propose, as a form of stipulation, that a category, β , that belongs to (A) in (83) must be translated into a variable in the configuration in (84).

(84)
 $\alpha_i \dots \beta_i \dots$ where α A-binds β .

Given the assumption that "English Adults" he is, but "English Children's" he and Japanese soko, do not belong to (A) gives the desired result. Namely, he and soko may be locally A-bound by a referential NP for "English Children" and in Japanese, respectively; but he for "English Adults" cannot.

Recall that we must also capture the fact that all of these three categories may be interpreted as bound variables. Not only can they be

bound by an quantified NP but they also yield sloppy readings in the designated configurations. I want to express this fact by assuming that these categories MAY be translated as bound variables. This property, I argue, is restricted to the categories in (A) and (B). (Only the categories in (A) MUST be translated into variables in the configuration given in (84).)

Proceeding to the instances of that linguist and sono gengogakusva 'that linguist', the fact that they can be bound by a quantified NP but can yield sloppy readings only marginally is expressed by categorizing them as members of (C). That is, I propose that the members of (C) have the ability to act as something like E-type pronouns, but not as a genuine bound variable (at least, without resulting in certain degree of marginality). This then contrasts with the members of (A) and (B), which can act something like E-type pronouns as well as genuine bound variables.

Notice that certain categories are placed across one or two boundaries. This is to capture the judgmental variations among (as well as within) the speakers. Since what is relevant here is the lexical specification of the relevant nominal categories, it is not unreasonable that such specifications vary, to some extent, from speaker to speaker, as long as the variations are within the expected range. Take the case of Korean ku, for example. As noted in Appendix to Ch. 4, some Korean linguists have reported that ku, the so-called overt pronoun in Korean, cannot be bound by a quantified NP, including which N'; cf. the discussion in Appendix to Ch. 4. Other speakers allow ku to be bound by a quantified NP, to varying degrees. As expected, the binding by which N' (singular) results in acceptability most readily and the binding by no N' tends to be rejected. This exactly parallels the situation observed in the case of that N' in English (as observed in Evans' (1977) discussion of the E-type pronoun) and of sono N' in Japanese. Furthermore,

some speakers claim that ku yields sloppy readings; cf. Suh (1990, Appendix D). To express such variation of judgements, some of the nominals "spreads" beyond boundaries in (83).

For similar reasons, kare, sore/soko and him/her are placed on the border lines between two "classes". Consider kare, which is placed between (C) and (D), although most of it belongs to (D). This is intended to express the fact that while most speakers do not allow kare to be bound by a quantified NP, some speakers allow it to be bound by a quantified NP that is singular in meaning. Recall that we have noted earlier in Ch. 4 that kare can marginally be bound by which N'. While the binding of kare by a (singular) quantified NP is thus accepted to some extent, its acceptability is in general much lower than that acceptability of the binding of sono N' by a quantified NP. For this reason, kare is placed almost, but not entirely, within (D). Similar variations are observed in the case of sore/soko.³⁴ Thus while some speakers quite readily accept the bound variable interpretation of sore and soko, other seem to have some difficulty accepting it.

It might be the case that him/her for "English Children" be placed strictly in (B). But the placement of him/her as indicated in (83) is compatible with the relevant data under discussion. If it turns out that children who accept John recommended him also accept sloppy reading for him when it is bound non-locally, then him/her for "English Children" must be placed within (B); cf. the discussion in Ch. 5 for many complications in conducting the relevant tests. Otherwise, him/her should be placed within (C).

Finally, him/her for "English Adults" is placed between (A) and (B). Notice that most of it is within (A). This placement of him/her in (83) is meant to capture the fact that some adult speakers detect some subtle difference between John has chosen him and Computer # 34 has chosen it. In

the proposed account, the subtle contrast between them is because it belongs only to (A) while him/her partly belongs to (B).

The dividing line between (D) and (E) is what distinguishes the ku system and the ce system in Korean. Recall from Appendix to Ch. 4 that while both ku N' and ce N' may be translated into "that N'" in English, only the former may be used, in the unmarked cases, in the absence of the object/individual that is referred to. In this sense the ce system in general does not allow the so-called anaphoric use and allows only the deictic use. This distinguishes the ce system on the one hand and the ku system, the Japanese a system and kare on the other, and makes ce N' somewhat analogous to English that N' over there.³⁵

The dividing line between (C) and (D) is what distinguishes categories that may function as an E-type pronoun and those that cannot.

As indicated by the arrows at the right periphery of the chart, the relevant characteristic of each of (A) to (D) are "inclusive," in that a member of (A) has properties of (B), (C) and (D), and a member of (B) also has properties of (C) and (D), and so on.

The relevant property of each of (A) to (E) are summarized in (85).

(85)

1. A "strongly deictic" element β MUST be translated into a variable in the configuration in (84), in addition to having all the properties in 2, 3, 4 and 5 below. ((A) in (83))
2. A "weakly deictic" element β MAY be translated into a variable, in addition to having all the properties in 3, 4 and 5 below. ((B) in (83))

3. A "non-deictic or deictic" element β MAY function as an E-type pronoun, in addition to having properties in 4 and 5 below. ((C) in (83))
4. A weakly deictic element β MAY be "anaphoric" (i.e. may be used in the absence of what it refers to), in addition to having the property in 5 below. ((D) in (83))
5. A "strongly deictic" element MUST be used with the presence of what it refers to, this is the unmarked case. ((E) in (83))

Let us now consider the acquisition of the relevant properties for the nominals under discussion. As in the case of the acquisition of binding conditions, I assume that what must be learned is the lexical properties of the relevant nominals, and that UG contains the dividing lines, as indicated in (83), as well as the different properties that are associated with each categories (i.e. (A), (B), (C), (D) and (E)).

A given nominal is marked as belonging to (D) if it is used in the absence of what it refers to. This does not, as noted above, preclude the possibility of it belonging to the other groups higher in the chart. Similarly, the membership to A/B/C, i.e. the identification of a nominal to be higher than the line between (C) and (D), is triggered by positive evidence that it can be bound by a quantified NP. It is not clear what would count as positive evidence for distinguishing A/B/C from A/B. This might mean that chart in (83) has to be modified in this regard. For it is somewhat implausible for the child to pay attention to the availability of sloppy readings in distinguishing A/B/C and A/B.

At this point, I would like to suggest that the positive evidence for

distinguishing A/B/C and A/B is morphological; namely, to qualify as a member of A/B, a nominal must be an N rather than NP. The fact that the nominals that function as genuine bound variable, in terms of the sloppy identity test, all seem to have the form of N, rather than that N' or sono N' provides support for this suggestion.

Now, what about the positive evidence for distinguishing (A) from (B)? Unlike the properties for A/B, A/B/C, A/B/C/D, the property for (A) is that it MUST be translated into a variable. Notice that it does not seem plausible, to say the least, to assume that occurrences of it yielding a certain interpretation in some environment trigger the **obligatoriness** under discussion. I would therefore like to suggest that the existence of the expletive it is the trigger for this lexical specification of it. That is, upon hearing an occurrence of it that is completely devoid meaning, the child assigns to it the lexical feature that is relevant in (A). I further speculate that the categorization of him and her in (A) is also triggered by the use of expletive use of it, presumably because they form a class of nominals in A/B/C that consists simply of N.³⁶

Let us now consider the acquisition process that is relevant for the different "judgments" between "English Adults" and "English Children." According to the above proposal, it is categorized in (A) based on the occurrence of its expletive use. And him and her are so categorized because they belong to the same class as it, as being an N, within A/B/C. I would thus like to suggest that the mastery of the expletive use of it is the key to placing him/her in (A). The absence of overt expletives in Japanese then accounts for the fact that sore/soko will not be regarded as belonging to (A).

Notice that the use of sore/soko is "originally" deictic in that they do belong to the deictic system of so. It is thus possible that Japanese is

undergoing some change in which the sono N' is moving from (D) to (C) and sore/soko are moving from (D) to (B) through (C). Judgmental variations might be a reflection of this change. Similarly, Korean ku is indeed a member of the ku system, as noted in Appendix to Ch. 4. Hence it is also possible that ku is undergoing a change similar to sono N', soko and sore. These are indicated by the arrows in the chart. In this sense the change that takes place from "English Children" to "English Adults," may be considered analogous to the change that the Japanese and Korean languages may be presently undergoing.

In summary, I have argued that (86) is unacceptable for "English Adults," because of condition B violation (which holds at the level after the "translation procedure" has taken place.)

(86) John_i recommended him_i

This result is obtained by the assumption that him for "English Adults" in (86) (which conforms to the configuration given in (83)) MUST be translated into a variable, as in (87).

(87) [John_i [λx_i [x_i recommended x_i]]]

And since it is at this level that the binding conditions are argued to apply, condition B rules out the sentence in (86).

(86) for "English Children" and (88) in Japanese, on the other hand, need not violate condition B since the bindee NEED NOT be translated into variables.

(88)

Toyota_i-ga soko_i-o suisensita

Toyota-NOM it-ACC recommended

'Toyota_i recommended it_i.'

Given this account, however, sentences like (89) MUST be represented as in (90), since his is bound by John; cf. the configuration in (84).

(89) John_i recommended his_i student

(90) [John_i [λx_i [x_i recommended x_i's student]]]

This in turn means, given the earlier discussion of the sloppy/strict readings, that the second conjunct in (91) must yield only the sloppy reading, i.e. the bound variable construal.

(91)

John_i recommended his_i student and Bill did too.

The fact that the second conjunct in (91) is compatible with the situation "Bill recommended John's student" therefore seems to raise a serious problem with the proposed analysis.³⁷

Here, I would like to argue that (89) is indeed represented, obligatorily, as (90), and that the strict reading need not be syntactically represented, unlike in Williams (1977). Recall that I am assuming, following Reinhart (1983, Ch. 7), that coreference falls outside the realm of syntax, except for the effects of condition D. Since the strict reading may well be

regarded as an instance of coreference (or at least, non-syntactic), there should not be any restrictions on it, under the assumptions I am making here. As noted in Ch. 5, it has in fact been pointed out in Sag (1976, pp. xx) that himself yields strict readings.

Consider (92), for example.

(92)

John recommended himself and {Bill did too/so did Bill}.

Most speakers prefer the sloppy reading and tend to disallow the strict reading in this example. Yet, the same speakers find the strict reading in (93) fairly acceptable, provided that they are familiar with the individuals under discussion.

(93)

At the last faculty meeting, Tim Stowell recommended himself for that task and {Ed Keenan did too/so did Ed Keenan}.

The judgmental variations of the sort that Sag (1976, pp. xx) notes and the contrast between (92) and (93) seem to be typical of pragmatic phenomena. Since the strict reading, as noted above, has to do with coreference, and since coreference is regarded here as belonging to pragmatics (except for those instances that involve condition D), it seems reasonable to conclude that the availability of the strict reading is in fact not constrained by syntactic principles. (Bear in mind that the availability of the sloppy reading IS constrained by syntactic principles, such as condition B and the "c-command" restriction.) If this turns out to be tenable, (89)'s obligatorily represented as

(90) is not a serious problem. Many further issues must be addressed in this connection; but I will leave this topic here.

6.4.2. Condition B for Non-Pronouns

Consider again the example in (94) from Evans (1977).

(94) (=xx)

Every logician_i walks with a boy near that logician_i's house.

It was argued earlier that sentences like (94) must be represented as in (95) after the translation procedure for bound variable has taken place.³⁸

(95)

[every logician_i [λ x_i [x_i [VP V ... [S' ... x_i ...] ...]]]]
[-a] [-a]

Given this analysis, we predicted that if that logician is locally bound by every logician, then the resulting sentence is unacceptable, violating condition B. Although the relevant judgments do not seem clear, as indicated in Ch. 4, the examples in (96a) do not seem as hopeless as (97a); cf. the discussion in 4.9.³⁹

(96)

- a. *??Every logician_i recommended that logician_i.
- b. (?)Every logician_i recommended {a/the} student who had studied with that logician_i.

(97)

- a. *Every logician_i recommended him_i.
b. Every logician_i recommended {a/the} student who had studied with him_i.

Recall that the absence of condition B effects are more striking in sentences like (98).

(98) Which logician_i recommended that logician_i?

One might take the absence of the clear effects of condition B in (96a) and (98) as evidence against the view that condition B holds of [-a] categories rather than [+p] categories. Notice that condition D effects are clearly observed in (97a), where the bindee is him, while they are weaker in (96) and (98), where the bindee is that logician.

I have, however, indicated at the end of Ch. 5 as well as in the preceding section the possibility that that N' and sono N' can function as E-type pronouns, not necessarily involving bound variable construal. In Chs. 4 and 5, we have identified two ways to exclude the E-type pronoun reading for that N' and sono N', forcing the bound variable reading on these NP's. They are (i) the binding of these NP's by a plural antecedent (e.g. a conjoined NP) and (ii) the sloppy reading test. We have in fact observed in Ch. 4 and 5 that when the bound variable reading is forced in one of the two ways noted above, the non-local binding of that N' and sono N' becomes impossible while the local binding of these NP's remains marginally possible.

Take the binding by a plural antecedent, for example. While the requirement of number agreement makes this test impossible to conduct in

English, Japanese exhibits a contrast as indicated in (99).

(99) (= (140) and (141) in Ch. 4)

- a. [[itibu zyoozyoo-no seitetugaisya] to [nibu zyoozyoo-no kookoku
first listed-GEN steel company and second listed-GEN advertising
dairiten]]_i-ga {soko_i/*?/?}[sono kaisya]_j-no rainendo-no
agency-NOM it that company-GEN nest year-GEN
saiyooo hoosin-o happyoosita (koto)
hiring policy-ACC announced
"[[{the/a} steel company that is listed in the first Tokyo Stock Exchange] and
[{the/a} advertising firm that is listed in the second Tokyo Stock
Exchange]]_i made announcements regarding {it_i/that company_i's} hiring
policy for the coming year'
- b. [[itibu zyoozyoo-no seitetugaisya] to [nibu zyoozyoo-no kookoku
first listed-GEN steel company and second listed-GEN advertising
dairiten]]_i-ga {*soko_i/*sono kaisya}_j-o suisensita (koto)
agency-NOM it that company-o recommended
'[[{the/a} steel company that is listed in the first Tokyo Stock Exchange] and
[{the/a} advertising firm that is listed in the second Tokyo Stock
Exchange]]_i recommended {it_i/that company_i'}

When soko is used, the contrast is sharper. When sono kaisya 'that company' is used, the non-local binding is marginal but does not seem impossible. When sono kaisya is locally bound by a conjoined NP, as in the (b) example, the sentence is plainly unacceptable.

To the extent that sono kaisya 'that company' is considered as a

so-called R-expression, rather than a pronoun, the data in (99b) confirm (i) that bound variable construal is not restricted to pronouns/reflexives and (ii) condition B, which is now assumed to apply to BVA, is not restricted to pronouns.⁴⁰ This is exactly what we expect since condition B is formulated in terms of [-a] categories rather than [+p] categories, as indicated in (100).

(100) A [-a] category must be free in its local domain.

A similar argument can be constructed based on the sloppy identity test, as I have indicated at the end of Ch 5. Consider again the English example in (98), repeated below.

(98) Which logician_i recommended that logician_i?

According to the preceding discussion, this sentence does not involve bound variable anaphora; i.e., it is not represented as in (101).

(101)
 [which logician_i [λ x_i [x_i [VP V x_i]]]]
 [-a] [-a]

If it were, condition B would rule this out. Consider now the examples in (102).

(102)
 a. I know which logician would recommend that logician's student, but I have no idea which linguist would.

b. I know which logician would recommend that logician_i, but I have no idea which linguist would.

It appears that the sloppy reading in (102a) is as marginal as (99a) with sono kaisya 'that company', but not impossible. When the binding is local as in (102b), on the other hand, the sloppy reading in (102b) appears impossible as in the Japanese examples in (99b). The data in (98) and (102) thus indicate, strongly, that what is involved in (98) is not bound variable anaphora. They further indicate that condition B disallows the local binding of that logician, when bound variable anaphora is involved.

We have thus seen confirming evidence for two of the claims that are listed at the outset of this chapter, repeated in (103).

(103) (Cf. (1).)
 a. Binding condition B regulates [-a] categories. (Ch. 2)
 c. Binding conditions regulates bound variable anaphora but not coreference. (Chs. 4 and 5) (Reinhart (1983))

This in turn constitutes strong confirmation for the modification of Binding Theory, as proposed in Ch. 2.

6.5. Accounting for The Effects of Binding Conditions for Coreference

In 6.4, I have proposed an account for condition B effects for coreference. The proposed analysis adopts the basic approach of Reinhart

(1983, Ch. 7) but departs from it in several important respects. In particular, while I adopt the Reinhartian view that binding conditions regulate only bound variable anaphora and not coreference, I reject the essentials of Reinhart's (1983) "pragmatic" analysis of the effects of binding conditions for coreference. In my analysis, the core effect of Reinhart's "pragmatic" strategy is expressed in a more formal mechanism; i.e. the relevant sentences do violate condition B for bound anaphora. In this section, I will briefly discuss Reinhart's account of disjoint reference effects for coreference, in regard to the aspects that have not been discussed in 6.4.

6.5.1. Condition B

I started the discussion in 6.4 with the assumption that a unified account is possible for the absence of condition B effects for coreference in Japanese and that in the response by children acquiring English. It was argued that, given this assumption, Reinhart's (1983) "pragmatic" account of disjoint reference effects for coreference cannot be maintained. For otherwise, we would have to conclude that the Japanese adults have not mastered the relevant pragmatic strategies, clearly a counter-intuitive conclusion to draw.

Insofar as my account of the disjoint reference effects for coreference for "English Adults", "English Children" and "Japanese Adults," presented in 6.4, is feasible, the initial assumption is confirmed. Namely, it is indeed possible to generalize the children's performance in English with the grammar of the Japanese adults. This conclusion in turn provides us with evidence for rejecting Reinhart's pragmatic account of the disjoint reference effects for coreference.

There are two other reasons to be suspicious about Reinhart's pragmatic account of condition B effects for coreference. They are recorded in (104).⁴¹

(104) Problems with Reinhart's "Pragmatic" Account

- a. Sometimes the use of zibun is not possible and yet the effects of condition B can be detected.
- b. The use of zibun is possible not only for the local domain but also for the non-local domain. Yet there is no "disjointness effects" for coreference in the non-local domain.

As an illustration of (104a), let us first consider the sentence in (105).⁴²

(105)
John-ga (sono) atarasii gakusei-ni soitu_i/*zibun_i-o suisensita (yo)
John-NOM that new student-DAT that guy/self-ACC recommended
'John recommended that guy_i/self_i to {that/the} new student_i.'

As indicated, the dative NP cannot serve as an antecedent for zibun.⁴³ Thus, according to Reinhart's pragmatic account, one would expect (105) to be better than (106), or conversely, (106) to be worse than (105).

(106)
(sono) atarasii gakusei-ga soitu_i/zibun_i-o suisensita (yo)
that new student-NOM that guy-ACC recommended
'(that) new student_i recommended that guy_i/self_i.'

In (106), soitu can be replaced by zibun, while in (105) it cannot. As far as I can tell, however, there is no significant difference between (105) and (106), contrary to the expectation in accordance with Reinhart's pragmatic account. I find both sentences with soitu equally acceptable.

By contrast, (107a) and (107b) are both impossible.

(107)

a. *Keidanren-ga [Toyota to Nissan]_i-ni soko_i-o suisensita (koto/yo)
Keidanren-NOM Toyota and Nissan-DAT it-ACC recommended
'Keidanren (a federation of business groups) recommended it_i to [Toyota and Nissan]_i'

b. *[Toyota to Nissan]_i-ga soko_i-o suisensita (koto/yo)
Toyota and Nissan-NOM it-ACC recommended

As has been discussed earlier, the conjoined NP in (107) forces the bound variable reading for soko. Hence the unacceptability of (107) is directly attributable to condition B effects.⁴⁴

In contrast to the impossible bound variable anaphora indicated in (107), the coreference in (108) and (109) seems possible.⁴⁵

(108)

a. Keidanren-ga Toyota-ni Toyota-o suisensita (koto/yo)
Keidanren-NOM Toyota-DAT Toyota-ACC recommended
'Keidanren recommended Toyota to Toyota.'

b. Toyota-ga Toyota-o suisensita (koto/yo)
Toyota-NOM Toyota-ACC recommended
'Toyota recommended Toyota.'

(109)

a. Keidanren-ga Toyota_i-ni soko_i-o suisensita (koto)
Keidanren-NOM Toyota-DAT it-ACC recommended
'Keidanren recommended it_i to Toyota_i'

b. Toyota_i-ga soko_i-o suisensita (koto)
Toyota-NOM it-ACC recommended
'Toyota_i recommended it_i.'

In discussing the possibilities of the sloppy reading in Japanese in Ch. 5, we have noted that soko in the structure as in (109) does not yield the sloppy reading. Thus, although the coreference is possible in (109), the sloppy reading in (110) is not possible.

(110)

Keidanren-ga Toyota-ni yorimo sakini Nissan-ni soko-o
Keidanren-NOM Toyota-DAT than early Nissan-DAT it-ACC
suisensita (koto)
recommended
'Keidanren recommended to Nissan it (i.e. that company) earlier than to Toyota.'

Based on the lack of sloppy reading in (110), we must conclude that soko

cannot be construed as a bound variable in (109).

In the case of English, because it MUST be translated into a variable in a configuration like (111) below. The BVA representation of the sentence in (111) violates condition B, which applies at the level after the translation into bound variable has taken place.

(111) Nissan_i recommended it_i.

Thus, in my account, (111) is ruled out, not because of a pragmatic reason, but because of condition B violation for bound variable anaphora.

One remaining instance in which condition B effects seem to obtain for coreference is illustrated by the examples in (112).

(112)

a. *John_i-ga kare_i-o {nagusameta/nagusameteita} (koto)

John-NOM he-ACC consoled was consoling

'John_i {consoled/was consoling} him_i'

b. *John_i-ga kare_i-ni nanika-o {iikikaseta/iikikaseteita} (koto)

John-NOM he-DAT something-ACC told was telling

'John_i {told/was telling} him_i something'

As noted in Ch. 2, when kare is non-locally bound, the resulting sentences are acceptable.

As I have noted earlier, xx, sentences like (112) contrast sharply with those like (113).

(113)

a. John_i-ga kare_i-o eranda (koto)

John-NOM he-ACC chose

'John_i chose him_i'

b. John_i-ga kare_i-ni toohyoosita (koto)

John-NOM he-DAT voted

'John_i voted for him_i'

While the judgments vary to some extent, the reported contrast between (112) and (113) seems to be observed consistently among speakers.

It is clear that the unacceptability of (112) does not fall under the proposed account of the condition B effects. Kare cannot be translated into a variable (at least for most speakers) and hence (112) cannot be ruled out on a par with (114) in English.

(114) *John_i recommended him_i.

The unacceptability of (115), which is in contrast to the acceptability of (116) indicates the generality of the relevant phenomenon.

(115)

a. *John_i-ga John_i-o nagusameta (koto)

John-NOM John-ACC consoled

'John_i consoled John_i'

b. *John_i-ga John_i-ni nanika-o iikikaseta (koto)

John-NOM John-DAT something-ACC told
 'John_i told John_i something'

(116)

a. John_i-ga John_i-o eranda (koto)

John-NOM John-ACC chose

'John_i chose John_i'

b. John_i-ga John_i-ni toohyoosita (koto)

John-NOM John-DAT voted

'John_i voted for John_i'

Notice that the relevant contrast, which seems to be directly related to the selection of the predicates, is observed also in English, as indicated in (117) and (118).⁴⁶

(117)

a. *John_i consoled John_i.

b. *John_i tried to convince John_i of something.

(118)

a. John_i recommended John_i.

b. John_i voted for John_i.

Again, the judgments seem to vary to some extent; yet the contrast seems quite clear.

While it is not entirely clear what type of verbs behave like nagusame

'console' and what type of verbs behave like suisensu 'recommend', the following generalization appears to be diagnostic in distinguishing the two types: If the form in (119) is possible, the verb is like suisensu 'recommend', and if not, the verb is like nagusame 'console'.⁴⁷

(119)

John_i-wa matigatte zibun_i-CASE V-TENSE-ga sono koto-ni

John-TOP by mistake self -BUT that matter-DAT

{ki-ga tuiteinai/kiga-tuiteinakatta}

{is not aware was not aware

'John_i Verb self_i but he {is not aware/was not aware} of it.'

It thus appears that some notion like "self-awareness" plays a role here. I would like to propose that these verbs are lexically specified, perhaps related to their "cognitive structure" or "semantic properties", so that (120a) must obligatorily be converted into (120b); cf. Evans' (1977, pp. 270-271, fn. 33).⁴⁸

⁴⁹

(120) Lexical Specification for "console" type of Verbs

a. NP_i [$\sqrt{x_i}$ [x_i [VP β_i Verb]]] ==> obligatory

b. NP_i [$\sqrt{x_i}$ [x_i [VP x_i Verb]]]

This requirement amounts to stipulate that the locally bound object NP of these verbs must be [+a], and it has the effect of accounting for (121) and (122).

(121)

a. *John_i-ga kare_i-o nagusameta (koto)

John-NOM he-ACC consoled

'John_i consoled him_i'

b. John_i-ga zibun_i-o nagusameta (koto)

John-NOM self-ACC consoled

'John_i consoled self_i'

(122)

a. *John_i-ga kare_i-o suisensita (koto)

John-NOM he-ACC recommended

'John_i recommended him_i'

b. John_i-ga zibun_i-o suisensita (koto)

John-NOM self-ACC recommended

'John_i recommended self_i'

Suppose it is [-a]. If it is capable of being translated into a variable, it violates condition B, and if it is not, then it would be in direct conflict with this lexical specification, which states that β in (120a) must be turned into a variable.

This proposal relates bound variable construal with some notion of "self-awareness", as is implied in Evans' discussion (1977, pp. 270-271) (although his claim is not this). In discussing the apparent condition C effects for coreference in the following subsection, I will further consider the relation between bound variable anaphora on the one hand and

"self-awareness" and "logophoricity", as discussed in Kuno (1986), on the other.

Notice that given the proposal just made, the unacceptability of (112), (115) and (117) is not due to condition B, but rather due to the lexical specification as indicated in (120).

6.5.2. Condition C

In the preceding subsection, we have observed that the forms in (123) are typically unacceptable

(123) (with the V being nagusame 'console', persuade, and so on)

a. John_i-ga John_i-o V

b. John_i-ga kare_i-o V

c. John_i V John_i

I have indicated that this is related to "point-of-view", "self-awareness", etc, and proposed that these verbs have certain lexical requirement, as indicated in (120).

I would like to point out that a similar consideration is called for in dealing with one instance of condition C effects for coreference that we have not accounted for yet. Consider the examples in (124).

(124)

a. *?John_i thinks that John_i is a genius.

b. *?John_i has confessed that John_i had stolen the money.

As pointed out in 6.2.1.2, sentences like (125) are most often provided as illustrating condition C effects in English. Most speakers detect the contrast between (124) and (125).

(125)

- a. ?John_i thinks that John_i's brother is a genius.
- b. ?John_i thinks that Chomsky likes John_i work.
- c. John_i ate all the cookies that Mary brought to John_i's apartment.

It is interesting to note that the Japanese analogues of (124) are also rather marginal, as indicated in (126).

(126)

- a. *?John_i-wa [S' John_i-ga tensai da to] omotte iru yo
 John-TOP John-NOM genius is that thinks
 'John_i thinks that John_i is a genius.'
- b. *?John_i-wa [S' John_i-ga kane-o nusunda koto]-o hakuzyoosita yo
 John-TOP John-NOM money-ACC stole fact-ACC confessed
 'John_i confessed that John_i had stolen the money.'

It is, however, hardly motivated to claim that the marginal status of (126) is due to condition C effects for coreference. One reason is that there are numerous structures in which a Name can be bound by another Name, as we have noted throughout the preceding discussion. Another reason is that the marginality of (126) persists even if we use kare in place of the embedded subject John. The contrast in (127) is noted in Kuno (1987, p. 138).

(127) (Kuno's (14.10) with his judgments)

- a. Taroo_i-wa zibun_i-ga tensai da to omotteiru
 Taroo-TOP self-NOM genius is that thinks
 'Taroo_i thinks that he is a genius.'
- b. ??Taroo_i-wa kare_i-ga tensai da to omotte iru
 Taroo-TOP he-NOM genius is that thinks
 'Taroo_i thinks that he_i is a genius.'

As discussed in Ch. 3, Kuno (1987, p. 138) indicates, in effect, that in a configuration such as given in (128), the unmarked option for β is a reflexive zibun. (THINK/SAY stands for "saying and thinking verbs" in Kuno (1987, p. 138).)

(128)

[S α_i -ga [S' β_i -ga VP to] THINK/SAY]

If we translate Kuno's "logophoric" effects into a notion of bound variable construal, we may say that β in (128) must be (or perhaps more tends to be) translated into a variable in the BVA representation of (128).⁵⁰ As is indicated in Kuno (1987), this seems to apply also to English. Thus while the examples in (124) are marginal, those in (129) are perfect.

(129)

- a. John_i thinks that he_i is a genius.
- b. John_i has confessed that he_i had stolen the money.

Notice that he can be translated into a variable, while kare cannot. Hence the contrast between (127b) and (129) is expected.

It thus seems that the marginality of (124) and (126) is not due to condition C, but rather to some independent consideration such as is indicated above. Given the assumption that the strength of the tendency for β in (128) to be translated into a variable (or alternatively, one may say, how "logophoric" a given predicate is regarded) is subject to variation, the judgmental differences among speakers on these sentences are also expected.

It is significant to note in this connection that the clearest cases of condition C for coreference typically involve structures such as given in (124). If the marginality (or unacceptability, depending upon speakers) of (124) is indeed due to a Name being bound, then we should expect the sentences in (125) to be just as bad as those in (124). That those in (125) are markedly better than those in (124) thus clearly indicates that the marginality of (124) cannot be simply attributable to the binding of a Name, i.e. condition C violation. This in turn provides strong support for the Reinhartian approach: i.e. condition C does not exist.

6.5.3. Condition D

The treatment of condition D effects clearly distinguishes my proposal from Reinhart's (1983, Ch.3). Reinhart (1983, Ch. 7) attributes the unacceptability of (130) to the pragmatic strategies.

(130)

a. * he_i ate all the cookies that Mary brought to John $_i$'s apartment

b. * he_i recommended John $_i$'s students

According to the proposal made in Ch. 2, the sentences in (130) are ruled out by condition D as formulated in (131), coupled with the rule in (132).

(131) (=47) in Ch. 3) (from Higginbotham (1983, pp. xx))

The Condition on Linking

If A c-commands B, A cannot be linked to B.

(132) (=51) in Ch. 3)

The Rule of Linking (RL)

If X and Y are coindexed and X is less referential than Y, X must be linked to Z where:

- (i) Z is more referential than or equally referential to Y and
- (ii) Z is coindexed with X and Y.

Thus while Reinhart's (1983) account of (130) is pragmatic, my proposal is syntactic.

Recall that both Reinhart's and my account regard the effects of Condition C (i.e. the condition that states Names must be free) as arising from considerations that are not purely syntactic. The different treatments of condition D and condition C, as in my account, seem to be supported by the fact that the judgments on sentences like (130) are quite strong and uniform cross-linguistically, whereas the judgments on sentences in (133) are much more unstable and less uniform cross-linguistically.⁵¹

(133)

- a. ^(?)John_i ate all the cookies that Mary brought to John_i's apartment
- b. ^(?)John_i recommended John_i's students

The language acquisition studies such as xx also report that the effects of condition D are clearly observed at an fairly early stage. Treating the effects in (130) as syntactic while treating those in (133) as not (purely) syntactic thus seems to be well motivated.

As to the level at which condition D applies, I argued that it was at the level of S-structure, based on the familiar arguments for this conclusion for its predecessor (condition C) in Chomsky (1981); cf. Ch. 3, xx. The issue does not seem to be settled, however, especially in light of Lebeaux's account of the "anti-reconstruction" effects, as discussed in Ch. 3, xx.⁵²

According to the proposal made above, conditions A and B are given in UG, and what the child need to learn is the [+a] feature for certain nominal categories. Unless this feature is assigned, in accordance with the way that was discussed in Ch. 2, a given nominal category must be [-a], the unmarked option, hence being subject to condition B.⁵³ What about the status of condition D, in terms of language acquisition? As in the case of conditions A and B, condition D must be part of UG; but what is involved in the "acquisition" of this condition is not simply the assignment of a value of one feature or another. We have seen a complex array of data in the preceding pages, especially in Ch. 3, indicating that the relevant referential hierarchies cannot be related to binding theoretic features. As briefly illustrated in footnote xx (the one preceding this paragraph), it even appears that there is an asymmetry in terms of the degrees of referentiality between phonetician and linguist. Thus there appears to be some subtle contrast between (134a) and (134b), as indicated below.

(134)

- a. ??Which phonetician_i submitted that linguist_i's work to LI?
- b. ??Which linguist_i submitted that phonetician_i's work to LI?

It seems quite unreasonable to differentiate these two nominals by means of some feature. Note that the relevant difference also seems to be observed between (135a) and (135b).

(135)

- a. ??Which scholar_i submitted that linguist_i's work to the government?
- b. ??Which linguist_i submitted that scholar_i's work to LI?

Notice that linguist appears to be "more referential than" phonetician but "less referential" than scholar, given the assumption that the contrasts in (134) and (135) are real and can be accounted for by condition D.⁵⁴

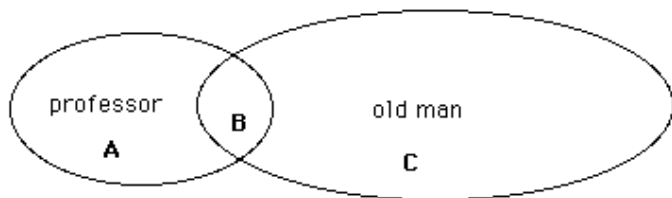
Considerations of this type indicate that the "referential hierarchy" is a relative one rather than an absolute one. As Tim Stowell (p.c.) has suggested to me, it seems reasonable to assume that the relevant "hierarchy" is computed based on the subset relation between the two given nominals. John is more "referential" than he since what John can possibly denote is a subset of what he can possibly denote.⁵⁵ As also pointed out by Tim Stowell, when there is no subset relation, as in the case of sentences like (136), the computation must involve the intersection and the complement to the intersected part of each set.

(136)

- a. The professor_i seems to be disgusted with what we said to the old man_i.
- b. *The old man_i seems to be disgusted with what we said to the professor_i.
- c. ?The old man_i's admirers seem to be disgusted with what we said to the professor_i.

Notice that the relation between the set that the professor can possibly denote and the set that the old man can denote seem to intersect as in (137).

(137)



We may say that professor is more referential than old man since B/A is greater than B/C. If this characterization of the "referential hierarchy," which is relevant to condition D is correct, then the "acquisition" of condition D must involve the computation of the relation of the two sets as indicated above.

6.6. Remaining Issues

A number of issues are left open, some of which have been discussed to some extent, and others essentially undiscussed. In this section, I will very briefly point out what appears to be a major issue that I have not discussed in

detail at all.

In the preceding pages, I have been concerned with various aspects of referential dependency between two overt nominal categories. The proposed feature system in Binding Theory is simply [+/- a] and the [+/-p] feature has been argued not to belong to this module. While this proposal, as I have argued, is motivated by wide range of empirical considerations, it is not clear whether it extends to the case of empty categories.

In Chomsky (1982) it is suggested and argued for that the "typology" of empty categories mirrors that of overt nominal categories. The correspondences, as argued in Chomsky (1982), are summarized below.

(138) Chomsky's (1982) Typology of Nominal Categories

	<u>overt</u>	<u>covert</u>
[+a, -p] pure anaphors	e.g. himself	an NP-trace
[-a, +p] pure pronominals	e.g. he	pro
[-a, -p] Names	e.g. John	a variable (<u>wh</u> -trace)
[+a, +p] pronominal anaphors		PRO

The elimination of the [+/-p] feature will have two consequences. One is that the three-way difference among anaphors, pronominals and Names will now be two ways, i.e. anaphors v.s. non-anaphors. This means, in terms of the covert categories, that there will no longer be a distinction between pro and (syntactic) variables (i.e. the traces of A'-movement), in terms of Binding Theory.⁵⁶ Furthermore, the distinction can no longer be made between NP-trace and PRO. The PRO theorem cannot be derived. We must no doubt consider carefully the implications of these results; but I cannot take up the

task at this point.

6.7. Concluding Remarks

The dual goals of this present work were stated at the outset of Ch. 1, in the form of a passage from the Preface in Kayne's (1975) French Syntax. They are (i) to obtain a clear understanding of the grammatical properties of a particular language based on proposals in syntactic theory, and (ii) to verify and modify, if necessary, those theoretical proposals through detailed analyses of a particular language. One might represent these two goals as in (139).

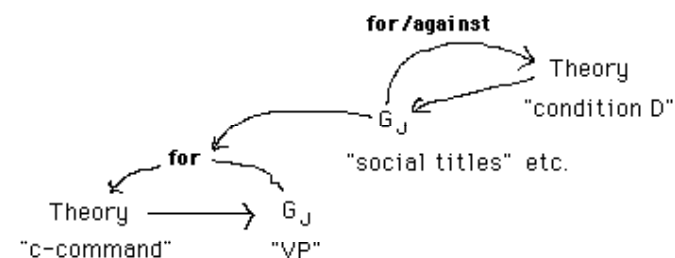
(139)

- a. Theory --> Grammar
- b. Grammar --> Theory

As pointed out in Chs. 1 and 2, the so-called "configurational" aspect of the Japanese language, often equated to the postulation of the VP node, was motivated based on certain theoretical proposals, namely, that syntactic domain is determined based on the configurational notion "c-command" (Reinhart (1976, 1983)) and that the relevant phenomenon of referential association is sensitive to the syntactic domain of the NP's under discussion. In this sense, the demonstration of Japanese as a "configurational language" in the early to mid 1980's was an instance of (139a). I presented in Ch. 2 evidence that reinforces Saito's (1985) argument that Japanese does provide crucial evidence that the "c-command" relation, but not the "precedence" relation is crucial in determining the syntactic domain.⁵⁷ The relevant

argument was based on Lasnik's (1986) proposal to divide the standard condition C into two parts. The Japanese data that provided support for Lasnik's proposal, however, indicated, upon further considerations, that his proposal to relate condition D to Binding Theory cannot be maintained. The interaction among the theoretical proposals and the elucidation of properties of particular languages, as reviewed above, are schematically represented in (140). (G_J stands for the grammar of Japanese.)

(140) For "C-command" and the VP in Japanese

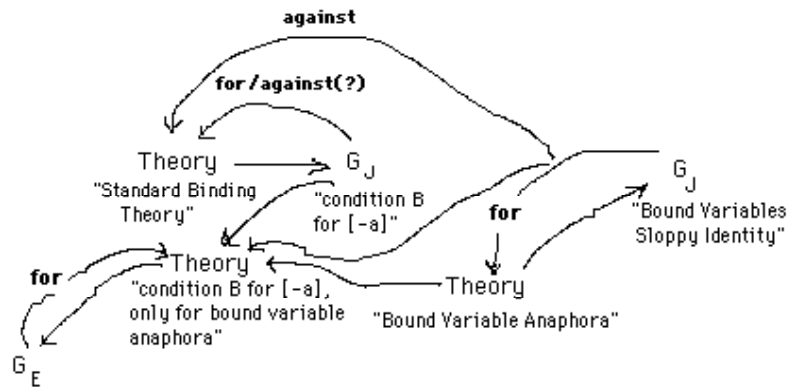


Among what is not expressed in (140) is one consequence of the feedback from G_J ("social titles") to Theory, namely, that the phenomena that are comparable to condition D involving social titles are in fact observed in English as well; cf. the discussion in the preceding section and xx in Ch.3. In this sense, an aspect of the grammar of English was clarified based on the investigation of the condition D phenomenon in Japanese, which was in turn based on the theoretical proposal made in Lasnik (1986). Similar remarks apply to other areas of inquiry presented above, e.g. the proposal that condition D is a condition on linking.

The interactions among theoretical proposals and grammars of

particular languages, with respect to condition B, are schematized in (141).
 (G_E stands for the grammar of English.)

(141) Condition B for [-a], and only for Bound Variable Anaphora



The standard binding theory, in its earlier formulations, is applied to Japanese in Oshima (1979). It is not clear that the theory is confirmed by the relevant Japanese data, with respect to condition B. As indicated above, the Japanese data on condition B for coreference, despite the claim made in Oshima, seem murky. There was already an indication at this point (i.e. in Ch. 2), where coreference is the topic of discussion, that condition B holds of [-a] categories rather than [+p] categories. Reinhart's proposal that binding conditions regulate only bound variable anaphora has received strong confirmation in the grammar of Japanese. This in turn constitutes strong argument against the standard view of binding conditions. The results

obtained in the examination of the Japanese grammar have given rise to a theoretical claim that condition B holds of [-a] categories and only in the case of bound variable anaphora. This proposal has been shown to be verified in the grammar of English. The preceding discussion is intended to illustrate this point.

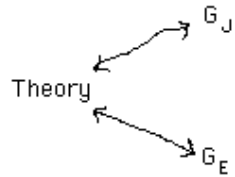
Both in the case of the proposed distinction between bound variable anaphora and coreference (and in particular, the claim that binding conditions regulate only the bound variable anaphora) and in the case of the claim that condition B holds of [-a] categories, the relationship between the theory and grammars is like (142).

(142)
 $T \leftrightarrow G_J \leftrightarrow T \leftrightarrow G_E$

That is, an aspect of the grammar of Japanese is investigated based on a certain theoretical proposal. The result of this investigation then leads us to modify the proposal. The revised theory then sheds new light on the grammar of English, and this in turn supports the validity of the modification of the theory, put forth by the investigation of Japanese.

The mutual relation between theory and the grammar of a particular language in terms of impact to each other is represented schematically in (143).

(143)



As is indicated (143), the grammar of Japanese and the grammar of English, for example, interact with each other, being mediated by theory.

The research strategy in generative grammar, stated in Kayne (1975, xx) has thus proven to be profitable. In the course of the discussion, it has also turned out that the verification of a theoretical claim based on a particular language often requires rather involved analyses of the relevant aspects of the grammar of this language; cf. the discussion in Ch. 5, in which the Japanese stripping was identified as being qualified as a construction that can reliably be used to test the availability of a sloppy reading. Once detailed analyses are completed, they often yield new insights into the theoretical proposal, in terms of a number of different considerations, such as language acquisition and the analyses of similar phenomena in other languages. As is made clear in the discussion in this chapter, certain aspects of UG are more easily detectable in one language than in another. For example, the isolation of condition B effects for bound variable anaphora was much clearer in Japanese than in English, for the reasons indicated above. This makes even greater the necessity and significance of comparative syntax; when a discover is made in one language, we are obtaining insight into many more languages and in fact into Universal Grammar.

Notes to Chapter Six

¹ Reinhart (1983, p. 159) assumes that anaphors (called "R-pronouns" there) "are interpretable only as bound variables." Hence her claim with respect to condition A must be true by assumption. While the unexpected instances of the "strict" reading for reflexives, discussed in Sag (1976, pp. xx) and chapter 5, might turn out to be problematic for (at least a simplistic interpretation of) this assumption, no further discussion will be given here on this issue.

² See Chomsky (1981, p. 193 and footnote 45). Chomsky's exposition there seems to anticipate the reinterpretation of the relevant data as indicated here.

³ It must also be recalled that overlapping coreference seems to be subject to the local disjointness requirement that is identical to that of condition B. The relevant contrast is illustrated by the English examples in (i) and (ii) below.

(i) The soldiers think that the general admires the officers' work.

It was pointed out in 2.10 that many speakers find the overlapping coreference in (i) possible (contra Lasnik (1976, p.x)) while disallowing that in (ii) (as in Chomsky (1973, p. x) and Lasnik (1976, p.x)).

(ii)

a. The soldiers shot at the officers.

b. The soldiers admire the officers.

The contrast between (i) and (ii) is consistent with the view that Names are also subject to condition B effects, as indicated in (1a). Note, however, that to the extent that the condition B effects in (ii) are real, a question will remain, in light of the discussion below, as to

whether the relevant "dependency" or "referential association" is that of "coreference."

⁴ Following Ueyama (1990), I supply to wa, in addition to koto, at the end of each sentence. The typical interpretation of S plus to wa is as indicated in (i).

- (i) John-ga kita to wa
John-NOM came COMP CONT
'I am surprised that John came.'

It appears that odoroita 'I am surprised' (or its equivalent) is omitted after to wa in (i). The addition of to wa is intended to have the same effect as adding koto at the end of the sentence. See footnote xx in Ch. 2 for the effect of the addition of koto to the sentence.

⁵ It is not entirely clear what type of verbs behave like nagusame 'console' and what type of verbs behave like suisensu 'recommend'. The following generalization appears to be diagnostic in distinguishing the two types. Namely, if the form (i) is possible, the verb is like suisensu 'recommend' and if it is not, the verb is like nagusame 'console'.

- (i) John_i-wa matigatte zibun_i-CASE V-TENSE-ga sono koto-ni
John-TOP by mistake self -BUT that matter-DAT
kiga {tuiteinai/tukanakatta}
{is/was} not aware
'John_i Verb self_i but he {is/was} not aware of it.'

Since some verbs, such as aisite 'is in love with' and sonkeisu 'respect', do not naturally allow the locally bound zibun, as is well known, sentences like (ii) cannot be used as crucial examples in the context of the present discussion.

(ii)

- a. *John-ga kare_i-o aisiteiru (koto)
John-NOM he-ACC loves
'John_i loves him_i.'

- b. *John_i-ga kare_i-o sonkeisiteiru (koto)
John-NOM he-ACC respect
'John_i respects him_i.'

Notice that the sentences in (iii) are marginal, at best.

(iii)

- a. *John_i-{ga/wa} zibun_i-o aisiteiru ({koto/yo})
John-NOM self-ACC loves
'John_i loves self_i.'

- b. *John_i-{ga/wa} zibun_i-o sonkeisiteiru ({koto/yo})
John-NOM self-ACC respect
'John_i respects self_i.'

In other words, in light of the marginal status of (iii), it is not clear whether the contrast between (ii) and (iv) can be directly related to condition B.

(iv)

- a. John-ga kare_i-no hahaoya-o aisiteiru (koto)
John-NOM he-GEN-ACC loves

'John_i loves his_i mother.'

b. John_i-ga kare_i-no sidookyookan-o sonkeisiteiru (koto)

John-NOM he-GEN supervisor-ACC respect

'John_i respects his_i supervisor.'

I note, in passing that bound variable construal for a nominal like soitu is not possible in sentences like (v).

(v)

*[subete-no gengogakysya]_i-ga soitu_i-o sonkeisiteiru (koto)

all-GEN linguist-NOM the guy-ACC respect

'[all the linguist]_i respect the guy_i'

When soitu is not bound in its local domain, the bound variable construal is possible: cf. the examples in xx, as noted earlier in Ch. 4,

⁶ The differentiation between coreference and bound variable anaphora with respect to condition B was not made in Oshima (1977), Kuno (1986) and Ch. 2 of this book.

⁷ A formal account of the contrast between (15b) and (16b) will be given in 6.4.

⁸ The "disjointness effects" indicated in (i), as compared to (ii), must therefore be accounted for independently of condition C.

(i) *John_i consoled John_i.

(ii)

a. ?John_i consoled John_i's brother.

b. John_i consoled himself_i.

⁹ As noted in Lasnik (1986) and discussed in Ch. 2, the Japanese counterpart of (21) is acceptable.

¹⁰ In the "standard" literature such as Chomsky (1981, p. 193) and Lasnik (1986, p. 149), sentences like (i) are judged ungrammatical.

(i)

a. *John_i said that John_i would win. (Chomsky's (25ii) with the judgment there)

b. *John_i regrets that John_i wasn't chosen. (Lasnik's (3) with the judgment there)

While sentences like (ii) have also been cited as ungrammatical in the "standard" literature, the most typically cited "examples of condition C violations" are sentences like (i).

(ii)

a. *John_i thinks that I admire John_i. (Lasnik's (1986, 149) (4) with the judgment there)

b. *John_i can't stand John_i's teacher. (Lasnik and Uriagereka's (1988, p. 39) (36a) with the judgment there)

¹¹ In 5.8, (26b) and (26c) are marked "???" representing the judgments of the "more conservative" speakers. The speakers who find (26b) and (26c) completely acceptable, still find (26a) unacceptable. Thus for those speakers, the contrast between (26b) and (26c) on the one hand and (26a) on the other is quite sharp.

¹² If this is a reasonable assumption to make, it indicates that the notion of "referentiality" relevant to condition D is independent of the semantic notion of referentiality, at least insofar as we assume that condition D holds at S-structure and not at LF. Cf. the discussion in 3.5.

¹³ The unacceptability of (i) indicates that the subject every logician c-commands that

logician in (32), excluding the possibility of reducing (32) to cases such as (ii).

(i) *he_i was walking with a boy near that logician_i's house

(ii) (Hoji (in press))

every syntactician's mother thinks that the poor s.o.b_i has chosen the wrong field.

(ii) is an instance of Indirect Binding of Haik (1984) and Spec Binding of Reinhart (1987).

The sentence in (iii) indicates that the use of near is not crucial in this example.

(iii) [Every logician]_i thinks that the theory of truth [that logician]_i has devised is the best in the world.

¹⁴ The problems noted in 6.2.2.2 still remain. I will discuss them in 6.5.

¹⁵ Given the observation that that logician, for example, may function as a bound variable, one would naturally expect that it may serve to yield a sloppy reading. It in fact appears that sentences like (i) do allow the sloppy reading.

(i) The Harvard logician tends to recommend that logician's student for the best job available in the field; and the MIT logician does too.

The sloppy reading for that logician seems possible (at least with the type reading for the Harvard logician and the MIT logician).

¹⁶ If Higginbotham's (1983) example in (i) may also be analyzed as an instance of condition D violation, the possibility pointed out by Hiroaki Tada (p.c.), the contrast between (i) and (ii) may be considered as deriving from the difference between bound variable

anaphora and coreference.

(i) *Which pictures of which linguist_i did he_i think that Susan wanted to see?

(ii) ??Which pictures of John_i did he_i think that Susan wanted to see?

There are a few complications in regard to the contrast between (i) and (ii) that are relevant to our present discussion. One is that the status of (ii) is not entirely clear. Lebeaux (1988, 1989) argues that (ii) does not allow coreference while Roberts (1985) argues to the contrary; cf. the discussion in xx. The other complication has to do with the effect of WCO. That is, the absence of the required configuration in (i) for variable binding results in the so-called WCO violation. Suppose that one argues that the difference in acceptability between (i) and (ii) is due to the difference between bound variable anaphora in (i) and coreference (ii), in terms of condition D. Then one must be able to isolate the effects of condition D for bound variable anaphora in (i), teasing them apart from the effects of WCO. But this is not an easy task, and I will not pursue this issue further in my present work.

¹⁷ Reinhart, however, specifically states (p. 158):

For convenience, [(38)] is stated as an actual coindexing mechanism. However, as we will see directly, it can be stated equally well as an output condition on free coindexing, along the lines of Chomsky (1981).

She also notes there that nothing in her analysis hinges on the choice of "minimal governing categories" for the relevant domain.

¹⁸ Reinhart (1983, C.3) does not consider reciprocals.

¹⁹ While the unavailability of the coreferential reading in (40c) makes it difficult, we can see that (40d), but not (40c) yields the relevant bound variable reading, based on the sloppy identity test as used in Reinhart (1983, Ch. 7) and in Ch. 5. Thus while (ia) can mean (iia), (ib) cannot mean (iib); cf. Y. Kitagawa (1989).

- (i)
- a. John thought that Mary had recommended him; and so did Bill.
- b. John recommend him; and so did Bill.
- (ii)
- a. [_S John (λx (x thought that Mary had recommended x))] and [_S Bill (λx (x thought that Mary had recommended x))]
- b. [_S John (λx (x recommended x))] and [_S Bill (λx (x recommended x))]

²⁰ As will be discussed later, restricting the bound variable construal to "pronouns" is problematic. At an informal level, the fact that that logician in an earlier example in (32) from Evans (1977) appears to be construed as a bound variable poses a problem since that logician is, intuitively, not a pronoun. At a formal level, the acquisition of the feature [+p] would be a problem for this, as discussed in detail in Ch. 2.

²¹ These speakers, however, still find the slight contrast between (i) and (ii), as indicated below. (Check on this.)

- (i) ?John_i recommended John_i's student.
- (ii) John_i's teacher recommended John_i.

²² In the following discussion, I will not be concerned with the experimental methods by which acquisition researchers have arrived at the relevant conclusions. The argument to be given below, which is in part based on the introspective judgments of the Japanese adult speakers (on the relevant Japanese sentences), can be taken as supporting evidence for the experimental result as indicated in (56).

²³ Grimshaw and Rosen (1990), on the other hand, argue that binding conditions are NOT restricted to bound variable anaphora. As to the status of (56a), they suggest that children use the pronouns as "emphatic pronouns", and that the "emphatic pronouns" are not subject to condition B. In the absence of an explicit characterization of "emphatic pronouns", however, their proposal is difficult to evaluate. One might attempt to equate "emphatic pronouns" to "demonstrative pronouns" and demonstrative nominals in general. While this seems to be a promising way to characterize "emphatic pronouns", it fails to account for the full range of phenomena, as will be discussed below.

As indicated above, they suggest that "[t]he high rejection rate for [(56b)] reflects a high rejection rate for pronouns as bound variables." As also noted above, a subsequent acquisition study such as reported in Chien and Wexler (1989) indicates that it is not the case that the children in general reject pronouns as bound variables.

²⁴ I am simplifying the relevant data, especially with respect to (61a) and (62a). The acceptable status of (61a) signifies that the children's performance in the relevant experimental tasks indicate that they do not systematically rule out the coreference reading in sentences of this sort. Similarly, the acceptable status of (62a) indicates that sentences of this type tend to be accepted by native (adult) speakers of Japanese, to varying degrees. This simplification (or purification) of the data is not merely for the purposes of exposition. I am in fact claiming that this interpretation of the data reflects the relevant principles of grammar under investigation.

²⁵ As indicated in Sportiche (1986), (60b) is more offensive than (60a); such difference is

suppressed here.

²⁶ Grimshaw and Rosen's (1990) account of (61a) does not seem plausible either. Recall that, according to them, (61a) is acceptable since the children use the pronouns as "emphatic pronouns," and "emphatic pronouns" are not subject to condition B. Kare in (62a) does not seem particularly emphatic at all. See footnote xx above.

²⁷ Recall that Reinhart (1983, p. 158) states that "[63] can be stated equally well as an output condition on free coindexing, along the lines of Chomsky (1981). If we assume free indexing, and filter out the indexing that would not be obtained by (63), we have the same result. That is, by the time we apply the translation procedure for bound anaphora, none of the examples in (60), (61) and (62) are allowed to have the indexing as indicated there. Hence none of them will undergo the translation procedure.

Notice that (63), when stated as a filtering condition, would not allow two NP's to be coindexed with each other unless one c-commands the other. Furthermore, of the two relevant NP's, the c-commanded one must be a pronoun or an anaphor. These two "features" of (63) will later be argued to be in direct conflict with the proposal to be made below as well as with the relevant empirical generalizations that motivate this proposal.

²⁸ Under this approach, the relevant level for Binding Theory is "after" LF, e.g. what is sometimes called as LF⁺; cf. xx. Given (1a) and (1c) in 6.1, conditions A and B apply at this level. The relevant level for condition D might be different, however, since it is not considered to be part of Binding Theory.

²⁹ As noted earlier, the rule in (64) is intended to operate as follows.

This rule thus operates in the S' domain and λ -abstracts on the antecedent, i.e. that NP in a set of coindexed NPs which c-commands the others (which can only be pronouns, given the coindexing procedure [(63)]), and converts all other pronouns in this set to variables bound by the λ operator. The antecedent (β in [(64)]) can be

any NP (definite, quantified or a pronoun) as long as it c-commands the pronoun it is coindexed with. (Reinhart (p. 160))

³⁰ The indexing in (67) and that in (i) can be obtained either (i) by retaining the coindexing procedure in (63), but without the (a) and (b) clauses, or (ii) by assuming free indices.

(i) *John_i thinks that Mary recommended himself_i.

If the former option is adopted, then the coindexing procedure would continue to function as a licensing condition for bound variable construal for α being bound by β ; i.e., only when α is c-commanded by β , α may be translated into a variable bound by β (putting aside the cases that involve "indirect binding" (Haik (1984)) and "Spec binding" (Reinhart (1987))). Without the (a) and (b) clauses, it no longer enforces the "locality restrictions" of condition A and condition B. Rather, conditions A and B apply after the translation procedure in (64) has taken place.

As long as we maintain the analysis of condition D, as proposed in Ch. 3, we must allow free indices, irrespective of c-command. For, according to this proposal, linking process takes place based on coindexation and it must be possible for two coindexed NP's that are not in a c-command relationship to be linked.

(The following part will be rewritten.) This in turn means that the "c-command" condition on bound variable construal must be stated independently of the indexing mechanism of the type in (63) without the (a) and (b) clause. We may follow Reinhart (1983) and assume that the relevant level of representation for this condition is at S'-structure. Then we must have a mechanism that marks every c-command relation among N^{max} within the sentence. This then amounts to the coindexing procedure in (63).

But there are two important differences between (63) and the proposal under discussion. One is that this proposal does not have the (a) and (b) clauses. (The effects of these clauses are shifted to LF (or to LF')). The other is that, as has been indicated, the indexing process now under discussion is not limited to instances that involve a pronoun. I.e., we can coindex two Names.

Alternatively, we may also assume that the relevant c-command requirement for bound variable construal is to be stated at LF or at LF'. As far as the simple sentences of the sort that we have been considering are concerned, the choice between these two alternatives seems immaterial.

³¹ That Binding Theory applies at LF has been argued for in Aoun (1986), May (1989), Fiengo and May (1990) and Y. Kitagawa (1989); cf. also the references therein. There are a number of issues that are related to this this proposal. Among the interesting and very relevant proposals in this connection are Barss' (1986) chain binding, which we might need independently of the procedure under discussion here, and Lebeaux's (1989, 1990) proposal on "licensing" conditions and "filtering" conditions, coupled with his proposal on the nature of "projection" and "adjunction". See Ch. 3 for a brief discussion of Lebeaux's (1989, 1990) proposal.

³² Furthermore, under this assumption, sentences like (ia) would have to be ruled out as an instance of WCO violation, due to the failure of John to c-command his at S-structure, analogous to (ib).

- (i)
- a. his_i student recommended John_i
 - b. *his_i student recommended no one_i

³³ Among the issues that this chart does not refer to are:

-
- (i) that N' v.s. the N'
 - (ii) ku N' in Korean

The issue in (i) is perhaps related to the distinction between that and it. See Kaplan (197?).

³⁴ It is not clear that the types of variations under discussion are entirely due to different specification of these nominal expressions. I suspect it to be the case that a portion of the variations can be attributed simply to "preferences," which is perhaps based on pragmatic considerations.

³⁵ Of course, this exposition is rough, since there in English need not be a member of (D).

³⁶ There are no occurrences of him or her as expletives, unlike it. Thus the subtle difference between it on the one hand, and him and her on the other, as noted above, may be traced back to this difference.

³⁷ A similar problem has been noted, as indicated before, for Reinhart's (1983) pragmatic account of disjointness effects for coreference; cf. Lasnik (1986, p. x).

³⁸ Recall that in Reinhart's (1983, Ch. 7) analysis, only pronouns and reflexives may be translated into variables, due to the restriction on her coindexing mechanism; cf. xx. If (94) must indeed be represented as (95), it therefore constitutes strong evidence against this particular aspect of her analysis. The same point can be made based on Hornstein and Weinberg's (1987) examples, in which "anaphoric epithets" are bound by quantified NP's.

³⁹ The sentence in (i) seems worse than (96a).

- (i)
- *Every logician_i recommended the logician_i.

This is related to the issues that we left undiscussed in connection with the chart in the preceding section (p.xx).

⁴⁰ The conclusion in (ii) was made in Ch. 2, regarding coreference. However, the preceding discussion clearly indicates that condition B holds of bound variable anaphora but not of coreference. In 6.5 I will return to the Japanese data in Ch. 2 that motivated condition B for coreference.

⁴¹ Among the other arguments advanced against Reinhart's pragmatic account for coreference are:

- (i)
 - a. No Other Ways to Express Coreference
 - b. The Failure of Complementarity
 - c. The Strict Reading (as opposed to the sloppy reading)

The logic of the argument in (ia) is that even when there is no alternative way of expressing the "coreference" with exactly the same "meaning," coreference is not possible. e.g. (i) "anaphoric epithets", allegedly may not be bound and (ii) the overlapping coreference such as in we like me is allegedly impossible. (Lasnik (1986)) However, as I have argued above, it is possible for the so-called anaphoric epithets to be bound. Furthermore it is not clear that (ii) is completely unacceptable (ii).

(ii) They recommended him. (they includes him)

Most speakers accept sentences like (ii) (cf. xx) and it appears that what is not possible in (ii) is the interpretation that includes "he recommended himself." Similarly, (iii) seems acceptable to the extent that it is possible to interpret it as not involving the sense of "I

recommended myself."

(iii) We recommended me.

The argument in (104b) is an instance of (ib), given in xx.

What is indicated in (ic) is that if the bound variable anaphora must be chosen, as a "pragmatic" strategy, then we would wrongly expect that the strict reading is not possible, in the "discourse-deletion" context. (Lasnik (1986)) If the account of the strict reading briefly suggested in 6.4 turns out to be tenable, (ic) ceases to be a problem .

The argument in (104a) can be added to this list as (iv).

(iv) No Bound Variable Alternatives

As noted in the text, even when the bound variable option is not allowed, coreference is not possible.

⁴² Recall that the structure in (i) is assumed as the VP-internal structure, as in Hoji (1985, 1987).

(i) [_{VP} NP-DAT [_V NP-ACC V]]

Hence, the indirect object NP c-commands the direct object NP. Cf. Hoji (1985, 1987) as well as Ch. 2 for arguments for this structure.

⁴³ I add yo at the end of the sentence, to avoid the complications that might arise due to the possibility of what Kuroda (1972) calls a "narrative" or "non-reportive" style.

⁴⁴ As noted, it is not immediately clear what form can be used as a reflexive in place of soko. One possible candidate for it is zisyā 'lit self-company' and it may be used in place of

soko in (107b). However, it cannot be used in place of soko in (107a), in which its intended antecedent is not in a subject position.

⁴⁵ See the discussion in xx for some complication that has to do with the compatibility between Names and members of the so system. Due to such complications, the examples in (109) might not be fully acceptable for some speakers. The relevant contrast can be illustrated also by the paradigms given below.

(i)

a. [A sya to B sya]_i-ga soko-no kogaisya-o suisensita (koto)
Company A and Company B-NOM it-GEN subsidiary-ACC recommended
'[Company A and Company]_i recommended it_is subsidiary companies'

b. *[A sya to B sya]_i-ga soko-o suisensita (koto)
Company A and Company B-NOM it-ACC recommended
'[Company A and Company]_i recommended it_i'

(ii)

a. Keidanren-ga [A sya to B sya]_i-ni soko_i-no kogaisya-o suisensita (koto)
Keidanren-NOM Company A and Company B-DAT it-GEN subsidiary-ACC
recommended
'Keidanren recommended it_is subsidiary companies to [Company A and Company]_i'

b. *Keidanren-ga [A sya to B sya]_i-ni soko_i-o suisensita (koto)
Keidanren-NOM Company A and Company B-DAT it-ACC recommended
'Keidanren recommended it_i to [Company A and Company]_i'

(iii)

a. A sya_i-ga {soko_i/soko_i-no kogaisya}-o suisensita (koto)
Company A-NOM {it/it-GEN subsidiary-ACC recommended
'Company A_i recommended {it_i/it_is subsidiaries}'

b. Keidanren-ga A-sya_i-ni {soko_i/soko_i-no kogaisya}-o suisensita (koto)
Keidanren-NOM Company A-DAT it/it-GEN subsidiary-ACC recommended
'Keidanren recommended {it_i/it_is subsidiaries} to Company A_i'

⁴⁶ The relevant difference that is due to the use of the two types of verbs can be illustrated also by the following examples.

(i) (pointing at the same person)

a. That guy_i was trying to recommend that guy_i to someone.

b. *[?]That guy_i was trying to convince that guy_i of something.

Barry Schein (p.c.) has pointed out that the judgments change depending upon whether there are two pointing actions (at the same person). According to him, when there are two pointing actions, then the judgements are as indicated in (i); but when there is one pointing action, accompanying the first linguistic occurrence of that guy, then (ia) becomes less acceptable while (ib) will become more acceptable. This subtle difference raises questions that have to do with conflicting requirements; no further discussion will be given here, however.

⁴⁷ Incidentally, some verbs, such as sonkeis 'respect', tend not to allow the locally bound zibun; cf. xx for earlier discussion of such phenomena. Thus, not only (i) but (ii) are quite odd.

(i)

a. *?John-ga kare_i-o aisiteiru (koto)

John-NOM he-ACC loves

'John_i loves him_i.'

b. *?John_i-ga kare_i-o sonkeisiteiru (koto)

John-NOM he-ACC respect

'John_i respects him_i.'

(ii)

a. *?John-{ga/wa} zibun_i-o aisiteiru ({koto/yo})

John-NOM self-ACC loves

'John_i loves self_i.'

b. *?John_i-{ga/wa} zibun_i-o sonkeisiteiru ({koto/yo})

John-NOM self-ACC respect

'John_i respects self_i.'

In light of the marginal status of (ii), it is not clear that the contrast between sentences in (i) and those (iii) can be directly related to condition B, despite the fact that the former involve locally bound instances of kare while the latter involve non-locally bound instances of kare.

(iii)

a. John-ga kare_i-no hahaoya-o aisiteiru (koto)

John-NOM he-GEN mother-ACC loves

'John_i loves his_i mother.'

b. John_i-ga kare_i-no sidookyookan-o sonkeisiteiru (koto)

John-NOM he-GEN supervisor-ACC respect

'John_i respects his_i supervisor.'

One may stipulate that, due to their lexical properties, these verbs do not allow the VBA representation as in (iv).

(iv) NP₁-ga [\sqrt{x} [x(-ga) x(-o) Verb]]

That is, the internal argument of these verbs cannot be translated into a variable bound by an operator within the minimal clause dominating them. However, while this stipulation make the description of (ii) possible, it does not account for (i). Why is the coreference in (i) disallowed? It seems that what has to be specified in the case of these verbs is not as general as what has to be specified in the case of the verbs such as console. For example, it might be the case that among the lexical meaning of sonkeis 'respect' is the exclusion of "self-respect."

I note, in passing, that bound variable construal for a nominal like soitu is not possible in sentences like (v).

(v)

*[subete-no gengogakusya]₁-ga soitu₁-o sonkeisiteiru (koto)

all-GEN linguist-NOM the guy-ACC respect

'[all the linguists]₁ respect the guy₁'

As noted earlier in Ch. 4, when soitu is not bound in its local domain, then the bound

variable construal is possible; cf. the examples in xx.

⁴⁸ Evans (1977, pp. 270-271) suggests that the distinction between (i) and (ii) be made in part based on the assumption that (ii) is "derived from the *oratio recta* sentence: 'John thinks "I am under suspicion"'. "

(i) John thinks that John is under suspicion.

(ii) John thinks that he is under suspicion.

As indicted in his footnote 33, this analysis seems to be directly related to Kuno's (1972) direct discourse analysis. Cf. also the paper by G.E.M. Anscombe. According to which Evans, "[t]his proposal is essentially made in Anscombe (1975, p. 47)."

⁴⁹ This perhaps is too strong a statement, since the judgments are not as clear as this statement indicates. I am thus providing (120) as a rough characterization of the relevant lexico-semantic properties of verbs like nagusame 'console'.

⁵⁰ It it were the case that the translation of β into a variable in (128) is obligatory, then the sentences in (124), (126) and (127b) should be completely ungrammatical. The fact that these sentences are accepted to varying degrees among speakers indicates that the structure in (128) TENDS to be, rather than MUST be, interpreted as that of bound variable construal

The consideration of this sort applies to the translation in (120); hence, as noted in footnote xx (around there), the translation process should not be obligatory. It must be stated as a tendency.

⁵¹ Lasnik (1986) argues that the cross-linguistic variations regarding the status of the sentences like (133) are due to the parameter encoded in condition C. As I argued in Ch. 2, however, such an account does not seem well-motivated.

⁵² There are many other considerations that are relevant in this regard. Consider, for example, the sentences in (i) and (ii).

(i)

a. ??Every syntactician_i praised that linguist_i's work very highly.

b. ??Every syntactician_i has a tendency to hate someone who criticizes that linguist_i's work.

(ii)

a. ?Which syntactician_i praised that linguist_i's work very highly?

b. ?Which syntactician_i has a tendency to hate anyone who criticizes that linguist_i's work?

While sentences like (i) and (ii) (and other similar sentences such as involving a pair of surgeon and doctor) are judged acceptable to varying degrees among speakers, those in (iii) and (iv) seem to be unacceptable.

(iii)

a. *Every linguist_i praised that syntactician_i's work very highly.

b. *Every linguist_i has a tendency to hate anyone who criticize that syntactician_i's work.

(iv)

a. *Which linguist_i praised that syntactician_i's work very highly?

b. *Which linguist_i has a tendency to hate anyone who criticizes that syntactician_i's work?

It seems plausible that the unacceptability of (iii) and (iv), as compared to (i) and (ii), is attributable to the violation of condition D, given the assumption that syntactician is more "referential" than linguist; cf. 2. 11. Notice that, loosely speaking, syntactician designates a set that is a subset of the set that linguist designates. As will be pointed out, this seems to be a crucial factor in the determination of the relative "degree" differences in terms of

referentiality.

While it seems reasonable to assume that syntactician is more referential than linguist, it is not clear how we can express that that syntactician is more referential than every linguist. If we assume that condition D is violated in the representation as given in (v), it seems possible to maintain the analysis of condition D for the unacceptability of (i) and (ii).

(v) {every/which} x [[NP x linguist] [VP ... [NP x syntactician] ...]]

If the referential value (or the denotation) (not the degree of "referentiality" that is relevant to condition D) of an NP resides in D(eterminer) as in the so-called DP analysis (xx, xx, and xx) this seems to be a reasonable way to capture the condition D effects in (i) and (ii).

Now, consider the examples in (vi) and (vii).

(vi)

- a. ??Every syntactician_i's spouse praises that linguist_i's work very highly.
- b. ??Every syntactician_i's spouse has a tendency to hate anyone who criticizes that linguist_i's work.
- c. Which syntactician_i's spouse praises that linguist_i's work very highly?
- d. Which syntactician_i's spouse has a tendency to hate anyone who criticizes that linguist_i's work?

(vii)

- a. *Every linguist_i's spouse praises that syntactician_i's work very highly.
- b. *Every linguist_i's spouse has a tendency to hate anyone who criticizes that syntactician_i's work.

c. *Which linguist_i's spouse praises that syntactician_i's work very highly?

d. *Which linguist_i's spouse has a tendency to hate anyone who criticizes that syntactician_i's work?

While the judgments seem even more subtle and unclear in here than in the earlier examples, some speakers seem to detect the contrast as indicated above. If this contrast is real and if it turns out that the unacceptability of (vii) is due to condition D, it would constitute evidence that condition D applies at LF (as well as at S-structure, because of the earlier considerations noted in Chomsky (1981) and discussed in Ch. 3). But the relevant judgments seem very delicate and I leave further discussion of the sentences like these for further studies.

⁵³ I leave it an open question how to analyze the so-called long distance anaphors in terms of language acquisition; cf. the discussion in Ch. 2. See also x, xx and xxx, for much relevant discussion on this issue.

⁵⁴ It is necessary to show that the relevant contrasts are sensitive to c-command. That is, if the relevant contrasts are real and are due to condition D, rather than simply due to precedence, we must demonstrate that phonetician may precede linguist, as long as the former does not c-command the latter. The relevant judgments are murky and I will not attempt to establish this here.

⁵⁵ In this sense, it does not make sense to say that Mary is more referential than he, although Lasnik's analysis would entail this proposition.

⁵⁶ Recall that I have suggested that strong crossover can be reduced to condition D. If this suggestion turns out to be tenable, then the remaining difference between pro and the trace of A'-movement can perhaps be accounted for in terms of Bounding Theory.

⁵⁷ Saito's argument was constructed after Reinhart's (1976, 1983) argument to this effect, based on Malagasy. The evidence I presented in Ch. 2 can thus be considered as

reinforcement of Reinhart's (1983) argument.

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