

Chapter 2. On the Scrambling Construction: Preliminary Discussion

2.1. Aim of This Chapter

The aim of this chapter is to introduce an analysis of the so-called scrambling construction in Japanese which is assumed in the subsequent chapters.

It will be claimed in chapter 3 that BVA is heterogeneous, and that not every instance of BVA should be represented as bound variable anaphora in the technical sense. This claim will be made on the basis of the observation that some instances of BVA are subject to the LF *c*-command requirement, while the others are subject to the PF precedence requirement. In order to argue for such a generalization, however, it is necessary to examine the configurations in (1c) and (1d), as well as those in (1a) and (1b):

- (1) a. a configuration containing α and β such that
 α precedes β at PF, and
 α *c*-commands β at LF.
 b. a configuration containing α and β such that
 α does not precede β at PF, and
 α does not *c*-command β at LF.
 c. a configuration containing α and β such that
 α precedes β at PF, but
 α does not *c*-command β at LF.
 d. a configuration containing α and β such that
 α does not precede β at PF, but
 α *c*-commands β at LF.

Although one may consider that it would be difficult to find an instance of (1d), I will argue in this chapter that certain instances of the so-called scrambling construction provides us an example of (1c) and (1d).

The so-called scrambling construction refers to the word order in (2b), which is regarded as 'marked' as opposed to the 'unmarked order' as in (2a).

- (2) a. NP-NOM NP-ACC/DAT V
 b. NP-ACC/DAT NP-NOM V

Although the name *scrambling* is often used to refer to the construction in (2b), this is originally the name for the movement rule which derives (2b) from

(2a).¹ In order to describe the relevant facts in an analysis-neutral way, we will call the configuration in which an NP-ACC/DAT precedes the NP-NOM (such as in (2b)) as an *OS-type* construction (*i.e.*, Object-Subject word order construction), in contrast to an *SO-type* construction (*i.e.*, Subject-Object word order construction) such as in (2a). In addition, I call the NP-ACC/DAT which occurs before NP-NOM in the OS-type construction (2b) as *DL* (*i.e.*, a dislocated NP).

It has been assumed in the literature that the word order in the OS-type construction is derived from the corresponding SO-type construction by a movement, which is called *Scrambling*. In the beginning of the research of the OS-type construction, the issue was whether Scrambling is a syntactic movement or a stylistic rule. A stylistic rule is supposed to apply outside the formal grammar, and hence, it is assumed in the relevant framework that such a rule is not subject to a grammatical constraint, and that the output of a stylistic rule should not affect the interpretation of a sentence. Ross 1967:51 argues that the free word order phenomenon in Latin should be regarded as being derived by a stylistic rule, since it is free from the subadjacency effects. Presumably following the analysis of Latin free word order in Ross 1967, Inoue 1976/1977 has claimed that Scrambling in Japanese is also a stylistic rule.² On the other hand, Harada 1977 argues that Scrambling is a syntactic movement. He demonstrates that the OS-type construction in Japanese exhibits subadjacency effects, and that the OS-type construction sometimes has a scope interpretation different from the corresponding SO-type construction.³ (3) illustrates the subadjacency effects in the OS-type construction:

¹ Sometimes a sentence in which an adjunct phrase is placed before the nominative NP is also regarded as an instance of scrambling. But I limit the discussion in this work to the OS-type construction in which an accusative-marked NP or a dative-marked NP appears before the nominative-marked NP, since it is not straightforward how we can demonstrate what the 'unmarked' position is for an adjunct phrase. (In fact this is also a problem for argument phrases, but the problem is more evident in the case of adjunct phrases.) Hoji 1985 (sections 2.2-2.3) claims that an adjunct phrase asymmetrically *c*-commands an accusative-/dative-NP at D-structure, but I do not discuss the validity of this generalization in this work.

² This claim is also found in Inoue 1976:232-233.

³ Harada 1977:101-102 does not refer to the generalization of Kuroda 1969/1970. It seems that he assumes that a scrambling construction such as in (i) only allows the interpretation in which Q1 has a scope over Q2.

(i) Q1-ACC Q2-NOM ...
 Incidentally, Kuno 1973a:ch.28, which Harada 1977:note 9 refers to, states that the construction in (i) only allows the group reading of Q1 and Q2. See Hoji 1985:236-242 for a critical review of the generalization of Kuno's. Section 2.3 below discusses on the scope interpretations in the OS-type construction.

(3) Subjacency effects in the OS-type construction:

- a. ?*[A-no hon-o]_i John-ga [NP [S *ec* *ec*_i katta] hito]-ni
 that-GEN book-ACC John-NOM bought person-DAT

aitagatteiru rasii
 want:to:see seem

'It seems that [that book]_i, John wants to meet [the person who bought *ec*_i]'

(Saito 1985:285 (11a))

- b. ?*[Russell-ni]_i John-ga [NP [S *ec* *ec*_i atta koto-ga aru]
 Russell-DAT John-NOM met fact-NOM exist

hito]-o mituketa rasii
 person-ACC found seem

'It seems that [Russell]_i, John found [a person who actually met *ec*_i]'

(Saito 1985:286 (11b))

- c. *[So-no hon-o]_i John-ga [minna-ga *ec*_i kau node]
 that-GEN book-ACC John-NOM all-NOM buy because

tigau hon-o katta (koto)
 different book-ACC bought fact

'[that book]_i, [because everyone buys *ec*_i], John bought a different one.'

(Saito 1985:247 (147b), due to Yoshimura 1984)

- d. ?*[Tookyoo-ni]_i Mary-ga [John-ga *ec*_i ikitagatteiru noni]
 Tokyo-to Mary-NOM John-NOM want:to:go although

musisiteiru rasii.
 ignoring seem

'It seems that [to Tokyo]_i, [although John wants to go *ec*_i], Mary is ignoring that fact.'

(Saito 1985:247 (147c), due to Yoshimura 1984)

It has been considered in the literature that the fact that the OS-type construction exhibits subjacency effects means that an overt movement is involved in deriving this construction; it is also usually assumed that what undergoes movement is the DL. Strictly speaking, however, (i) it cannot be determined solely on the basis of the existence of subjacency effects what

undergoes movement in the OS-type construction, and moreover (ii) the existence of subjacency effects does not necessarily mean that an overt movement is involved, even if the latter necessarily means the former. Nevertheless, the conclusion that Scrambling is a syntactic movement has been one of the shared assumptions in Japanese linguistics.

The issue then moved onto how Scrambling should be further characterized. It has been discussed in the research of English that passivization or raising displays properties which are distinct from those of *wh*-movement. It is argued that the difference is to be attributed to the type of the landing site of the movement, and that passivization or raising is a movement to an *A-position* (*i.e.*, a position in which an argument can appear at D-structure) while *wh*-movement is a movement to an *A'-position* (*i.e.*, a position in which an argument cannot appear at D-structure): the former is called *A-movement* and the latter *A'-movement*. However, the type of Scrambling was not settled easily, because the OS-type construction appears to exhibit properties inconsistent with each other. To begin with, the OS-type construction appears to show both properties of A-movement and A'-movement. This has led some linguists to propose that the OS-type construction is structurally ambiguous, so that some DLs are located in an A-position while the others are in an A'-position.⁴ In addition, some DLs appear to be 'interpreted' in the position of its trace, while the others do not. In order to express this idea, Saito 1989, 1992 has argued that Scrambling can be 'undone' at LF, *i.e.*, a DL can be literally put back into its θ -position at LF.⁵ Thus, this leads Saito 1992 to conclude that the OS-type construction is three-way ambiguous: the DL may be in an A-position c-commanding the subject, may be in an A'-position, or may be literally reconstructed back into the trace position.

I will argue in section 2.2, however, that two-way distinction is sufficient: it will be demonstrated that the major observations which have been discussed in the literature are accounted for by assuming that some DLs are in

⁴ Such an analysis has been defended in Mahajan 1990 (cf. section B.2.3), Saito 1992 (cf. section B.1.4) and Miyagawa 1997, among others. The relevant discussion is found also in Weibelhuth 1989 (cf. section B.2.2) and Yoshimura 1992 (cf. section B.1.3).

⁵ Yoshimura 1992 follows Saito 1989 in assuming that Scrambling can be 'undone'. The operation called *Anti-scrambling* in Kitagawa 1990 also has an effect of 'undoing of Scrambling', so to speak, but the purpose of this analysis is not identical with that in Saito 1989, 1992 and Yoshimura 1992. See Appendix B for the reviews of these works.

One should notice that the idea that some DLs are 'interpreted' in its θ -position is related to the insight underlying the debate regarding the choice between a syntactic movement and a stylistic rule. Recall that a stylistic rule is assumed to be an operation which never affects the formal meaning of a sentence. Reinterpreting it into the current framework, we can say that a stylistic rule corresponds to a PF movement, a movement which does not affect the LF representation, by definition. I will propose later in section 2.5 that some instances of the OS-type construction indeed involves a PF movement.

an A-position c-commanding the subject while the others are in its θ -position at LF, and that it is unnecessary to postulate that some DLs are in an A'-position c-commanding the subject at LF. It follows that there are two OS-type constructions, whose PF and LF representations are given in (4) and (5). Let us call the one in (4) as *Deep OS-type* and the DL therein as *Deep DL*; let us also call the one in (5) as *Surface OS-type* and the DL therein as *Surface DL*.

- (4) Deep OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-ACC/DAT (=DL) ... NP-NOM ... V
- (5) Surface OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-NOM ... NP-ACC/DAT (=DL) ... V

In the Deep OS-type (4) the DL c-commands the nominative-marked NP at LF just as suggested by the PF representation. In contrast, in the Surface OS-type (5) the nominative-marked NP c-commands the DL at LF, despite its appearance at PF. I will further argue in section 2.3 that the scope interpretations in the SO-type and the OS-type constructions can be accounted for in a principled manner according to this analysis.

It follows that the configurations mentioned in (1c,d) can be realized by the Surface OS-type, as indicated in (6) and (7).

- (6) An instance of (1c):
 PF: QP-ACC/DAT_i ... [... so-ko ...]-NOM ... ec_i ... V
 LF: [... so-ko ...]-NOM ... QP-ACC/DAT ... V (before QR)
 The Surface DL precedes the subject at PF, but the Surface DL does not c-command the subject at LF.
- (7) An instance of (1d):
 PF: [... so-ko ...]-ACC/DAT_i ... QP-NOM ... ec_i ... V
 LF: QP-NOM ... [... so-ko ...]-ACC/DAT ... V (before QR)
 The subject does not precede the Surface DL at PF, but the subject c-commands the Surface DL at LF.

It is crucial to be able to identify the Surface DL unambiguously, since the Deep OS-type can never realize (1c) or (1d), just as the SO-type construction. In the case of the Deep OS-type, the PF representations in (6)-(7) would be paired by the LF representations as in (8) and (9), respectively.

- (8) An instance of (1a):
 PF: QP-ACC/DAT_i ... [... so-ko ...]-NOM ... ec_i ... V
 LF: QP-ACC/DAT_i ... [... so-ko ...]-NOM ... ec_i ... V (before QR)

- (9) An instance of (1b):
 PF: [... so-ko ...]-ACC/DAT_i ... QP-NOM ... ec_i ... V
 LF: [... so-ko ...]-ACC/DAT_i ... QP-NOM ... ec_i ... V (before QR)

I will show in section 2.4 that there are at least three syntactic environments in which the DL can only be a Surface DL, on the basis of the observations of scope interpretations presented in section 2.3.⁶

Thus, (10) summarizes the claims to be made in this chapter.

- (10) Claims:
 a. An OS-type construction involves either a Deep DL (as in (4)) or a Surface DL (as in (5)).
 b. There are syntactic environments in which the DL can be a Surface DL but not a Deep DL.

It is not substantial for the discussion in the subsequent chapters how the Deep OS-type and the Surface OS-type should be derived. Hoping that some discussion will make the claims in (10) more concrete, however, I will present my analysis in section 2.5. It will be argued there that a Deep DL is base-generated in the position c-commanding the subject accompanied by an empty operator movement, while a Surface DL is moved there in terms of a PF-movement.

The OS-type construction is one of the most extensively discussed topics in Japanese syntax. Since various kinds of analyses have been presented over the years, a proper evaluation of our proposal requires a careful reexamination of the claims in the past literature. Such discussion however will also be a digression from the main purpose of this chapter, especially because the relevant observations and analyses in the past works are based on sets of assumptions that are often radically different from one another. I will therefore attach two appendices to this chapter. Appendix A provides a critical review of the major observations in the past concerning the OS-type construction, and Appendix B a critical review of the major analyses in the literature of this construction.

⁶ The core idea presented in this chapter was first proposed in Ueyama 1997, based on the observations regarding the absence of the weak crossover (WCO) effects. Hayashishita 1997a examined quantifier scope interpretations along the lines of Ueyama 1997, and proposed a new analysis for the Surface OS-type, as will be mentioned in section 2.5. The analysis of the OS-type construction to be presented in this chapter is the extended version of Ueyama 1997 which incorporates the claim of Hayashishita 1997a. In this chapter I mainly present the observations concerning the scope interpretations, and the WCO effects will be examined in detail in the next chapter (especially sections 3.2.4 and 3.4.3.1).

2.2. Two OS-type Constructions

This section shows that the major observations presented in the literature in the past can be accounted for by postulating (i) the Deep OS-type (4), in which the DL is in an A-position c-commanding the subject at LF, and (ii) the Surface OS-type (5), in which the DL is in its θ -position at LF.

- (4) Deep OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-ACC/DAT (=DL) ... NP-NOM ... V
- (5) Surface OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-NOM ... NP-ACC/DAT (=DL) ... V

As mentioned in section 2.1, it has been discussed in this literature (i) that Scrambling can be A-movement, (ii) that it can be A'-movement, and (iii) that it can be 'undone'. I present the relevant properties for each claim in sections 2.2.1, 2.2.2, 2.2.3, respectively. Then in section 2.2.4, I will show that those properties of (i) can be ascribed to the Deep OS-type, and those of (ii) and (iii) to the Surface OS-type.

2.2.1. A-properties: absence of the WCO effects

(11a) and (11b) are the representative A-properties that are discussed in the literature.

- (11) A-properties:
 a. Availability of anaphor-binding
 b. Absence of weak crossover (WCO) effects

(11a) presupposes that the word *otagai* 'each other/respective' has the feature [+anaphor] in the binding theoretic sense. This is a widely-held view, but it is impossible to show (and in fact it does not appear) that *otagai* is an anaphor, as convincingly demonstrated in Hoji 1998 and summarized in section A.3.1. Therefore, although the claim itself is completely consistent with the analysis to be given below, I will not mention (11a) as it is, and only discuss (11b) 'Absence of WCO effects' as an A-property of the OS-type construction in the remainder of this subsection.

Consider the contrast in (12):

- (12) a. Every student hit his best friend.
 b. *His best friend hit every student.
 c. ?*Who_i did [his best friend]_i hit t_i ?

In the literature, a sentence such as (12b,c) is said to exhibit *weak crossover*

(WCO) effects (Postal 1971, Wasow 1972, Chomsky 1976), and the sensitivity to the structural relation of c-command is considered to be one of the defining characteristics of BVA, as has been argued in Evans 1977, Partee 1978, and Reinhart 1983a among others. Roughly the relevant condition can be stated as in (13).⁷

- (13) A dependent term in BVA must be c-commanded by the (QR-)trace of a QP at LF.

Notice that BVA can be established in (14), despite the fact that t_i in the θ -position does not c-command the dependent term.

- (14) a. Every daughter_i seems [to her father]_i t_i to be beautiful.
 b. Who_i t_i seems [to his mother]_i t_i to have come?

In other words, raising in English does not induce the WCO effects, while *wh*-movement in English does. This observation is often understood in a generalized form as in (15):

- (15) a. Movement to an A-position does not induce WCO effects.
 b. Movement to an A'-position induces WCO effects.

Consider the OS-type construction of the form schematized in (16).

- (16) OS-type construction:

⁷ (13) is an informal statement. We will restate it later in section 3.3 as a necessary condition on the establishment of Formal Dependency.

Another possible account of the WCO effects is to refer to the precedence relation, as in (i), which is proposed in Chomsky 1976:(105) and named as 'Leftness Condition' in Higginbotham 1980:687:

- (i) A variable cannot be the antecedent of a pronoun to its left.
 One may consider that (i) is more desirable than (13) because (i) can account for the availability of BVA in (ii) but (13) cannot.
- (ii) a. [Whose mother] loves him?
 b. [Every boy's father] thinks he's a genius.
 c. [Which man's dog] do you think might bite him?
 d. [Some boy's father's best friend's daughter] wants him to marry her.
 e. The teacher gave [every child's parents] a report on his progress.
 (Higginbotham 1980:691 (68)-(72))

Certainly the availability of BVA in (ii) appears to be a problem for (13), but I suspect that not every QP allows BVA in this configuration. If BVA is available in (ii) only if the QP belongs to what shall be called B-type QPs in section 3.1, the paradigm will fall within the expectation of the theory proposed in this thesis. In addition, I consider that a notion such as 'precedence' is irrelevant at LF, and hence, I maintain that a condition on an LF representation should not refer to such a notion. Therefore, I do not pursue the way of characterization in (i) in the following discussion.

QP_i-ACC/DAT ... [NP ... NP ...]-NOM ... t_i ... V

As shown in (18), Scrambling 'remedies' the WCO effects in (17).

(17) An instance of WCO effects:

?*[So-itu-no hahaoya]-ga dare-o aisiteru no
 that-guy-GEN mother-NOM who-ACC love COMP
 '?*Who does his mother love?'

(18) Absence of WCO effects in the OS-type construction:

a. ?Dare-o_i [so-itu-no hahaoya]-ga ec_i aisiteru no
 who-ACC that-guy-GEN mother-NOM love COMP

Who_i his mother loves ec_i '
 (Saito 1992:73 (10b), due to Hajime Hoji, Hiroaki Tada, and
 Yoshimura 1989)

b. Toyota-sae-o_i [so-ko-o tekitaisiteiru kaisya]-ga ec_i
 Toyota-even-ACC that-place-ACC be:hostile company-NOM

uttaeta.
 sued
 '[Even Toyota]_i, [the company which is hostile to it] sued ec_i.'

Thus, one may say that Scrambling has an A-property in that it does not induce the WCO effects.

(19) A-property of the OS-type construction:

Absence of WCO effects (18)

2.2.2. A'-properties: reconstruction effects

Scrambling also appears to have properties associated with the so-called A'-movement such as *wh*-movement in English.

One of those properties is the so-called *reconstruction effects*. It has been noticed since Engdahl 1980, van Riemsdijk & Williams 1981, Barss 1984, and Lebeaux 1990 that a configuration such as in (20) is well-formed in spite of the fact that a reflexive pronoun appears not to be c-commanded by its antecedent.

(20) Reconstruction effects:

a. [Which pictures of himself]_i does John like t_i ?
 b. [These photographs of himself]_i, John really likes t_i .
 (Barss 1986:17 (1))

These examples have been said to exhibit *reconstruction effects*.⁸ It has been known that the presence of the reconstruction effects in (20) crucially depends upon whether the trace is c-commanded by the QP or not (cf. Engdahl 1980, van Riemsdijk & Williams 1981, Barss 1986, and Lebeaux 1990). This is illustrated by the contrast in (21).⁹

- (21) a. (Guess) [which one of his teachers]_i Mary told the principal that every boy should talk to t_i
 b. *(Guess) [which one of his teachers]_i Mary told t_i that every boy should talk to the principal.

In (21a) the trace is c-commanded by *every boy* and the BVA reading is available, while in (21b) it is not c-commanded by *every boy* and the BVA reading does not obtain.

It is known that a *wh*-movement shows reconstruction effects while raising does not, as shown in (22).¹⁰

- (22) a. *Wh*-movement:
 [Which friend of his son]_i did even John invite t_i ?
 b. Raising:
 *[Which friend of his son]_i seems to even John t_i to win the prize?

Thus, the reconstruction effects are regarded as an A'-property.

Turning to the OS-type construction, it has been shown in Hoji 1985 and Yoshimura 1992, among others, that it exhibits the reconstruction effects.¹¹

⁸ Various analyses have been proposed to account for the reconstruction effects, including the postulation of a new level of representation (van Riemsdijk and Williams 1981), an operation of (*literal*) *reconstruction* (Langendoen & Battistella 1982, Saito 1992), *chain binding* (Barss 1986), and the *copy* and *deletion* theory of movement (Chomsky 1995). The choice between these alternatives do not affect the subsequent discussion in this thesis.

⁹ I owe these examples to Hajime Hoji (p.c.; summer 1998).

¹⁰ It is sometimes claimed that an A'-movement such as raising in English can exhibit the reconstruction effects (Belletti & Rizzi 1988, Barss 1986, Kitagawa & Kuroda 1992); but, as far as I know, all the examples involve *every NP* as a QP, and I believe that they are instances of 'quirky binding' discussed in section D.2 later.

¹¹ We will reexamine the reconstruction effects in the OS-type construction more in detail in sections 3.2.4 and 3.4.3.2.

According to Saito 1985:144-146 (note 27 in chapter 2) and Hoji 1985:128-129, Muraki 1974 notes the reconstruction effects of the scrambling construction with respect to *zibun* 'self'.

(i) [zibun-no ootoo-o]_i John-ga hometa (koto)
 self-GEN brother-ACC John-NOM praised fact

- (23) a. [... NP ...]-ACC/DAT_i ... QP-NOM ... t_i ... V
 b. [So-ko-o tekitaishiteiru kaisyai]-o Toyota-sae-ga t_i
 that-place-ACC be:hostile company-ACC Toyota-even-NOM
 uttaeta
 sued
 '[The company which is hostile to it]_i, even Toyota sued t_i.'

Thus, in this respect, one can say that Scrambling has an A'-property.

Saito 1992 adds another observation of a similar sort. He points out that (24) does not induce the Binding Condition C violation, in spite of the fact that *zibunzisin* 'self', which he considers to be an anaphor, c-commands its "antecedent" *Hanako*, which is an R-expression.¹²

'(Lit.) [His own brother]_i, John praised t_i.'
 (cited as (iv) in Saito 1985:145)

Saito *ibid.* and Hoji *ibid.* also note that Kuno 1973a:353 fn.1 contains a relevant discussion.

Hoji 1985 has shown the reconstruction effects mainly with respect to bound variable anaphora between a quantificational expression and an empty nominal, which is represented by *ec* in the following examples.

- (i) a. [NP [ec *ec* hitome mita] hito]-o_i daremo-ga t_i sukininatta
 glance saw person-ACC everyone-NOM fell:in:love
 (koto)
 fact
 '[The person that he saw]_i, everyone fell in love with t_i.'
 b. [NP [ec *ec* butta] hito]-o_i daremo-ga t_i uttaeta (koto)
 hit person-ACC everyone-NOM sued fact
 '[The person that hit him]_i, everyone sued t_i.'
 (Hoji 1985: 114-115 (3))

Hoji 1985:section 4.1.4 (pp.231-232) demonstrates that reconstruction effects are observed with a wide range of quantificational expressions, including *daremo* 'everyone', *dare* 'who', *John-mo* 'also John', *John-mo Bill-mo* 'both John and Bill', *John-ya Bill* 'John and Bill and so on', *John to Bill* 'John and Bill', *John ka Bill* 'John or Bill', and *John-sae* 'even John'.

Referring to Hoji 1990b, Yoshimura 1992:220 adds an observation that the reconstruction effects also obtain between a quantificational expression and *so-ko* 'that place/it'. (See section 1.4.2 above for some description of properties of *so-ko* 'that place/it'. Especially it is shown there that *so-ko* is a singular-denoting item.)

- (ii) [So-ko-no syain-o]_i [Toyota to Nissan]-ga t_i kubinisita
 that-place-GEN employee-ACC Toyota and Nissan-NOM fired
 (koto)
 fact
 '(Lit.) Its employee, [(each of) Toyota and Nissan] fired.'
 (Yoshimura 1992:220 (10b))

¹² I do not discuss in any depth the binding theoretic properties of *zibun(zisin)* in this work. I simply note here that I do not consider that *zibun(zisin)* should have a feature

(24) 'Absence of Condition C violation':

Zibunzisin-o_i [Hanako]-ga t_i hihansita] (koto)
 self-ACC Hanako-NOM criticized fact
 '(the fact that) Herself_i, Hanako_i criticized t_i '
 (Saito 1992:76 (17))¹³

Saito 1992:76 in effect claims that Scrambling can be an A'-movement, assimilating (24) with the topicalization in English in (25b).

- (25) a. *Himself_i seems to John_i to be a genius.
 b. Himself_i, [John_i likes t_i].
 (Saito 1992:77 (18))

Saito 1992 also discusses the 'reconstruction effects of Condition C violation' in the OS-type construction, and argues that Scrambling "cannot be analyzed simply as A movement" (Saito 1992:91), but I consider that we should dismiss the observations reported there for the reason that the relevant contrast cannot be stated in formal terms. See section A.3.2 for detail.

Thus, (23) and (24) can be regarded as indicating that Scrambling has an A'-property.

- (26) A'-properties of the OS-type construction:
 a. Reconstruction effects (23)
 b. Absence of Condition C violation (24)

2.2.3. 'Undoing' of the movement: reconstruction of a *wh*-phrase

Saito 1989,1992 argues that Scrambling can be 'undone' at LF, on the basis of the contrast between (27) and (28).¹⁴

[+anaphoric] in the binding theoretic sense. Some related discussion is found in section A.3.1.

¹³ Saito 1985:144 (note 27 of chapter 2) contains some information regarding the past discussion in the literature of the configuration (24).

¹⁴ Saito 1989,1992 discusses (28) with respect to the so-called proper binding condition. Let us briefly go over that lines of account here.

Fiengo 1974,1977, May 1977 and Chomsky 1981,1986a discuss the so-called *Proper Binding Condition*, which can be informally stated as in (i) (I owe the relevant citations here to Saito 1992:112 (note 14)):

(i) Proper Binding Condition:
 Traces must be bound.
 (Saito 1985:170 (17))

This condition in effect excludes a downward movement, since if a phrase moves downward, the trace will not be c-commanded by its antecedent.

Saito 1992:80 cites the following examples for the illustration of this condition,

- (27) *_{[IP Hanako-ga dare-ni} [_{CP [Masao-ga kuru] ka}] osieta] koto
 Hanako-NOM who-DAT Masao-NOM come Q told fact
 'the fact that Hanako told who [Q [Masao is coming]]'
 (Saito 1992:84 (32b), due to K.I. Harada 1972)
- (28) a. ?Do-no hon-o_i Masao-ga [_{CP [Hanako-ga t_i tosyokan-kara}
 which-GEN book-ACC Masao-NOM Hanako-NOM library-from
 karidasita] ka] siritagatteiru (koto)
 checked:out Q want:to:know fact
 '(the fact that) which book_i, Masao wants to know [Q [Hanako
 checked out t_i from the library]]'
 (Saito 1992:84 (33b))
- b. ?Dare-ni_i Mary-ga [_{CP [John-ga t_i Susan-o syookaisita] ka}]
 who-DAT Mary-NOM John-NOM Susan-ACC introduced Q
 siritagatteiru (koto)
 want:to:know fact
 '(Lit.) To whom_i, Mary wants to know [Q [John introduced Susan
 t_i]]'
 (Yoshimura 1992:244 (38b))
- c. ?Doko-ni_i Mary-ga [_{CP [John-ga t_i so-no kagi-o simatta] ka}]
 where-in Mary-NOM John-NOM that-GEN key-ACC put Q
 siritagatteiru (koto)
 want:to:know fact
 '(Lit.) Where_i, Mary wants to know [Q [John put that key t_i]]'

attributing them to May 1977.

- (ii) a. Mary ordered John to find out [<sub>CP who_i [_{IP t_i saw who}]
 b. *Mary ordered who to find out [<sub>CP who_i [_{IP t_i saw John}]
 Both (ii-a) and (ii-b) contain a *wh in situ* (the underlined who's), which must be moved at LF to the CP-spec position occupied by *who_i*. Then the representations as in (iii) will be yielded.</sub></sub>
- (iii) a. Mary ordered John to find out [<sub>CP who_i who_j [_{IP t_i saw t_j}]
 b. *Mary ordered t_j to find out [<sub>CP who_i who_j [_{IP t_i saw John}]
 Notice that the t_j in (iii-b) is not c-commanded by its antecedent who_j, and hence it is excluded by the Proper Binding Condition in (i). Thus, (ii-b) can be considered an instance of *proper binding violation*.</sub></sub>

Likewise, one can say that (27) is an instance of proper binding violation in Japanese, assuming that a *wh*-phrase in Japanese has to move into a specifier position of a CP whose head is [+wh] (C⁰ being occupied by 'Q') in terms of LF *wh*-movement. (27) will then be mapped to (iv), which would be an instance of proper binding violation.

- (iv) ... t_i [_{CP wh-DAT_i [...] Q}] ...

(Yoshimura 1992:245 (39b))

Both (27) and (28) can be schematically represented as in (29), in which the *wh*-phrase is located outside the scope of Q.

- (29) ... wh-ACC/DAT [_{CP [...] Q}] ...

Nevertheless, those examples in (28) are much more acceptable than (27).¹⁵ Saito (1989,1992) argues that the movement in the OS-type construction can be literally 'undone' and the DL is 'radically reconstructed' to the trace position at LF, so that the OS-type constructions in (28) has the representations in (30).

- (30) OS-type construction:
 PF: [wh-ACC/DAT]_i ... [_{CP [... t_i ...] Q}] ...
 LF: ... [_{CP [... [wh-ACC/DAT] ...] Q}] ...

In other words, this analysis claims that the LF representation of (28a) is not distinct from that of (31), and it is thus expected that the configurations in (28) are not ungrammatical.

- (31) SO-type construction:
 Mary-ga [_{CP [John-ga dare-ni Susan-o syookaisita] ka}]
 Mary-NOM John-NOM who-DAT Susan-ACC introduced Q
 siritagatteiru (koto)
 want:to:know fact
 '(Lit.) Mary wants to know [Q [John introduced Susan to whom]]'

Saito 1992 claims that the same point is shown by the fact that (32) is not totally unacceptable: its schematic representations and the corresponding SO-type construction are given in (33) and (34), respectively.

- (32) ??_[CP Hanako-ga do-no hon-o tosyokan-kara karidasita to]_i
 Hanako-NOM which-GEN book-ACC library-from checked:out COMP

¹⁵ Hajime Hoji (p.c.; February 1998) points out to me that the examples in (28) and (32) are hardly acceptable for him, reporting that presumably Scrambling of the *wh*-phrase out of the CP is blocked by the subjacency effects. The fact that these sentences are more or less acceptable for me then suggests that the subjacency effects of the OS-type construction may not be as solid as normally believed. Since our analysis to be given in section 2.5 claims that the Surface OS-type is derived in terms of PF movement, it follows that we should reexamine what has been regarded as the subjacency effects in the OS-type construction, and investigate how the PF movement should be constrained. Since this is beyond the scope of this work, I have to leave it to future research.

Masao-ga [CP [minna-ga *t_i* omotteiru] ka] siritagatteiru koto
 Masao-NOM everyone-NOM think O want.to:know fact

'the fact that [that Hanako checked out which book from the library]_{*i*},
 Masao wants to know [Q [everyone thinks *t_i*]]'
 (Saito 1992:85 (36b))

(33) OS-type construction:

PF: [[CP ... wh-NP ...]_{*i*} ... [CP [... *t_i* ...] Q] ...]

LF: [... [CP [... [CP ... wh-NP ...] ...] Q] ...]

(34) SO-type construction:

Masao-ga [CP [minna-ga [CP Hanako-ga do-no hon-o]
 Masao-NOM everyone-NOM Hanako-NOM which-GEN book-ACC

tosyokan-kara karidasita to] omotteiru] ka] siritagatteiru koto
 library-from checked.out COMP think O want.to:know fact

'the fact that Masao wants to know [Q [everyone thinks [that Hanako
 checked out which book from the library]]]'

Notice that this 'reconstruction of a *wh*-phrase' cannot be explained by chain-binding proposed in Barss 1986. Saito 1989,1992 thus argues that this phenomenon strongly suggests that Scrambling can be 'undone',

(35) 'Undoing' of the movement:

Reconstruction of a *wh*-phrase (28),(32)

2.2.4. The Deep OS-type and the Surface OS-type

We have pointed out so far that the OS-type construction has the following properties.

(19) A-property of the OS-type construction:

Absence of WCO effects (18)

(26) A'-properties of the OS-type construction:

a. Reconstruction effects (23)

b. Absence of Condition C violation (24)

(35) 'Undoing' of the movement:

Reconstruction of a *wh*-phrase (28),(32)

Saito 1992 argues virtually on the basis of these considerations that there are three types of LF representations for a OS-type construction.

Notice however that the properties in (26) are accounted for, once we assume that Scrambling can be 'undone'. According to this analysis, the LF

representation of (23) and (24) can be identical with that of (36) and (37), respectively, and the acceptable status of (23) and (24) are expected as long as the relevant conditions apply at LF.

(23) b. [So-ko-o tekitaissiteiru kaisya]_{*i*}-o Toyota-sae-ga *t_i*
 that-place-ACC be:hostile company-ACC Toyota-even-NOM

uttaeta

sued

'[The company which is hostile to it]_{*i*}, even Toyota sued *t_i*.'

(36) SO-type construction:

Toyota-sae-ga [so-ko-o tekitaissiteiru kaisya]-o uttaeta
 Toyota-even-NOM that-place-ACC be:hostile company-ACC sued

'Even Toyota sued the company which is hostile to it.'

(24) 'Absence of Condition C violation':

Zibunzisin-o [Hanako-ga *t_i* hihansita] (koto)
 self-ACC Hanako-NOM criticized fact

'(the fact that) Herself, Hanako criticized *t_i*'
 (Saito 1992:76 (17))

(37) SO-type construction:

Hanako-ga zibunzisin-o hihansita (koto)
 Hanako-NOM self-ACC criticized fact

'(the fact that) Hanako criticized herself'

Let us call the OS-type construction in which the DL is 'undone at LF'(in Saito's terms) as Surface OS-type, otherwise Deep OS-type.

(5) Surface OS-type:

PF: NP-ACC/DAT ... NP-NOM ... V

LF: NP-NOM ... NP-ACC/DAT ... V

(4) Deep OS-type:

PF: NP-ACC/DAT ... NP-NOM ... V

LF: NP-ACC/DAT ... NP-NOM ... V

Now the properties of the OS-type construction that we have discussed so far can be classified as follows.

(38) Properties of the Deep OS-type (*to be expanded*):

Absence of WCO effects (18)

- (39) Properties of the Surface OS-type (*to be expanded*):
- Reconstruction effects (23)
 - Absence of Condition C violation (24)
 - Reconstruction of a *wh*-phrase (28),(32)

I have thus argued in this section that the proposal in (10a) is supported by the major observations in the previous literature.

- (10) a. An OS-type construction involves either a Deep DL (as in (4)) or a Surface DL (as in (5)).

The next section demonstrates that the scope interpretations in the OS-type construction can be accounted for in a principled manner if one adopts the claim in (10a).

2.3. On Scope Interpretations¹⁶

The distinction between the Deep and the Surface OS-type brings us a new insight into the issue of scope interpretations in the OS-type construction. We first introduce the relevant generalization in section 2.3.1, and then provide an account for it under our analysis of the OS-type construction in section 2.3.2.

2.3.1. Scope Interpretations and the OS-type construction

It is often argued that an English example such as (40) is ambiguous with respect to the interpretation of *everyone* and *someone*.

- (40) Someone loves everyone.

The two readings can be roughly expressed as in (41).

- (41) a. $\exists x[\forall y[x \text{ loves } y]]$
 b. $\forall y[\exists x[x \text{ loves } y]]$

It is usually assumed that the scope of a quantifier is its c-commanding domain at LF (cf. May 1977, Huang 1982). Based on this assumption, May 1977 claims that the English sentence in (40) can correspond to the following two LF representations:

- (42) a. [someone_i [everyone_j [*t_i* loves *t_j*]]]
 b. [everyone_j [someone_i [*t_i* loves *t_j*]]]

Thus, the scope ambiguity as expressed in (41) is usually attributed to the

¹⁶ The main arguments in this section should be ascribed to Hayashishita 1997a.

availability of the two LF representations in (42).

Kuroda 1969/1970, on the other hand, observes that in Japanese a sentence such as in (43) is unambiguous, while the scrambling construction such as in (44) allows two readings.¹⁷

- (43) SO-type construction:

Dareka-ga daremo-o aisiteiru
 someone-NOM everyone-ACC love

'Someone loves everyone.'

$\exists x[\forall y[x \text{ loves } y]]$
 $*\forall y[\exists x[x \text{ loves } y]]$

- (44) OS-type construction:¹⁸

- a. Dareka-o_i daremo-ga *t_i* aisiteiru
 someone-ACC everyone-NOM love

'Someone_i, everyone loves *t_i*.'

$\exists y[\forall x[x \text{ loves } y]]$
 $\forall x[\exists y[x \text{ loves } y]]$

- b. Daremo-o_i dareka-ga *t_i* aisiteiru
 everyone-ACC someone-NOM love

'Everyone_i, someone loves *t_i*.'

$\forall y[\exists x[x \text{ loves } y]]$
 $\exists x[\forall y[x \text{ loves } y]]$

Hoji 1985 further demonstrates that the same generalization holds with other types of quantificational expressions. I only cite the examples of the OS-type construction here.

¹⁷ Kuroda 1969/1970 states the generalization as follows. (The statement in (i) appears between (61) and (62); p.97 of Kuroda 1992:chapter 2.)

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

¹⁸ I have provided (44a) in order to show that the subject can take scope over the DL, and (44b) to show that the DL can take scope over the subject, since a specific NP may allow the so-called "wide scope reading" irrespective of its structural position.

(i) Daremo-ga dareka-o aisiteiru
 everyone-NOM someone-ACC love
 'Everyone loves someone.'
 $\forall x[\exists y[x \text{ loves } y]]$
 $\exists y[\forall x[x \text{ loves } y]]$

(45) OS-type construction:

- a. [Sake to biiru]-o_i [John ka Bill]-ga t_i nonda (rasii)
 sake and beer-ACC John or Bill-NOM drank seem

'(it seems that) [sake and beer]_i, [John or Bill] drank t_i'
 $\forall x(x \text{ \{sake,beer\}})[\exists y(y \text{ \{John,Bill\}})[y \text{ drank } x]]$
 $\exists y(y \text{ \{John,Bill\}})[\forall x(x \text{ \{sake,beer\}})[y \text{ drank } x]]$
 (Hoji 1985:242 (62))

- b. Nanika-o_i [_{NP} S dare-ga ec_j osieta] gakusei_j-mo t_i mottekita
 something-ACC who-NOM taught student-also brought

$\exists x(x = \text{thing})[\forall y(y = \text{person})[\text{the student that } y \text{ taught brought } x]]$
 $\forall y(y = \text{person})[\exists x(x = \text{thing})[\text{the student that } y \text{ taught brought } x]]$
 (Hoji 1985:242 (63))

Thus, the following generalization emerges.

- (46) (i) In the SO-type construction, 'QP1-NOM QP2-ACC/DAT V'
 QP1>QP2, but *QP2>QP1.
 (ii) In the OS-type construction, 'QP2-ACC/DAT QP1-NOM V'
 QP1>QP2, and QP2>QP1.

Although the generalization in (46) has been largely accepted in the literature, some speakers detect scope ambiguity in the SO-type construction.¹⁹ For example, an SO-type construction such as (47) (whose syntactic structure seems to be not crucially different from (43)) allows the second reading relatively easily.

(47) SO-type construction:

[Dareka-ga [uti-no subete-no sensyu-o] bikoositeiru] (toyuu)
 someone-NOM our-GEN all-GEN athlete-ACC shadow COMP

koto-wa, zen'in-ga kiken-ni sarasareteiru toyuu koto da.)
 fact-TOP everyone-NOM danger-DAT exposed COMP fact COPULA

'(The fact that) someone is shadowing every athlete of ours (means that everyone's life is in danger.)'

$\exists x[\forall y(y = \text{athlete})[x \text{ is shadowing } y]]$
 $\forall y(y = \text{athlete})[\exists x[x \text{ is shadowing } y]]$

Sentences such as (47) do appear to be "ambiguous." Nevertheless, I maintain that the nature of "ambiguity" in such cases is distinct from that in the OS-type construction.

¹⁹ See the discussion in section B.1.2 for a relevant remark.

Generally speaking, the ambiguity in question is easier to obtain when the second QP is interpreted to refer to a specific group of individuals.²⁰ For example, the availability of ambiguity in an SO-type construction decreases if we use QPs such as *55%-no NP* '55% of the NPs', *10 izyoo-no NP* 'ten or more NPs', or *kanarinokazu-no NP* 'most of the NPs', which resist a specific group reading more strongly than QPs such as *daremo* 'everyone'.

Consider the examples in (48) for instance.

(48) SO-type construction:

- a. [30%-no ginkoo-ga] [10 izyoo-no kaisya-ni] huseina
 30%-GEN bank-NOM 10 or:more-GEN company-DAT illegal

kasituke-o syooninsiteiru
 loan-ACC approve

'[30% of the banks] have approved illegal loans [to ten or more companies].'

- (i) QP-NOM > QP-DAT
 30%.x(x = bank)[TEN-OR-MORE_y(y = company)[x has approved illegal loans to y]]
 '30% of the banks are such that it has approved illegal loans to ten or more companies.'
- (ii) ??/?*QP-DAT > QP-NOM
 TEN-OR-MORE_y(y = company)[30%.x(x = bank)[x has approved illegal loans to y]]
 'There are ten or more companies such that 30% of the banks have approved illegal loans to it.'
- b. [10 izyoo-no ginkoo-ga] [kanarinokazu-no kaisya-ni] huseina
 10 or:more-GEN bank-NOM quite:many-GEN company-DAT illegal
- kasituke-o siteiru
 loan-ACC do
- '[Ten or more banks] provide illegal loans [to quite many companies].'
- (i) QP-NOM > QP-DAT
 TEN-OR-MORE_x(x = bank)[QUITE-MANY_y(y = company)[x

²⁰ We have to say that it is still mysterious why the specific group reading of the second QP allows an apparent distribution of the first QP, but let us not go into the analysis of this phenomenon in this work. What is important for us now is to make sure that the ambiguity observed in the OS-type construction is not of that kind. The forthcoming work by J.-R. Hayashishita will discuss this issue.

provides illegal loans to y]]

'There are ten or more banks that provide illegal loans to quite many companies.'

(ii) $??/?*QP-DAT > QP-NOM$

QUITE-MANY y ($y = \text{company}$)[TEN-OR-MORE x ($x = \text{bank}$)[x
provides illegal loans to y]]

'There are quite many companies such that ten or more banks
provide illegal loans to it.'

As indicated, the SO-type construction tends not to exhibit scope ambiguity if we use QPs such as *55%-no NP* '55% of the NPs', *10 izyoo-no NP* 'ten or more NPs', or *kanarinokazu-no NP* 'most of the NPs', instead of *daremo* 'everyone'.

The OS-type construction, on the other hand, allows ambiguity even if we use these QPs, as illustrated in (49).

(49) OS-type construction:

a. [10 izyoo-no kaisya-ni] _{i} [30%-no ginkoo-ga] t_i huseina
10 or:more-GEN company-DAT 30%-GEN bank-NOM illegal

kasituke-o syooninsiteiru
loan-ACC approve

'[To ten or more companies] _{i} , [30% of the banks] have approved
illegal loans t_i .'

(i) $QP-DAT > QP-NOM$

TEN-OR-MORE y ($y = \text{company}$)[30%. x ($x = \text{bank}$)[x has approved
illegal loans to y]]

'There are ten or more companies such that 30% of the banks have
approved illegal loans to it.'

(ii) $QP-NOM > QP-DAT$

30%. x ($x = \text{bank}$)[TEN-OR-MORE y ($y = \text{company}$)[x has approved
illegal loans to y]]

'30% of the banks are such that it has approved illegal loans to ten
or more companies.'

b. [Kanarinokazu-no kaisya-ni] _{i} [10 izyoo-no ginkoo-ga] t_i
quite:many-GEN company-DAT 10 or:more-GEN bank-NOM

huseina kasituke-o siteiru
illegal loan-ACC do

'[To quite many companies] _{i} , [ten or more banks] provide illegal
loans t_i .'

(i) $QP-DAT > QP-NOM$

QUITE-MANY y ($y = \text{company}$)[TEN-OR-MORE x ($x = \text{bank}$)[x
provides illegal loans to y]]

'There are quite many companies such that ten or more banks
provide illegal loans to it.'

(ii) $QP-NOM > QP-DAT$

TEN-OR-MORE x ($x = \text{bank}$)[QUITE-MANY y ($y = \text{company}$)[x
provides illegal loans to y]]

'There are ten or more banks that provide illegal loans to quite many
companies.'

The contrast between (48) and (49) thus indicates that the ambiguity in (49) should be attributed to some property of the OS-type construction, not to the properties of the QPs, while the ambiguity in the SO-type construction ((43)/(47)) heavily depends on what expression is used as the QPs.

Therefore, despite some apparent counterexamples, I maintain that (46) expresses a descriptive generalization which calls for some account.

(46) (i) In the SO-type construction, 'QP1-NOM QP2-ACC/DAT V'
QP1 > QP2, but *QP2 > QP1.

(ii) In the OS-type construction, 'QP2-ACC/DAT QP1-NOM V'
QP1 > QP2, and QP2 > QP1.

2.3.2. Scope Interpretation Hypothesis

Let us consider now how the descriptive generalization in (46) can be accounted for.

Huang 1982 proposes the condition in (50), based on the observation that the sentence corresponding to (40) in Chinese allows only one interpretation, in which the subject NP takes scope over the object NP.²¹

(50) Scope Interpretation Hypothesis in Huang 1982:

- a. The scope of a QP is its c-commanding domain after QR.
- b. Suppose A and B are both QPs or both Q-NPs or Q-expressions, then if A c-commands B at SS, A also c-commands B at LF.

²¹ As Huang 1982 mentions, (50) is a restatement of the generalization in Reinhart 1976:191, which is cited in (i):

(i) A logical structure in which a quantifier binding a variable x has wide scope over a quantifier binding a (distinct) variable y is a possible interpretation for a given sentence S just in case in the surface structure of S the quantified expression corresponding to y is in the (c-command) domain of the quantified expression corresponding to x .
(Reinhart 1976:191 (39))

((50b) = Huang 1982:220 (70) "The General Condition on Scope Interpretation")

On the other hand, Hoji 1985:248 reformulates Huang's generalization as in (51):²²

- (51) Scope Interpretation Hypothesis in Hoji 1985:
- a. The scope of a QP is its c-commanding domain after QR.
 - b. at LF
 $*QP_i \text{ QP}_j \ t_j \ t_i$
 where each member c-commands the member to its right
 ((51b) = Hoji 1985:248 (76))

One might consider that (50) and (51) are not substantially different. Let us briefly go over the argument in Hoji 1985 regarding why he has chosen (51) over (50).

Both two hypotheses successfully account for the unambiguity of the SO-type construction (=46i), since, because of (50b) or (51b), only the LF representation as in (52a) is allowed.

- (52) SO-type construction:
- a. $QP1-NOM \ QP2-ACC/DAT \ V$
 $QP1 > QP2$
 $[QP1_i [QP2_j [\ t_i \ t_j \ V]]]$
 - b. $*QP2 > QP1$
 $*[QP2_j [QP1_i [\ t_i \ t_j \ V]]]$

But Hoji 1985 argues that the hypothesis in (50) would predict that the OS-type construction is also unambiguous, since (50b) would exclude (53b).

- (53) OS-type construction:
- a. $QP2-ACC/DAT \ QP1-NOM \ V$
 $QP2 > QP1$
 $[QP2_i [QP1_j [\ t_i \ [\ t_j \ t_i \ V]]]]$
 - b. $*QP1 > QP2$
 $*[QP1_j [QP2_i [\ t_i \ [\ t_j \ t_i \ V]]]]$

Hoji 1985:251 proposes on the other hand that the intermediate trace in (53b) can be deleted, and hence (53b) can be made into (54), which is well-formed under (51).

²² Hoji 1985:297-299 (note 25 of chapter 4) adds some remarks on the possible conceptual issues that this formulation would have in relation to the Nested Dependency Condition.

- (54) OS-type construction:
- $$QP2-ACC/DAT \ QP1-NOM \ V$$
- $$QP1 > QP2$$
- $$[QP1_j [QP2_i [\ \ \ \ [\ t_j \ t_i \ V]]]]$$

He argues that it is reasonable to assume that the intermediate trace can be deleted, since it is not a subcategorized category and hence its presence is optional, along the lines of Lasnik & Saito 1984.²³ Once it is deleted, the representation in (54) does conform with (51b), although it violates (50b). The hypothesis in (51) thus accounts for the generalization in (46) successfully.

Notice that the additional assumption regarding the trace deletion is unnecessary if we assume that the OS-type construction is ambiguous between Deep OS-type and Surface OS-type: if each reading in (55) is based on the LF representations in (56a) or (56b), respectively, the observations in (46) can be accounted for by assuming (57).²⁴

- (55) OS-type construction:
- $$PF: \ QP2-ACC/DAT \ QP1-NOM \ V$$
- $$QP2 > QP1$$
- $$QP1 > QP2$$

- (56) a. LF representation (before QR) of (55) in case it is the Deep OS-type:
 $QP2-ACC/DAT \ \dots [\ QP1-NOM \ \dots \ V]$
 $QP2 > QP1$
- b. LF representation (before QR) of (55) in case it is the Surface OS-type:
 $QP1-NOM \ \dots [QP2-ACC/DAT \ \dots \ V]$
 $QP1 > QP2$

- (57) Scope Interpretation Hypothesis:
- a. The scope of a QP is its c-commanding domain after QR.
 - b. If QP1 c-commands QP2 before QR applies, QP1 must also c-

²³ Hoji 1985:251 states that this idea was suggested to him by Joseph Emonds (p.c.).

²⁴ A question arises as to how the ambiguity of the English sentence as in (40) can be accounted for under this hypothesis. Let us tentatively assume for the sake of discussion that (57b) only applies to some languages, such as Chinese and Japanese. This does not look plausible, however, since it is highly implausible that a condition such as (57b) can be acquired in the course of language learning. (See Aoun & Li 1989 for the relevant discussion.) One of the possibilities is to assume that the condition (57b) is contained in Universal Grammar, instead. Then an English sentence such as (40) should be structurally ambiguous in some way, or the second interpretation should be yielded by some other operation. The forthcoming work by J.-R. Hayashishita will pursue this possibility.

command QP2 after QR.²⁵

Despite its appearance, one can consider that this analysis is in fact one way of reinterpreting Hoji's analysis. In Hoji's analysis, the trace of Scrambling is considered as a trace of QR, so to speak, when the intermediate trace is deleted. This is not different from saying that it is an instance of the Surface OS-type, and that the scope interpretation is subject to (57).

We have discussed in the preceding section that the Deep and the Surface OS-type exhibit properties in (38) and (39), respectively.

(38) Properties of the Deep OS-type (*to be expanded*):

Absence of WCO effects (18)

(39) Properties of the Surface OS-type (*to be expanded*):

- a. Reconstruction effects (23)
- b. Absence of Condition C violation (24)
- c. Reconstruction of a *wh*-phrase (28),(32)

We can now expand them as follows.

(58) Properties of the Deep OS-type:²⁶

- a. Wide scope reading of DL with respect to the subject
- b. Absence of WCO effects (18)

(59) Properties of the Surface OS-type:

- a. Narrow scope reading of DL with respect to the subject
- b. Reconstruction effects (23)
- c. Absence of Condition C violation (24)
- d. Reconstruction of a *wh*-phrase (28),(32)

In the next section, I will show that the distribution of Deep DLs is more restricted than that of Surface DLs by examining the properties (58a) and (59a).

2.4. Distributional Constraints on the Deep DL

We have argued for (10a) so far.

²⁵ (57b) should be understood as a mere generalization. It has yet to be considered how the relevant constraint should be stated to achieve the effect in question under the framework outlined in section 1.3.

²⁶ Hayashishita 1997a further adds the 'availability of resumption' to the properties of the Deep OS-type (see section A.2 below). Hoji & Ueyama 1998 discusses the nature of resumption in Japanese based on this observation, which in turn provides support to the analysis of the OS-type construction to be presented in section 2.5.

(10) Claims:

- a. An OS-type construction involves either a Deep DL (as in (4)) or a Surface DL (as in (5)).
- b. There are syntactic environments in which the DL can be a Surface DL but not a Deep DL.

Let us move on to (10b) now; more specifically, I argue that in some syntactic environments a DL in the OS-type construction can only have narrow scope with respect to the nominative-marked NP.

2.4.1. Long distance OS-type construction

Let us start with the long distance OS-type construction.²⁷ I argue that the LF representation of the long distance OS-type construction in (63) should be as in either (64a) or (64b), but not as in (65).

(60) PF: NP1-DAT (=DL) NP2-NOM [CP NP3-NOM ... *ec*₁ ... V1 COMP] V2

(61) LF:

- a. NP2-NOM [CP NP3-NOM ... NP1-DAT (=DL) ... V1 COMP] V2
- b. NP2-NOM [CP NP1-DAT (=DL) NP3-NOM ... *ec*₁ ... V1 COMP] V2

(62) LF: *NP1-DAT (=DL) NP2-NOM [CP NP3-NOM ... *ec*₁ ... V1 COMP] V2

I demonstrate in particular that the DL in the long distance scrambling construction cannot take wide scope with respect to the nominative-marked NP of the matrix clause.²⁸ Consider the schematic representations in (63)-(65).

(63) PF: QP1-DAT (=DL) QP2-NOM [CP ... *ec*₁ ... V1 COMP] V2

(64) LF:

- a. QP2-NOM [CP NP3-NOM ... QP1-DAT (=DL) ... V1 COMP] V2

²⁷ We exclusively examine the configuration in (i-a) instead of the one in (i-b).

- (i) a. NP₁-DAT (=DL) NP-NOM [CP ... *ec*₁ ...] ...
- b. NP₁-ACC (=DL) NP-NOM [CP ... *ec*₁ ...] ...

This is because an NP-ACC can be an argument of the matrix predicate (*i.e.*, a *major object*), and hence we cannot really tell whether a surface string such as (i-b) is a long distance OS-type construction as in (ii-a), or a clause-internal OS-type construction as in (ii-b).

- (ii) a. NP₁-ACC (=DL) NP-NOM [CP ... *ec*₁ ...] ...
- b. NP₁-ACC (=DL) NP-NOM *ec*₁ [CP ... *ec* ...] ...

The relevant discussion is given in section A.1.

²⁸ The observation that the long distance OS-type construction does not induce the scope ambiguity has been reported in Kitagawa 1992 and several other unpublished manuscripts inaccessible for me.

b. QP2-NOM [CP QP1-DAT (=DL) NP3-NOM ... *ec*₁ ... V1 COMP] V2

(65) LF: *QP1-DAT (=DL) QP2-NOM [CP NP3-NOM ... *ec*₁ ... V1 COMP] V2

According to the Scope Interpretation Hypothesis (57), it is expected that QP1 cannot take wide scope over QP2 in (63), if the LF representation in (65) is not available.

As we discussed in section 2.3.1, some QPs are inappropriate to use in examining the scope interpretation based on the LF representation: we have argued above that we should use QPs such as *55%-no NP* '55% of the NPs', *10 izyoo-no NP* 'ten or more NPs', or *kanarinokazu-no NP* 'most of the NPs' for that purpose. As shown in (64), the SO-type construction does not allow scope ambiguity, if we use these QPs.

(66) a. QP2-NOM [CP NP-NOM QP1-DAT ... V1 COMP] V2

b. [QP₂ Yaohan-sae]-ga [CP seizi-dantai X-ga [QP₁ 55%-no
Yaohan-even-NOM political-party X-NOM 55%-GEN

ginkoo]-ni supai-o okurikonda to] kimetuketeyu.
bank-DAT spy-ACC dispatched COMP conclude

'[QP₂ Even Yaohan] concludes [CP that political party X had
dispatched spies to [QP₁ 55% of the banks]].'

c. QP₂ > QP₁

EVEN_y(y = Yaohan)[y concludes that 55%.x(x = bank)[political
party X had dispatched spies to x]]

d. *QP₁ > QP₂

55%.x(x = bank)[EVEN_y(y = Yaohan)[y concludes that political
party X had dispatched spies to x]]

QP₁ cannot take wide scope with respect to QP₂ also in case QP₁ is a DL within the embedded clause.

(67) a. QP2-NOM [CP QP1-DAT (=DL) NP-NOM ... V1 COMP] V2

b. [QP₂ Yaohan-sae]-ga [CP [QP₁ 55%-no ginkoo]-ni seizi-
Yaohan-even-NOM 55%-GEN bank-DAT political-

dantai X-ga supai-o okurikonda to] kimetuketeyu.
party X-NOM spy-ACC dispatched COMP conclude

'[QP₂ Even Yaohan] concludes [CP that political party X had
dispatched spies to [QP₁ 55% of the banks]].'

c. QP₂ > QP₁

EVEN_y(y = Yaohan)[y concludes that 55%.x(x = bank)[political
party X had dispatched spies to x]]

d. *QP₁ > QP₂

55%.x(x = bank)[EVEN_y(y = Yaohan)[y concludes that political
party X had dispatched spies to x]]

Now (68) is an instance of the long distance OS-type construction, and we still do not obtain the reading in (68d) despite the fact that QP₁ precedes QP₂ in the surface word order.²⁹

²⁹ It may appear that the point in question can also be demonstrated by using familiar QPs such as *everyone* and *someone*, but I consider that it is not appropriate. For example, Boskovic & Takahashi 1995 cites the following example in arguing in effect that the long distance OS-type construction only allows a Surface DL (apparently attributing it to Saito 1992 and Tada 1993):

(i) Daremo₁-ni dareka-ga [Mary-ga *t*₁ atta to] omotteiru (koto)
everyone-DAT someone-NOM Mary-NOM met COMP think fact
'(Lit.) Everyone, someone thinks that Mary met.'
= For some *x*, *x* a person, *x* thinks that for every *y*, *y* a person, Mary met *y*.
≠ For every *y*, *y* a person, there is some *x*, *x* a person, such that *x* thinks that Mary met *y*.
(Boskovic & Takahashi 1995:10 (13))

I agree that the second reading is quite difficult to obtain in (i), but it is also true that the second reading is not very easy to get even in the clause-internal OS-type construction as in (ii) for whatever reason.

(ii) a. daremo-ni dareka-ga atta (koto)
everyone-DAT someone-NOM met fact
'(the fact that) everyone, someone met'
b. There is some *x*, *x* a person, such that *x* met everyone.
c. ??For every *y*, *y* a person, there is some *x*, *x* a person, such that *x* met *y*.

In contrast to (ii), (iii) readily allows the two readings as shown in (iii-b,c).

(iii) a. do-no hito-ni-mo dareka-ga syootaizyoo-o okutta (koto)
which-GEN person-DAT-also someone-NOM invitation-ACC sent fact
'(the fact that) everyone, someone sent an invitation'
b. There is some *x*, *x* a person, such that *x* sent an invitation to everyone.
c. For every *y*, *y* a person, there is some *x*, *x* a person, such that *x* sent an invitation to *y*.

If we consider an example of the long distance OS-type construction using the lexical items in (iii), the second reading turns out to be not totally hopeless.

(iv) a. do-no hito-ni-mo dareka-ga [CP Mary-ga syootaizyoo-
which-GEN person-DAT-also someone-NOM Mary-NOM invitation-
o okutta to] kantigaisiteita
ACC sent COMP mistook
'(Lit.) every person, someone mistook that Mary had sent an invitation'
b. There is some *x*, *x* a person, such that *x* incorrectly believed that Mary had sent an invitation to everyone.
c. ???For every *y*, *y* a person, there is some *x*, *x* a person, such that *x* incorrectly believed that Mary had sent an invitation to *y*.

- (68) a. QP1-DAT (=DL) QP2-NOM [_{CP} NP-NOM ... V1 COMP] V2
- b. [_{QP1} 55%-no ginkoo]-ni [_{QP2} Yaohan-sae]-ga [_{CP} seizi-
55%-GEN bank-DAT Yaohan-even-NOM political-
dantai X-ga supai-o okurikonda to] kimetuketeiru.
party X-NOM spy-ACC dispatched COMP conclude
'[_{QP2} Even Yaohan] concludes [_{CP} that political party X had
dispatched spies to [_{QP1} 55% of the banks]].'
- c. QP2 > QP1
EVEN_y(y = Yaohan)[y concludes that 55%_x(x = bank)[political
party X had dispatched spies to x]]
- d. *QP1 > QP2
55%_x(x = bank)[EVEN_y(y = Yaohan)[y concludes that political
party X had dispatched spies to x]]

Thus it is demonstrated that (62) is not a possible LF representation for (60).

- (60) PF: NP1-DAT (=DL) NP2-NOM [_{CP} NP3-NOM ... *ec*₁ ... V1 COMP] V2
- (62) LF: *NP1-DAT (=DL) NP2-NOM [_{CP} NP3-NOM ... *ec*₁ ... V1 COMP] V2

2.4.2. Multiple OS-type construction

We consider next the multiple OS-type construction as in (69). Let us call for convenience the first and the second DLs as *DL1* and *DL2*, respectively.

- (69) PF: NP1-ACC (=DL1) NP2-DAT (=DL2) NP3-NOM ... V

I argue that the schematic PF representation in (69) cannot correspond to the LF representation in (70d), and that (70c) is allowed only marginally, compared with (70a) and (70b).

- (70) LF:
- a. NP3-NOM ... NP2-DAT (=DL2) NP1-ACC (=DL1) ... V ³⁰
- b. NP1-ACC (=DL1) NP3-NOM ... NP2-DAT (=DL2) ... V
- c. ??NP2-DAT (=DL2) NP3-NOM ... NP1-ACC (=DL1) ... V

Therefore, I avoid using these QPs in examples shown in the text.

³⁰ (i) may also be a possible LF representation.

(i) NP3-NOM ... NP1-ACC (=DL1) NP2-DAT (=DL2) ... V
However, our discussion in this work does not hinge on the distinction between the LF representation in (70a) and (i). Therefore, we do not discuss (i) here.

- d. *NP1-ACC (=DL1) NP2-DAT (=DL2) NP3-NOM ... V

In the following, I demonstrate that a multiple OS-type construction schematized as in (71) allows the scope interpretations in (73a) and (73b), marginally (73c), but not (73d), as expected from the availability of LF representations in (72) and the Scope Interpretation Hypothesis (57).³¹

- (71) PF: QP1-ACC (=DL1) QP2-DAT (=DL2) QP3-NOM ... V

- (72) LF:
- a. QP3-NOM ... QP2-DAT (=DL2) QP1-ACC (=DL1) ... V
- b. QP1-ACC (=DL1) QP3-NOM ... QP2-DAT (=DL2) ... V
- c. ??QP2-DAT (=DL2) QP3-NOM ... QP1-ACC (=DL1) ... V
- d. *QP1-ACC (=DL1) QP2-DAT (=DL2) QP3-NOM ... V

- (73) a. QP3 > QP1, and QP3 > QP2
b. QP1 > QP3, and QP3 > QP2
c. ??QP2 > QP3, and QP3 > QP1
a. *QP1 > QP3, and QP2 > QP3

First, (74) shows that there is no scope ambiguity in the SO-type construction, if we choose the right kind of QPs.³²

- (74) a. QP1-NOM QP2-DAT QP3-ACC V
- b. [_{QP1} Yaohan-sae]-ga [_{QP2} kanarinokazu-no ginkoo]-ni [_{QP3} hutatu
Yaohan-even-NOM quite:many-GEN bank-DAT two
izyoo-no seizi-dantai]-o suisensita.
or:more-GEN political-party-ACC recommended
'[_{QP1} Even Yaohan] recommended [_{QP3} two or more political parties]
to [_{QP2} quite many of the banks].'
- c. QP1 > QP2; QP1 > QP3
EVEN_x(x = Yaohan)[QUITE-MANY_y(y = bank) [TWO-OR-
MORE_z (z = political party) [x recommended z to y]]]

³¹ Ueyama 1997 has claimed that (70c) or (72c) is ungrammatical. However, J.-R. Hayashishita among others has pointed out to me that some speakers (at least marginally) allow the interpretation in (73c). Therefore, I conclude in this work that it is a marked option but not totally ungrammatical. This conclusion also carries over to the distribution of the WCO effects to be discussed in section 3.2.3.3.

³² There can be scope ambiguity between QP2 and QP3 in (74), but it is irrelevant to the current issue.

Next, (75) and (76) are the (single) OS-type construction, in which the DL can take scope over the nominative-marked QP.

- (75) a. QP1-ACC (=DL) QP3-NOM QP2-DAT V
- b. [QP1 Yaohan-sae]-o [QP3 hutatu izyoo-no seizei-dantai]-ga
Yaohan-even-ACC two or:more-GEN political-party-NOM
[QP2 kanarinokazu-no ginkoo]-ni suisensita.
quite:many-GEN bank-DAT recommended
'[QP3 Two or more political parties] recommended [QP1 even Yaohan]
to [QP2 quite many of the banks].'
- c. (one of the possible readings)
QP1 > QP3
EVEN_x(x = Yaohan)[TWO-OR-MORE_z (z = political party)
[QUITE-MANY_y(y = bank) [z recommended x to y]]]
- (76) a. QP2-ACC (=DL) QP3-NOM QP1-DAT V
- b. [QP2 Kanarinokazu-no ginkoo]-o [QP3 hutatu izyoo-no seizei-
quite:many-GEN bank-ACC two or:more-GEN political-
dantai]-ga [QP1 Yaohan-sae]-ni suisensita.
party-NOM Yaohan-even-DAT recommended
'[QP3 Two or more political parties] recommended [QP2 quite many of
the banks] to [QP1 even Yaohan].'
- c. (one of the possible readings)
QP2 > QP3
QUITE-MANY_y(y = bank) [TWO-OR-MORE_z (z = political party)
[EVEN_x(x = Yaohan)[z recommended y to x]]]

In contrast, in the multiple OS-type construction such as in (77) and (78), the reading in which both DLs take scope wider than the nominative-marked QP is not available. In addition, the reading in which DL2 takes scope wider than the nominative-marked QP is much harder than the one in which DL1 takes wide scope.

- (77) a. QP1-ACC (=DL1) QP2-DAT (=DL2) QP3-NOM V
- b. [QP1 Yaohan-sae]-o [QP2 kanarinokazu-no ginkoo]-ni [QP3 hutatu
Yaohan-even-ACC quite:many-GEN bank-DAT two

izyoo-no seizei-dantai]-ga suisensita.
or:more-GEN political-party-NOM recommended

'[QP3 Two or more political parties] recommended [QP1 even Yaohan]
to [QP2 quite many of the banks].'

- c. QP3 > QP1; QP3 > QP2
TWO-OR-MORE_z (z = political party) [QUITE-MANY_y(y = bank)
[EVEN_x(x = Yaohan)[z recommended x to y]]]
- d. QP1 > QP3; QP3 > QP2
EVEN_x(x = Yaohan)[TWO-OR-MORE_z (z = political party)
[QUITE-MANY_y(y = bank) [z recommended x to y]]]
- e. ??/?*QP2 > QP3; QP3 > QP1
QUITE-MANY_y(y = bank) [TWO-OR-MORE_z (z = political party)
[EVEN_x(x = Yaohan)[z recommended x to y]]]
- f. *QP1 > QP3; QP2 > QP3
EVEN_x(x = Yaohan)[QUITE-MANY_y(y = bank) [TWO-OR-
MORE_z (z = political party) [z recommended x to y]]]
- (78) a. QP1-DAT (=DL1) QP2-ACC (=DL2) QP3-NOM V
- b. [QP1 Yaohan-ni-sae] [QP2 kanarinokazu-no ginkoo]-o [QP3 hutatu
Yaohan-DAT-even quite:many-GEN bank-ACC two
izyoo-no seizei-dantai]-ga suisensita.
or:more-GEN political-party-NOM recommended
'[QP3 Two or more political parties] recommended [QP2 quite many of
the banks] to [QP1 even Yaohan].'
- c. QP3 > QP1; QP3 > QP2
TWO-OR-MORE_z (z = political party) [EVEN_x(x =
Yaohan)[QUITE-MANY_y(y = bank) [z recommended y to x]]]
- d. QP1 > QP3; QP3 > QP2
EVEN_x(x = Yaohan)[TWO-OR-MORE_z (z = political party)
[QUITE-MANY_y(y = bank) [z recommended y to x]]]
- e. ??/?*QP2 > QP3; QP3 > QP1
QUITE-MANY_y(y = bank) [TWO-OR-MORE_z (z = political party)
[EVEN_x(x = Yaohan)[z recommended y to x]]]
- f. *QP1 > QP3; QP2 > QP3
EVEN_x(x = Yaohan)[QUITE-MANY_y(y = bank) [TWO-OR-

MORE_z (*z* = political party) [*z* recommended *y* to *x*]]

Thus, this subsection has argued (i) that at most one DL can be a Deep DL in the multiple OS-type construction and (ii) that the second DL is much harder to be a Deep DL than the first DL.

2.4.3. Special type of clauses

Finally, I would like to note that a certain type of clauses does not allow a Deep DL even in the case of the clause-internal, non-multiple OS-type construction.

Consider the perceptual report construction given in (79). Although a dative-marked NP precedes a nominative-marked phrase in (79), this is the unmarked word order with the predicate *mieta* 'could see'.

(79) NP-DAT [CP ... [COMP *tokoro*]]-NOM *mieta*
'NP could see the scene of CP.'

I demonstrate below that the DL in the embedded clause of (79) cannot be a Deep DL: that is to say that the LF representation corresponding to (80) must be (81a), rather than (81b).

(80) PF: NP-DAT [CP NP-ACC/DAT NP-NOM ... [COMP *tokoro*]]-NOM *mieta*

(81) LF:

- a. NP-DAT [CP NP-NOM ... NP-ACC/DAT ... [COMP *tokoro*]]-NOM *mieta*
- b. *NP-DAT [CP NP-ACC/DAT ... NP-NOM ... [COMP *tokoro*]]-NOM *mieta*

More concretely, it is shown that QP2 cannot take scope over QP3 in (82).

(82) NP1-DAT [CP QP2-DAT (=DL) QP3-NOM ... V *tokoro*]-NOM *mieta*

Let us start with (83), which is an SO-type construction.³³

(83) NP1-DAT [CP QP3-NOM QP2-DAT ... V *tokoro*]-NOM *mieta*

(84) a. Ko-no gakusei-ni-wa [CP [QP3 *hutari izyoo-no hito*]-ga
this-GEN student-DAT-TOP two or:more-GEN person-NOM
[QP2 *kanarinokazu-no seizika*]-ni *tirasi-o watasiteiru tokoro*]
quite:many-GEN politician-DAT flier-ACC hand COMP
-ga *mieta rasii.*

³³ It seems that some speakers hardly allow quantification within the embedded clause of a perceptual verb. In the case of such speakers, therefore, the claim in question cannot be verified in regard to the scope interpretation.

-NOM could:see they:say

'They say that this student could see [CP [QP3 two or more people] handing a flier to [QP2 quite many of the politicians]].'

b. QP3 > QP2

they say that this student could see [TWO-OR-MORE_z (*z* = person) [QUITE-MANY_y(*y* = politician) [*z* handing a flier to *y*]]]

c. *QP2 > QP3

*they say that this student could see [QUITE-MANY_y(*y* = politician) [TWO-OR-MORE_z (*z* = person) [*z* handing a flier to *y*]]]

(85) a. Ko-no gakusei-ni-wa [CP [QP3 *kanarinokazu-no seizika*]-ga
this-GEN student-DAT-TOP quite:many-GEN politician-NOM

[QP2 *hutari izyoo-no hito*]-ni *tirasi-o watasiteiru tokoro*]
two or:more-GEN person-DAT flier-ACC hand COMP

-ga *mieta rasii.*
-NOM could:see they:say

'They say that this student could see [CP [QP3 quite many of the politicians] handing a flier to [QP2 two or more people]].'

b. QP3 > QP2

they say that this student could see [QUITE-MANY_y (*y* = politician) [TWO-OR-MORE_z (*z* = person) [*z* handing a flier to *y*]]]

c. *QP2 > QP3

they say that this student could see [TWO-OR-MORE_z (*z* = person) [QUITE-MANY_y (*y* = politician) [*z* handing a flier to *y*]]]

(86) is an OS-type construction of the form (82) which minimally differs from (83).

(82) NP1-DAT [CP QP2-DAT (=DL) QP3-NOM ... V *tokoro*]-NOM *mieta*

(86) a. Ko-no gakusei-ni-wa [CP [QP2 *kanarinokazu-no seizika*]-ni
this-GEN student-DAT-TOP quite:many-GEN politician-DAT
[QP3 *hutari izyoo-no hito*]-ga *tirasi-o watasiteiru tokoro*]
two or:more-GEN person-NOM flier-ACC hand COMP

-ga *mieta rasii.*
-NOM could:see they:say

'They say that this student could see [CP [QP3 two or more people]

handing a flier to [QP2 quite many of the politicians]].'

- b. QP3 > QP2
they say that this student could see [TWO-OR-MORE_z (z = person) [QUITE-MANY_y(y = politician) [z handing a flier to y]]]
- c. *QP2 > QP3
*they say that this student could see [QUITE-MANY_y(y = politician) [TWO-OR-MORE_z (z = person) [z handing a flier to y]]]

As shown by (86), the OS-type construction within the perceptual report construction does not allow scope ambiguity, and the DL has to be a Surface DL.

Most of the embedded clauses behaves as the matrix clause: *i.e.*, the OS-type construction therein exhibits scope ambiguity, unlike the case of the perceptual report construction. For example, QP2 can take scope over QP3 in (87).

- (87) a. NP1-NOM [CP QP2-DAT (=DL) QP3-NOM ... V COMP] *think*
- b. Ko-no gakusei-wa [CP [QP2 kanarinokazu-no seizika]-ni
this-GEN student-TOP quite:many-GEN politician-DAT
[QP3 hutari izyoo-no hito]-ga tirasi-o watasita to
two or:more-GEN person-NOM flier-ACC handed COMP
omotteiru.
think
'This student thinks [CP that [QP3 two or more people] handed a flier to [QP2 quite many of the politicians]].'
- c. QP3 > QP2
This student thinks that [TWO-OR-MORE_z (z = person) [QUITE-MANY_y(y = politician) [z handed a flier to y]]]
- d. QP2 > QP3
This student thinks that [QUITE-MANY_y(y = politician) [TWO-OR-MORE_z (z = person) [z handed a flier to y]]]

One would naturally wonder why there should be a difference between the embedded clause in (86) and the one in (87). I consider that the key is the fact that the embedded clause in (86) necessarily expresses an *eventuality*.³⁴

³⁴ I am using the term *eventuality* to cover both *events* and *states*.

While a clause may express an *eventuality* or a *predicational proposition*, the embedded clause of a perceptual verb has to express an *eventuality* (in principle), since it is impossible to 'see' a *predicational proposition*. In contrast, the embedded clause in (87) can express a *predicational proposition* just as non-embedded clauses.³⁵

Ueyama 1996, 1997 claim that there are syntactically two types of clause structures, and that the one is (ultimately) interpreted as an *eventuality* while the other as a *predicational proposition*.³⁶ Objectively speaking, it is not easy to demonstrate which clause is interpreted as an *eventuality*, rather than as a *predicational proposition*. For example, a sentence 'John kissed Mary' can be understood as either (i) an eventuality of 'kissing' whose agent is 'John' and whose theme is 'Mary', or (ii) a predication of a property 'kissed Mary' in regard

³⁵ It is not self-evident if the embedded clause in (87) can express an *eventuality*. Although one may consider that it is impossible to 'think/believe' an *eventuality*, it is still possible to 'think/believe' that there is such an *eventuality*.

³⁶ The contrast between *eventuality* and *predicational proposition* roughly corresponds to that between '(nonpredicational) description' and 'predication/Predication' as discussed in Kuroda 1965:ch.2 and Kuroda 1992, but the overall picture presented in Ueyama 1996,1997 is different from Kuroda's in an important respect: while the distinction can be made only in connection with the cognitive act 'judgment' in Kuroda's theory, the two types of clauses are distinguished purely syntactically in Ueyama 1996, independently of 'judgment'. (Kuroda 1992 attributes the notion 'judgment' to Franz Brentano and Anton Marty, citing Brentano 1924 and Marty 1908, 1916-1918, 1940, 1950ab in the references. The presentation of this notion in Ueyama 1996 is based on Brentano 1970,1973 and Hosoya 1970.)

A (nonpredicational) description is characterized as "the intentional object of a thetic judgment," and a Predication as "the intentional object of a categorical judgment." (Cf. Kuroda 1992: section 1.5.) Kuroda claims that a clause which does not express a judgment cannot represent a Predication. Kuroda 1992 (ch.1 section 12) states that "Predication exists only as a form of the object of a judgment, and not as a form of a proposition per se." The following is what Kuroda 1992:ch.1 states on the notion 'proposition': "By a *proposition* I mean a contextually and referentially interpreted meaning of a sentence insofar as it relates to its truth-condition. A proposition is thus a truth-value carrier, something that is believed to be true (or, false), that is judged to be true, rightly or wrongly. One may say that in judging one judges a proposition to be true. I assume that a proposition is a more abstract entity than the intentional object of a judgment, of which it is a necessary constitutive aspect. Thus, for example, to anticipate a later discussion, a topicalized sentence expressing a categorical judgment and the corresponding nontopicalized sentence expressing a thetic judgment or a focused response can represent one and the same proposition." (Kuroda 1992:20 section 1.5) (Kuroda 1992 does not state explicitly if a (nonpredicational) description exists only as a form of the object of a judgment, and hence it is not clear if a clause which does not express a judgment can represent a description in his opinion.)

In contrast, the distinction between *eventuality* and *predicational proposition* is based on the clause structure in Ueyama 1996,1997, and hence, every clause is classified into either of the two categories. In particular, it is argued there that the embedded clauses which are not asserted (*i.e.*, which do not express judgment) are also syntactically divided into two groups.

to a substance 'John', and it appears that the two interpretations cannot be distinguished in terms of the truth condition. Nevertheless, there are some clauses which unambiguously represents an *eventuality*, such as the embedded clause of a perceptual verb.³⁷

I claim that a Deep DL has to be a constituent of the 'major predication' that takes place in a clause expressing a *predicational proposition*.³⁸ In other words, I claim that a Deep DL cannot be interpreted if the clause is interpreted as an *eventuality*. It follows that a DL within a clause expressing an *eventuality* is necessarily a Surface DL, and hence cannot take scope over the nominative-marked QP.³⁹

We have discussed in the preceding subsection that there cannot be more than one Deep DL in a single clause. I consider that this restriction is also related to the fact that a Deep DL has to be a constituent of a 'major predication'. Suppose that we cannot interpret a clause which contains more than one 'major predication': this is also suggested by that fact that the cleft construction in English cannot be stacked.

³⁷ We can thus assume that there is in effect no structural ambiguity in the embedded clause of the perceptual report construction. This does not necessarily mean, however, that the other structure is excluded for a syntactic reason, since it is also possible that the Grammar allows both structures but one of them is excluded semantically.

³⁸ We need more discussion on the nature of 'predication' to complete this theory. Roughly speaking, I consider that at least two types of 'predication' has to be distinguished: (i) 'predication' between the 'subject' and the 'predicate' (*i.e.*, 'major predication', to be named tentatively), which cannot be stacked within a single clause, and (ii) 'predication' between an adjunct/modifier (presumably including nominative-marked NPs and topic-marked NPs in Japanese) and some phrase, which can be multiply stacked within a single clause. I will discuss this issue more in a separate work. The forthcoming work by J.-R. Hayashishita and the one by Iwao Takai will also be relevant to this issue.

³⁹ Although (i) can be regarded as another instance of the perceptual report construction, it seems that some people can detect the scope ambiguity in this case.

(i) NP-NOM [CP ... [COMP *no*]-ACC *mita / mitodoketa*
NP saw / witnessed CP.'

In fact Ueyama 1996, 1997 have used this configuration instead of (79), but I avoid to do so in this work because of this speaker variation.

I suspect that those speakers who detect the scope ambiguity in (i) can interpret the embedded clause as expressing a *predicational proposition*, as in a clause such as 'NP understood/recognized CP', which reminds us of the contrast between (ii-a) and (ii-b,c):

(ii) a. John saw that Mary read his letter.
b. John saw Mary read his letter.
c. John saw Mary reading his letter.
(Lenci 1993:(1))

I got acquainted with the observation regarding (ii) in Lenci 1993, where works such as Barwise 1981, Rizzi 1992, and Guasti 1993 are referred to. I am grateful to Hajime Hoji for bringing the configuration similar to (79) to my attention, which resists the *predicational proposition* interpretation much more than (i).

(88) *It is a ticket that it is to Mary that John handed.

Then it follows that a clause containing more than one Deep DL cannot be interpreted, either.

2.4.4. Summary

I have pointed out three syntactic environments in which a DL cannot be a Deep DL, in support of the claim in (10b).

- (10) b. There are syntactic environments in which the DL can be a Surface DL but not a Deep DL.
- (89) a. The DL in the long distance OS-type construction is necessarily a Surface DL (section 2.4.1).
b. There is at most one Deep DL in a clause. In the case of the multiple OS-type construction, it is harder for the second DL to be a Deep DL than the first DL (section 2.4.2).
c. A DL within a clause expressing an *eventuality* is necessarily a Surface DL (section 2.4.3).

First, in section 2.4.1, I have demonstrated that (61), but not (62), is a possible LF representation for (60).

(60) PF: NP1-DAT (=DL) NP2-NOM [CP NP3-NOM ... *ec*₁ ... V1 COMP] V2

(61) LF:
a. NP2-NOM [CP NP3-NOM ... NP1-DAT (=DL) ... V1 COMP] V2
b. NP2-NOM [CP NP1-DAT (=DL) NP3-NOM ... *ec*₁ ... V1 COMP] V2

(62) LF: *NP1-DAT (=DL) NP2-NOM [CP NP3-NOM ... *ec*₁ ... V1 COMP] V2

Then, in section 2.4.2, I have argued that the sentence in (69) cannot have the LF representation in (70d), and that (70c) is allowed only marginally, compared with (70a) and (70b).

(69) PF: NP1-ACC (=DL1) NP2-DAT (=DL2) NP3-NOM ... V

(70) LF:
a. NP3-NOM ... NP2-DAT (=DL2) NP1-ACC (=DL1) ... V
b. NP1-ACC (=DL1) NP3-NOM ... NP2-DAT (=DL2) ... V
c. ??NP2-DAT (=DL2) NP3-NOM ... NP1-ACC (=DL1) ... V
d. *NP1-ACC (=DL1) NP2-DAT (=DL2) NP3-NOM ... V

Finally, in section 2.4.3, I have claimed that the LF representation corresponding to (80) must be (81a), rather than (81b).

- (80) PF: NP-DAT [_{CP} NP-ACC/DAT NP-NOM ... [_{COMP} *tokoro*]]-NOM *mieta*
- (81) LF:
- NP-DAT [_{CP} NP-NOM ... NP-ACC/DAT ... [_{COMP} *tokoro*]]-NOM *mieta*
 - *NP-DAT [_{CP} NP-ACC/DAT ... NP-NOM ... [_{COMP} *tokoro*]]-NOM *mieta*

2.5. Summary and Discussion

2.5.1. Summary of the claims in this chapter

In this chapter, I have argued for the proposals in (10).

- (10) Claims:
- An OS-type construction involves either a Deep DL (as in (4)) or a Surface DL (as in (5)).
 - There are syntactic environments in which the DL can be a Surface DL but not a Deep DL.
- (4) Deep OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-ACC/DAT (=DL) ... NP-NOM ... V
- (5) Surface OS-type:
 PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-NOM ... NP-ACC/DAT (=DL) ... V

Each OS-type construction is considered to exhibit the following properties:

- (58) Properties of the Deep OS-type:
- Wide scope reading of DL with respect to the subject
 - Absence of WCO effects (18)
- (59) Properties of the Surface OS-type:
- Narrow scope reading of DL with respect to the subject
 - Reconstruction effects (23)
 - Absence of Condition C violation (24)
 - Reconstruction of a *wh*-phrase (28),(32)

The content of (10b) is described in (89):

- (89) a. The DL in the long distance OS-type construction is necessarily a Surface DL (section 2.4.1).
- b. There is at most one Deep DL in a clause. In the case of the multiple OS-type construction, it is harder for the second DL to be a Deep DL than the first DL (section 2.4.2).

- c. A DL within a clause expressing an *eventuality* is necessarily a Surface DL (section 2.4.3).

It is critical for the discussion in the subsequent chapters that the OS-type construction is ambiguous between the Deep OS-type and the Surface OS-type. On the other hand, it does not substantially affect the subsequent discussion how the representations in each OS-type construction are derived. Therefore, we could leave the actual analysis undiscussed, but I briefly introduce my analysis in the rest of this section, in order to make the proposal more concrete.

2.5.2. Analysis of the Deep OS-type

In most of the relevant analyses in the literature, it is assumed that the Deep DL moves from its θ -position to the position as a DL. One might consider that the properties in (58) are accounted for by assuming that the DL is moved to an A-position.

- (58) Properties of the Deep OS-type:
- Wide scope reading of DL with respect to the subject
 - Absence of WCO effects (18)

Under such an analysis, however, one has to explain why the movement has to take place in the overt component: if the movement should take place in the covert component, the PF representation would look like as if it were the SO-type construction, and yet the LF representation would qualify as the Deep OS-type, as shown in (90).

- (90) 'SO-type-looking Deep OS-type':
 PF: NP-NOM ... NP-DAT/ACC ...
 LF: [NP-DAT/ACC]_i ... NP-NOM ... *t_i* ...

If a derivation such as (90) should be allowed, it is predicted that an SO-type construction can exhibit the properties of the Deep OS-type in (58). However, this is not the case, at least generally speaking.⁴⁰ Therefore the movement analysis of the Deep OS-type has to be accompanied by the stipulation that scrambling cannot take place in the covert component.⁴¹

⁴⁰ See section B.1.2 for the remarks in Kitagawa 1990 that an SO-type construction can marginally exhibit some properties of the OS-type construction. Suppose that Grammar in fact allows such a possibility but marginally. As long as one assumes that the properties in (58) are attributed to the landing site of the relevant movement, it would be very hard to account for this marginality, since it does not make sense to say that 'the movement can marginally take place', or that 'the landing site marginally has these properties'.

⁴¹ One may consider that this problem could be circumvented by assuming that the

In contrast, I have argued in Ueyama 1997 that the Deep DL is base-generated in a position c-commanding the subject NP, *i.e.*, an position outside the θ -domain of the predicate. One would naturally wonder how the locality between the Deep DL and the corresponding θ -position could be accounted for: as described in (89a), a clause boundary cannot intervene between the Deep DL and its corresponding θ -position. Ueyama 1997 proposes that the Deep DL has to be accompanied by an empty operator movement originated in the θ -marked position corresponding to the DL, as schematized in (91), and that the relevant empty operator movement is clause-bounded.⁴²

(91) Deep OS-type:

PF: NP-DAT/ACC (=DL) ... NP-NOM ... ec_i ...⁴³
 LF: NP-DAT/ACC (=DL) Op_i NP-NOM ... t_i ...

Ueyama 1997 states that it is a case-marker on the DL (rather than the NP itself) that requires the empty operator movement. It is assumed that a case-marker is not properly interpreted without being syntactically related to the verb, and that (i) θ -marked positions are syntactically related to the verb and that (ii) the empty operator movement as in (91) forms a syntactic relation.

The properties of the Deep OS-type which we have discussed above can be accounted for straightforwardly under the analysis in (91). First, the DL QP takes wide scope over the subject QP, since the former c-commands the latter at LF. In addition, a dependent term contained in the subject NP can be

movement in question is driven by a strong feature (cf. Miyagawa 1997). If one accepts that Grammar contains a general stipulation regarding a strong feature to the effect that it triggers a movement in the overt component, it is true that it would not be necessary to add a stipulation specifically to Scrambling. The issue will be then why Scrambling appears to be an optional operation if it is motivated by a strong feature. In fact it is for this reason that Saito 1989,1992 considers that Scrambling is not driven by feature-checking, and hence it can be 'undone' at LF, unlike *wh*-movement or raising in English. See also footnote 118.

⁴² Ueyama 1997 states that the empty operator movement in question is a covert version of QR, which is assumed to be clause-bounded for whatever reason. Obviously the assumption that the relevant empty operator movement is clause-bounded should be carefully examined in connection with other constructions in Japanese which may involve an empty operator movement as well: *e.g.* cleft construction, *tough* construction, comparative ellipsis, stripping, sluicing and so on. Some of these constructions in fact turn out to be clause-bounded; for example, Fukaya 1998 argues that the empty operator movement in the so-called 'sluicing' construction in Japanese is clause-bounded. I leave it to the future research to argue for the assumption that the empty operator movement in Japanese is clause-bounded. Hoji & Ueyama 1998 contains some relevant discussion.

I am grateful to Hajime Hoji for originally giving me a suggestion that the Deep OS-type might involve an empty operator movement.

⁴³ In this work I leave open at what point of the derivation the empty operator movement occurs, since it does not seem to hinge on any empirical issues at this stage.

bound by the DL, because the latter c-commands the former in their base-generated positions, and hence, the so-called WCO effects do not show up.

2.5.3. Analysis of the Surface OS-type

Saito 1989,1992 and Yoshimura 1992 assume that a Surface DL is moved by Scrambling and then reconstructed back into its original θ -position. If the alternation between the Deep OS-type and the Surface OS-type were completely free, such an analysis could be maintained. However, I have pointed out that there are syntactic environments in which an DL has to be a Surface DL. This would mean that the DL *has to* be reconstructed back in such cases, but it would not be an easy task to construct a mechanism in which the literal reconstruction is obligatory under some conditions, while allowing it to occur freely otherwise.

I claim that a Surface DL undergoes a PF movement.⁴⁴

(92) Surface OS-type:

PF: NP_i -DAT/ACC NP-NOM ... t_i ...
 LF: NP-NOM NP-DAT/ACC ...

Since the PF movement does not affect the derivation of the LF representation, this analysis does not need to postulate an operation of literal reconstruction. I assume that a PF movement freely occurs without requiring any syntactic motivation.

Unlike a Deep DL, a Surface DL can be stacked. This is shown by the fact that there are examples of the multiple long distance OS-type construction, as in (93).

(93) Multiple long distance OS-type constructions:

a. Mary-ga [_S John-ga [Bill-ni]_j [so-no hon-o]_i watasita to]
 Mary-NOM John-NOM Bill-DAT that-GEN book-ACC handed COMP

omotteiru (koto)

think fact

'Mary thinks [_S that John handed [that book]_i [to Bill]_j']

b. [Bill-ni]_j [so-no hon-o]_i Mary-ga [_S John-ga t_j t_i watasita
 Bill-DAT that-GEN book-ACC Mary-NOM John-NOM handed

to] omotteiru (koto)

COMP think fact

⁴⁴ Ueyama 1997 virtually does not make any commitment regarding the analysis of what we call the Surface OS-type here. The claim that the DL undergoes a PF movement in the case of the Surface OS-type should be ascribed to Hayashishita 1997a.

'[to Bill]_i, [that book]_j, Mary thinks [_S that John handed t_i t_j]'

- c. [So-no hon-o]_i [Bill-ni]_j Mary-ga [_S John-ga t_j t_i watasita
 that-GEN book-ACC Bill-DAT Mary-NOM John-NOM handed
 to] omotteiru (koto)
 COMP think fact

'[that book]_j, [to Bill]_i, Mary thinks [_S that John handed t_i t_j]'
 (Saito 1985:163 (7))

This observation is also compatible with our analysis, since if the PF movement is not feature-driven, multiple stacking should be possible in principle.

It is necessary however to assume that the PF movement is subject to the subjacency effects.⁴⁵ Then the PF representation should have a hierarchical structure, as mentioned in section 1.3.4.1, since it seems that the (alleged) 'subjacency effects' should be stated in structural terms. I further suggest that there is a possibility that the so-called subjacency effects in Japanese are PF phenomena altogether. In fact it is not the case that the OS-type construction is blocked by every 'island' attested in English, which indicates that the source of the 'subjacency effects' in Japanese may be different from that in English.⁴⁶

Recall that we have observed the effects described by the second sentence in (89b), which can be restated as in (94) under the PF movement analysis of the Surface OS-type.⁴⁷

- (89) b. There is at most one Deep DL in a clause. In the case of the multiple OS-type construction, it is harder for the second DL to be a Deep DL than the first DL (section 2.4.2).
 (94) The PF movement crossing the Deep DL is allowed only marginally.

I consider that the 'subjacency effects' in Japanese to be described in future

⁴⁵ A PF movement can be assimilated to stylistic rules (mentioned in section 2.1 above) in that it does not affect the formal meaning of the sentence. But stylistic rules have been assumed to ignore the syntactic locality conditions, unlike the PF movement relevant to this discussion.

⁴⁶ In addition, in the model of Grammar outlined in Chomsky 1995, it is not easy to express the subjacency conditions at LF either, given that the feature-driven movements are restricted to be even more local under Minimal Link Conditions (cf. Chomsky 1995:ch.4 section 4.5.5). This may suggest that not only in Japanese but universally the so-called subjacency effects should be attributed to the phonological component, but this is definitely beyond the scope of this work, which should be pursued in some future research.

⁴⁷ The asymmetry in question between DL1 and DL2 can hardly be explained under the analysis presented in Saito 1992, as discussed in section B.1.4.

research should also cover the effects of (94).⁴⁸ The assumption in (94) will also play a role in making the representation in (95) marginal.⁴⁹

(95) 'SO-type-looking Deep OS-type':

- PF: NP-NOM_j NP-DAT/ACC (=Deep DL) ... t_j ... ec_i ...
 LF: NP-DAT/ACC (=Deep DL) Op_i NP-NOM ... t_i ...

The analyses of the Deep and the Surface OS-type presented above have many open ends, but it does not contain conceptually conflicting ideas. I have provided some critical reviews on previous analyses in Appendix B to show that other approaches have to suffer from much more serious problems than ours. Chapter 3 will discuss the nature of the BVA readings and the WCO effects on the basis of the considerations in this chapter.

Appendix A: Critical Discussions on Some Observations in the Literature

A.1. Long distance OS-type construction and the 'major object'

A case-marked NP argument of the embedded clause can appear before the nominative NP of the matrix clause: such examples are often called as a *long distance scrambling* construction, as opposed to a *clause-internal scrambling* construction. Correspondingly, I have used the terms *long distance OS-type construction* and *clause-internal OS-type construction* in this chapter.

(96) shows a typical sentence which is used in the literature as an instance of the long distance OS-type construction.

- (96) [So-no hon-o]_i John-ga [Mary-ga t_i katta to] omotteiru
 that-GEN book-ACC John-NOM Mary-NOM bought COMP think

(koto)
 fact

'(the fact that) [that book]_j, John thinks [that Mary bought t_i]'
 (Saito 1985:156 (1a))

As explicitly stated in note 31 of chapter 2 in Yoshimura 1992:82, however, we should use a dative-marked NP as in (97), rather than an accusative-marked NP as in (96), in illustrating this construction.

⁴⁸ See section A.4 for relevant discussions.

⁴⁹ This is closely related with the issue discussed in Kitagawa 1990, to be reviewed in section B.1.2. I thank Chris Kennedy for raising a question relevant to this point to me. A relevant discussion is also found in section A.4.2.

- (97) [So-no mura-ni]_i John-ga [Bill-ga *t_i* sundeiru to]
 that-GEN village-in John-NOM Bill-NOM live COMP
 omotteiru (koto)
 think fact
 '(the fact that) [in that village]_i John thinks that Bill lives *t_i* '
 (Saito 1985:157 (1b))

If the DL is an accusative-marked NP, we cannot exclude the possibility that it originates in the matrix clause, as argued below.

It has been an issue since Kuno 1972,1976 whether the accusative-marked NP in (98) should be analyzed as a complement of the matrix verb *omow*- 'think' or as the subject of the embedded clause.

- (98) Watasi-wa John-o baka da to omotta
 I-TOP John-ACC fool COPULA COMP thought
 'I thought John to be a fool.'

Kuno 1976 argues that the accusative-marked NP is originally the subject of the embedded clause but raises to the object position of the matrix clause. In contrast, Saito 1983, Kitagawa 1986a and Hoji 1991b point out that there is a possibility that it is base-generated as an argument of the matrix clause: using the term in Hoji 1991b, there is a possibility that it is a *major object*.⁵⁰ One of the most compelling observations is that both the accusative-marked NP and the subject of the embedded clause can surface as an lexical NP. Consider the examples in (99):

- (99) a. Mary-wa John-no koto-o [kurasu-no nakade kare-ga
 Mary-TOP John-GEN fact-ACC class-GEN among he-NOM
 itiban baka da to] omotteiru
 most fool COPULA COMP think
 '(Lit.) Mary believes of John that he is the most stupid among the class.'
 (Saito 1983:(30))
- b. keisatu-wa Sigeko-o [_{CP} kanozyo-ga Yamada-no
 police-TOP Sigeko-ACC she-NOM Yamada-GEN
 kyoohansya datta to] danteisita
 accomplice COPULA COMP concluded

⁵⁰ Recently Zidani-Eroglu 1997 also argues for this possibility with respect to the corresponding construction in Turkish.

'The police concluded about Shigeko that she was Yamada's accomplice.'
 (Kitagawa 1986a:(viii) in footnote 6)

- c. Daitasuu-no hito-ga [so-no hooan]-o [_{CP} Tanaka moto
 most-GEN person-NOM that-GEN bill-ACC Tanaka ex
 syusyoo-ga {[?]pro/so-no} hatuansya da to] omoikondeita
 Prime:Minister-NOM that-GEN initiator COPULA COMP believed
 '(Lit.) Most people believed of that bill; that ex Prime Minister Tanaka was its_i initiator.'
 (Hoji 1991b:(19c))

If a verb such as *omow*- 'think' can take an accusative-marked NP as one of its arguments, the DL in (96) may also be an element of the matrix clause. Although it is still possible that the DL originates in the embedded clause, such an example is generally not suitable in examining the property of the long distance OS-type construction, since it may be an instance of the clause-internal OS-type construction corresponding to the SO-type construction in (100).

- (100) John-ga [so-no hon-o] [Mary-ga *ec* katta to] omotteiru
 John-NOM that-GEN book-ACC Mary-NOM bought COMP think
 (koto)
 fact
 '(the fact that) John believes [of that book] [that Mary bought *ec*]'

On the other hand, it is fairly certain that such a verb cannot take a dative-marked NP as a complement.

- (101) a. *Watasi-wa John-ni kare-ga baka da to omotta
 I-TOP John-DAT he-NOM fool COPULA COMP thought
 'I thought John to be a fool.'
- b. *Watasi-wa John-ni baka da to omotta
 I-TOP John-DAT fool COPULA COMP thought
 'I thought John to be a fool.'

Thus, we can say that the sentence such as in (97) is unambiguously an instance of the long distance OS-type construction.

A.2. Resumption

Saito 1985 claims that the OS-type construction never allows resumption,

citing examples such as in (102).⁵¹

- (102) a. *John_i-o, Mary-ga kare_i-o mita (koto)
 John-ACC Mary-NOM he-ACC saw fact
 '(the fact that) John_i, Mary saw him_i'
 (Saito 1985:115 (118))
- b. *So-no hon_i-o John-ga [Mary-ga so-re_i-o katta to]
 that-GEN book-ACC John-NOM Mary-NOM that-thing-ACC bought COMP
 omotteiru] (koto)
 think fact
 '(the fact that) [that book]_i, John thinks [that Mary bought it_i]'
 (Saito 1985:164 (9))
- c. *Tookyoo_i-ni John-ga [raigetū so-ko_i-ni ikoo to]
 Tokyo-to John-NOM next:month that-place-to will:go COMP
 omotteiru rasii]
 think seem
 'It seems that [to Tokyo]_i, John is planning [to go there_i next month]'
 (Saito 1985:322:(59))

Hayashishita 1997a, however, points out that the Deep OS-type allows resumption in principle, while the Surface OS-type does not. For example, the DLs in the examples in (103) can be a Deep DL and the sentences are fairly acceptable with resumption. (The DL and the resumption are underlined in the following examples.)

(103) A Deep DL and resumption:

- a. Toyota-ni-sae Nissan-ga so-ko-ni syatyoo-to-no
 Toyota-DAT-even Nissan-NOM that-place-DAT president-with-GEN
 mendan-o moosiiretekita.
 appointment-ACC requested
 'Even to Toyota, Nissan applied to it for an appointment with the president.'
- b. ?Toyota-ni IBM-ga saisinsiki-no konpyuutaa-o
 Toyota-DAT IBM-NOM latest:style-GEN computer-ACC

⁵¹ Haig 1976:369 also notes that the OS-type construction does not allow resumption, but no examples are provided there.

so-ko-ni okurituketekita.
 that-place-DAT sent:directly

'To Toyota, IBM sent latest style computers directly to it.'

- c. ?Toyota-ni saisinsiki-no konpyuutaa-o IBM-ga so-ko-ni
 Toyota-DAT latest:style-GEN computer-ACC IBM-NOM that-place-DAT
 okurituketekita.
 sent:directly

'To Toyota, latest style computers, IBM sent directly to it.'

In contrast to (103), the instances of the OS-type construction such as in (104) hardly allow resumption. (104a) is an instance of the multiple OS-type construction in which DL1 needs to be a Deep DL because of the establishment of BVA and hence DL2 must be a Surface DL; and (104b) is an instance of the OS-type construction within the perceptual report construction, in which the DL must be a Surface DL.⁵²

(104) A Surface DL and resumption:

- a. *[55%-no konpyuutaa]_i-o Toyota-ni [so-re]_i-no sekkeisya-ga
 55%-GEN computer-ACC Toyota-DAT that-thing-GEN planner-NOM
so-ko-ni okurituketekita.
 that-place-DAT sent:directly
 '[55% of the computers]_i, to Toyota, its_i planner sent e_i directly to it.'
- b. *John-wa [Toyota-ni IBM-ga saisinsiki-no konpyuutaa-o
 John-TOP Toyota-DAT IBM-NOM latest:style-GEN computer-ACC
so-ko-ni okurituketekita tokoro]-ni dekuwasita.
 that-place-DAT sent:directly COMP-DAT came:across
 'John came across the situation in which [to Toyota, IBM sent latest style computers directly to it].'

As shown in (105), the OS-type construction in (104) are acceptable if the sentences do not involve resumption.

- (105) a. [55%-no konpyuutaa]_i-o Toyota-ni [so-re]_i-no sekkeisya-ga
 55%-GEN computer-ACC Toyota-DAT that-thing-GEN planner-NOM
 okurituketekita.
 sent:directly

⁵² Since the case of the long distance OS-type construction may require more consideration, I do not cite relevant examples here.

'[55% of the computers]_i, to Toyota, its_i planner sent *e* directly.'

- b. John-wa [Toyota-ni IBM-ga saisinsiki-no konpyuutaa-o
John-TOP Toyota-DAT IBM-NOM latest:style-GEN computer-ACC

okurituketekita tokoro]-ni dekuwasita.
sent:directly COMP-DAT came:across

'John came across the situation in which [to Toyota, IBM sent latest style computers directly].'

I do not try to develop a theory of resumption in Japanese in this work, but the contrast between (103) and (104) further supports the claim that the Deep DL is not derived in the same way as the Surface DL. I will discuss the nature of the resumption in Japanese in a separate work (cf. Hoji & Ueyama 1998).

A.3. Observations which are dismissed in this thesis

The two phenomena discussed in this section—'availability of anaphor-binding' and 'reconstruction effects of Condition C violation'—are among the topics that are most often referred to in the literature. Nevertheless, I have not mentioned them in the arguments in the main text. The aim of this section is to explain why I consider them to be dismissed.

A.3.1. Availability of anaphor-binding

The raising construction and the *wh*-movement construction in English exhibit different properties with respect to anaphor-binding: *i.e.*, the relation between a reflexive or reciprocal pronoun and its antecedent. (106) and (107) informally state the relevant generalizations which are usually assumed (cf. Chomsky 1981:188, Chomsky 1986a:80).

(106) An anaphor must have its antecedent in its local domain.⁵³

- (107) An NP α can be an antecedent of an anaphor β , if
(i) α c-command β , and
(ii) α is in an A-position.

Given the assumptions in (106) and (107), the contrast in (108) and (109) is as expected, provided that raising is a movement to an A-position and that *wh*-movement is a movement to an A'-position.

⁵³ I do not specify the definition of the notion 'local domain' here. One can choose any definition one likes; for example, 'local domain of α ' can be expressed as the minimal complete functional complex (see fn.9 in section 1.3.3.2) which contains α . The exact characterization of this notion is irrelevant to the discussion in this section.

- (108) a. John_i seems to himself *t_i* to be genius.
b. John and Bill_i seems to each other *t_i* to be very lucky.
- (109) a. *Who_i did [a picture of himself] surprise *t_i* ?
b. *Which pair_i did [each other's advisors] recommend *t_i* ?

If Japanese has an appropriate lexical item whose property can be described by (106)-(107), we can thus examine whether the OS-type construction schematized in (110) allows anaphor-binding or not.

(110) [NP-ACC/DAT]_i [[... anaphor-NP ...] [... *t_i* ...]]

Zibun 'self' is often argued to have properties as an anaphor, but it is not appropriate to use it in examining whether (110) is well-formed or not anyway, since it is known that *zibun* has a strong subject-orientation (*i.e.*, the antecedent of *zibun* has to be a subject NP in most cases) and hence it is expected that the anaphoric relation in (110) will fail, irrespective of whether the fronted NP is in an A-position or not.⁵⁴

Saito 1992:74-76 claims that *otagai* 'each other' can be used to examine whether (110) is well-formed or not, citing Yang 1984, Ueda 1984, and Kitagawa 1986b as works which argue that *otagai* has the binding properties of an anaphor.⁵⁵ He reports that anaphor-binding is successful in the case of the clause-internal OS-type construction as in (111), but not in the case of the long distance OS-type construction as shown in (112).

(111) Clause-internal OS-type construction and "anaphor-binding":

- a. Karera-o, Masao-ga [[otagai-no sensei]-ni [*t_i* syookaisita]]
they-ACC Masao-NOM each:other-GEN teacher-DAT introduced
(koto)
fact
'(the fact that) them_i, Masao introduced [each other's teachers] *t_i* '
- b. ?Karera-o [[otagai-no sensei]-ga [*t_i* hihansita]] (koto)
they-ACC each:other-GEN teacher-NOM criticized fact
'(the fact that) them_i, [each other's teachers] criticized *t_i* '
(Saito 1992:75 (14))

⁵⁴ It is another issue whether *zibun* 'self' qualifies as an anaphor in the sense characterized in (106)-(107), which I will not discuss in this work. Hoji 1998: fn.16 contains a relevant remark.

⁵⁵ We will argue against this generalization immediately below. Incidentally, it is misleading in this respect to translate *otagai* as 'each other', but I use 'each:other' in word-by-word glosses, since there is no other suitable word in English that I can think of.

(112) Long distance OS-type construction and "anaphor-binding":

- a. *Karera-o, Masao-ga [otagai-no sensei]-ni [_{CP} Hanako-ga t_i
they-ACC Masao-NOM each:other-GEN teacher-DAT Hanako-NOM

hihansita to] itta (koto)
criticized COMP said fact

'(the fact that) them, Masao said [to each other's teachers] [that Hanako criticized t_i]'

- b. *Karera-o, [otagai-no sensei]-ga [_{CP} Hanako-ga t_i hihansita
they-ACC each:other-GEN teacher-NOM Hanako-NOM criticized

to] itta (koto)
COMP said fact

'(the fact that) them, [each other's teachers] said [that Hanako criticized t_i]'

(Saito 1992:76 (16))

The reported observations thus suggest that the clause-internal Scrambling can be an A-movement while the long distance Scrambling can only be an A'-movement, under the hypothesis given in (106)-(107) and the assumption that *otagai* is an anaphor.

Although this observation is consistent with our claim, I will not regard

(111) as showing that the DL has an A-property, for the following two reasons.

- (113) a. It is not appropriate to regard *otagai* 'each other' as having the feature [+anaphoric], as argued in Hoji 1998.⁵⁶
b. The solid part of the paradigm with respect to *otagai* 'each other' is subsumed under the paradigm of 'the absence of WCO effects'.

The observations in Hoji 1998 that are relevant to (113a) can be summarized as in (114).⁵⁷

- (114) a. The antecedent of *otagai* need not be in the local domain of *otagai*.
b. The antecedent of *otagai* need not c-command *otagai* as long as the antecedent is understood to be some specific individuals.

⁵⁶ Yoshimura 1992 also makes a remark, referring to Hajime Hoji (p.c.), that *otagai* may not be an anaphor, in pages 169-174 and in note 47 of chapter 3.

⁵⁷ (114) does not exhaust the claims in Hoji 1998; and in addition, (114b) is phrased differently from the original. In this section I present some of the materials in Hoji 1998 limiting myself to the part relevant to the claim that *otagai* does not qualify as an anaphor in the binding-theoretic sense.

- c. Split antecedence is possible for *otagai*.
(cf. Hoji 1998:(1a-c))

The examples in (115)-(117) illustrate the points in (114a,b,c), respectively.

- (115) a. John to Bill-wa [_{CP} Mary-ga otagai-ni horeteiru to]
John and Bill-TOP Mary-NOM each:other-DAT be:in:love COMP

omoikondeita
believed

'each of John and Bill believed [that Mary was in love with {the other/him}]'

- b. John to Bill-wa [_{CP} Chomsky-ga naze otagai-o suisensita
John and Bill-TOP Chomsky-NOM why each:other-ACC recommended

no ka] wakaranakatta
COMP Q did:not:understand

'(each of) John and Bill did not understand [why Chomsky had recommended {the other/him/them}]'

(Hoji 1998:(7))

- (116) a. [otagai-no koibito]-ga John to Bill-o yuuwakusita
each:other-GEN lover-NOM John and Bill-ACC seduced

(toyuu uwasa]-ga matizyuu-no wadai-ni natteita)
COMP rumor-NOM whole:town-GEN topic-DAT became

'[(The rumor that) each other's lovers] seduced John and Bill (had become a hot topic of the town.)'

(Hoji 1998:(8a))

- b. [otagai-no koibito]-ga John to Bill-ni iiyotta (koto)
each:other-GEN lover-NOM John and Bill-DAT tried:to:seduce fact

'John's lover tried to seduce Bill, and Bill's lover tried to seduce John.'

(Hoji 1998:(8b))

- c. (due to Yukinori Takubo (p.c.; February 1997))

Situation: ⁵⁸

⁵⁸ The primary purpose of having this example here is to show that the antecedent of *otagai* does not even need to appear in the sentence. Hoji 1998 has provided such a concrete situation for this example in order to illustrate in addition that the value of *otagai* need not be the speaker and the addressee.

It has been said that A quoted B's opinion that B expressed on something at one point or another. And there has been some doubt as to whether the quotation is accurate. A and B are both present at a certain meeting, with C. C has been curious as to what B actually said and what A said about what B had said. B knows that C has been wondering about this.

B: [talking to C]
 [Otagai-ga iawaseteiru kore]-wa [sinsoo kaimei-no
 each:other-NOM is:present:simultaneously this-TOP truth discovery-GEN
 ii tyansu] desu.
 good opportunity COPULA

'This situation in which both of us (*i.e.*, A and B) are present is a good opportunity (for you (*i.e.*, C)) to find out the truth.'
 (Hoji 1998:(48))

(117) a. Ieyasu₁-wa Nobunaga₂-ni [Singen-ga sin-eba otagai₁₊₂-no
 Ieyasu-TOP Nobunaga-DAT Shingen-NOM die-if each:other-GEN

ryoodo-ga sibirakuwa antai da to] tugeta
 territory-NOM for:a:while safe COPULA COMP told

'Ieyasu₁ told Nobunaga₂ that, if Shingen dies, their₁₊₂ territories will be safe for a while'

b. Ieyasu₁-wa Nobunaga₂-ni [Singen-ga otagai₁₊₂-o
 Ieyasu-TOP Nobunaga-DAT Shingen-NOM each:other-ACC

hometeita to] tugeta
 was:praising COMP told

'Ieyasu₁ told Nobunaga₂ that Shingen was praising them₁₊₂'
 (Hoji 1998:(9))

Hoji 1998:sections 4-5 reexamines the paradigms of *otagai* which have been regarded in the literature as evidence that *otagai* is an anaphor, and demonstrates that similar paradigms also emerge when we examine the conditions under which a kinship term such as *tiiioya* 'his father' can have an "anaphoric relation" with *John*, *i.e.*, the conditions under which *tiiioya* 'father' can be understood as 'John's father'.⁵⁹ The nature of the conditions which appear to be relevant both to *otagai* and kinship terms are not stated explicitly, but Hoji 1998 points out that a coreferential relation is known to be affected by various lexico-semantic and pragmatic factors, and hence it is not surprising

⁵⁹ Although Hoji 1998:section 5 does not mention the examples in (112) above in particular, the parallelism with *tiiioya* 'his father' also obtains with them.

that its conditions cannot be expressed in formal terms. He thus concludes that the alleged contrasts with respect to *otagai*, just as that of a kinship term, should not be attributed to the binding theory, or to any formal part of Grammar.

As Hoji 1998 notes in section 5, one may argue that there are two *otagai*'s, one being an anaphor (say, *otagai*_[+A]) and the other something else (say, *otagai*_[??]). It is true that the arguments above do not directly reject the possibility that there exist *otagai*_[+A] in Japanese, since one can maintain that (114) states the generalizations regarding *otagai*_[??], not *otagai*_[+A]. If one aims to claim so, however, one should at least describe an environment in which *otagai*_[+A], but not *otagai*_[??], can appear, and demonstrate that *otagai*_[+A] exhibits the properties as an anaphor in that environment, which seems to be the only way for the claim that *otagai*_[+A] exists in Japanese to be verifiable. Hoji 1998 (sections 1 and 5) cites Pollard & Sag 1992 as an example of such a proposal with respect to *each other* in English. According to Pollard & Sag 1992, while there are instances of *each other* which do not exhibit the properties of anaphor, *each other* occurring in an argument position necessarily behaves as an anaphor: in such a case, the claim that *each other*_[+A] (so to speak) exists is given an empirical ground. But what about *otagai*_[+A]? As Hoji 1998 explicitly states, *otagai* is put in an argument position in some of the examples in (115)-(117) above, thus showing that even an argument position allows the occurrence of *otagai*_[??] in Japanese. After examining some other possible descriptions, which turn out to be unsuccessful, Hoji 1998 concludes that the claim that Japanese has *otagai*_[+A] is not demonstrable.

Recall that Saito 1992 discusses (111) and (112) under the assumption that those examples contain *otagai*_[+A]. Now that we have to say that there is no empirical evidence that they are *otagai*_[+A], the given contrasts may be due to the properties of *otagai*_[??]. Then, theoretically speaking, the observations in (111) and (112) may have nothing to do with anaphor-binding characterized as in (106)-(107). We therefore have to conclude that (111) and (112) should not be considered as a basis on which we make an argument regarding the structural properties of the OS-type construction, since we do not know yet enough about *otagai*_[??] at least at this stage.

Notice that even *otagai*_[??] exhibits WCO effects, as argued in Hoji 1998 by referring to the following sentences. Hoji 1998 claims that (119) is an instance of WCO effects, which should be contrasted with the acceptable sentences in (118) and (120).⁶⁰

⁶⁰ I omit some of the analysis-dependent notations from (118)-(120). Hoji 1998 argues that (118) allows the readings in (i), while (119) does not allow those in (ii).

(i) For a good number of couples, it is true of each of the couples that

a. [the husband *x* and the wife *y*]'s shared teacher(s) harshly criticized *x* and *y*
 b. the husband *x*'s former teacher(s) harshly criticized the wife *y* and the wife *y*'s

(118) An instance in which bound variable anaphora is successful:

(Watasi-wa) [kanarinokazu-no nihonzin-huuhu]-ga otagai-no
I-TOP a:good:number-GEN Japanese-couple-NOM each:other-GEN

(katuteno) onsi-o batoosuru (no-o mita)
former teacher-ACC harshly:criticize COMP-ACC saw

'(I saw) [a good number of Japanese couples] harshly criticize their
(former) teachers.'

(Hoji 1998 (12))

(119) An instance of WCO effects:

*(Watasi-wa) [otagai-no (katuteno) onsi]-ga [kanarinokazu-no
I-TOP each:other-GEN former teacher-NOM a:good:number-GEN

nihonzin-huuhu]-o batoosuru (no-o mita)
Japanese-couple-ACC harshly:criticize COMP-ACC saw

'(I saw) their (former) teachers harshly criticize [a good number of
Japanese couples].'

(Hoji 1998 (14))

(120) Instances in which coreference is successful:

a. (Watasi-wa) [otagai-no (katuteno) onsi]-ga [John to Mary]-o
I-TOP each:other-GEN former teacher-NOM John and Mary-ACC

batoosuru (no-o mita)
harshly:criticize COMP-ACC saw

'(I saw) their (former) teachers harshly criticize [John and Mary].'

b. ?(Watasi-wa) [otagai-no (katuteno) onsi]-ga [so-no nihonzin-
I-TOP each:other-GEN former teacher-NOM that-GEN Japanese-

former teacher(s) harshly criticized the husband *x*'s former teacher(s)

c. the husband *x*'s former teacher(s) harshly criticized *x* and the wife *y*'s former
teacher(s) harshly criticized *y*

(Hoji 1998 (15))

(ii) For a good number of couples, it is true of each of the couples that

a. the husband *x* and the wife *y* harshly criticized *x* and *y*'s shared teacher(s) of the
past

b. the husband *x* harshly criticized the wife *y*'s former teacher(s), and the wife *y*
harshly criticized the husband *x*'s former teacher(s)

c. the husband *x* harshly criticized *x*'s former teacher(s), and the wife *y* harshly
criticized *y*'s former teacher(s)

(Hoji 1998 (13))

huuhu]-o batoosuru (no-o mita)
couple-ACC harshly:criticize COMP-ACC saw

'(I saw) their (former) teachers harshly criticize [that Japanese
couple].'

(Hoji 1998 (16))

Hoji 1998 argues that while the availability of the anaphoric relation with respect to *otagai* 'each other' is considerably affected by non-syntactic factors, the availability of the bound variable reading is syntactically constrained. In other words, he claims that the distribution of the WCO effects is the only solid part of the paradigms that can be used in the syntactic discussion, regarding the anaphoric relation with respect to *otagai* 'each other'.

Now, as shown in (121), the bound variable reading of (119) is available in the OS-type construction, just as other examples of this sort.

(121) Absence of WCO effects in the OS-type construction:

[Kanarinokazu-no nihonzin-huuhu]-o [otagai-no
a:good:number-GEN Japanese-couple-ACC each:other-GEN

(katuteno) onsi]-ga batoositeita
former teacher-NOM harshly:criticized

Their (former) teachers harshly criticized [a good number of
Japanese couples].'

Thus, as for the availability of a BVA reading, there is no need to treat *otagai*_[??] separately from other lexical items which may enter into BVA.

To summarize, we have dismissed the observation in (111)-(112) reported in Saito 1992 for the reason that the contrast may stem from non-syntactic factors. On the other hand, we have claimed, following Hoji 1998, that the contrasts shown in (118)-(119) should be accounted for syntactically, as an instance of the WCO effects. Therefore, we can use this lexical item in our examples, but there is no need to discuss it separately from the others.

A.3.2. Reconstruction effects of Condition C violation

It has been pointed out in Langacker 1969, Lasnik 1976 and Reinhart 1981 among others that the following configuration is unacceptable when *he_i* is understood to refer to the same individual that is referred to by *John_i*.

(122) *[[... [he_i [... John_i ...]]]

Let us call the condition which is responsible for the unacceptability of (122)

as (*Binding*) *Condition C*, following most of the literature.⁶¹ (123) shows one of its versions.

- (123) (Binding) *Condition C*:
 An R-expression must be free.
 (Chomsky 1981:188)

An *R-expression* stands for a referential expression, such as a name, which is neither an anaphor nor a pronominal in binding theoretic sense; and that 'an NP is *free*' means that the NP is not c-commanded by any coindexed NP which is in an A-position.⁶²

We have seen in section 2.2.2 above that the OS-type construction exhibits reconstruction effects. Now if we assume Binding *Condition C* (123), we expect that the reconstruction effects may also obtain with respect to (123). That is to say, a configuration such as in (124) may be ruled out by (123) if the construction induces the reconstruction effects.

- (124) ...[... John_i ...]_j ...[he_j [... *t*_j ...]

However, it has been known that the facts are not so straightforward as expected. For example, Reinhart 1981 points out the following mysterious contrasts.⁶³

- (125) a. *[In John's film of Mary_j], she_j found a scratch *t*_j.
 b. [In John's film of Mary_j], she_j looks sick *t*_j.
 (Reinhart 1981:608 (8), due to Jackendoff 1975)

⁶¹ The relevant condition is also sometimes called *Condition D*, which is a name given by Huang 1988 to the following generalization stated in Lasnik 1991.

(i) A less referential expression may not bind a more referential one.
 (Lasnik 1991:19 (51))

Lasnik 1991 divides the *Condition C* into two parts, and (i) is claimed to be its universal part. The name '*Condition D*' may be more suitable for the discussion here, since we exclusively consider the anaphoric relation between a name and a 'pronoun', rather than that between two names, but I have chosen the name '*Condition C*' in the text because this is the name used in the works which we discuss in this subsection (such as Saito 1992). Appendix C in chapter 4 also discusses some issues regarding the nature of the *Condition D* effects.

⁶² We assume for now that two NPs are coindexed if they are used to refer to the same individual for the sake of the discussion in this section. Although this is often implicitly assumed in many works which deal with instances of the *Condition C* violation, it is not a trivial assumption at all. See especially Evans 1980 and Reinhart 1983b for relevant discussions. We will also discuss this issue in Appendix C.

⁶³ While Reinhart 1981 calls (126) 'mysteries', the examples in (125) and (127) are not regarded as 'mysteries' under her analysis.

- (126) a. *[In John_i's apartment], he_j smoked pot *t*_j.
 b. [In John_i's newly renovated apartment on 5th Avenue], he_j smoked pot *t*_j.
 (Reinhart 1981:629 (68))⁶⁴
- (127) a. *[In Ben_i's box], he_j put his cigars *t*_j.
 b. *[In Ben_i's most precious Chinese box], he_j put his cigars *t*_j.
 (Reinhart 1981:630 (74))

While van Riemsdijk & Williams 1981:201 suggests that the contrast between (128a) and (128b) should be captured in terms of the degree of embedding of the name, Lebeaux 1990 argues that the contrast in question should be regarded as manifesting the argument-adjunct asymmetry, based on the observation in (129).⁶⁵

- (128) a. ??[Which picture of John_i] did he_j like *t*_j
 b. [Which picture that John_i saw] did he_j like *t*_j best
 (van Riemsdijk & Williams 1981:201 (86), cf. Lebeaux 1990:319 (2c,d))
- (129) a. Complement clause (argument):
 *[Whose claim that John_i likes Mary] did he_j deny *t*_j ?
 b. Relative clause (adjunct)
 [Which claim that John_i made] did he_j later deny *t*_j ?
 (Lebeaux 1990:320 (3d,c))

Thus, with respect to both the PP preposing construction and the *wh*-movement construction in English, some instances exhibit the reconstruction effects of *Condition C* violation while others do not, very roughly speaking.

Saito 1985,1992 considers it an important fact that the reconstruction effects of *Condition C* violation are never observed in constructions involving an A-movement.

- (130) Absence of the reconstruction effects of *Condition C* violation:
 a. [John_i's mother] seems to him_j [*t*_j to be smart]
 b. [John_i's picture] struck him_j [*t*_j as a good likeness]
 (Saito 1992:90 (47))

⁶⁴ Reinhart 1981 cites (126a) as "Lakoff's famous example." According to her, Lakoff 1968, Akmajian & Jackendoff 1970, and Wasow 1972 have noted the type of contrast reported in (126).

⁶⁵ Webelhuth 1989:section 6.2.5 ((76G),(77G) and note 7) reports that Lebeaux's generalization also holds in German, based on the examples which are parallel to (129) in the relevant respects.

He points out that some instances of the OS-type construction such as in (131) appear to exhibit the reconstruction effects of Condition C violation while there are instances which do not, as given in (132).⁶⁶

- (131) a. ??/?*[John-no sensei]_j-o kare-ga (zibun-de) *t_j* syookaisita
(koto)
John-GEN teacher-ACC he-NOM self-by introduced fact
'??/?*[John's teacher]_j, he introduced *t_j* himself'
(Saito 1985:47 (31b))
- b. ?*[Masao-no hahaoya]-o_j kare-ga *t_j* aisiteiru (koto)
Masao-GEN mother-ACC he-NOM love fact
'(the fact that) [Masao's_i mother]_j, he_j loves *t_j*'
(Saito 1992:96 (56), cf. Saito 1985:48 (32b))
- c. ??[Masao-no hako-ni]_j kare-ga *t_j* hamaki-o ireta (koto)
Masao-GEN box-in he-NOM cigar-ACC put fact
'(the fact that) [in Masao's_i box]_j, he_j put cigars *t_j*'
(Saito 1992:91 (48a))
- d. *[John-o]_i kare-ga *t_i* syookaisita (koto)
John-ACC he-NOM introduced fact
'*(the fact that) John_i, he_j introduced *t_i*'
(Saito 1985:82 (64b))
- e. *[Mary-o]_i kanozoyo-ga [John-ga *t_i* kiratteiru to] omotteiru
Mary-ACC she-NOM John-NOM hate COMP think
(koto)
fact
'*(the fact that) Mary_i, she_j thinks [that John hates *t_i*]'
(Saito 1985:162 (6b))
- (132) a. [Mary-ga John-ni okutta tegami]_j-o kare-ga mada *t_j*
Mary-NOM John-to sent letter-ACC he-NOM yet
yondei-nai (koto)
read-not fact

⁶⁶ Saito 1985 cites the examples in (131d,e) as instances of "strong crossover effects." I have put them here as instances of the reconstruction effects of Condition C violation instead, because I consider that the notion *strong crossover effects* should be restricted to the cases involving a quantificational expression. We will examine the strong crossover effects (in our sense) of the OS-type construction later in section 3.4.4.

'(the fact that) [the letter that Mary sent to John]_j, he_j has not read *t_j* yet'
(Saito 1985:39-40 (20b))

- b. [kinoo Mary-o tazunetekita hito-o]_j John-ga [kanozoyo-ga
yesterday Mary-ACC visit person-ACC John-NOM she-NOM
t_j kiratteiru to] omotteiru (koto)
hate COMP think fact
'(the fact that) [the person who came to see Mary_j yesterday]_j, John
thinks [that she_j hates *t_j*]'
(Saito 1985:162 (4b))

Assuming that the absence of the reconstruction effects of Condition C violation is a necessary diagnostics for A-movement, Saito 1992 argues on the basis of this observation that the clause-internal Scrambling "cannot be analyzed simply as A movement" (Saito 1992:91).⁶⁷

Suppose tentatively that there is a contrast between (131) and (132). But how can we express this contrast in the theory of Grammar? Saito 1992 mentions a notion of 'degree of embedding', along the lines of van Riemsdijk & Williams 1981. Although it is possible that such a notion is indeed crucial in (131)-(132), this notion cannot be expressed in terms of the primitive concepts in Grammar: it means that the relevant condition cannot be stated as a grammatical condition.⁶⁸ The situation would be different if there were an argument-adjunct asymmetry, as argued in Lebeaux 1990, since notions such as 'argument' and 'adjunct' can be expressed in formal terms. Yoshimura 1992 notes, however, that the OS-type construction in Japanese does not exhibit the argument-adjunct contrast of the sort reported in Lebeaux 1990, as illustrated in (133) and (134).

- (133) a. Relative clause (adjunct):
[NP [CP [John-ga Mary-kara *e_k* kiita] uwasa_k]-o]_j kare-ga
(suguni)
John-NOM Mary-from heard rumor-ACC he-NOM readily
t_j sinzita (koto)
believed fact
'(the fact that) [the rumor that John_j heard from Mary]_j, he_j readily
believed *t_j*'

⁶⁷ The analysis in Saito 1992 will be reviewed in section B.1.4.

⁶⁸ I am grateful to Hajime Hoji for making me realize this point.

b. Complement clause (argument)

[_{NP} [_{CP} John_i-ga Mary-o kiratteiru] (toyuu) uwasa]-o]_j kare_j-ga
 John-NOM Mary-ACC hate COMP rumor-ACC he-NOM

(suguni) *t_j* hiteisita (koto)
 readily denied fact

'*(the fact that) [the rumor that John_i disliked Mary], he_j hastily denied *t_j*'

(Yoshimura 1992:302 (iii) (in note 47 of chapter 4))

(134) a. adjunct:

[_{NP} Mary-no John_i-nitaishuru kimoti-o]_j kare_j-ga (saikin) *t_j* sitta
 Mary-GEN John-toward feelings-ACC he-NOM recently learned

(koto)
 fact

'(the fact that) [Mary's feelings towards John_i], he_j came to know *t_j* recently'

b. argument:

[_{NP} Mary-no John_i-no hyooka-o]_j kare_j-ga (naisyo-de) *t_j*
 Mary-GEN John-GEN evaluation-ACC he-NOM secret-in

yonda (koto)
 read fact

'*(the fact that) [Mary's evaluation of John_i], he_j read *t_j* in secret'
 (Yoshimura 1992:302 (iv) (in note 47 of chapter 4))

Given that an argument-adjunct asymmetry does not obtain in the OS-type construction in Japanese, we have to conclude that the contrast between (131) and (132) (if any) cannot be expressed in grammatical terms at least at this stage.

As discussed in Appendix C in chapter 4, the further fundamental issue regarding this phenomenon is whether the content of 'Condition C' can ever be stated in the terms of Grammar. Even if we agree that it is some kind of a linguistic condition, the effects in question is in fact much more obscure than usually believed. One such indication is the fact that the judgment of the sentences in (131) vary a great deal among speakers. For example, Yoshimura 1992 claims that the sentences of the sort shown in (131) are fairly acceptable for her, contrary to Saito's judgment.

(135) a. [John_i-no hahaoya-o]_j kare_j-ga *t_j* aisiteiru (koto)
 John-GEN mother-ACC he-NOM love fact

'[John_i's mother]_j, he_j loves *t_j*.'

(cf. (131b) above)

b. [Mary_i-no tomodati-ni]_j kanozoyo_j-ga *t_j* Bill-o syookaisita (koto)
 Mary-GEN friend-to she-NOM Bill-ACC introduced fact

'[To Mary_i's friend]_j, she_j introduced Bill *t_j*.'
 (Yoshimura 1992:279 (82))

As will be reviewed in section B.1.3, the observation reported in (135) provides support for Yoshimura's claim that Scrambling in Japanese is an A-movement, since (135) patterns with (130), typical examples of A-movement.

Kitagawa 1990, on the other hand, claims that the examples in (136) are not readily acceptable (agreeing with Saito's judgment to some extent) but that the acceptability "suddenly" improves if one puts stress on the displaced NP as shown in (137) (in effect giving an account of Yoshimura's judgment in some sense).⁶⁹

(136) a. ?* [John_i-no titioya-o]_j kare_j-ga *t_j* sahodo sonkeisitei-nai
 (koto)
 John-GEN father-ACC he-NOM that:much respect-not fact

'(the fact that) [John_i's father]_j he_j doesn't respect *t_j* that much'

b. ?* [John_i-no hahaoya-o]_j kare_j-ga *t_j* aisiteiru (koto)
 John-GEN mother-ACC he-NOM love fact

'(the fact that) [John_i's mother]_j, he_j loves *t_j*.'
 (cf. (131b) above)

(Kitagawa 1990:6 (7a,b))

(137) a. [JOHN_i-NO TITIOYA-O]_j kare_j-ga *t_j* sahodo sonkeisitei-nai
 (koto)

b. [JOHN_i-NO HAHAOYA-O]_j kare_j-ga *t_j* aisiteiru (koto)
 (Kitagawa 1990:8 (12a,b))

He further claims that the reconstruction effects of Condition C violation are never observed in the long distance scrambling construction, citing the following examples.

(138) a. [John_i-no titioya-o]_j, boku-ga [kare_j-ga sahodo *t_j*

⁶⁹ The sentences in (132)-(134) (i.e., those in which the Name is 'deeply embedded' in the DL) are not explicitly discussed in Kitagawa 1990. It is expected from his explanation that these sentences are unacceptable for him if the DL is not focused, or that a 'longer phrase' qualifies as a focus without phonological stress. (Yoshihisa Kitagawa (p.c.; summer 1998) has suggested the latter option.)

John-GEN father-ACC I-NOM he-NOM that:much

sonkeisitei-nai to] handansita konkyo
respect-not COMP judged reason

'the reason that [John's_i father]_j, I judged that he doesn't respect _{t_j} that much'

- b. [John_i-no sensei-o]_j, boku-ga [kare_i-ga (zibun-de) _{t_j}
John-GEN teacher-ACC I-NOM he-NOM self-by

syookaisita koto]-o yoku oboeteiru riyuu
introduced fact-ACC well remember reason

'the reason why [John's_i teacher]_j, I remember well that he introduced _{t_j} by himself'

(Kitagawa 1990:6-7 (8a,b))

As will be reviewed in section B.1.2, the DL with focus and the DL in the long distance OS-type construction will c-command the subject at LF while the DL without focus will be c-commanded by the subject according to his analysis. Therefore, the observations reported in (136)-(138) are accounted for under his analysis if it is assumed that the LF representation is relevant to the Condition C effects.

Let us consider these observations on the basis of the conclusion reached at in the main text of this chapter. Recall that I have argued that the DL in the long distance OS-type construction is necessarily a Surface DL, i.e., it must be situated in its θ -position at LF. Therefore, if the LF representation should be relevant to the Condition C effects, it would be wrongly predicted that the sentences in (138) are always unacceptable. Can we assume then that the PF representation is relevant to this phenomenon, instead? No. First we would lose an account for the fact that some people do not accept (131) or (136). In addition, it would be predicted that the sentences in (139) are unacceptable, which is not necessarily the fact.⁷⁰

- (139) a. */ok Kare-o boku-wa [John-no titioya-ga _t semeru to]-wa
he-ACC I-TOP John-GEN father-NOM blame COMP-TOP

omow-anakatta
think-did:not

'I never thought that John's father would blame him.'

⁷⁰ The examples in (139) are from Kitagawa 1990, as noted there. In fact, he states that they are clearly ungrammatical. But I do not consider that everyone will agree with his judgment.

- b. */ok Kare-o boku-wa [John-o kiratteiru otoko-ga _t naguru
he-ACC I-TOP John-ACC dislike man-NOM hit

no]-o mokugekisita
COMP-ACC witnessed

'I witnessed the man who dislikes John punch him.'
(Kitagawa 1990:47 (72a,b), judgmental report modified)

Thus, we cannot specify which level of representation is relevant to the Condition C effects.⁷¹

I conclude on the basis of the considerations given above that we cannot make use of the examples discussed in this subsection in constructing Grammar until we better understand the nature of the reconstruction effects of Condition C violation in Japanese or in general.

A.4. PF movement analysis and some related issues

I have proposed in section 2.5.3 that a Surface DL undergoes a PF movement, and that a PF movement is subject to some version of 'subjacency conditions'. The nature of the PF movement is yet to be explored. I point out some of the related issues in this section for future research.

A.4.1. Proper binding violations

Saito 1985:167-171 discusses the paradigm exemplified in (140). (140a) is an SO-type construction; the complement clause can be Scrambled as in (140b) and an NP in the complement clause can also be Scrambled as in (140c). In contrast, (140d) is not readily acceptable.

- (140) a. SO-type construction:

Taroo-ga [CP Hanako-ga [NP so-no hon-o] yonda to] itta (koto)
Taro-NOM Hanako-NOM that-GEN book-ACC read COMP said fact

'(the fact that) Taro said [CP that Hanako read that book]'

- b. In case the embedded clause in (140a) undergoes Scrambling:

[CP Hanako-ga [NP so-no hon-o] yonda to]_j Taroo-ga _{t_j}
Hanako-NOM that-GEN book-ACC read COMP Taro-NOM

⁷¹ One may want to describe the variation in judgment among speakers in terms of the tendency regarding the selection of the relevant level of representation under our analysis of the OS-type construction. For example, the judgment reported in Saito 1992 and Kitagawa 1990 could be stated as in (i) and (ii), respectively.

- (i) Condition C applies to the PF representation if the DL is long enough a string; otherwise, it applies to the LF representation.
(ii) Condition C applies to the PF representation if the DL is 'focused/stressed'; otherwise, it applies to the LF representation.

itta (koto)
said fact

'(the fact that) [_{CP} that Hanako read that book]_i, Taro said t_j '

- c. In case an NP in the embedded clause in (140a) undergoes Scrambling:

[_{NP} so-no hon-o]_i Taroo-ga [_{CP} Hanako-ga t_i yonda to] itta
that-GEN book-ACC Taro-NOM Hanako-NOM read COMP said

(koto)
fact

'(the fact that) [_{NP} that book]_i, Taro said [_{CP} that Hanako read t_i ']

- d. In case (140c) followed by the Scrambling of the embedded clause:

*[_{CP} Hanako-ga t_i yonda to]_j [_{NP} so-no hon-o]_i Taroo-ga t_j
Hanako-NOM read COMP that-GEN book-ACC Taro-NOM

itta (koto)
said fact

'(the fact that) [_{CP} that Hanako read t_i]_j, [_{NP} that book]_i, Taro said t_j '

(Saito 1992:82-83 (29),(31))

Saito 1985,1992 concludes that this is because the trace included in the Scrambled clause in (140d) is not c-commanded by its antecedent *so-no hon-o* 'that book' (*i.e.*, the violation of the Proper Binding Condition).⁷²

Yoshimura 1992 points out (attributing this remark to Hajime Hoji (p.c.)) that the word order as in (140d) may not be totally unacceptable if the accusative-marked NP can be considered as a major object. She cites Hajime Hoji's example which is more or less acceptable despite the word order is basically the same with (140d):

⁷² Saito 1985 states the Proper Binding Condition as in (i), and Saito 1992:80 cites the examples in (ii) for the illustration of this condition, attributing them to May 1977. (See also footnote 14 in section 2.2.3 for a relevant remark.)

(i) Proper Binding Condition:

Traces must be bound.
(Saito 1985:170 (17))

(ii) a. Mary ordered John to find out [_{CP} who_i [_{IP} t_i saw who]
b. *Mary ordered who to find out [_{CP} who_i [_{IP} t_i saw John]

As Hajime Hoji (p.c.; Feb/1998) pointed out to me, however, the sentences in (140d) (and (142) as well) do not share the sense of 'uninterpretability' that (ii-b) has. Such a sensation can be taken as an indication that (ii-b) should be excluded at LF while (140d) and (142) are excluded at PF, as suggested shortly.

(141) [[_{CP} iroirona gakubu-no gakusei-ga e_i yondeiru to]_j so-no
several department-GEN student-NOM read COMP that-GEN

hon_i(-no koto)-o [John-ga t_j itta] (koto)
book-GEN fact-ACC John-NOM said fact

'(Lit.) [_{CP} that students of several departments read it_i]_j, John said about [that book]_i t_j .'

(Yoshimura 1992:293 fn.24 (ii))

She argues that Saito's point can be shown more sharply by using a dative-marked NP, as in (142).

(142) *[[_{CP} Mary-ga t_i Bill-o syookaisita to]_j [so-no hito-ni_i
Mary-NOM Bill-ACC introduced COMP that-GEN person-DAT

[John-ga t_j omotta]] (koto)
John-NOM thought fact

'(Lit.) [That Mary introduced Bill t_i]_j, [to that person]_i, John thought t_j .'

(Yoshimura 1992:241 (34c))

The observations reported in (140d) and (142) used to be one of the supporting evidence that Scrambling is a movement to which Proper Binding Condition applies. However, this account cannot be maintained as it stands, once it is assumed that Scrambling can be 'undone', since the offending trace would disappear after the literal reconstruction.

Saito 1990 and Yoshimura 1992 suggest that Proper Binding Condition also applies to S-structure. I could not find a relevant statement in Saito 1992, in spite of the fact that something should be stated as to how he rules out (140d). (143c) is from Saito 1990:12, apparently an earlier version of Saito 1992.

(143) Proper Binding Condition applies not only at LF but also at S-structure.

One possibility to reinterpret this idea into the framework which disallows the reference to the level of S-structure is to assume that (140d) and (142) are derived in terms of PF movement, and that some version of 'Proper Binding Condition' is violated at PF. Notice that the dative-marked NP in (142) has to be a Surface DL, since a Deep DL cannot be separated from the corresponding θ -position by a clause boundary. In addition, the relative acceptability of (141) indicates that the effects under discussion do not emerge when the DL does not need to undergo a PF movement. Obviously to propose such an analysis would need a full articulation of the relevant 'Proper Binding

Condition'. Since this is by all means an empirical issue which needs more investigation, I leave this open in this work.

A.4.2. Scrambling of a nominative-marked NP

Saito 1985 claims that a nominative-marked NP cannot be displaced in the OS-type construction, citing examples like the following.

- (144) a. *[Mary-ni]_i [Bill-ga]_j John-wa [t_j gakkoo-de t_i kisusita
 Mary-DAT Bill-NOM John-TOP school-at kissed

koto]-o Jane-ni osieta
 fact-ACC Jane-DAT told

'John told Jane that Bill had kissed Mary at school.'
 (Saito 1985:182 (36), an example from Miyara 1982)

- b. *[John-ni]_i [so-no hon-ga]_j Mary-ga [s' t_j t_i
 John-DAT that-GEN book-NOM Mary-NOM

akueikyoo-o ataeta to] omotteiru (koto)
 bad:influence-ACC gave COMP think fact

'Mary thinks that that book gave bad influence to John'
 (Saito 1985:183 (38))

- c. *[So-no okasi-ga]_i John-ga [s' t_i oisii to] omotteiru (koto)
 that-GEN candy-NOM John-NOM tasty COMP think fact

'John thinks that that candy is tasty.'
 (Saito 1985:185 (42a))

- d. *[So-no hon-ga]_i John-ga [s' t_i yoku ureteiru to] omotteiru
 that-GEN book-NOM John-NOM well sell COMP think

(koto)
 fact

'John thinks that that books sells well.'
 (Saito 1985:185 (42b))

Saito 1985 argues that the generalization in (145) can be derived from the Case theory.

- (145) A nominative-marked NP cannot undergo Scrambling.

Assuming that Scrambling is an A'-movement, Saito 1985 claims that the trace of Scrambling must have Case, because it had been proposed in Chomsky 1981 that variables (*i.e.*, *wh*-traces, as opposed to an NP-trace) must have Case.

- (146) a trace is a variable if and only if it is Case-marked
 (Chomsky 1981:69 (17))

Saito 1985:section 3.2.2 proposes that a trace in the object position can be assigned Case by V, while a nominative-marked NP can only be assigned Case by virtue of carrying the marker *-ga*. It follows that while the trace of an object NP can be assigned Case by V, the trace of the subject NP can never get Case, because a trace cannot carry the marker *-ga*. Then (145) is derived from this Case theory together with the assumption that Scrambling is an A'-movement and that the trace of an A'-movement must have Case.

Kitagawa 1990, on the other hand, argues that Scrambling of a nominative-marked NP does not violate any syntactic condition, and that the sentences in (144) are not unacceptable especially when the nominative-marked NP is focused (cf. Kitagawa 1990: Appendix 1). He suggests that the sentences in (144) are marginal when they are not accompanied by focus, because the relevant PF representations then do not carry the full-fledged information enough for specifying the corresponding LF representations.⁷³

I leave open the grammatical status of the configurations in (144) in this work, since I have not examined the relevant examples enough. This issue is also related to the status of the configuration in (95), which we have mentioned in section 2.5.3.

- (95) 'SO-type-looking Deep OS-type':

PF: NP-NOM_j NP-DAT/ACC (=Deep DL) ... t_j ... ec_i ...
 LF: NP-DAT/ACC (=Deep DL) Op_i NP-NOM ... t_i ...

I have suggested there that the PF movement of the nominative-marked NP in (95) possibly violates some version of the 'subjacency condition' in Japanese. A further question is whether (95) should be given the same status with a multiple OS-type construction with DL2 being a Deep DL. If there is no significant difference between the two configurations, we should consider that a nominative-marked NP can undergo PF movement just as other NPs. If, on the other hand, it turns out that (95) is considerably worse than the multiple OS-type construction with DL2 being a Deep DL, we will have to explain why a nominative-marked NP behaves differently from other NPs. This is one of the issues that I have to deal with in future research.

A.4.3. Quantifier floating

It is known in Japanese linguistics that a numeral quantifier can be related to an NP without a genitive-marker *-no*. The construction is often called as *quantifier floating*; thus, (147a) and (148a) are instances of quantifier floating,

⁷³ See section B.1.2 for the analysis proposed in Kitagawa 1990.

which can be contrasted with (147b) and (148b), respectively.⁷⁴

- (147) a. [NP Igirisuzin-ga san-nin utidenokozuti-o katta.
Englishman-NOM 3-person magic:mallet-ACC bought

'Three Englishmen bought a magic mallet.'
(Kuroda 1980:27 (11))

- b. [NP San-nin-no igirisuzin-ga] utidenokozuti-o katta.
3-person-GEN Englishman-NOM magic:mallet-ACC bought

'Three Englishmen bought a magic mallet.'

- (148) a. Igirisuzin-ga [NP utidenokozuti-o huta-tu katta.
Englishman-NOM magic:mallet-ACC 2-thing bought

'Englishmen bought two magic mallets.'
(Kuroda 1980:27 (12))

- b. Igirisuzin-ga [NP huta-tu-no utidenokozuti-o] katta.
Englishman-NOM 2-thing-GEN magic:mallet-ACC bought

'Englishmen bought two magic mallets.'

Kuroda 1980,1983 and Haig 1980, among others, discuss this construction in relation with the movement analysis of Scrambling. Notice that the floating quantifier is located adjacent to the NP to which it modifies in both (147a) and (148a). In contrast, in case they are not adjacent to each other, it is reported that an accusative-marked NP does, but a nominative-marked NP does not, allow the quantifier floating, as shown in (149).⁷⁵

- (149) a. *Igirisuzin-ga utidenokozuti-o san-nin katta.
Englishman-NOM magic:mallet-ACC 3-person bought

'Three Englishmen bought a magic mallet.'
(Kuroda 1980:27 (15))

- b. Utidenokozuti-o igirisuzin-ga huta-tu katta.

⁷⁴ See Gunji & Hashida 1995 and the references therein for the discussion of differences in meaning between (147a) and (147b) for example.

⁷⁵ It is not the case that the quantifier floating with a subject NP is not possible in the OS-type construction: as long as the floating quantifier is adjacent to the NP, the sentence is readily acceptable.

(i) Utidenokozuti-o igirisuzin-ga san-nin katta.
magic:mallet-ACC Englishman-NOM 3-person bought
'Three Englishmen bought a magic mallet.'
(Kuroda 1980:27 (14))

magic:mallet-ACC Englishman-NOM 2-thing bought

'Englishmen bought two magic mallets.'
(Kuroda 1980:27 (13))

Kuroda 1980,1983 and Haig 1980 suggest that a sentence such as (149b) can be assimilated to (148) if the structure of (149) is analyzed as (150), in which the DL originates in the position adjacent to the floating quantifier.

- (150) [Utidenokozuti-o]_i igirisuzin-ga t_i huta-tu katta.
magic:mallet-ACC Englishman-NOM 2-thing bought

'Englishmen bought two magic mallets.'

One may say therefore that the acceptability of (149b) provides supporting evidence that the OS-type construction is derived by the movement of the DL.

I have not mentioned this construction in this work for the following reasons. First, as Saito 1985:53 points out, the argument given above crucially relies on the assumption that the floating quantifier must be adjacent to the modifying NP, and hence it is not a decisive argument unless it is explained why that particular assumption needs to be made. Second, I doubt how solid the reported contrast in (149) is.⁷⁶ This may be related with the first point: since we do not know the theoretical status of the relevant condition, we also cannot see clearly the nature of the contrast in (149). Finally, as discussed in Saito 1985:210-214, the derivation in (151) has to be excluded by some additional condition, in order to account for the unacceptability of (149a) in the way suggested above.

- (151) [Igirisuzin-ga]_j [utidenokozuti-o]_i t_i san-nin t_i katta.
Englishman-NOM magic:mallet-ACC 3-person bought

'Three Englishmen bought a magic mallet.'

This brings us back to the question whether we should assume (145) or not.

- (145) A nominative-marked NP cannot undergo Scrambling.

Therefore I consider that we are not yet ready to make use of this construction in exploring the syntactic nature of the OS-type construction.

Appendix B: Critical Reviews on Previous Analyses

In this Appendix, I review the previous analyses of the OS-type construction

⁷⁶ Kitagawa 1990 points out that (149a) is not totally unacceptable, especially when the nominative-marked NP is focused. See section B.1.2 for his analysis.

and compare them with the analysis proposed in section 2.5. Section B.1 discusses four major works on the OS-type construction; section B.2 briefly summarizes three works which are not particularly on, but are closely related to, the OS-type construction in Japanese.

B.1. Analyses of the OS-type construction in Japanese

B.1.1. Scrambling as an A'-movement: Saito 1985

Saito & Hoji 1983 and Saito 1985 among others claim that Scrambling is an A'-movement. Let us briefly go over the analysis proposed Saito 1985 in this subsection.

Saito 1985 concludes on the basis of the subadjacency effects and 'proper binding violations' (see section A.4.1) that the DL undergoes movement in the OS-type construction. He argues that this movement should be an adjunction (rather than a substitution) since there can be more than one DLs, just as Heavy NP Shift in English.⁷⁷

(152) Multiple OS-type construction:

- a. Mary-ga [John-ni]_j [so-no hon-o]_i watasita (koto)
 Mary-NOM John-DAT that-GEN book-ACC handed fact
 '(the fact that) Mary handed [that book]_i [to John]_j'
- b. [So-no hon-o]_i [John-ni]_j Mary-ga *t_j* *t_i* watasita (koto)
 that-GEN book-ACC John-DAT Mary-NOM handed fact

⁷⁷ Saito 1985 considers that the OS-type construction does not allow resumption (cf. section A.2), and claims that this is because Scrambling is an adjunction, assuming (i).

(i) An NP in an adjoined position must bind a variable unless it is licensed in some other way.
 (Saito 1985:317 (52))

In (i), 'variable' should be understood as a *wh-trace* as opposed to a pronominal, and in mentioning 'some other way' he has in mind so-called 'aboutness relation' between a Topic and the rest of the clause, for instance. (ii) can be taken as typical examples in which a Topic has to be 'licensed in terms of the aboutness relation'.

(ii) a. Sakana-wa [tai-ga ii].
 fish-TOP sea:breams-NOM good
 'As for fish, sea breams are good.'
 (Kuno 1973b:162 (20a))

b. Buturigaku-wa [syuusyoku-ga taihen desu].
 physics-TOP job:hunting-NOM terrible COPULA
 'As for physics, job hunting is terrible. (= If one graduates from physics, he will surely have a very hard time in finding a job.)
 (Kuno 1973b:163 (27a))

No principled reason is stated there, however, as to why a DL, unlike a Topic NP, cannot be licensed in terms of 'aboutness relation'.

- c. [John-ni]_j [so-no hon-o]_i Mary-ga *t_j* *t_i* watasita (koto)
 John-DAT that-GEN book-ACC Mary-NOM handed fact

(Saito 1985:41 (21))

(153) Multiple Heavy NP Shift:

John told *t_i* *t_j* yesterday [a most incredible story]_i [to practically everyone who was still willing to listen]_j
 (Webelhuth 1989:378 (140E))

(154) Scrambling is an adjunction to S. (cf. Saito 1985:78 (59))

An adjunction is usually classified as an A'-movement. If this analysis is correct, it is expected that Scrambling induces WCO effects.⁷⁸ At least apparently this prediction is not borne out, as shown in (155).

- (155) a. [Do-no hon-o]_i John-wa [PP Mary-ga ec yomu maeni] *t_i*
 which-GEN book-ACC John-TOP Mary-NOM read before

yonda no
 read COMP

'Which book_i did John read *t_i* [before Mary read ec]?'
 (Saito 1985:105 (107))

- b. [Dare-o]_j [NP [s *ec_i* hitome ec mita] hito]_i-ga *t_j* sukininatta
 no
 who-ACC glance saw person-NOM fell.in:love COMP

'*Who_j did [the person that took a glance at him]_i fell in love with *t_j*?'
 (Hoji 1985:74 (80))

- c. [Do-no hito-ni-mo]_i John-ga [PP Mary-ga ec atta atode] *t_i*
 which-GEN person-DAT-also John-NOM Mary-NOM met after

⁷⁸ Saito & Hoji 1983 and Saito 1985 claim that the WCO effects are in fact observed in (i), assuming that the anaphoric relation between *zibun* 'self' and its antecedent must be bound variable anaphora:

(i) ??[s Ziro-o [s [NP Hanako-ga zibun-o kiratteiru koto]-ga [VP *t_i*
 Ziro-ACC Hanako-NOM self-ACC hate fact-NOM
 yuutunisiteiru]]]
 depressed
 '[The fact that Hanako dislikes him]_i has depressed Jiro'
 (Saito 1985:112 (117))

There is a brief remark concerning the reported judgment of (i) in Saito 1992:111 (note 5).

atta (koto)
met fact

'(Lit.) (the fact that) every person_i, John met t_i [after Mary had met him].'

(Hoji 1985:75 (82b))

- d. [A-no yubiwa-sae_j] _{NP} [_S ec_i John-kara ec {azukatta/kariteita}]
that-GEN ring-even John-from asked.to:keep / borrowed

gakusei_i]-ga t_j nakusita (koto) ⁷⁹
student-NOM lost fact

'(Lit.) (the fact that) even that ring_j, [the student who was asked to keep/borrowed ec] lost t_j .)

(Hoji 1985:227 (32c))

In Saito & Hoji 1983, Saito 1985 and Hoji 1985, the examples in (155) are analyzed as a parasitic gap construction: that is to say, the configuration in (155) is assimilated to (156):

(156) [Which article_i] did you file t_i [without reading ec]?

Since it is generally assumed that a parasitic gap is licensed only by an overt A'-movement, the observation in (155) is regarded as supporting the claim that Scrambling is an overt A'-movement.⁸⁰

To summarize: Saito 1985 argues (i) that the OS-type construction is derived by the movement of a DL—Scrambling—, and (ii) that Scrambling is an adjunction which is an A'-movement. (i) is supported by the observations of the subjacency effects and 'proper binding violations' (section A.4.1). (ii) is motivated by the fact that DLs can be stacked, and defended by claiming that the sentences in (155) are instances of the parasitic gap construction. We will

⁷⁹ Strictly speaking, (155d) does not qualify as an OS-type construction under our definition, since the clause-initial NP does not have a case-marker. In that respect (155d) should be replaced with (i) below, to which an accusative-marker is added to it.

(i) [A-no yubiwa-sae-o_j] _{NP} [_S ec_i John-kara ec {azukatta/kariteita}]
that-GEN ring-even-ACC John-from asked.to:keep / borrowed
gakusei_i]-ga t_j nakusita (koto)
student-NOM lost fact
'(Lit.) (the fact that) even that ring_j, [the student who was asked to keep/borrowed ec] lost t_j .)

Note that the observational generalization is not affected by this modification.

⁸⁰ Saito 1985 argues that the 'reconstruction effects of Condition C violation' also support the claim that Scrambling is an A'-movement, but as discussed in section A.3.2 above, I consider it inappropriate to regard the observation in question as a basis for constructing a theory of Grammar.

see in section B.1.3 that Yoshimura 1992 argues against (ii), mainly by demonstrating that those in (155) are not instances of the parasitic gap construction.

B.1.2. Scrambling and Anti-scrambling: Kitagawa 1990

Kitagawa 1990 considers (as Saito 1985) that the OS-type construction can be derived by moving a DL—Scrambling—, but he argues that it can also be derived by what he calls *Anti-scrambling*.⁸¹ Let us see first how the two operations are characterized in Kitagawa 1990.

On the one hand, Scrambling is considered to be an adjunction of a focus operator (Kitagawa 1990:16).⁸² The derivation is schematized in (157).

(157) Scrambling:

- a. D-structure:
NP-NOM NP-ACC/DAT V
- b. S-structure/LF:
[NP-ACC/DAT]_i NP-NOM t_i V

He claims that the NP moved by scrambling is necessarily interpreted as a focus, and usually (but not always) phonologically marked by stress.

On the other hand, he proposes that the OS-type construction can be base-generated as in (158a), and then transformed to (158b).⁸³

(158) Anti-scrambling:

- a. D-/S-structure:
NP-ACC/DAT NP-NOM V
- b. LF:
NP-NOM NP-ACC/DAT V

In (158), the nominative-marked NP is moved by Anti-scrambling without leaving a trace. It is assumed in Kitagawa 1990 that Anti-scrambling does not leave a trace because no principle requires its existence. According to his theory, Anti-scrambling is called for because the structure in (158a) would

⁸¹ More precisely, Kitagawa 1990 uses the terms 'scrambling' and 'anti-scrambling', without capitals. But I represent them with capitals in this thesis in order to indicate that they refer to specific operations.

⁸² Haig 1976 calls the operation which derives the scrambling construction as *Emphatic Fronting*, which implies that he considers that the marked word order has something to do with 'emphasis'. Saito 1985:section 3.1 also mentions that the scrambling construction is often requires a focus interpretation, especially in the case of the long distance scrambling construction.

⁸³ Thus, Kitagawa 1990 has proposed the abolishment of the Projection Principle as early as 1990, as he explicitly argues in section 5.

cause a 'Case conflict' if an abstract accusative Case is to be assigned to a nominative-marked NP. No NP is expected to be interpreted as focus in (158), since Scrambling is not involved in deriving this OS-type construction.

Schematically speaking, the PF and the LF representations resulted from Scrambling and Anti-scrambling coincide with the representations of the Deep and the Surface OS-type, respectively.

(159) Scrambling:

PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-ACC/DAT (=DL) ... NP-NOM ... V

(160) Anti-scrambling:

PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-NOM ... NP-ACC/DAT (=DL) ... V

(3) Deep OS-type:

PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-ACC/DAT (=DL) ... NP-NOM ... V

(4) Surface OS-type:

PF: NP-ACC/DAT (=DL) ... NP-NOM ... V
 LF: NP-NOM ... NP-ACC/DAT (=DL) ... V

Although one could thus say that Kitagawa 1990 virtually makes the distinction between the Deep and the Surface OS-type, the properties ascribed to (159) and (160) are substantially different from those of (3) and (4) as argued in this thesis, and hence, the two analyses make distinct predictions.

Scrambling and Anti-scrambling seems to share the properties in (161) according to the analysis presented in Kitagawa 1990.

(161) Properties of a sentence which Scrambling or Anti-scrambling has applied to:

- a. Quantifier scope is ambiguous.
- b. An empty category can be bound by a QP which does not appear to c-command it.⁸⁴
- c. Floating quantifier need not be adjacent to the related NP.

⁸⁴ (i) is an example which is discussed in Kitagawa 1990:section 4.1 regarding the property in (161b).

(i) [_{ec} hahaoya]-o daremo-ga kokoro-kara aisiteiru (koto)
 mother-ACC everyone-NOM heart-from love
 'Everyone sincerely loves his/her mother.'
 (Kitagawa 1990:31 (47a))

Kitagawa 1990 describes the property of (i) by stating that such sentences "do not exhibit a Weak Crossover violation".

(162) Properties of a sentence which neither Scrambling nor Anti-scrambling has applied to:

- a. Quantifier scope is unambiguous.
- b. An empty category cannot be bound by a QP which does not appear to c-command it.
- c. Floating quantifier must be adjacent to the related NP.

The only phenomenon which differentiate (159) and (160) concerns the 'reconstruction effects of Condition C violation'.

(163) Property of (159):

The DL can contain a name which is coreferential with the subject NP.

(164) Property of (160):

The DL cannot contain a name which is coreferential with the subject NP.

And this phenomenon provides empirical support for the claim that the long distance OS-type construction can only be derived in terms of Scrambling.⁸⁵ As I have argued in section A.3.2, however, I do not consider that the nature of this phenomenon is understood enough so that an analysis can be constructed on the basis of it.

In contrast, the Deep and the Surface OS-type have the following properties under our analysis.

(58) Properties of the Deep OS-type:

⁸⁵ It is stated: "[w]hen scrambling is long-distance, this exhausts the possible analysis, and the preposed phrase is necessarily followed by a pause, and is unmistakably interpreted as a focus with at least a mild stress" (Kitagawa 1990:16). Compare (i) and (ii):

- (i) Long distance Scrambling:
 - a. D-structure:
 NP1-NOM [_{CP} NP2-NOM NP3-ACC/DAT V2 COMP] V1
 - b. S-structure/LF:
 [_{NP3-ACC/DAT}]_i NP1-NOM [_{CP} NP2-NOM _{t_i} V2 COMP] V1
- (ii) No long distance Anti-scrambling:
 - a. D-/S-structure:
 NP3-ACC/DAT NP1-NOM [_{CP} NP2-NOM V2 COMP] V1
 - b. unavailable LF for (ii-a):
 NP1-NOM [_{CP} NP2-NOM NP3-ACC/DAT V2 COMP] V1

I interpret the quote above as saying that (ii) is not a possible option because the representation in (ii-b) cannot be derived by moving NP2-NOM in (ii-a). As far as the surface word order is concerned, however, it appears that (ii-b) can be derived by applying Anti-scrambling to both NP1-NOM and NP2-NOM in (ii-a), contrary to what is claimed in Kitagawa 1990. I suppose that he assumes that Anti-scrambling must be as local as A-movement.

- a. Wide scope reading of DL with respect to the subject
- b. Absence of WCO effects (18)

(59) Properties of the Surface OS-type:

- a. Narrow scope reading of DL with respect to the subject
- b. Reconstruction effects (23)
- c. Absence of Condition C violation (24)
- d. Reconstruction of a *wh*-phrase (28),(32)

I have demonstrated that there are syntactic environments in which the Deep OS-type is not allowed, including the long distance OS-type construction, and that the property in (58a) is not observed there. This observation cannot be expressed under the analysis in Kitagawa 1990, because (i) the property (58a) is not ascribed to a particular derivation and (ii) those syntactic environments allow the application of Scrambling whose resulting representation (159) is not different from the Deep OS-type (3).⁸⁶

Although I thus do not agree with Kitagawa 1990 in the analysis of the OS-type construction, it bears an important consequence regarding the SO-type construction. Since a D-structure such as in (158a) is allowed in his analysis, it is expected that a derivation such as in (165) is also possible, in which an SO-type construction is derived by the interaction of Scrambling and Anti-scrambling.

(165) 'SO-type-looking scrambling construction':

- a. D-structure:
NP-ACC/DAT NP-NOM V
- b. S-structure (after scrambling NP-NOM):
[NP-NOM]_i NP-ACC/DAT *t_i* V
- c. LF (after anti-scrambling of *t_i*):⁸⁷
[NP-NOM]_i *t_i* NP-ACC/DAT V

According to Kitagawa 1990, (165) is marked when the nominative-marked NP is not focused/stressed, while it is not marked if the NP is focused/stressed. Kitagawa 1990:28 states as follows: "[m]ore likely than not, when we attempt to detect a higher scope reading of the universal quantifier in [(i) \exists -NOM \forall -ACC V], our mind unconsciously attempts to associate the surface string of

⁸⁶ Nothing would prevent Scrambling from the multiple application in the analysis presented in Kitagawa 1990, and from the application within the perceptual report construction.

⁸⁷ It is assumed that there is no need for extrinsic ordering of operations at LF (or any other component), and hence, Anti-scrambling may take place after QR, which Kitagawa 1990 assumes to be constrained by the scope interpretation hypothesis proposed in Hoji 1985 (see (51) in section 2.3.2 above).

this sentence with an LF derivation that permits such an interpretation. While grammar does in fact permit such an LF derivation of [(i)], *i.e.*, that in [(165) with QR taking place between (b) and (c)], this LF derivation must be associated with a PF representation which lacks the phonetic information to support it. Note that the subject NP in the PF representation of [(i)] is not accompanied by any focus intonation, and hence does not indicate that scrambling has actually applied in this sentence. This mismatch between LF and PF, we claim, enhances the markedness of the scope ambiguity in [(i)]." He thus argues that this analysis can account for the otherwise unexplained mysteries, *i.e.*, why some speakers detect the properties of the OS-type construction (161) even in an SO-type construction, weakly without stress/focus and clearly with stress/focus.

The following examples are provided in Kitagawa 1990 to support this claim.

(166) Scope ambiguity in the focused/stressed SO-type construction:

DAREKA-GA daremo-o aisiteiru
someone-NOM everyone-ACC love

'SOMEONE loves everyone.'

$\exists y[\forall x[x \text{ loves } y]]$

$\forall x[\exists y[x \text{ loves } y]]$

(Kitagawa 1990:9 (13a))

- cf. Dareka-ga daremo-o NANTO SIBATTESIMATTA
someone-NOM everyone-ACC surprisingly roped

'Surprisingly someone ROPED everyone.'

$\exists y[\forall x[x \text{ roped } y]]$

* $\forall x[\exists y[x \text{ roped } y]]$

(Kitagawa 1990:29 (44b))

(167) BVA in the focused/stressed SO-type construction:

- a. [*ec* HAHAOYA]-GA daremo-o kokoro-kara aisiteiru (koto)
mother-NOM everyone-ACC heart-from love

'(Lit.) HIS/HER MOTHER sincerely loves everyone.'

- b. [*ec ec* AISITEIRU HITO]-GA daremo-o tuneni kabau
love person-NOM everyone-ACC always try:to:protect

to-wa kagiranai.

COMP-TOP not:necessarily:the:case

'(Lit.) It is not necessarily the case that THE ONE WHO LOVES HIM/HER always tries to protect everyone.'

(Kitagawa 1990:31 (46))

(168) Quantifier floating in the focused/stressed SO-type construction:

- a. (Kodomo-zyanakute) OTONA-GA biidama-o huta-ri
 child-not adult-NOM marble-ACC 2-person

kaimasita yo
 bought PARTICLE

'Not kids, but two adults bought marbles.'

- b. (Zyosigakusei-zyanakute) DANSIGAKUSEI-GA tyokoreeto-o
 female:student-not male:student-NOM chocolate-ACC

san-nin kuremasita yo
 3-person gave:me PARTICLE

'Not three female students, but three male students gave me chocolate.'

(Kitagawa 1990:38 (58a,b))

I more or less agree with his judgment that (166) can be ambiguous and that (167) and (168) can be acceptable. But I am not certain if the existence of stress/focus plays a crucial role in obtaining the relevant judgment. Notice that (166) uses *daremo* 'everyone', and we have seen in section 2.3.1 that the wide scope reading regarding such a QP does not necessarily depend on the structure. Similarly (167) can be an instance of 'quirky binding' to be discussed in Appendix D, and it is demonstrated there that the apparent BVA reading is not constrained by the familiar c-command requirement. (168) might indicate (94)-(95) mentioned above, if we are to assume that a floating quantifier has to be generated in an adjacent/local position of the related NP.

(94) The PF movement crossing the Deep DL is allowed only marginally.

(95) 'SO-type-looking Deep OS-type':

PF: NP-NOM_j NP-DAT/ACC (=Deep DL) ... t_j ... ec_i ...
 LF: NP-DAT/ACC (=Deep DL) Op_i NP-NOM ... t_i ...

But I do not pursue this possibility in this work, mainly because the relevant empirical facts are not yet very clear to me.

B.1.3. Scrambling as an A-movement: Yoshimura 1992

Let us move on to Yoshimura 1992, who argues, contrary to Saito 1985, that Scrambling should be characterized as an A-movement.

Recall that the substantial part of the arguments in Saito 1985 that

Scrambling is an A'-movement is (i) that it can be stacked, and (ii) that it licenses the parasitic gap construction.

Regarding (i), Yoshimura 1992 adopts the theory proposed in Kuroda 1988, in which it is assumed that there can be multiple specifier positions in Japanese. Thus, each nominative-marked NP in (169) can be located in the IP-spec position according to this theory.⁸⁸

(169) Multiple nominative-marked NP construction:

Bunmeikoku-ga dansei-ga heikin-zyumyoo-ga mizikai.
 civilized:country-NOM male-NOM average-life:span-NOM short

'It is civilized countries that men —their average life-span is short in.'

(Kuno 1973a:71 (27c))

Similarly, Yoshimura 1992 argues that the multiple application of an A-movement is not prohibited.⁸⁹

Yoshimura 1992 provides empirical argument against the assumption underlying (ii), *i.e.*, the assumption that the empty category in (155) is a parasitic gap. I repeat (155a) here for convenience.

- (155) a. [Do-no hon-o]_i John-wa [_{PP} Mary-ga ec yomu maeni] t_i
 which-GEN book-ACC John-TOP Mary-NOM read before
 yonda no
 read COMP

'Which book_i did John read t_i [before Mary read ec]?'
 (Saito 1985:105 (107))

First, it is known that the parasitic gap construction in English exhibits the subjacency effects, as shown in (170):⁹⁰

⁸⁸ See section B.2.1 for the brief summary of Kuroda's theory.

⁸⁹ According to the theory in Kuroda 1988, the following three types of NPs are distinguished with respect to Case Agreement.

- (i) a. a Case-marked category in a Case-marked position (*e.g.* a subject in English)
 b. a non-Case-marked category in a Case-marked position (*e.g.* a Scrambled NP in Japanese)
 c. a non-Case-marked category in a non-Case-marked position (*e.g.* a fronted *wh*-phrase in English)

Although it is not explicitly discussed in Kuroda 1988 how the typology in (i) is to be related with the discussion regarding the different properties between A- and A'-movement, Yoshimura 1992 in effect assimilates the distinction between Case-marked/non-Case-marked position to the one between A/A'-position.

⁹⁰ Yoshimura 1992 cites Kayne 1983, 1984, Longobardi 1984, Chomsky 1986b for the

- (170) Subjacency effects in the parasitic gap construction in English:
- *the books [Op_j you should read t_i [before [talking about ec]] becomes difficult] (Kayne 1984:166 (3b))
 - *he's a man [Op_j that [anyone who meets [people who talk to ec]] usually likes t_i] (Chomsky 1986b:58 (133c))

If the sentences in (155) are instances of the parasitic gap construction, it is expected that the relevant anaphoric relation would fail if *ec* is deeply embedded in an island. Yoshimura 1992 has demonstrated that the anaphoric relation is still successful in (171), contrary to this prediction.

- (171) Absence of subjacency effects in the OS-type construction:
- [Dare-ni_k [[NP [CP *ec*_i [NP [CP *ec*_j nantuumo ec tegami-o dasiteiru] who-DAT many letter-ACC sent] musume_j-o sinpaisita] oya_i]-ga t_k ai-ni-itta]] no daughter-ACC worried parent-NOM see-to-went COMP
*Whom_k did [the parent_j who worried about [NP her daughter [CP who sent many letters to ec]]] go to see t_k ?' (Yoshimura 1992:34 (29c))
 - [LGB ka Aspects-o_j [John_i-ga [PP *ec*_i kinoo [PP PRO_i ec yoma-LGB or Aspects-ACC John-NOM yesterday read-zuni] neta node] ima t_j yondeiru]] rasii without slept because now reading seem
'(*) It seems that LGB or Aspects_j, John is reading t_j now [because yesterday he went to bed [without reading (it)]].'
(Yoshimura 1992:35 (30c))

She also points out that not only an empty category but also an overt form allows a BVA reading in the relevant construction.

- (172) a. LGB to Aspects-o_j [NP [CP Mary-ga *ec*_i {ec/so-re-o} kasiteita] LGB and Aspects-ACC Mary-NOM that-thing-ACC lent hito_i]-ga t_j nakusitesimatta rasii person-NOM lost seem
*It seems that LGB or Aspects_j, [the person to whom Mary lent { ec

observation that the parasitic gap construction in English exhibits the subjacency effects.

- /it}] lost t_j .' (Yoshimura 1992:58 (57b))
- Do-no daigaku-ni_j [NP [CP *ec*_i zyuunen maeni {ec/so-ko-ni} which-GEN university-to ten:years before that-place-to ryuugakusiteita] hito_i]-ga mata t_j nyuugakusita no study person-NOM again entered COMP
*Which foreign university_j did [the person who studied { ec/there} ten years ago] enter t_j again?' (Yoshimura 1992:58 (58b))
 - ?Dare-o_j [so-itu-no hahaoya]-ga t_i aisiteru no who-ACC that-guy-GEN mother-NOM love COMP
Who_j, his mother loves t_i ?' (Saito 1992:73 (10b))

Based on these observations, she concludes that the configuration in (155) should be analyzed as a parasitic construction, and that BVA is available in this configuration because the landing site of Scrambling is an A-position (and hence the WCO effects are not induced).

On the other hand, Yoshimura 1992:246 adopts the following claim made in Saito 1992, in order to account for the 'reconstruction of a *wh*-phrase' (cf. section 2.2.3).

- (173) A constituent moved by scrambling can move back to its D-structure position in the LF component.
(Saito 1992:86 (39))

According to (173), the LF representation of the OS-type construction can be as in (174a) as well as (174b):

- (174) a. NP-NOM NP-ACC/DAT V
b. [NP-ACC/DAT]_i NP-NOM t_i V

Thus, Yoshimura 1992 in effect distinguishes the Deep and the Surface OS-type as two possible representations of the OS-type construction, but it is expected from the analysis presented in Yoshimura 1992 that every OS-type construction should be ambiguous between the Deep and the Surface OS-type, which is a claim empirically distinct from ours.

Since we have claimed in section 2.4 on the basis of the observation regarding the scope interpretation that the long distance OS-type construction can only be the Surface OS-type, it is then expected that it exhibits WCO effects. However, Yoshimura 1992 claims that the long distance OS-type

construction does not show WCO effects, as well as the clause-internal OS-type construction (cf. (155), (171), (172)).⁹¹ We will reexamine this generalization in section 3.2.3 and provide an account why the examples cited in Yoshimura 1992 seem to allow the BVA reading in section 3.4.3.1.

She further assumes (175) along the lines of Saito 1992.

- (175) A bound pronoun must be locally A-bound at S-structure.⁹²
(Yoshimura 1992:262 (53))

She argues that the examples in (176) provide supporting evidence for the assumption in (175), since while the underlined *wh*-phrase c-commands the underlined NP at surface, the c-command relation cannot obtain at LF in which the *wh*-phrase has to be related with a [+WH] COMP, *ka*:

- (176) a. ?[Ittai dare-o]_i Mary-ga [Susan-ga so-itu-no atarasii sensei-ni
the:hell who-ACC Mary-NOM Susan-NOM that-guy-GEN new teacher-DAT

t_i syookaisita ka] siritagatteiru (koto)
introduced Q want.to:know fact

'(Lit.) (the fact that) [who the hell]_i, Mary wants to know [Q [Susan introduced to his new teacher *t_i*]]'

b. ?[Do-no kaisya-ni]_i John-ga [so-ko-no syain-ga *t_i*
which-GEN company-DAT John-NOM that-place-GEN employee-NOM

tangansyo-o dasita ka] siritagatteiru (koto)
petition-ACC submitted Q want.to:know fact

'(Lit.) (the fact that) [to which company]_i, John wants to know [Q [its employees submitted a petition *t_i*]]'
(Yoshimura 1992:263-264 (54c)-(55c))⁹³

⁹¹ Yoshimura 1992 claims that the long distance OS-type construction is derived in terms of successive cyclic A-movement.

⁹² I suppose that (175) can also be restated as in (i), which is minimally different from (ii), its seemingly earlier version discussed in Yoshimura 1992:ch.2:

- (i) A pronoun cannot be locally A-bar bound at S-structure.
(ii) A pronoun cannot be locally A-bar bound.
(Yoshimura 1992:13 (6))

In explaining (ii), Yoshimura 1992:13 states that "[ii] bars a pronoun from taking a *wh*-phrase or a quantifier (hereafter QNP) in an A-bar position (*i.e.*, an operator, cf. Chomsky (1981; 102)) as its local binder, which is the case in [(iii)], but not in [(iv)]."

- (iii) a. ?*Who_i does his_i mother love?
b. ?*His_i mother loves everyone.
(iv) a. Who_i loves his_i mother?
b. Everyone_i loves his_i mother.

One may consider that the assumption in (175) is inevitable in order to account for the observation in (176); nevertheless, we do not want to have a constraint which refers to S-structure, which is no longer admitted as an independent level of representation, under the model of Grammar along the lines of Chomsky 1995 that we assume in this work. I will show in section 3.4.3 below that my analysis of the WCO effects can successfully account for the observation in (176) without stating a condition on S-structure.

To summarize: Yoshimura 1992 argues that the OS-type construction is uniformly derived by Scrambling, and that Scrambling is a movement into an IP-spec position, which can be stacked. But since she assumes (173), the undoing of Scrambling, she in effect distinguishes the Deep and the Surface OS-type, if stated in our terms. Yoshimura 1992 shares most of the assumptions with Saito 1992, which will be reviewed in the next subsection, but differs in the conclusion that every OS-type construction is ambiguous between the Deep and the Surface OS-type (including the long distance OS-type construction), so to speak. Since her claim is mainly based on the distribution of the WCO effects, we postpone examining the crucial observations of hers until the subsequent chapter (especially section 3.4.3). It will be demonstrated there that it is not appropriate to assume that the long distance OS-type construction can be the Deep OS-type, contrary to her claim.

B.1.4. Scrambling which can be undone: Saito 1992

Saito 1992 proposes that the OS-type construction should be considered as consisting of the following operations, as given in (177):⁹⁴

- (177) a. at S-structure:
adjunction to IP (= a movement to a non-argument/non-operator position)
b. at LF:
(i) undone,
(ii) reanalyzed as an A-chain, or
(iii) reanalyzed as an A'-chain
(cf. Saito 1992:99-100 (66))

⁹³ The sentences themselves are not modified, but some of the analysis-dependent notations are omitted from these examples.

⁹⁴ Saito 1992:99 states that he adopts the central ideas proposed in Tada 1990 in presenting this analysis: "Although the analysis proposed in Tada (1990) and the one suggested below are different in the specifics, they are quite similar conceptually and also in the mechanisms employed" (Saito 1992:113 note 27). According to Saito 1992, one of the differences is that Saito 1992 has added (177b-iii). Saito 1992:114 has a remark on a mechanical difference between the two analyses in note 37.

He thus claims that Scrambling is a uniform operation at the level of S-structure while it can be ambiguous between A-chain and A'-chain at LF; he attributes the former claim to Weibelhuth 1989 (cf. section B.2.2) and the latter to Mahajan 1990 (cf. section B.2.3), and states that his analysis is a synthesis of the two theory.⁹⁵ Let us briefly go over how each of his claim is supported by empirical facts, and then consider how his analysis can (or cannot) incorporate the new observations presented in section 2.4 above.

First, Saito 1992 claims that the OS-type construction is generated as in (178a), and Scrambling (as an instance of Move) optionally applies to (178a) to yield (178b).

- (178) a. NP-NOM NP-DAT/ACC ...
 b. [_{IP} NP_i-DAT/ACC [_{IP} NP-NOM ... t_i ...]]

He claims that Scrambling is a uniform operation at this stage, arguing against the theory of Mahajan 1990, which claims that Scrambling is structurally ambiguous at all the levels. Saito 1992 claims that the observation regarding the 'reconstruction effects of Condition C violation' (cf. section A.3.2) should be attributed to the constraints which apply to S-structure, the idea of which may be stated as in (179).⁹⁶

- (179) A movement to a non-argument position exhibits the reconstruction effects of Condition C violation of some sort.

As we discussed in section A.3.2, however, it is impossible to state the intended content of (179) in formal terms, and we have concluded there that the relevant observations should be dismissed from the discussion of the formal properties of the OS-type construction.

Second, Saito 1992 argues that Scrambling can be 'undone' at LF, so that it does not leave any effect on the output LF representation (cf. (177b-i)).⁹⁷

⁹⁵ It does not seem to me, however, that Saito 1992 incorporates any aspect of the theory proposed in Weibelhuth 1989. See especially the following fn.97 and section B.2.2 below.

⁹⁶ Saito 1992:102-103 states: "According to [Weibelhuth's (1989)] hypothesis, scrambled phrases are in A' (non-A) position at S-structure. Hence this hypothesis makes it possible to account for the fact that scrambling in general exhibits reconstruction effects as shown in [(131) in section A.3.2 above]. ... the analysis of scrambling suggested above implies that Condition (C) type reconstruction effects must be accounted for not at LF, but at some level before the reanalysis of an A' chain to an A chain can apply."

⁹⁷ Although Saito 1992 states that the fact that Scrambling can be 'undone' at LF "provides strong support for Weibelhuth's (1989) hypothesis that scrambling differs from regular A' movement operations in that it is movement to a non-operator position" (Saito 1992:89), this is a misleading statement in my opinion. Saito 1992 considers that Scrambling does not (necessarily) form an operator-variable relation, and that this is the reason that Scrambling can be 'undone' at LF. In contrast, while Weibelhuth 1989 assumes

As we have discussed in section 2.2.3, this claim is empirically based on 'reconstruction of a *wh*-phrase'.⁹⁸ He argues that the reason why Scrambling can be 'undone' (unlike *wh*-movement in English) is because it does not involve an operator feature.

Third, Saito 1992 claims that the chain formed by Scrambling can be reanalyzed as an A-chain (cf. (177b-ii)).⁹⁹ He claims that V⁰ raises to I⁰ at LF so that V⁰ can enter into SPEC-head agreement (*i.e.*, Case assignment relation) with an NP in an IP-adjoined position, assuming that an IP-adjoined position can enter into SPEC-head agreement along the lines of Kuroda 1988 (cf. section B.2.1). If the SPEC-head agreement occurs, the chain is reanalyzed as an A-chain, provided that the conditions on A-chains in (180) and (181) are satisfied.

- (180) If C = (a₁, ..., a_n) is a maximal CHAIN, then a_n occupies its unique θ-position and a₁ its unique Case-marked position.
 (Saito 1992:97 (60); cited from Chomsky 1986a: 137 (171))
- (181) Each link of an A chain must be θ-subjacent. (*I.e.*, no barrier can intervene between two members of a single A chain.)
 (Saito 1992:100 (67))¹⁰⁰

that Scrambling is a movement to a non-operator position, he characterizes scrambling as necessarily forming an operator chain. In other words, while Weibelhuth 1989 expects that an adjunction operation (such as Scrambling) exhibits binding properties different from *wh*-movement, for example, he does not expect that it does not form either an argument chain or an operator chain. Therefore, we should consider that Saito's claim that Scrambling can be undone at LF is independent of the theory proposed in Weibelhuth 1989. See section B.2.2 for the summary of the relevant part of Weibelhuth 1989.

⁹⁸ As noted in footnote 14 in section 2.3.3, Saito 1992 regards the relevant example as an instance of the exemption from the Proper Binding Condition.

⁹⁹ Saito 1992 argues against Weibelhuth 1989, in which it is assumed that A-binding is always possible from an adjoined position. As summarized in section B.2.2 below, Weibelhuth 1989 claims (i).

- (i) a. Only A-binding is possible from an argument position.
 b. Only O-binding is possible from an operator position.
 c. Both A-binding and O-binding are available from an adjoined position
 (cf. Weibelhuth 1989:413)

Saito 1992 claims that (24) (repeated above from section 2.2.2) is wrongly predicted to be ungrammatical if A-binding is always possible from an adjoined position.

Saito 1992 also argues that the 'availability of anaphor-binding' (cf. section A.3.1) provides another evidence against Weibelhuth's claim that A-binding is always possible from an adjoined position: he claims that anaphor-binding is not successful in the case of the long distance OS-type construction, contrary to Weibelhuth's prediction. His examples are given in (112) in section A.3.1; I do not repeat them here, since I do not consider *otagai* 'each other' as having a feature [+anaphoric], as discussed in that subsection.

¹⁰⁰ Saito 1992 cites Chomsky 1986b for (181), but I have not been able to locate the part

According to his analysis, the clause-internal Scrambling may or may not be reanalyzed as an A-chain while the long distance Scrambling can never be reanalyzed as an A-chain, because the reanalysis into an A-chain is blocked by the Chain Condition in (181).

Saito 1992 bases this claim on the 'availability of anaphor-binding', which I have argued to be dismissed in section A.3.1 above. Nevertheless, one can appeal the 'absence of the WCO effects' (cf. section 2.2.1) instead, since it is considered that an A-chain does not exhibit WCO effects.¹⁰¹ In addition, if the DL c-commands the nominative-marked NP at LF as in (178b), it is expected that the former can take scope over the latter. Thus two solid observations with respect to the Deep OS-type are compatible with this analysis.

Fourth, Saito 1992 claims that the chain formed by Scrambling can also

which states (181) as it is.

¹⁰¹ In fact Saito 1992 does not attribute the absence of the WCO effects to the Deep OS-type, for the reason that he considers the absence of the WCO effects to be observed in the case of long distance OS-type constructions as well as in the case of clause-internal OS-type constructions. We will see later in section 3.4.3.1 however that this is not a correct generalization, and that the long distance OS-type construction in principle exhibits the WCO effect. It will be accounted for there why there are some examples of the long distance OS-type construction that do not seem to give rise to the WCO effects. Although this conclusion conflicts with what is actually stated in Saito 1992, it is rather desirable for his entire analysis, since then he does not need to resort to an S-structure constraint in order to account for the WCO effects.

Saito 1992:110 states as follows:

- (i) A pronoun can be interpreted as a bound pronoun only if it is non-operator bound.
(Saito 1992:110 (80))

Although the statement in (i) does not explicitly refer to S-structure, it is evident that he means that, since in introducing (i) he states that "[t]he problems posed by [(ii) and (91) in section 3.4.3.1], I believe, indicate that weak crossover is not an LF condition but an S-structure condition, as proposed by Reinhart (1976) and Haik (1983), among others" (Saito 1992:109).

- (ii) ?*[So-itu_i-no hahaoya]_i-ga [dare_i-o aisiteru]_i no
that-guy-GEN mother-NOM who-ACC love Q
'(Lit.) His_i mother loves who_i'
(Saito 1992:107 (77a))

Apparently, Saito 1992 uses the term 'non-operator bound' as meaning 'being bound by an NP which is in a non-operator position, *i.e.*, either in an A-position or in an adjoined position'. Note, however, that Webelhuth 1989 does not employ such a notion: there are only two kinds of binding for him, A(argument)-binding and O(perator)-binding, and it is assumed that both A-binding and O-binding are possible from an adjoined position. Therefore, (i) should be stated as in (iii), if Saito 1992 really wants to incorporate the theory of Webelhuth 1989 in this respect.

- (iii) A pronoun can be interpreted as a bound pronoun only if it is A-bound at S-structure.

be reanalyzed as an A'-chain (cf. (177b-iii)). He argues that (24) can be accounted for "in exactly the same way as the English [(182)]."

- (24) Zibunzisin-o_i [Hanako_i-ga t_i hihansita] (koto)
self-ACC Hanako-NOM criticized fact
'(the fact that) Himself_i, Hanako_i criticized t_i '
(Saito 1992:76 (17))
- (182) Himself_i, John_i likes t_i
(Saito 1992:94 (54))

Therefore it seems that he assumes that Scrambling in (24) is reanalyzed as an A'-chain at LF. Notice however that (24) can also be accounted for if we assume that the Scrambling in (24) is undone at LF (177b-i) and that the binding conditions apply at LF. No explicit discussion is given in Saito 1992 as to the choice between (177b-iii) and (177b-i) in this case. No other arguments are given in Saito 1992 as to the necessity of the A'-chain reanalysis, either.

Thus, although it appears that Saito 1992 proposes an analysis in which the OS-type construction can be represented in three ways at LF, what he really argues for is that some instances of Scrambling can be 'undone' at LF while the other are not, since it is not demonstrated in Saito 1992 that there are instances of Scrambling which exhibits A'-properties in particular. In other words, the substantial part of Saito's analysis can be reinterpreted as in (183).¹⁰²

(183) Saito's Grammar (reinterpreted):

- a. An NP can move without being motivated by feature-checking.
- b. The chain formed by the movement in (183a) can be reanalyzed as an A-chain, provided that the conditions in (180) and (181) are satisfied.
- c. The movement in (183a) must be 'undone' in the covert component unless (183b) takes place.

Notice that (183b) and (183c) can be considered as an analysis the Deep OS-type and the Surface OS-type, respectively. Let us consider now how his analyses can account for the distribution of the Deep OS-type, presented in section 2.4 above. The main observations are summarized in (89), repeated here.

¹⁰² The analysis in Boskovic & Takahashi 1995 seems to be one execution of this reinterpreted version of Saito's analysis, despite its appearance. I do not review Boskovic & Takahashi 1995 in this work, however, since I only have the draft dated March 1995, and there are reasons to believe that this cannot be the final version.

- (89) a. The DL in the long distance OS-type construction is necessarily a Surface DL (section 2.4.1).
 b. There is at most one Deep DL in a clause. In the case of the multiple OS-type construction, it is harder for the second DL to be a Deep DL than the first DL (section 2.4.2).
 c. A DL within a clause expressing an *eventuality* is necessarily a Surface DL (section 2.4.3).

The reinterpretation given in (183) explicitly shows that the availability of the Deep or Surface OS-type under Saito's approach crucially depends on whether the chain can be reanalyzed as an A-chain.

The Grammar in (183) can predict (89a) successfully because of the condition on A-chains in (181). In order to accommodate the observations in (89b,c), on the other hand, it is necessary to add some conditions on Case-marking, such as in (184).

- (184) a. Only one DL can be Case-marked per clause.
 b. It is harder for the second DL to be Case-marked than the first DL.
 c. A DL cannot be Case-marked within a clause expressing an *eventuality*.

(184c) may not add further problem to Approach A, provided that \bar{f} in such a clause is defective in the relevant sense and that the lexical properties of a category can affect the 'Case-marking' ability.¹⁰³

Although (184a) may seem to be a direct consequence from the assumption that Case-marking is an instance of feature-checking, *i.e.*, a one-to-one relation, it is not so straightforward how it can be incorporated into Saito's analysis, since Saito 1992 adopts the characterization of 'Case-marking' given in Kuroda 1988. As reviewed in section B.2.1 below, Kuroda 1988 distinguishes the notion 'Case-marked position' from 'Case-marked category': while every IP-adjoined position (as well as IP-spec position) is a Case-marked position, it is a separate issue under this theory whether a category in such a position is actually Case-marked. In fact the idea in (183a,c) that the DL does not require feature-checking and the assumption in (183b) that the DL can be 'Case-marked' can make a coherent theory only if it is assumed that the DL is in a Case-marked position, but it is not a Case-marked category itself.

As long as one assumes that the 'Case-marking' between positions is the notion that is relevant to the A-chain reanalysis, it would be difficult to derive (184a). If, on the other hand, one assumes that the 'Case-marking' between categories is the notion that is relevant to (183b), the Grammar in (183) would

¹⁰³ This possibility has been pointed out to me by an anonymous reviewer of the volume edited by H. Bennis et al. (1997).

not give a coherent picture. Note also that the idea that the DL is actually assigned Case goes against the core analysis presented in Kuroda 1988, as reviewed in section B.2.1 below.

(184b) raises still tougher problem for Saito's analysis. (184b) states that DL1, rather than DL2, tends to be picked as a target of SPEC-head agreement with V+I.

- (185) a. [IP NP₁-DAT (=DL1) [IP NP₂-ACC (=DL2) [IP NP-NOM ... V+I]]]
 b. [IP NP₁-ACC (=DL1) [IP NP₂-DAT (=DL2) [IP NP-NOM ... V+I]]]

If it were the other way around, *i.e.*, if the NP closer to V+I enters into agreement relation, this might sound more plausible, but the fact is that one has to assume that SPEC-head agreement can occur skipping the closer possible target, and moreover, that such a "long distance" agreement is much more preferred to a "local" agreement. Although it might be possible to conceive of a stipulation to such an effect, I believe that this would destroy the core insight underlying the notion 'agreement'.

Since a Deep DL undergoes movement in Saito's analysis, it also suffer from the problem pointed out in section 2.5.2: namely, it has to be stipulated that Scrambling cannot take place in the covert component. This problem is mentioned in Saito 1992:108 himself, but it is presented as a problem for the absence of WCO effects only, and this has led him to assume that the WCO effects should be attributed to an S-structure constraint. However, it should be considered as a problem for any property which is to be connected with the Deep OS-type. For example, Saito 1992 assumes that the Binding Theory applies at LF, and that an "anaphor" *otagai* 'each other' can be bound by a Deep DL. Although we have argued against the assumption that *otagai* has the feature [+anaphoric] in section A.3.1 above, let us tentatively suppose so, for the sake of discussion. It is then predicted by his theory that an "anaphor" within the nominative-marked NP could be bound by an accusative-marked NP even in an SO-type sentence as long as Scrambling takes place at LF. However, he claims that an SO-type sentence does not allow such "anaphor"-binding (cf. (13) and (15) of Saito 1992), which explicitly goes against his prediction.

Saito 1992 cannot adopt the assumption that Scrambling is motivated by a strong feature, either. Recall that it is one of the core idea of Saito's analysis that scrambling is not driven by feature-checking, and that this is the reason why scrambling can be 'undone' at LF, unlike *wh*-movement or raising in English. Therefore, it would cause internal incoherence if such an assumption is added to Saito's analysis.

Thus, although our analysis has many open ends, as pointed out in section 2.5, I have argued that Saito's analysis would face more serious and

fundamental problems in order to account for the full range of facts.¹⁰⁴

B.2. Other relevant theories

In this last section of chapter 2, we briefly summarize three works: (i) Kuroda 1988, (ii) Webelhuth 1989, and (iii) Mahajan 1990. They are put separately in this section because they are not particularly on the OS-type construction in Japanese. Nevertheless, (i) is crucially referred to by Yoshimura 1992 and Saito 1992 among others, and both (ii) and (iii) provide some theoretical bases for Saito 1992. The following subsections only contain the part of the theories which are relevant to the discussions in the preceding sections.

B.2.1. Kuroda 1988¹⁰⁵

Kuroda 1988 considers that the contrasts between (186) and (187) reflect the fundamental difference between English and Japanese.

(186) Generalizations with respect to English:

- a. Move-WH is obligatory in S-structure (Kuroda 1992:325 Corollary E-5-1)
- a'. Only one WH-phrase is preposed in a +WH sentence (Kuroda 1992:332 Proposition E-6)
- b. The Extended Projection Principle holds for English (Kuroda 1992:325 Corollary E-5-4)
- c. A non-theta subject position may not be left vacant in S-Structure (Kuroda 1992:326 Corollary E-5-5)
- d. There is at most one subject in a sentence (Kuroda 1992:332 Proposition E-7)
- e. There is at most one object in a sentence (Kuroda 1992:332 Proposition E-8)

(187) Generalizations with respect to Japanese:

- a. Japanese does not have obligatory WH-movement in S-Structure (Kuroda 1992:328 Corollary J-11-3)
- b. The Extended Projection Principle does not hold in Japanese (Kuroda 1992:330 Corollary J-11-6)

¹⁰⁴ Saito's analysis may face another problem with respect to the availability of resumption in the Deep OS-type (cf. section A.2), since it is normally considered that an A-chain does not allow resumption. However, this does not make a strong counter argument without a formal theory of resumption in Japanese, which will be pursued in a separate work (Hoji & Ueyama 1998).

¹⁰⁵ Kuroda 1988 is reprinted in Kuroda 1992:315-357. I use Kuroda 1992 for page references in the following exposition, since I suppose that this version is easier to obtain for most of us.

- c. A non-theta subject position (Ext(V)) may be left vacant in SS (Kuroda 1992:330 Corollary J-11-5)¹⁰⁶
- d. A Japanese sentence may have multiple subjects (Kuroda 1992:347 Proposition J-16)
- e. There are double object structures in Japanese (Kuroda 1992:343 Proposition J-15)

The observations in (186) and (187) can be generalized in the following schematic forms, roughly speaking, where α ranges over 'preposed WH', 'subject', 'object'.

(188) Generalizations with respect to English:

- a. α must exist
- b. There is at most one α .

(189) Generalizations with respect to Japanese:

- a. α need not exist.
- b. There can be more than one α .

Kuroda 1988 proposes that such a contrast between English and Japanese stems from (190), under the assumption of (191).

- (190) a. English is a forced Agreement language (Kuroda 1992:325 Proposition E-5)
- b. Japanese is not a forced Agreement language (Kuroda 1992:326 Proposition J-11)
- (191) a. Languages are parametrized as to whether X-Agreement is forced or not (Kuroda 1992:323 Assumption U-3)
- b. X-Agreement is a feature-sharing (co-specification) between a base category and a Max(X) that it governs (Kuroda 1992:323 Assumption U-4)¹⁰⁷
- c. A base category Agrees with at most one Max(X) (Kuroda 1992:332 Assumption U-6)

Kuroda's account roughly goes as follows. Suppose that α occurs in a position related to Agreement. Then since English is a forced Agreement language, α

¹⁰⁶ By 'a non-theta subject position', Kuroda has in mind a subject position of a weather verb. And 'Ext(X)' can be translated as '[Spec,X(P)]' in Chomsky 1995. See Kuroda 1992:354 note 2 for his remark regarding why he avoids using the term 'Specifier' in his paper.

¹⁰⁷ 'Max(X)' in Kuroda's theory stands for XP or X^{\max} in the familiar notation. Similarly, 'a base category' should be understood as X^0 .

must occur ((188a)), and since Agreement relation is restricted to be one-to-one, there can be only one α ((188b)). In contrast, since Japanese is not a forced Agreement language, α need not occur ((189a)), and if it need not be licensed by Agreement, its occurrence is not constrained by (191c) and hence there can be more than one α ((189b)).

He further argues that multiple specifiers are possible as long as (191c) is not violated. Thus, in the structure such as in (192a), "both Max(X) and Max(Y) are interpreted as Ext(I)s": (192a) can be translated as in (192b), if we are to use the more familiar notations.

- (192) a. $[_{Max(I)} Max(X) [_{Max(I)} Max(Y) [_r Max(V) INFL]]]$
(Kuroda 1992:334 (27))
b. $[_{IP} XP [_{IP} YP [_r VP INFL]]]$
where both XP and YP are interpreted as [Spec,INFL].

The basic ideas underlying the notion of 'X-Agreement' given in (191b,c) appear not very different from the theory of agreement proposed in Chomsky 1991 or the checking theory in Chomsky 1995, especially in that the distribution of nominal phrases is aimed to be accounted for in terms of their relations with X^0 s, and in that the features *WH* and *Case* play a central role.¹⁰⁸ However, the contrast between (188a) and (189a) should be derived separately from the one between (188b) and (189b) under Chomsky's theory. On the one hand, the contrast between (188a) and (189a) would be attributed to the existence and the non-existence of a certain feature.¹⁰⁹ On the other hand, the contrast between (188b) and (189b) would be attributed to the difference in property of the relevant features: for example, since it is assumed in Chomsky 1995:section 4.5 that an interpretable feature can enter into checking relation more than once, it would follow that (188b) involves an uninterpretable feature while (189b) involves an interpretable one. The crucial difference between Kuroda's theory and Chomsky's theory is that the former does not, but the latter

¹⁰⁸ There are several differences between Kuroda's and Chomsky's agreement theories. For one thing, Kuroda allows a lexical category to 'agree' with its complement, while Chomsky does not consider it a configuration in which agreement/checking can take place. For another thing, Kuroda assumes that agreement is an S-structure phenomenon (Kuroda 1992:324). In this respect, Kuroda's agreement theory is more comparable to the theory of strong feature checking in Chomsky 1995. Notice that Chomsky 1995:232 assumes that "feature strength is one element of language variation," thus reminding us of (191a). Although the careful comparison between these two theories would lead us to many interesting profound issues, I refrain from it because it is not the purpose of this work.

¹⁰⁹ Considering Kuroda's remark that Agreement is an S-structure phenomenon (Kuroda 1992:324), we should consider that the contrast between (188a) and (189a) should be expressed by the existence and the non-existence of a certain *strong* feature, as mention in the preceding footnote 108. See Chomsky 1995:232-235, and Chomsky 1995:section 4.5 for the notion 'strong'.

does, assume Last Resort, which is repeated from section 1.3.3.2.

- (193) Last Resort (Chomsky 1995:280 (51))
Move F raises F to target K only if F enters into a checking relation with a sublabel of K.

Because of Last Resort, feature checking is necessary in the case of (189b) as well as (188) under Chomsky's theory. In contrast, Kuroda 1988 allows a movement which is not driven by feature checking, and hence he can assume that (189b) does not involve any Agreement.¹¹⁰

Kuroda 1988 considers that the contrast between English and Japanese given in (194) can also be derived from (190).

- (194) a. English does not scramble (Kuroda 1992:325 Corollary E-5-3)
b. Japanese freely scrambles (Kuroda 1992:330 Corollary J-11-4)

First he characterizes Scrambling as a substitution to an IP-spec position.¹¹¹

- (195) The effect of Move-alpha of Max(X) into Ext(I) is scrambling (Kuroda 1992:321 Proposition J-4)¹¹²

It is important under Kuroda's theory to distinguish between the notions '{Agree with/Case-mark} a position' and '{Agree with/Case-mark} a category or a chain'. For example, both Int(V) (*i.e.*, a complement position within VP) and Ext(I) (*i.e.*, IP-spec) are assumed to be a Case-marked position, but it is another issue whether a category in such a position is actually Case-marked by the head. To be more concrete, there are logically four combinations, as shown in (196), of which (196c) is not a possible combination since it is assumed that an NP can be Case-marked only in a Case-marked position:

- (196) a. a Case-marked category in a Case-marked position
b. a non-Case-marked category in a Case-marked position
c. a Case-marked category in a non-Case-marked position
d. a non-Case-marked category in a non-Case-marked position

Now in order to account for the contrast between (194a) and (194b), Kuroda

¹¹⁰ This aspect of Kuroda's theory is restated more explicitly in Fukui & Saito 1996 using the terms of Chomsky 1995.

¹¹¹ Although Kuroda 1988 claims (195), he does not reject the possibility that the scrambling construction is derived by an adjunction to VP: "if an adjunction may also cause word-order change, apparent scrambling could also take place in Max(V). Relevant facts are difficult to determine, and I will leave this problem aside for now." (Kuroda 1992:321)

¹¹² As mentioned above, Max(X) stands for X^{\max} and Ext(I) for [Spec, I].

1988 proposes (197):¹¹³

- (197) A Case-marked maximal category may not move into a Case-marked position (Kuroda 1992:325 Assumption U-5)

If the movement from Int(V) to Ext(I) is called scrambling, the chain resulted from scrambling necessarily occupies more than one Case position by definition. Therefore, such a movement is excluded by (197) once the chain is Case-marked. Thus, (198a,b) are instances of (196a,b), respectively, under Kuroda's theory.

- (198) a. a subject of a finite clause in English; an object in English; some non-Scrambled NPs in Japanese ¹¹⁴
 b. a Scrambled NP in Japanese; some non-Scrambled NPs in Japanese

It is expected from (197) that a movement from Int(V) to Ext(I) is not allowed in a language which requires Agreement, such as English; in contrast, such a movement is expected to be possible in a language which does not force Agreement, such as Japanese. Kuroda 1988 thus derives the observation in (194) from the assumption in (190). The fact that Japanese allows multiple Scrambling is also expected, since IP-spec can be multiple under Kuroda's theory, as discussed in (192).

B.2.2. Webelhuth 1989

Webelhuth 1989 examines Scrambling in German and proposes a theory which accounts for the ambiguous status of Scrambling. Since his theory is mainly based on the observations of Germanic languages, it sometimes does not carry over to the discussion of Japanese as it is, but I briefly introduce his theory in this subsection, since it is mentioned in Saito 1992, reviewed in section B.1.4.¹¹⁵

Webelhuth 1989 claims that the 'licensing of a parasitic gap' and the 'reconstruction effects of Condition C violation' are the properties of an

¹¹³ Kuroda 1988 revises (197) into (i) in order to account for the case-marker drop phenomena in Japanese, but I do not reproduce the argument here.

(i) If a chain is marked with Case, it cannot occupy more than one Case position (Kuroda 1992:328 Assumption U-5 (revised))

¹¹⁴ I do not present Kuroda's analysis of the case-marker drop phenomena in this work, but it is considered in Kuroda 1988 that every NP without a case-marker must be included in (198a).

¹¹⁵ Webelhuth 1989 contains a subsection '6.5.6. Japanese (Altaic)' (p.404) under the section '6.5. Other Free Word Order Languages'. But all we find there is two citations from Kuno 1972b, which state that there is a scrambling construction in Japanese and that the word order is related with pragmatic notions such as new/old information.

O(perator)-chain, as opposed to an A(rgument)-chain.¹¹⁶ Therefore, he categorizes Scrambling as a movement which forms an O-chain. In his section 6.4.3, he argues that the NP moved by Scrambling must have a feature [-F(ocus)], and that this feature is interpreted as an operator feature. Thus, Scrambling shares these properties with a *wh*-movement because both Scrambling and *wh*-movement carry an operator feature and hence form an O-chain.

Now, 'multiple stacking' is not possible in the case of a *wh*-movement. Webelhuth 1989 claims that this is because Scrambling is an adjunction while a *wh*-movement is a substitution to a Spec position.

Finally, the 'absence of the WCO effects' and the 'availability of anaphor-binding' appear to be properties which are often observed with an A-chain, and here the dichotomy of A/O-chain needs to be augmented by some other notions. Calling the relation involved in these phenomena as *A-binding* and the one involved in the 'licensing of a parasitic gap' as *O-binding*, Webelhuth 1989:section 6.6 proposes the following.

- (199) a. Only A-binding is possible from an argument position.
 b. Only O-binding is possible from an operator position.
 c. Both A-binding and O-binding are available from an adjoined position
 (cf. Webelhuth 1989:413)

Thus, he attributes the binding possibilities to the property of the position, rather than to the property of the chain (*i.e.*, whether the chain is an O-chain or an A-chain).

As supporting evidence for the claim in (199), Webelhuth 1989 points out that A-binding and O-binding can be established at the same time in the scrambling construction. (200) is an example in which the scrambled QP binds a dependent term and licenses a parasitic gap at the same time; and (201) is an example in which the DP binds an anaphor and licenses a parasitic gap at the same time.

- (200) ?Peter hat jeden Gast_j [ohne *ec*_i anzuschauen] seinem_i Nachbarn
 Peter has every guest without to:look:at his neighbor
*t*_i vorgestellt
 introduced

'Peter introduced [every guest]_j to his_i neighbor [without looking at

¹¹⁶ As noted in section A.3.2 above, Webelhuth 1989 reports that the generalization which Lebeaux 1990 puts forth with respect to the reconstruction effects of Condition C violation is confirmed in German. Therefore, we do not have particular reasons to dismiss this observation in this case.

ec_i]
(Webelhuth 1989:410 (187G))

- (201) ?Peter hat die Gäste_j [ohne ec_i anzuschauen] einander t_i
Peter has the guests without looking:at each:other

vorgestellt
introduced:to

'Peter introduced [the guests]_j to [each other]_i; [without looking at ec_i].'
(Webelhuth 1989:411 (189G))

It is difficult, however, to conceive of examples in Japanese in which the relevant points of (200) and (201) are reproduced, since we do not have a clear case of O-binding: first, it is hard to identify the parasitic gap construction in Japanese, since apparently an empty nominal can occur anywhere; in addition, we have dismissed 'reconstruction effects of Condition C violation' in the case of Japanese for the reason presented in section A.3.2 above. Therefore, we cannot examine the validity of his claim in (199) on the basis of Japanese.

Nevertheless, there is one clear difference between Webelhuth's analysis and ours: the former does not admit the Surface OS-type in our term. Therefore, if one is to bring Webelhuth's analysis directly into Japanese, one will lose the account for the phenomenon of 'reconstruction of a *wh*-phrase' (cf. section 2.2.3) and the entire paradigm of scope interaction (and eventually the theory of WCO effects to be presented below).

B.2.3. Mahajan 1990

Mahajan 1990 examines scrambling in Hindi, and proposes that it is structurally ambiguous between A-movement and A'-movement. Mahajan 1990 considers that the 'absence of the WCO effects' and the 'availability of anaphor-binding' are properties of an A-movement, and that the 'reconstruction effects', the 'absence of Condition C violation', and the 'licensing of a parasitic gap' are properties of an A'-movement.

After demonstrating that the clause-internal scrambling construction in Hindi exhibits all these properties, he shows that an A-property and an A'-property do not obtain at the same time, arguing against the analysis of Webelhuth 1989 which states that a scrambled NP is compatible with both A-binding (*e.g.* BVA and anaphor-binding) and O-binding (*e.g.* 'licensing of a parasitic gap').¹¹⁷ He also shows that the long distance scrambling

¹¹⁷ Mahajan 1990 provides unacceptable examples which are meant to involve at the same time (i) the 'absence of the WCO effects' and the 'reconstruction effects', or (ii) the 'absence of the WCO effects' and the 'licensing of a parasitic gap'.

construction does not have those A-properties. This is expected, given that an A-chain cannot extend beyond a clause boundary, roughly speaking.

Thus, Mahajan 1990 proposes that there are two types of landing sites of a movement involved in the scrambling construction, one being an A-position and the other an A'-position, and that the landing site determines the properties of the construction.

Detail aside, this is also a theory in which the Surface OS-type is not recognized. Therefore, just as in the case of Webelhuth's analysis, if one transports Mahajan's analysis directly into Japanese, one cannot account for the phenomena which we have attributed to the Surface OS-type.¹¹⁸

¹¹⁸ Miyagawa 1997 claims that the OS-type construction is ambiguous between A-movement and A'-movement. The main purpose of Miyagawa 1997 is to argue that the relevant movements are both feature-driven (*i.e.*, driven by Case feature and focus feature, respectively), and to claim that it is not necessary to consider that Scrambling is an optional operation. It is not very clear to me however if he has achieved his goal, since the locus of the optionality is simply moved to other part of the grammar under his analysis. First, he does not state explicitly which X⁰ can carry a focus feature, which is to motivate an A'-scrambling, but it has to be assumed that the relevant head can carry the feature 'optionally'. I recognize that such optionality is indeed admitted in the theory proposed in Chomsky 1995, but I do not consider that it can be the answer of the optionality problem. Moreover, his analysis in effect requires an assumption that the fusion of Agr_S and Agr_O, which is argued to trigger the A-movement, can take place 'optionally'. As I understand, such optionality is not admitted in any theory which aims to get rid of optional operations altogether.

In contrast, Fukui 1993 and Fukui & Saito 1996 approach the issue of optionality along the lines of Kuroda 1988. Recall that the theory in Kuroda 1988 does not assume Last Resort and hence it allows movements which are not feature-driven; the claim that there can be multiple specifier in Japanese is also made on the basis of this idea. Fukui & Saito 1996 partly restates Kuroda's idea more explicitly using the terms of Chomsky 1995. For example, it is claimed that Scrambling need not be motivated by feature-checking, since the resulting structure is indistinguishable from the structure made by Merge, which is assumed not to fall under Last Resort.

Chapter 2. On the Scrambling Construction: Preliminary Discussion

2.1. Aim of This Chapter	23
2.2. Two OS-type Constructions.....	29
2.2.1. A-properties: absence of the WCO effects.....	29
2.2.2. A'-properties: reconstruction effects.....	31
2.2.3. 'Undoing' of the movement: reconstruction of a <i>wh</i> -phrase.....	34
2.2.4. The Deep OS-type and the Surface OS-type.....	37
2.3. On Scope Interpretations	39
2.3.1. Scope Interpretations and the OS-type construction	39
2.3.2. Scope Interpretation Hypothesis	44
2.4. Distributional Constraints on the Deep DL.....	47
2.4.1. Long distance OS-type construction.....	48
2.4.2. Multiple OS-type construction.....	51
2.4.3. Special type of clauses	55
2.4.4. Summary	60
2.5. Summary and Discussion.....	61
2.5.1. Summary of the claims in this chapter	61
2.5.2. Analysis of the Deep OS-type.....	62
2.5.3. Analysis of the Surface OS-type	64
Appendix A: Critical Discussions on Some Observations in the Literature.....	66
A.1. Long distance OS-type construction and the 'major object'.....	66
A.2. Resumption.....	68
A.3. Observations which are dismissed in this thesis.....	71
A.3.1. Availability of anaphor-binding	71
A.3.2. Reconstruction effects of Condition C violation.....	78
A.4. PF movement analysis and some related issues.....	86
A.4.1. Proper binding violations.....	86
A.4.2. Scrambling of a nominative-marked NP.....	89
A.4.3. Quantifier floating.....	90

Appendix B: Critical Reviews on Previous Analyses.....	92
B.1. Analyses of the OS-type construction in Japanese.....	93
B.1.1. Scrambling as an A'-movement: Saito 1985	93
B.1.2. Scrambling and Anti-scrambling: Kitagawa 1990.....	96
B.1.3. Scrambling as an A-movement: Yoshimura 1992.....	101
B.1.4. Scrambling which can be undone: Saito 1992.....	106
B.2. Other relevant theories	113
B.2.1. Kuroda 1988.....	113
B.2.2. Webelhuth 1989	117
B.2.3. Mahajan 1990.....	119