

## Chapter 3. The Weak Crossover Effects and the Reconstruction Effects

### 3.1. Introduction

The aim of this chapter is to consider the syntactic conditions under which a BVA reading is available.<sup>1</sup> As mentioned in section 1.1, I use the term 'BVA' (in capital) purely descriptively as given in (1).

- (1) Any anaphoric relation between  $\alpha$  and  $\beta$  is called 'BVA' in the following, if
- (i)  $\alpha$  is an expression which can induce a distributive reading, such as *kanarinokazu-no NP* 'most of the NPs', *NP-sae* 'even NP', *do-no NP* 'which NP' and so on,<sup>2</sup> and
  - (ii)  $\beta$  is a singular-denoting expression which need not refer to a specific individual.

It will be argued later in section 5.3 that some instances of BVA should not be analyzed as bound variable anaphora in the technical sense: *i.e.*, as anaphora between two occurrences of the identical bound variable.

One may consider that the conditions on the availability of a BVA reading should only refer to the LF representation, since it is a matter of 'meaning', rather than 'pronunciation', informally speaking. The observations in this chapter will demonstrate, however, that not only the LF representation but also the PF representation have to be taken into consideration in describing the conditions on the availability of a BVA reading between  $\alpha$  and  $\beta$ . More specifically, it will be shown that the two structural requirements in (2) are relevant to this issue.

- (2) Structural considerations:
- a. Does the QR-trace of  $\alpha$  c-command  $\beta$  at LF?
  - b. Does  $\alpha$  precede  $\beta$  at PF?

<sup>1</sup> The discussion on an earlier version of this work (at Kobe University; December 1997) was very helpful for me in reorganizing the materials presented in this chapter. I am grateful to the audience there for raising many questions to clarify the points; in particular I thank Satoshi Kinsui for in effect suggesting me to present the summary of the observations in the form of a table, such as in (63) and (67).

<sup>2</sup> Japanese expressions such as *kanarinokazu-no NP* 'most of the NPs' and *Toyota to Nissan* 'Toyota and Nissan' can enter into BVA with a singular-denoting dependent term.

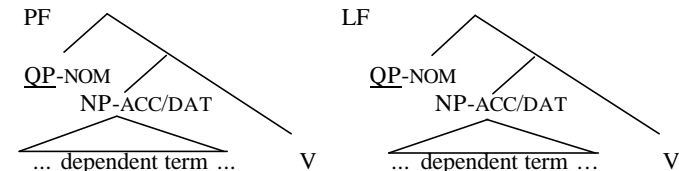
Note that the two requirements in (2) are presented as neither conjunctive nor disjunctive. The distribution of BVA is not that simple, as presented immediately.

In order to show that both (2a) and (2b) are relevant to the availability of a BVA reading, we need to examine the following four types configurations.

- (3) Configuration type 1:
  - a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.
  - b.  $\alpha$  precedes  $\beta$  at PF.
- (4) Configuration type 2:
  - a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
  - b.  $\alpha$  does not precede  $\beta$  at PF.
- (5) Configuration type 3:
  - a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
  - b.  $\alpha$  precedes  $\beta$  at PF.
- (6) Configuration type 4:
  - a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.
  - b.  $\alpha$  does not precede  $\beta$  at PF.

Configuration type 1 (3) and Configuration type 2 (4) are not very difficult to find; for example, (7) and (8) can be their instances.<sup>3</sup>

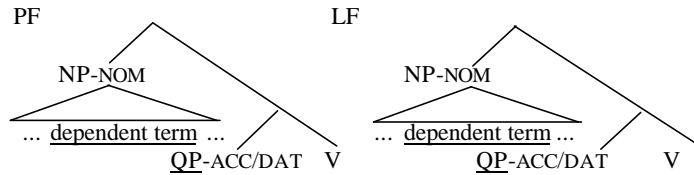
- (7) SO-type configuration I:  
 PF:  $\underline{\alpha}$ -NOM ... [ ...  $\underline{\beta}$  ... ]-ACC/DAT ... V  
 $\alpha$  precedes  $\beta$  at PF.  
 LF:  $\underline{\alpha}$ -NOM ... [ ...  $\underline{\beta}$  ... ]-ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.



- (8) SO-type configuration II:  
 PF: [ ...  $\underline{\beta}$  ... ]-NOM ...  $\underline{\alpha}$ -ACC/DAT ... V  
 $\alpha$  does not precede  $\beta$  at PF.  
 LF: [ ...  $\underline{\beta}$  ... ]-NOM ...  $\underline{\alpha}$ -ACC/DAT ... V (before QR)

<sup>3</sup> As evident from the attached tree diagrams, I assume that the PF representation has a hierarchical structure.

The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

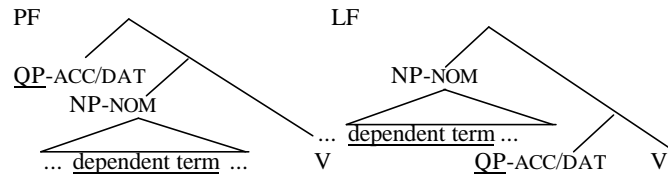


The purpose of the discussions in chapter 2 was to show that Configuration types 3 and 4 are also found in Japanese, by using the Surface OS-type.

(9) (Surface) OS-type configuration I:

PF:  $\alpha$ -ACC/DAT ... [ ...  $\beta$  ... ]-NOM ... V  
 $\alpha$  precedes  $\beta$  at PF.

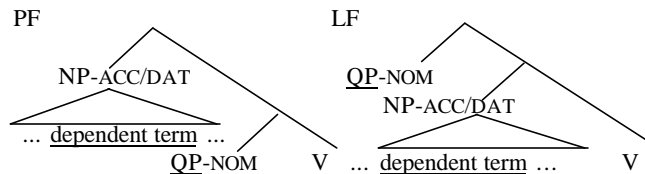
LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.



(10) (Surface) OS-type configuration II:

PF: [ ...  $\beta$  ... ]-ACC/DAT ...  $\alpha$ -NOM ... V  
 $\alpha$  does not precede  $\beta$  at PF.

LF:  $\alpha$ -NOM ... [ ...  $\beta$  ... ]-ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.



It will be shown below that some instances of OS-type configurations I and II do not allow BVA. Obviously it is crucial to be able to identify the Surface OS-type unambiguously, since the relevant c-command relation would be reversed in the LF representation of the Deep OS-type. Recall that I have shown in chapter 2 on the basis of the observation of the scope interaction that there are syntactic environments in which only the Surface OS-type can occur.

- (11) a. The DL in the long distance OS-type construction is necessarily a Surface DL.  
 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.  
 c. A DL within a clause expressing an *eventuality* is necessarily a Surface DL.

These constructions will be examined when the distinction between the Surface and the Deep OS-type is critical.

The availability of a BVA reading is affected not only by the structural relation between  $\alpha$  and  $\beta$ , but also by the lexical choice of  $\alpha$  and  $\beta$ . As pointed out in Hoji 1995a and illustrated in the subsequent subsections, there are configurations in which a BVA reading between  $\alpha$  and  $\beta$  does not obtain if  $\alpha$  is one of the QPs listed in (12a) in contrast to those listed in (12b).<sup>4</sup>

- (12) a. A-type QPs:  
 NP-*sae* 'even NP'  
*kanarinokazu-no* NP 'most of the NPs'  
 10 *izyoo-no* NP 'ten or more NPs'  
 55% *-no* NP '55% of the NPs'  
 NP1 *to* NP2 (*to*) 'NP1 and NP2'  
 NP1 *ka* NP2 (*ka*) 'either NP1 or NP2'
- b. B-type QPs:  
*do-no* NP 'which NP'  
*do-no* NP-*mo* 'every NP'  
 (*subete-no* NP 'every NP')<sup>5</sup>

<sup>4</sup> The descriptive classification between A-type QPs and B-type QPs claimed in this work is mainly based on the syntactic property to be presented in section 3.2.3 below (*i.e.*, the WCO effects), while Hoji 1995a originally made this distinction on the basis of the observation of the so-called Principle B effects, as we will see in section 3.4.2. Another property of an A-type QP is presented in section 3.2.1 (*i.e.*, the incompatibility with a <sup>large</sup>NP), but it seems that the effect of this property varies to some extent, depending on the choice of an A-type QP, while the property to be presented in section 3.2.3 is observed almost uniformly with the QPs listed in (12a). I will argue later in section 5.3.4 that A-type QPs and B-type QPs are distinguished in terms of the semantic properties of the QP.

<sup>5</sup> *Subete-no* NP 'every NP' is put in parentheses in (12b) because some degree of marginality accompanies to it when it patterns with *do-no* NP 'which NP'. The acceptability variation among speakers is also observed. (It seems that *every NP* in English qualifies as a B-type QP more easily than *subete-no NP* in Japanese. See section 3.4.1 for discussion of BVA in English.) The examples using *subete-no* NP 'every NP' are

Let us tentatively call those in (12a) A-type QPs and those in (12b) B-type QPs. In most examples in the following subsections, NP-*sae* 'even NP' is used as an instance of an A-type QP, and *do-no* NP 'which NP' is used as a representative of a B-type QPs. By citing those examples, however, I am claiming that the other quantificational expressions in (12) also exhibit the same syntactic properties in principle, although there are cases that the availability of a BVA reading is affected by non-syntactic factors, the detail of which I cannot discuss in this work.

In addition, it will be shown that there are cases in which a BVA reading between  $\alpha$  and  $\beta$  is harder to obtain if an expression such as in (13a) is used as  $\beta$ , compared to a case in which an expression such as in (13b) is used.<sup>6,7</sup>

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not provided in the following discussion because of this marginality/variation. In the analysis of dependency to be proposed in chapter 5, I will try to give an account of this marginality/variation.

<sup>6</sup> As will be reviewed in section 3.4.2 below, Hoji 1995a proposes that there are syntactically two ways of yielding a BVA reading, and in effect points out the distinction between <sup>large</sup>NPs and <sup>small</sup>NPs, on the basis of the observation regarding the property to be presented in section 3.2.1 below (*i.e.*, the incompatibility with an A-type QP). Prior to that, Hoji 1990a:69-70 also reports the relevant observation, citing the examples in (i)-(iii). (Notations and translations are slightly adapted.)

- (i) do-no daigaku-mo [so-no daigaku-no gengogakusya]-o  
 which-GEN university-also that-GEN university-GEN linguists-ACC  
 tairyooni kubinisita  
 many fired  
 'every university fired that university's linguists by a large number'  
 (Hoji 1990a:(23a))
- (ii) \*[Furansu-no daigaku to Itariya-no daigaku]-ga [so-no  
 France-GEN university and Italy-GEN university-NOM that-GEN  
 daigaku-no gengogakusya]-o tairyooni kubinisita  
 university-GEN linguists-ACC many fired  
 '[(each of) {the/a} French university and {the/a} Italian university] fired that  
 university's linguists by a large number'  
 (Hoji 1990a:(23b))
- (iii) [Furansu-no daigaku to Itariya-no daigaku]-ga [so-ko-no  
 France-GEN university and Italy-GEN university-NOM that-place-GEN  
 gengogakusya]-o tairyooni kubinisita  
 linguists-ACC many fired  
 '[(each of) {the/a} French university and {the/a} Italian university] fired its  
 linguists by a large number'  
 (Hoji 1990a:(24))

<sup>7</sup> The distinction between <sup>large</sup>NPs and <sup>small</sup>NPs in this work is mainly based on the property to be presented in section 3.2.4 below (*i.e.* the reconstruction effects), rather than the one in section 3.2.1 below (*i.e.*, the incompatibility with an A-type QP), since the effect of the latter property is sometimes not very clear, as mentioned in footnote 4 above.

- (13) a. <sup>large</sup>NPs:  
*so-no zidoosya-gaisya* 'that automobile company'  
*so-no daigaku-insei* 'that graduate student'
- b. <sup>small</sup>NPs  
*so-ko* 'it/that institution'  
*so-re* 'it/that thing'  
 (*so-itu* 'he/that guy')<sup>8</sup>

Again tentatively, I call those in (13a) and (13b) as <sup>large</sup>NPs and <sup>small</sup>NPs, respectively.

Following Hoji 1995a, I assume that the distinction between <sup>large</sup>NPs and <sup>small</sup>NPs is basically determined based on the 'amount of semantic content' on N.<sup>9</sup> Since the 'amount of semantic content' is a matter of degree, it follows that it is a partition relative to each other, rather than an absolute distinction. Since the 'amount of semantic content' is subjective in nature, it is well expected that the ways of classification vary depending on speakers and contexts. Therefore, these notions—<sup>large</sup>NPs and <sup>small</sup>NPs—should be regarded as purely for the sake of description, rather than as theoretical terms.

*So-ko* 'that place/it' and *so-re* 'that thing/it' are the dependent terms whose 'semantic content' is the smallest among the (overt) NPs in Japanese.<sup>10</sup> Therefore, they are most likely to exhibit properties of a <sup>small</sup>NP to be described below. Nevertheless, it is possible that even these expressions do not qualify as a <sup>small</sup>NP for some speakers, since they do retain some 'semantic content' represented by [<sub>N</sub> -*ko*] and [<sub>N</sub> -*re*].<sup>11</sup> In addition, *so-itu* 'he/that guy' is less

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<sup>8</sup> As is implied by the gloss 'guy', *so-itu* is regarded to be a rough and impolite expression: usually such a word is used by men in referring to a non-respected person, and a lady is not supposed to use such words. Unlike 'that guy' in English, however, *so-itu* can refer to either a male or a female.

<sup>9</sup> I will discuss later in section 5.3.2 as to why the 'amount of semantic content' on N affects the availability of a BVA reading.

<sup>10</sup> See the brief discussion on the demonstratives in Japanese in section 1.4.2.

<sup>11</sup> Based on such a consideration, Hoji 1995a: section 3 in effect suggests that it is a marked option in Japanese to use a dependency which requires a <sup>small</sup>NP (*i.e.*, Formal Dependency, to be introduced in section 3.3 below), while it is an unmarked option in English since a pronoun can be used as a <sup>small</sup>NP without any difficulty. For example, a BVA reading may be a preferred reading in the case of an English sentence such as in (i), while the preferred reading of *so-ko* in (ii) is most likely a referential one (*i.e.*, *so-ko* is likely to be interpreted to refer to some other specific company).

- (i) Every company recommended its subsidiary.  
 (ii) Subete-no kaisya-ga [so-ko-no ko-gaisya]-o  
 every-GEN company-NOM that-place-GEN child-company-ACC

suitable as a <sup>small</sup>NP than *so-ko* 'it/that institution', since *so-itu* has an additional derogative meaning.<sup>12</sup>

*So-no zidoosya-gaisya* 'that automobile company', on the other hand, is much harder to be a <sup>small</sup>NP because of its 'amount of semantic content', but this does not mean that it can never be regarded as a <sup>small</sup>NP. For example, under the context that everyone has been talking about automobile companies to the effect that the NP 'automobile company' becomes not informative any more, it is fairly possible that an NP such as *so-no zidoosya-gaisya* 'that automobile company' exhibits properties of a <sup>small</sup>NP. Although such indeterminacy always accompanies to the distinction between a <sup>large</sup>NP and a <sup>small</sup>NP, I use those expressions listed in (13) in the following examples for the sake of exposition.<sup>13</sup>

In the following four subsections, I illustrate how the distinction between A-type QPs and B-type QPs and the one between <sup>large</sup>NPs and <sup>small</sup>NPs affect the availability of a BVA reading for each of the configuration introduced above.

### 3.2. Observations in Japanese

The aim of this section is to examine what type of  $\alpha$  and  $\beta$  can enter into BVA under what type of configuration in Japanese. I consider the four types of configurations one by one in the subsequent subsections.

#### 3.2.1. SO-type configuration I

We begin with Configuration type 1 in (3), examining SO-type configuration I in (7):

- (3) Configuration type 1:  
 a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
 b.  $\alpha$  precedes  $\beta$  at PF.
- (7) SO-type configuration I:  
 PF:  $\alpha$ -NOM ... [ ...  $\beta$  ... ]-ACC/DAT ... V  
 $\alpha$  precedes  $\beta$  at PF.

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suisensita  
 recommended  
 'Every company recommended [*so-ko*'s subsidiary].'

<sup>12</sup> This remark also originates in Hoji 1995a.

<sup>13</sup> I almost exclusively use *so-no zidoosya-gaisya* 'that automobile company' as an instance of a <sup>large</sup>NP in the following examples. Although this is convenient for the purpose of showing the relevant examples in minimal pairs, this may not be a good strategy for demonstrating the effect of using a <sup>large</sup>NP, since it is probable that it becomes more and more like a <sup>small</sup>NP as we get used to this particular expression.

LF:  $\alpha$ -NOM ... [ ...  $\beta$  ... ]-ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.

As exemplified below, a BVA reading obtains irrespective of the QP type if the dependent term is a <sup>small</sup>NP.<sup>14</sup>

- (14) A-type QP & <sup>small</sup>NP:

Toyota-sae-ga [so-ko-no ko-gaisya]-o suisensita.  
 Toyota-even-NOM that-place-GEN child-company-ACC recommended

'Even Toyota recommended [its subsidiary].'  
 EVEN(Toyota)( *x* recommended *x*'s subsidiary)

PF: [even Toyota]-NOM [so-ko's subsidiary]-ACC recommended

LF: [even Toyota]<sub>1</sub> [t<sub>1</sub>(-NOM)] [so-ko's subsidiary]-ACC recommended]  
 (after QR)

- (15) B-type QP & <sup>small</sup>NP:

Do-no zidoosya-gaisya-ga [so-ko-no ko-gaisya]-o  
 which-GEN automobile-company-NOM that-place-GEN child-company-ACC

suisensita no?  
 recommended COMP

'Which automobile company recommended [its subsidiary]?'  
 WH(automobile company)( *x* recommended *x*'s subsidiary)<sup>15</sup>

PF: [which automobile company]-NOM [so-ko's subsidiary]-ACC  
 recommended

LF: [which automobile company]<sub>1</sub> [t<sub>1</sub>(-NOM)] [so-ko's subsidiary]-ACC  
 recommended] (after QR)

If the dependent term is a <sup>large</sup>NP, on the other hand, an A-type QP does not easily yield a BVA reading, while there is no difficulty with a B-type QP.<sup>16</sup>

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<sup>14</sup> Shorthand semantic representations are accompanied to the translation of some of the examples in order to make explicit the intended interpretation. We will return in chapter 5 to the issue of what the relevant semantic representations should look like.

<sup>15</sup> I will propose later a slightly different semantic representation for a BVA reading involving a B-type QP, but this does not affect the claim made in this chapter.

<sup>16</sup> As mentioned in footnotes 4 and 6 above, I do not consider that the contrast between (16) and (17) is the defining property of A-type QPs, since the relevant contrast may not be very clear with some of the A-type QPs, presumably for the reason that the distinction between <sup>small</sup>NPs and <sup>large</sup>NPs is affected by non-syntactic factors, as noted

(16) A-type QP & <sup>large</sup>NP:

\*?Toyota-sae-ga [so-no zidoosya-gaisya-no ko-gaisya]-o  
 Toyota-even-NOM that-GEN automobile-company-GEN child-company-ACC

suisensita.  
 recommended

'Even Toyota recommended [that automobile company's subsidiary].'  
 EVEN(Toyota)( *x* recommended *x's* subsidiary)

PF: [even Toyota]-NOM [so-no zidoosya-gaisya's subsidiary]-ACC  
 recommended

LF: [even Toyota]<sub>1</sub> [ t<sub>1</sub>(-NOM) [so-no zidoosya-gaisya's subsidiary]-ACC  
 recommended] (after QR)

(17) B-type QP & <sup>large</sup>NP:

Do-no zidoosya-gaisya-ga [so-no zidoosya-gaisya-no  
 which-GEN automobile-company-NOM that-GEN automobile-company-GEN

ko-gaisya]-o suisensita no?  
 child-company-ACC recommended COMP

'Which automobile company recommended [that automobile company's  
 subsidiary]?'  
 WH(automobile company)(*x* recommended *x's* subsidiary)

PF: [which automobile company]-NOM [so-no zidoosya-gaisya's  
 subsidiary]-ACC recommended

LF: [which automobile company]<sub>1</sub> [ t<sub>1</sub>(-NOM) [so-no zidoosya-gaisya's  
 subsidiary]-ACC recommended] (after QR)

**3.2.2. SO-type configuration II**

A BVA reading does not obtain in Configuration type 2 in (4) in principle.<sup>17</sup>

above. In contrast, the property to be discussed in section 3.2.3 (*i.e.*, the WCO effects) is observed almost uniformly among the QPs which I call A-type in this work, and hence I regard it as the defining property of the A-type QP.

<sup>17</sup> Although I claim that no syntactic dependency is established between  $\alpha$  and  $\beta$  in Configuration type 2, there are cases in which a BVA reading appears to marginally obtain in SO-type configuration II in (8). This is a phenomenon which Ueyama 1997 calls *quirky binding*. I maintain that no syntactic dependency is involved in this apparent BVA reading, on the basis of the observation that only a universal QP can yield such a reading and that the availability is largely determined by pragmatic factors, as discussed in Appendix D below.

## (4) Configuration type 2:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- b.  $\alpha$  does not precede  $\beta$  at PF.

SO-type configuration II in (8) is one instance of Configuration type 2, and as illustrated below, a BVA reading is not available in such a configuration, irrespective of the lexical choices.

## (8) SO-type configuration II:

PF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V  
 $\alpha$  does not precede  $\beta$  at PF.

LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

(18) A-type QP & <sup>small</sup>NP:

?\*[So-ko-no oya-gaisya]-ga [A-sya-ni-sae Toyota-o  
 that-place-GEN parent-company-NOM A-company-DAT-even Toyota-ACC

suisensita.  
 recommended

'[Its parent company] recommended Toyota to even Company A.'  
 EVEN(Company A)( *x's* parent company recommended Toyota to *x*)

PF: [so-ko's parent company]-NOM [even Company A]-DAT Toyota-ACC  
 recommended

LF: [even Company A]<sub>1</sub> [ [so-ko's parent company]-NOM t<sub>1</sub>(-DAT)  
 Toyota-ACC recommended] (after QR)

(19) A-type QP & <sup>large</sup>NP:

?\*[So-no zidoosya-gaisya-no oya-gaisya]-ga [A-sya-ni-  
 that-GEN automobile-company-GEN parent-company-NOM A-company-DAT-

sae Toyota-o suisensita.  
 even Toyota-ACC recommended

'[That automobile company's parent company] recommended Toyota to  
even Company A.'  
 EVEN(Company A)( *x's* parent company recommended Toyota to *x*)

PF: [so-no zidoosya-gaisya's parent company]-NOM [even Company  
A]-DAT Toyota-ACC recommended

LF: [even Company A]<sub>1</sub> [ [so-no zidoosya-gaisya's parent  
 company]-NOM t<sub>1</sub>(-DAT) Toyota-ACC recommended] (after

QR)

(20) B-type QP & <sup>small</sup>NP:

?\*[So-ko-no oya-gaisya]-ga do-no zidoosya-gaisya-ni  
 that-place-GEN parent-company-NOM which-GEN automobile-company-DAT

Toyota-o suisensita no?  
 Toyota-ACC recommended COMP

'To which automobile company did [its parent company] recommend Toyota?'

WH(automobile company)( *x*'s parent company recommended Toyota to *x* )

PF: [so-ko's parent company]-NOM [which automobile company]-DAT  
 Toyota-ACC recommended

LF: [which automobile company]<sub>1</sub> [ [so-ko's parent company]-NOM t<sub>1</sub>  
 (-DAT) Toyota-ACC recommended] (after QR)

(21) B-type QP & <sup>large</sup>NP:

?\*[So-no zidoosya-gaisya-no oya-gaisya]-ga do-no  
 that-GEN automobile-company-GEN parent-company-NOM which-GEN

zidoosya-gaisya-ni Toyota-o suisensita no?  
 automobile-company-DAT Toyota-ACC recommended COMP

'To which automobile company did [that automobile company's parent company] recommend Toyota?'

WH(automobile company)( *x*'s parent company recommended Toyota to *x* )

PF: [so-no zidoosya-gaisya's parent company]-NOM [which automobile company]-DAT  
 Toyota-ACC recommended

LF: [which automobile company]<sub>1</sub> [ [so-no zidoosya-gaisya's parent company]-NOM t<sub>1</sub>  
 (-DAT) Toyota-ACC recommended] (after QR)

### 3.2.3. OS-type configuration I: WCO effects

Let us move on to Configuration type 3 in (5).

(5) Configuration type 3:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- b.  $\alpha$  precedes  $\beta$  at PF.

The configuration in (9) qualifies as Configuration type 3:

(9) (Surface) OS-type configuration I:

PF:  $\alpha$ -ACC/DAT ... [ ...  $\beta$  ... ]-NOM ... V

$\alpha$  precedes  $\beta$  at PF.

LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)

The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

(9) is an instance of the OS-type construction (*i.e.*, the Object-Subject word order sentence; the so-called scrambling construction) that we have discussed at length in chapter 2: more specifically, it is an instance of the Surface OS-type. Let us briefly review the relevant points made in chapter 2 in section 3.2.3.1, and then discuss the availability of a BVA reading in this configuration.

#### 3.2.3.1. WCO effects and the OS-type construction

I have argued in chapter 2 that the LF representation of the OS-type construction (22) can be either (23) or (24), where DL stands for a 'dislocated NP' and refers to an accusative-/dative-marked NP preceding the nominative-marked NP.

(22) NP-ACC/DAT (=DL) ... NP-NOM ... V

(23) Deep OS-type:

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

(24) Surface OS-type:

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

Thus, if an OS-type construction is the Surface OS-type (*or* if the DL is a Surface DL), the LF representation is indistinguishable from that of the corresponding SO-type construction (*i.e.*, the Subject-Object word order sentence); in other words, the word order difference on the surface does not correlate with a difference in the formal meaning of the sentence in such cases.

Consider now an OS-type construction as schematized in (25), where  $\alpha$  is a QP and  $\beta$  is a dependent term, and  $\alpha$  and  $\beta$  are to be related in terms of BVA.

(25)  $\alpha$ -ACC/DAT (=DL) ... [ ...  $\beta$  ... ]-NOM ... V

According to what we have discussed in chapter 2, the LF representation of (25) can be either (26) or (27).

(26) Deep OS-type:

LF:  $\alpha$ -ACC/DAT (=DL) ... [ ...  $\beta$  ... ]-NOM ... V

(27) Surface OS-type:

LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT (=DL) ... V

If it is the Deep OS-type, it is Configuration type 1, which is discussed in section 3.2.1.

- (3) Configuration type 1:  
 a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
 b.  $\alpha$  precedes  $\beta$  at PF.

Therefore, on the basis of the observation in section 3.2.1, it is expected that a BVA reading is available in (25) if it is the Deep OS-type. If, on the other hand, the OS-type construction in (25) is the Surface OS-type, it is Configuration type 3, which we are going to examine in this subsection.

- (5) Configuration type 3:  
 a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.  
 b.  $\alpha$  precedes  $\beta$  at PF.

It has been reported in Saito & Hoji 1983, Saito 1985, Hoji 1985 and Yoshimura 1992 among others that a BVA reading obtains in an OS-type configuration such as in (28).

- (28) A-sya-ni-sae [so-ko-no oya-gaisya]-ga Toyota-o  
 A-company-DAT-even that-place-GEN parent-company-NOM Toyota-ACC  
 suisensita.  
 recommended  
 '[Its parent company] recommended Toyota to even Company A.'  
 EVEN(Company A)( *x*'s parent company recommended Toyota to *x*)

Examples of this sort have been considered in the literature to show that the WCO effects are absent in the OS-type construction. But as long as (28) can be the Deep OS-type, it is not evident if we should attribute the absence of the WCO effects to the OS-type construction in general, or to the Deep OS-type only. Recall that I have demonstrated that there are syntactic environments in which a Surface DL is allowed, but not a Deep DL. The relevant descriptions are repeated in (29):

- (29) 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 follows that we can examine whether the WCO effects are also absent in the

Surface OS-type by putting the configuration (25) into the syntactic environments given in (29). The constructions in (29a,b,c) are discussed in sections 3.2.3.2, 3.2.3.3 and 3.2.3.4, respectively. It will be shown that the Surface OS-type do exhibit the WCO effects with A-type QPs, which means that Configuration type 3 allows a B-type QP, but not an A-type QP, to enter into BVA.

### 3.2.3.2. Long distance OS-type construction

First, I have argued based on the observation of the scope interpretation that the DL in the long distance OS-type construction is necessarily a Surface DL: that is to say that the LF representation of a long distance OS-type construction such as in (30) is necessarily (31), rather than (32).<sup>18</sup>

- (30) Long distance OS-type construction:  
 PF: [ $\alpha$ -DAT [ ...  $\beta$  ...]-NOM [CP ... *t* ... V COMP] V ]  
 (31) LF representation of (30) (before QR):  
 [[ ...  $\beta$  ...]-NOM [CP ...  $\alpha$ -DAT ... V COMP] V ]  
 (32) Unavailable LF representation for (30) (before QR):  
 \* [ $\alpha$ -DAT [ ...  $\beta$  ...]-NOM [CP ... *e* ... V COMP] V ]

As shown in (33)-(35) below, an A-type QP cannot yield a BVA reading in (30) while a B-type QP can.

- (33) A-type QP & <sup>small</sup>NP:  
 ?\*Toyota-ni-sae [so-ko-no bengosi]-ga [John-ga *ec*  
 Toyota-DAT-even that-place-GEN attorney-NOM John-NOM  
 ayamatta to] omotteiru.  
 apologized COMP think  
 'its attorney thinks [that John apologized to even to Toyota].'  
 ?\*EVEN(Toyota)( *x*'s attorney thinks that John apologized to *x*)  
 PF: even to Toyota [so-ko's attorney]-NOM [John-NOM apologized  
 COMP] think  
 LF: [so-ko's attorney]-NOM [even to Toyota [John-NOM  $t_1$ -(-DAT)  
 apologized] COMP] think (after QR)

- (34) B-type QP & <sup>small</sup>NP:  
Do-no zidoosya-gaisya-ni [so-ko-no bengosi]-ga

<sup>18</sup> As noted in section A.1 above, we should use a dative-marked NP, rather than an accusative-marked NP, as a DL in illustrating a long distance OS-type construction.

which-GEN automobile-company-DAT that-place-GEN attorney-NOM

[John-ga *ec* ayamatta to] omotteiru no?  
John-NOM apologized COMP think COMP

'To which automobile company does [its attorney] think [that John apologized]?'  
WH(automobile company)( *x*'s attorney thinks that John apologized to *x*)

PF: which automobile company [*so-ko*'s attorney]-NOM [John-NOM apologized COMP] think

LF: [which automobile company [[*so-ko*'s attorney]-NOM [John-NOM *t*<sub>1</sub>(-DAT) apologized COMP] think] COMP ] (after QR)

(35) B-type QP & <sup>large</sup>NP:

Do-no zidoosya-gaisya-ni [so-no zidoosya-gaisya-no  
which-GEN automobile-company-DAT that-GEN automobile-company-GEN

bengosi]-ga [John-ga *ec* ayamatta to] omotteiru no?  
attorney-NOM John-NOM apologized COMP think COMP

'To which automobile company does [that automobile company's attorney] think [that John apologized]?'  
WH(automobile company)( *x*'s attorney thinks that John apologized to *x*)

PF: which automobile company [*so-no zidoosya-gaisya*'s attorney]-NOM [John-NOM apologized COMP] think

LF: [which automobile company [[*so-no zidoosya-gaisya*'s attorney]-NOM [John-NOM *t*<sub>1</sub>(-DAT) apologized COMP] think] COMP ] (after QR)

It thus seems that in the long distance OS-type construction (30)-(31), a BVA reading obtains with a B-type QP, but not with an A-type QP. It is not appropriate to conclude based on this observation, however, that an A-type QP does not yield a BVA reading in Configuration type 3 in general, since if QR of NP-*sae* 'even NP' is clause-bounded, the dependent term *so-ko* in (33) is outside its scope at LF, and the relation between the two cannot be BVA.<sup>19</sup>

The similar remark holds with respect to the contrast between (36) and

<sup>19</sup> While I reject the way of argumentation here, it will be shown in the following subsections that this conclusion turns out to be correct.

(37)-(38), while they still demonstrate the contrast between A-type QPs and B-type QPs.

(36) A-type QP & <sup>small</sup>NP:

a. \*?[Kyonen Toyota-ga Nissan-sae-o uttaeta koto]-ga  
last:year Toyota-NOM Nissan-even-ACC sued fact-NOM

so-ko-o toosan-ni oiyatta  
that-place-ACC bankrupt-DAT drove

'[The fact that Toyota sued even Nissan last year] caused it to go bankrupt'

?\*EVEN(Nissan)([the fact that Toyota sued *x* last year] caused *x* to go bankrupt)

PF: [last year Toyota-NOM even Nissan-ACC sued fact]-NOM  
so-ko-ACC to bankrupt drove

LF: [even Nissan [last year Toyota-NOM *t*<sub>1</sub>(-ACC) sued] fact]-NOM  
so-ko-ACC to bankrupt drove (after QR)

b. \*?[Kyonen Nissan-sae-ga Toyota-o uttaeta toyuu riyuu-de],  
last:year Nissan-even-NOM Toyota-ACC sued COMP reason-with

John-ga so-ko-o tyoosasiteiru.  
John-NOM that-place-ACC investigate

'[For the reason that even Nissan sued Toyota last year], John is investigating it.'

EVEN(Nissan)([for the reason that *x* sued Toyota last year] John is investigating *x*)

PF: [last year even Nissan-NOM Toyota-ACC sued COMP] reason-with  
John-NOM so-ko-ACC is investigating

LF: [even Nissan [last year *t*<sub>1</sub>(-NOM) Toyota-ACC sued] COMP]  
reason-with John-NOM so-ko-ACC is investigating (after QR)

(37) B-type QP & <sup>small</sup>NP:

a. [Kyonen Toyota-ga do-no zidoosya-gaisya-o uttaeta  
last:year Toyota-NOM which-GEN automobile-company-ACC sued

koto]-ga so-ko-o toosan-ni oiyatta no?  
fact-NOM that-place-ACC bankrupt-DAT drove COMP

'(Lit.) [The fact that Toyota sued which automobile company last year] caused it to go bankrupt ?'

WH(automobile company)([the fact that Toyota sued *x* last year])



caused  $x$  to go bankrupt)

PF: [last year Toyota-NOM which automobile company-ACC sued  
fact]-NOM so-ko-ACC to bankrupt drove COMP

LF: [which automobile company [[last year Toyota-NOM  $t_1$  (-ACC) sued  
fact]-NOM so-ko-ACC to bankrupt drove] COMP ] (after QR)

b. [Kyonen do-no zidoosya-gaisya-ga Toyota-o uttaeta toyuu  
last:year which-GEN automobile-company-NOM Toyota-ACC sued COMP

riyuu-de], John-ga so-ko-o tyoosaseiru no?  
reason-with John-NOM that-place-ACC is:investigating COMP

'(Lit.) [For the reason that which automobile company sued Toyota last  
year ], is John investigating it?'  
WH(automobile company)([for the reason that  $x$  sued Toyota last

year] John is investigating  $x$ )

PF: [last year which automobile company-NOM Toyota-ACC sued  
COMP] reason-with John-NOM so-ko-ACC is investigating COMP

LF: [which automobile company [[last year  $t_1$  (-NOM) Toyota-ACC sued  
COMP] reason-with John-NOM so-ko-ACC is investigating] COMP ]  
(after QR)

(38) B-type QP & <sup>large</sup>NP:

a. [Kyonen Toyota-ga do-no zidoosya-gaisya-o uttaeta  
last:year Toyota-NOM which-GEN automobile-company-ACC sued

koto]-ga so-no zidoosya-gaisya-o toosan-ni oiyatta no?  
fact-NOM that-GEN automobile-company-ACC bankrupt-DAT drove COMP

'(Lit.) [The fact that Toyota sued which automobile company last year]  
caused that automobile company to go bankrupt ?'

WH(automobile company)([the fact that Toyota sued  $x$  last year]  
caused  $x$  to go bankrupt)

PF: [last year Toyota-NOM which automobile company-ACC sued  
fact]-NOM so-no zidoosya-gaisya-ACC to bankrupt drove COMP

LF: [which automobile company [[last year Toyota-NOM  $t_1$  (-ACC) sued  
fact]-NOM so-no zidoosya-gaisya-ACC to bankrupt drove] COMP ]  
(after QR)

b. [Kyonen do-no zidoosya-gaisya-ga Toyota-o uttaeta toyuu  
last:year which-GEN automobile-company-NOM Toyota-ACC sued COMP

riyuu-de], John-ga so-no zidoosya-gaisya-o tyoosaseiru  
reason-with John-NOM that-GEN automobile-company-ACC is:investigating

no?  
COMP

'(Lit.) [For the reason that which automobile company sued Toyota last  
year], is John is investigating that automobile company?'  
WH(automobile company)([for the reason that  $x$  sued Toyota last

year] John is investigating  $x$ )

PF: [last year which automobile company-NOM Toyota-ACC sued  
COMP] reason-with John-NOM so-no zidoosya-gaisya-ACC is  
investigating COMP

LF: [which automobile company [[last year  $t_1$  (-NOM) Toyota-ACC sued  
COMP] reason-with John-NOM so-no zidoosya-gaisya-ACC is  
investigating] COMP ] (after QR)

Again, it is not appropriate to conclude based on this observation that an A-type QP does not yield a BVA reading in Configuration type 3 in general, since the unavailability of a BVA reading in (36) is expected if QR of NP-*sae* 'even NP' is clause-bounded.<sup>20</sup> Therefore, in order to see if a BVA reading is ever available with an A-type QP in Configuration type 3, it is necessary to examine a

<sup>20</sup> Hayashishita 1997b claims that in a certain usage NP-*sae* 'even NP' can have scope beyond a clause, assuming that the semantic representation of (i-a) should be something like (i-b), where (ii-a) is to be read roughly as in (ii-b).

(i) a. [Manga-sae yom-e-reba], daredemo ko-no siken-ni ukaru.  
comic-even read-can-if anyone this-GEN exam-DAT pass  
'Anyone can pass this exam, if only he can read a comic book.'  
(Literally: 'If one can read even a comic book, anyone can pass this exam.')

b. EVEN $x$  (a comic book)(  $y$  [if  $y$  can read  $x$ ,  $y$  can pass this exam])

(ii) a. EVEN $x$  (F)(S)

b. Suppose that there is an ordered set (*i.e.*, a scale) which contains F as a member. S holds with  $x$  being F; in addition, S holds with  $x$  being any F' which is ordered higher than F in the scale.

According to this analysis, the unavailability of a BVA reading in (iii) might be regarded as evidence that an A-type QP cannot yield a BVA reading in Configuration type 3.

(iii) a. ??/\*?Nissan-sae-o uttae-rare-reba] daredemo so-ko-o  
Nissan-even-ACC sue-can-if anyone that-place-ACC  
toosan-ni oiyar-eru.  
bankrupt-DAT drive-can

'Anyone can make it go bankrupt, if only he can sue Nissan.'

b. EVEN $x$  (Nissan)(  $y$  [if  $y$  can sue  $x$ ,  $y$  can make  $x$  go bankrupt])

But I leave the discussion here, since it is not very evident at this stage if NP-*sae* 'even NP' as used in (i) should be regarded as an A-type QP, and if it can ever enter into BVA.

configuration in which  $\alpha$  and  $\beta$  are in the same clause. The following subsections will deal with such configurations and demonstrate that in fact an A-type QP cannot yield a BVA reading in Configuration type 3.

Summarizing so far, I have shown that a BVA reading obtains in a configuration such as in (30)-(31) if  $\alpha$  is a B-type QP, but not if  $\alpha$  is an A-type QP.

(30) Long distance scrambling construction:

PF: [ $\underline{\alpha}$ -DAT [ ...  $\underline{\beta}$  ...]-NOM [CP ... *t* ... V COMP] V ]

(31) LF representation of (30):

[[ ...  $\underline{\beta}$  ...]-NOM [CP ...  $\underline{\alpha}$ -DAT ... V COMP] V ]

Although this may appear to suggest that an A-type QP cannot yield a BVA reading in Configuration type 3, I have pointed out that it is not a decisive argument, since the unavailability of a BVA reading is also expected from the scope consideration.

(5) Configuration type 3:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- b.  $\alpha$  precedes  $\beta$  at PF.

### 3.2.3.3. Multiple OS-type construction

I have argued in chapter 2 that there is at most one Deep DL in a clause. It follows that at least one of the DLs in (39) is a Surface DL: that is to say that the LF representation of (39) should be either (40a) or (40b), but not as in (41).

(39) Multiple OS-type construction:

PF: ...  $\underline{\alpha}$ -DAT/ACC  $\underline{\alpha}$ -ACC/DAT [ ...  $\underline{\beta}$  ...  $\underline{\beta}$  ...]-NOM V

(40) Possible LF representations of (39):

- a. ...  $\underline{\alpha}$ -DAT/ACC [ ...  $\underline{\beta}$  ...  $\underline{\beta}$  ...]-NOM  $\underline{\alpha}$ -ACC/DAT V  
(before QR)
- b. ... [ ...  $\underline{\beta}$  ...  $\underline{\beta}$  ...]-NOM  $\underline{\alpha}$ -DAT/ACC  $\underline{\alpha}$ -ACC/DAT V  
(before QR)

(41) Unavailable LF representation for (39):

...  $\underline{\alpha}$ -DAT/ACC  $\underline{\alpha}$ -ACC/DAT [ ...  $\underline{\beta}$  ...  $\underline{\beta}$  ...]-NOM V  
(before QR)

In a configuration such as in (39), BVA forms Configuration type 1 if it involves a Deep DL, while it forms Configuration type 3 if it involves a Surface DL.

(3) Configuration type 1:

- a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.
- b.  $\alpha$  precedes  $\beta$  at PF.

(5) Configuration type 3:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- b.  $\alpha$  precedes  $\beta$  at PF.

It is argued in this subsection that a BVA reading is not available in (39) if the  $\alpha$  of a Surface DL is an A-type QP, which means that an A-type QP cannot yield a BVA reading in Configuration type 3.

First let us make sure that there are instances in which two BVA readings obtain simultaneously. For example, (42) involves two sets of  $\alpha$  and  $\beta$  both standing in Configuration type 1.

(42) SO-type construction:

...  $\underline{\alpha}$ -NOM  $\underline{\alpha}$ -DAT [ ...  $\underline{\beta}$  ...  $\underline{\beta}$  ...]-ACC V

As exemplified by (43), both of the two BVA readings are successfully established.

(43) [USC to UCLA to-ga] [55%-no gakusei-ni] [[so-itu-o  
USC and UCLA and-NOM 55%-GEN student-DAT that-guy-ACC

sitteiru] so-ko-no sensei-o] suisen-saseta.  
know that-place-GEN professor-ACC recommend-made

'[(Each of) USC and UCLA] made [55% of the students] recommend [its professor who knows him].'

Note that both QPs in (43) are A-type.

We now examine the multiple OS-type construction in (39). As shown in (44), the two BVA readings do not obtain at the same time if the two QPs are both A-type, while there are instances in which two BVA readings successfully obtain in the multiple OS-type construction, as given in (45) and (46).

(44) A-type QP & A-type QP.<sup>21</sup>

<sup>21</sup> BVA becomes possible if, *55%-no gakusei* '55% of the students' in (44) is replaced with *so-no gakusei* 'that student', for example, thereby allowing the coreference between *so-no gakusei* and *so-itu*.

(i) a. [USC to UCLA to-o] [so-no \_\_\_\_\_gakusei-ni] [[so-itu-o  
USC and UCLA and-ACC that-GEN student-DAT that-guy-ACC  
sitteiru] so-ko-no sensei-ga] suisen-saseta.  
know that-place-GEN professor-NOM recommend-made  
'[Its professor who knows him] made [that student] recommend [(each of) USC and UCLA].'

- a. ?\*[USC to UCLA to-o] [55%-no gakusei-ni]  
 USC and UCLA and-ACC 55%-GEN student-DAT  
 [[so-itu-o sitteiru] so-ko-no sensei-ga] suisen-saseta.  
 that-guy-ACC know that-place-GEN professor-NOM recommend-made  
 '[Its professor who knows him] made [55% of the students]  
 recommend [(each of) USC and UCLA].'
- b. ?\*[55%-no gakusei-ni] [USC to UCLA to-o]  
 55%-GEN student-DAT USC and UCLA and-ACC  
 [[so-itu-o sitteiru] so-ko-no sensei-ga] suisen-saseta.  
 that-guy-ACC know that-place-GEN professor-NOM recommend-made  
 '[Its professor who knows him] made [55% of the students]  
 recommend [(each of) USC and UCLA].'

(45) A-type QP & B-type QP:<sup>22</sup>

- 
- b. [So-no gakusei-ni] [USC to UCLA to-o] [[so-itu-o]  
 that-GEN student-DAT USC and UCLA and-ACC that-guy-ACC  
 sitteiru] so-ko-no sensei-ga] suisen-saseta.  
 know that-place-GEN professor-NOM recommend-made  
 '[Its professor who knows him] made [that student] recommend [(each of) USC  
 and UCLA].'

<sup>22</sup> One may wonder why the examples in (i) are not readily acceptable.  
 (i) A-type QP & B-type QP:

- a. ?\*[USC to UCLA to-o] [do-no gakusei-ni] [[so-itu-o]  
 USC and UCLA and-ACC which-GEN student-DAT that-guy-ACC  
 sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
 know that-place-GEN professor-NOM recommend-made COMP  
 '[Which student] did [its professor who knows him] make recommend [(each  
 of) USC and UCLA]?'  
 b. ?\*[55%-no gakusei-ni] [do-no daigaku-o] [[so-itu-o]  
 55%-GEN student-DAT which-GEN university-ACC that-guy-ACC  
 sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
 know that-place-GEN professor-NOM recommend-made COMP  
 '[Which university] did [its professor who knows him] make [55% of the  
 students] recommend?'

I suppose that the unacceptability of the sentences in (i) is related to the observation in Hoji 1985: section 4.5 that (ii-b) is unacceptable in contrast to (ii-a). (He states in note 40 of chapter 4 that "[E]ssentially the same contrast as in [(iii)] has been independently observed by Taisuke Nishigauchi according to Nobuko Hasegawa and Mamoru Saito (both personal communication).")

- (ii) a. Dare-ga [sake ka biiru]-o nomimasita ka  
 who-NOM sake or beer-ACC drank Q

- a. [USC to UCLA to-o] [do-no gakusei-ni-mo] [[so-itu-o]  
 USC and UCLA and-ACC which-GEN student-DAT-also that-guy-ACC  
 sitteiru] so-ko-no sensei-ga] suisen-saseta  
 know that-place-GEN professor-NOM recommend-made  
 '[Its professor who knows him] made [every student] recommend  
 [(each of) USC and UCLA].'
- b. [55%-no gakusei-ni] [do-no daigaku-o-mo] [[so-itu-o]  
 55%-GEN student-DAT which-GEN university-ACC-also that-guy-  
 o sitteiru] so-ko-no sensei-ga] suisen-saseta  
 ACC know that-place-GEN professor-NOM recommend-made  
 '[Its professor who knows him] made [55% of the students]  
 recommend [every university].'

## (46) B-type QP &amp; B-type QP:

- 
- a. [Do-no daigaku-o] [do-no gakusei-ni-mo] [[so-itu-o]  
 which-GEN university-ACC which-GEN student-DAT-also that-guy-ACC  
 sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
 know that-place-GEN professor-NOM recommend-made COMP

---

'Who drank [sake or beer]?'  
 b. \*[John ka Bill]-ga nani-o nomimasita ka  
 John or Bill-NOM what-ACC drank Q  
 'What did [John or Bill] drink?'  
 (Hoji 1985:264 (110))

Assuming that a *wh*-phrase must always take wide scope by its nature (say, of being connected to the CP-spec position), Hoji 1985 attributes the contrast in (ii) to his scope interpretation hypothesis which in effect prohibits the inverted scope interpretation. He also shows that the DL must take narrow scope in the OS-type construction such as in (iii-a) and wide scope in (iii-b).

- (iii) a. [Sake ka biiru]-o dare-ga nomimasita ka  
 sake or beer-ACC who-NOM drank Q  
 'Who drank [sake or beer]?'  
 b. Nani-o [John ka Bill]-ga nomimasita ka  
 what-ACC John or Bill-NOM drank Q  
 'What did [John or Bill] drink?'

(Hoji 1985:268 (120))

I informally restate the observations in (ii) and (iii) in our terms as in (iv), putting aside for now the question how to derive these generalizations in a principled way:

- (iv) a. A *wh*-phrase DL must take wide scope.  
 b. A DL must be a Surface DL if another NP in the sentence is a *wh*-phrase.

If we assume (iv-b), it follows that the A-type QPs in (i) is a Surface DL, and it is now predicted from our analysis that the relevant BVA reading does not obtain.

'[Which university] did [its professor who knows him] make [every student] recommend?'

- b. [Do-no gakusei-ni] [do-no daigaku-o-mo] [[so-itu-  
which-GEN student-DAT which-GEN university-ACC-also that-guy-  
o sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
ACC know that-place-GEN professor-NOM recommend-made COMP

'[Which student] did [its professor who knows him] make recommend [every university]?'

The observations in (44)-(46) can be accounted for if one assumes that an A-type QP cannot yield a BVA reading in Configuration type 3.

Furthermore, it has been argued in chapter 2 that the second DL can hardly be a Deep DL compared to the first DL. If this is correct, it is expected that the BVA in (47b) is hardly established in case it involves an A-type QP, compared to the case in (47a).

- (47) a. ...  $\alpha$ -ACC/DAT NP-DAT/ACC [ ...  $\beta$  ...]-NOM V  
b. ... NP-DAT/ACC  $\alpha$ -ACC/DAT [ ...  $\beta$  ...]-NOM V

The prediction is borne out, as shown below.<sup>23</sup>

- (48) a. (Kotosi-wa) A-sya-o-sae Toyota-ni so-ko-no  
(this:year-TOP) A-company-ACC-even Toyota-DAT that-place-GEN  
oya-gaisya]-ga suisensita.  
parent-company-NOM recommended  
'(This year,) [its parent company] recommended even Company A to Toyota.'
- b. ?\*(Kotosi-wa) Toyota-ni A-sya-o-sae so-ko-no  
(this:year-TOP) Toyota-DAT A-company-ACC-even that-place-GEN  
oya-gaisya]-ga suisensita.  
parent-company-NOM recommended  
'(This year,) [its parent company] recommended even Company A to Toyota.'

<sup>23</sup> Hong-Keun Park (p.c.; 1997) and Daeho Chung (p.c.; 1997) have pointed out to me that the contrast between the first and second DL does not obtain clearly in Korean. I suspect that this is related to the fact that an accusative case-marker in Korean can appear in a sentence more freely than in Japanese, but I leave it open how to account for this discrepancy between the two languages.

- (49) a. (Kotosi-wa) A-sya-ni-sae Toyota-o so-ko-no  
(this:year-TOP) A-company-DAT-even Toyota-ACC that-place-GEN  
oya-gaisya]-ga suisensita.  
parent-company-NOM recommended  
'(This year,) [its parent company] recommended Toyota to even Company A.'
- b. ?\*(Kotosi-wa) Toyota-o A-sya-ni-sae so-ko-no  
(this:year-TOP) Toyota-ACC A-company-DAT-even that-place-GEN  
oya-gaisya]-ga suisensita.  
parent-company-NOM recommended  
'(This year,) [its parent company] recommended Toyota to even Company A.'

As expected, there is no such contrast in the case of a B-type QP.

- (50) B-type QP and <sup>small</sup>NP:  
a. (Kotosi-wa) Toyota-ni do-no zidoosya-gaisya-o so-ko  
(this:year-TOP) Toyota-DAT which-GEN automobile-company-ACC that-place  
-no oya-gaisya]-ga suisensita no?  
-GEN parent-company-NOM recommended COMP  
'(This year,) which automobile company did [its parent company] recommend to Toyota?'
- b. (Kotosi-wa) Toyota-o do-no zidoosya-gaisya-ni so-ko  
(this:year-TOP) Toyota-ACC which-GEN automobile-company-DAT that-place  
-no oya-gaisya]-ga suisensita no?  
-GEN parent-company-NOM recommended COMP  
'(This year,) to which automobile company did [its parent company] recommend Toyota?'
- (51) B-type QP and <sup>large</sup>NP:  
a. (Kotosi-wa) Toyota-ni do-no zidoosya-gaisya-o so-no  
(this:year-TOP) Toyota-DAT which-GEN automobile-company-ACC that-GEN  
zidoosya-gaisya-no oya-gaisya]-ga suisensita no?  
automobile-company-GEN parent-company-NOM recommended COMP  
'(This year,) which automobile company did [that automobile company's parent company] recommend to Toyota?'

- b. (Kotosi-wa) Toyota-o do-no zidoosya-gaisya-ni so-no  
 (this:year-TOP) Toyota-ACC which-GEN automobile-company-DAT that-GEN
- zidoosya-gaisya-no oya-gaisya]-ga suisensita no?  
 automobile-company-GEN parent-company-NOM recommended COMP
- '(This year,) to which automobile company did [that automobile company's parent company] recommend Toyota?'

Similarly, the relative unacceptability of the sentences in (52) is also expected from this generalization.

- (52) B-type QP & A-type QP:
- a. ?\*[Do-no gakusei-ni] [USC to UCLA to-o] [so-itu-o]  
 which-GEN student-DAT USC and UCLA and-ACC that-guy-ACC
- sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
 know that-place-GEN professor-NOM recommend-made COMP
- '[Which student] did [its professor who knows him] make recommend [(each of) USC and UCLA]?'
- b. ?\*[Do-no daigaku-o] [55%-no gakusei-ni] [so-itu-o]  
 which-GEN university-ACC 55%-GEN student-DAT that-guy-ACC
- sitteiru] so-ko-no sensei-ga] suisen-saseta no?  
 know that-place-GEN professor-NOM recommend-made COMP
- '[Which university] did [its professor who knows him] make [55% of the students] recommend?'

Thus, the observations of the multiple OS-type construction given in this subsection are accounted for by assuming that a B-type QP can, but an A-type QP cannot, yield a BVA reading in OS-type configuration I, which is an instance of Configuration type 3.

- (9) (Surface) OS-type configuration I (cases of the 'WCO effects'):  
 PF:  $\alpha$ -ACC/DAT ... [ ...  $\beta$  ... ]-NOM ... V  
 $\alpha$  precedes  $\beta$  at PF.  
 LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- (5) Configuration type 3:  
 a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.  
 b.  $\alpha$  precedes  $\beta$  at PF.

### 3.2.3.4. Special type of clauses

Finally, it is argued in chapter 2 that a DL within a clause expressing an *eventuality* is necessarily a Surface DL.

Let us examine the perceptual report configuration given in (53), which is used in the discussion in chapter 2.<sup>24</sup>

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

Consider first if the SO-type construction in (54a) allows a BVA reading, in contrast to (54b).<sup>25</sup>

- (54) a. John-ni-sae [55%-no robotto-ga] [so-re-no]  
 John-DAT-even 55%-GEN robot-NOM that-thing-GEN
- sekkeisya]-ni tobikakatteiru tokoro]-ga mieta rasii.  
 designer-DAT assaulting COMP-NOM could:see they:say
- 'They say that even John could see [55% of the robots] assaulting [its designer].'
- b. \*John-ni-sae [[so-re-no sekkeisya]-ga] [55%-no]  
 John-DAT-even that-thing-GEN designer-NOM 55%-GEN
- robotto-o kowasiteiru tokoro]-ga mieta rasii.  
 robot-ACC destroying COMP-NOM could:see they:say
- 'They say that even John could see [[its designer] destroying 55% of the robots].'

Now, as shown in (55), a BVA reading does not obtain with an A-type QP in the OS-type construction, while it is possible with a B-type QP as given in (56).

- (55) A-type QP:  
 ?\*John-ni-sae [55%-no robotto-o] [so-re-no]  
 John-DAT-even 55%-GEN robot-ACC that-thing-GEN
- sekkeisya]-ga kowasiteiru tokoro]-ga mieta rasii.  
 designer-NOM destroying COMP-NOM could:see they:say
- 'They say that even John could see [[its designer] destroying 55% of

<sup>24</sup> As mentioned earlier, although a dative-marked NP precedes a nominative-marked phrase in (53), this is the unmarked word order in this case.

<sup>25</sup> As noted in section 2.4.3, it seems that some speakers hardly allow quantification within a clause expressing an *eventuality*. Interestingly, even such speakers usually accept BVA with a B-type QP.

the robots].'

## (56) B-type QP:

- a. John-ni-sae [do-no konpyuutaa-o-mo [so-re-no  
John-DAT-even which-GEN computer-ACC-also that:thing-GEN

sekkeisya]-ga kowasiteiru tokoro]-ga mieta rasii.  
designer-NOM destroying COMP-NOM could:see they:say

'They say that even John could see [[its designer] destroying every  
computer].'

- b. John-ni-sae [do-no konpyuutaa-o-mo [so-no konpyuutaa-no  
John-DAT-even which-GEN computer-ACC-also that-GEN computer-GEN

sekkeisya]-ga kowasiteiru tokoro]-ga mieta rasii.  
designer-NOM destroying COMP-NOM could:see they:say

'They say that even John could see [[that computer's designer]  
destroying every computer].'

Therefore, it is again demonstrated that a B-type QP can, but an A-type QP cannot, yield a BVA reading in OS-type configuration I, which is an instance of Configuration type 3.<sup>26</sup>

<sup>26</sup> Ueyama 1996,1997 claim that a conditional clause of the form as in (i) also necessarily express an *eventuality*, and argue that this property is responsible for the contrast between (ii) and (iii):

## (i) SO-type construction:

[Mosi A-sya ka B-sya-ga [so-ko-no bengosi]-ni  
if A-company or B-company-NOM that-place-GEN attorney-DAT  
ayamat-tara], sugu [so-no bengosi]-ni intabyuu si-ni-itte  
apologize-if immediately that-GEN attorney-DAT interview do-to-go  
kudasai.

please

'[If Company A or Company B apologized to [its attorney]], please go and  
interview [that attorney], immediately.'

## (ii) A-type QP:

?\*[Mosi A-sya ka B-sya-ni [so-ko-no bengosi]-ga  
if A-company or B-company-DAT that-place-GEN attorney-NOM  
ayamat-tara], sugu [so-no bengosi]-ni intabyuu si-ni-itte  
apologize-if immediately that-GEN attorney-DAT interview do-to-go  
kudasai.

please

'[If [its attorney], apologized to Company A or Company B], please go and  
interview [that attorney], immediately.'

## (iii) B-type QP:

- a. [Do-no zidoosya-gaisya-ni [so-no zidoosya-gaisya-

## (9) (Surface) OS-type configuration I:

PF:  $\alpha$ -ACC/DAT ... [ ...  $\beta$  ... ]-NOM ... V

$\alpha$  precedes  $\beta$  at PF.

LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)

The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

## (5) Configuration type 3:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

b.  $\alpha$  precedes  $\beta$  at PF.

## 3.2.3.5. Summary

I have shown in the preceding subsections that a BVA reading obtains in OS-type configuration I (which is an instance of Configuration type 3) if  $\alpha$  is a B-type QP, but not if  $\alpha$  is an A-type QP.

## (9) (Surface) OS-type configuration I:

PF:  $\alpha$ -ACC/DAT ... [ ...  $\beta$  ... ]-NOM ... V

$\alpha$  precedes  $\beta$  at PF.

LF: [ ...  $\beta$  ... ]-NOM ...  $\alpha$ -ACC/DAT ... V (before QR)

The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

## (5) Configuration type 3:

- a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

b.  $\alpha$  precedes  $\beta$  at PF.

We can also state the observation above as follows: an A-type QP exhibits the WCO effects in the Surface OS-type, but not a B-type QP.

which-GEN automobile-company-DAT that-GEN automobile-company-  
no bengosi]-ga ayamat-tara], [so-no bengosi]-ni intabyuu  
GEN attorney-NOM apologize-if that-GEN attorney-DAT interview  
si-ni-ikimasu ka  
do-to-go Q

'(Lit.) [Upon [that automobile company's attorney], apologized to which  
automobile company], will you go and interview [that attorney],?'

- b. [Do-no zidoosya-gaisya-ni [so-no zidoosya-gaisya-  
which-GEN automobile-company-DAT that-GEN automobile-company-  
no bengosi]-ga ayamat-temo], John-wa [so-no bengosi]-ni  
GEN attorney-NOM apologize-if John-TOP that-GEN attorney-DAT  
intabyuu suru tumori-da.

interview do intention-COPULA

'(Lit.) [[that automobile company's attorney], apologizes to whichever  
automobile company], John will interview [that attorney],.'

### 3.2.4. OS-type configuration II: reconstruction effects

Finally we examine if a BVA reading is available in Configuration type 4 in (6):

- (6) Configuration type 4:  
 a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
 b.  $\alpha$  does not precede  $\beta$  at PF.

The OS-type construction as in (10) qualifies as Configuration type 4:<sup>27</sup>

- (10) (Surface) OS-type configuration II:  
 PF: [ ...  $\beta$  ... ]-ACC/DAT ...  $\alpha$ -NOM ... V  
 $\alpha$  does not precede  $\beta$  at PF.  
 LF:  $\alpha$ -NOM ... [ ...  $\beta$  ... ]-ACC/DAT ... V (before QR)  
 The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.

As shown in (57), the relevant BVA reading is available irrespective of the type of the QP.

- (57) a. [So-ko-no ko-gaisya]-o Toyota-sae-ga suisensita  
 that-place-GEN child-company-ACC Toyota-even-NOM recommended  
 'Even Toyota recommended [its subsidiary].'  
 EVEN(Toyota)( *x* recommended *x*'s subsidiary)  
 PF: [so-ko's subsidiary]-ACC [even Toyota]-NOM recommended  
 LF: [even Toyota]<sub>1</sub> [t<sub>1</sub> (-NOM)] [so-ko's subsidiary]-ACC recommended]  
 (after QR)
- b. [So-ko-no ko-gaisya]-o do-no zidoosya-gaisya-ga  
 that-place-GEN child-company-ACC which-GEN automobile-company-NOM  
 suisensita no?  
 recommended COMP  
 'Which automobile company recommended [its subsidiary]?'  
 WH(automobile company)(*x* recommended *x*'s subsidiary)  
 PF: [so-ko's subsidiary]-ACC [which automobile company]-NOM  
 recommended

<sup>27</sup> Like OS-type configuration I, OS-type configuration II is also the Surface OS-type. But the distinction between the Deep and the Surface OS-type is not crucial this time, since there is no particular syntactic environment which affects the availability of a BVA reading in (10); what is at stake instead is the form of the dependent term, as shown immediately.

- LF: [which automobile company]<sub>1</sub> [t<sub>1</sub> (-NOM)] [so-ko's subsidiary]-ACC  
 recommended] (after QR)

The fact that the BVA reading obtains in a configuration such as in (57) has been reported in Hoji 1985 and Yoshimura 1992 among others, and it has thus been assumed that the OS-type construction exhibits the *reconstruction effects*. As far as the OS-type configuration II in (10) is concerned, no special treatment is necessary to account for the availability of the BVA reading, since  $\alpha$  c-commands  $\beta$  at LF just as the corresponding SO-type construction.

Nevertheless, there are some cases in which a BVA reading is quite hard, if not impossible, to obtain in this configuration. Consider (58):

- (58) ?\*[So-no zidoosya-gaisya-no ko-gaisya]-o do-no  
 that-GEN automobile-company-GEN child-company-ACC which-GEN

zidoosya-gaisya-ga suisensita no?  
 automobile-company-NOM recommended COMP

'Which automobile company recommended [that automobile company's subsidiary]?'  
 WH(automobile company)( *x* recommended *x*'s subsidiary)

- PF: [so-no zidoosya-gaisya's subsidiary]-ACC [which automobile company]-NOM recommended

- LF: [which automobile company]<sub>1</sub> [t<sub>1</sub> (-NOM)] [so-no zidoosya-gaisya's subsidiary]-ACC recommended] (after QR)

The only difference between (58) and (57b) is that a <sup>large</sup>NP is used in (58) while a <sup>small</sup>NP is used in (57b). Recall from section 3.2.1 that a BVA reading is available with a <sup>large</sup>NP if the word order is changed.

- (17) B-type QP & <sup>large</sup>NP:

Do-no zidoosya-gaisya-ga [so-no zidoosya-gaisya-no  
 which-GEN automobile-company-NOM that-GEN automobile-company-GEN

ko-gaisya]-o suisensita no?  
 child-company-ACC recommended COMP

'Which automobile company recommended [that automobile company's subsidiary]?'  
 WH(automobile company)( *x* recommended *x*'s subsidiary)

- PF: [which automobile company]-NOM [so-no zidoosya-gaisya's subsidiary]-ACC recommended

- LF: [which automobile company]<sub>1</sub> [t<sub>1</sub> (-NOM)] [so-no zidoosya-gaisya's

subsidiary]-ACC recommended] (after QR)

Thus the OS-type construction exhibits the reconstruction effects with a <sup>small</sup>NP, but not with a <sup>large</sup>NP.<sup>28</sup>

The contrast between a <sup>small</sup>NP and a <sup>large</sup>NP is also observed in the syntactic environments discussed in section 3.2.4.

(59) Long distance OS-type construction:

- a. [So-ko-no bengosi]-ni do-no zidoosya-gaisya-ga  
that-place-GEN attorney-DAT which-GEN automobile-company-NOM

[John-ga *ec* ayamatta to] itteiru no?  
John-NOM apologized COMP say COMP

'Which automobile company says [that John apologized [to its attorney]]?'

- b. ?\*[So-no zidoosya-gaisya-no bengosi]-ni do-no zidoosya-  
that-GEN automobile-company-GEN attorney-DAT which-GEN automobile-

gaisya-ga [John-ga *ec* ayamatta to] itteiru no?  
company-NOM John-NOM apologized COMP say COMP

'Which automobile company says [that John apologized [to that automobile company's attorney]]?'

(60) Multiple OS-type construction:

- a. (Kotosi-wa) Toyota-o [so-ko-no ko-gaisya]-ni do-no  
(this:year-TOP) Toyota-ACC that-place-GEN child-company-DAT which-GEN

zidoosya-gaisya-ga suisensita no?  
automobile-company-NOM recommended COMP

'(This year,) which automobile company recommended Toyota [to its subsidiary]?'

- b. ?\*(Kotosi-wa) Toyota-o [so-no zidoosya-gaisya-no  
(this:year-TOP) Toyota-ACC that-GEN automobile-company-GEN

ko-gaisya]-ni do-no zidoosya-gaisya-ga suisensita no?  
child-company-DAT which-GEN automobile-company-NOM recommended COMP

<sup>28</sup> In fact, Kuno & Kim 1994:24 (5.9b) uses *so-no NP* as a dependent term in arguing that there is no reconstruction effects in Japanese.

(i) \*Sono sensei-o hihansita gakusei-o dono sensei-ga sikatta ka?  
the teacher-ACC criticized student-ACC which teacher-NOM scolded Q  
'(Lit.) The student who criticized the teacher, which teacher scolded?'

I thank Hajime Hoji for bringing Kuno & Kim 1994 to my attention.

'(This year,) which automobile company recommended Toyota [to that automobile company's subsidiary]?'

(61) Clauses expressing an *eventuality*:

- a. John-ni-sae [[so-re-no sekkeisya]-o do-no konpyuutaa-mo  
John-DAT-even that-place-GEN designer-ACC which-GEN computer-also

osotteiru tokoro]-ga mieta rasii.  
attacking COMP-NOM could:see they-say

'They say that John could see [each computer attacking [its designer]].'

- b. ?\*John-ni-sae [[so-no konpyuutaa-no sekkeisya]-o do-no  
John-DAT-even that-GEN computer-GEN designer-ACC which-GEN

konpyuutaa-mo osotteiru tokoro]-ga mieta rasii.  
computer-also attacking COMP-NOM could:see they-say

'They say that John could see [each computer attacking [that computer's designer]].'

Thus, a BVA reading is available in OS-type configuration II, an instance of Configuration type 4, only if  $\beta$  is a <sup>small</sup>NP, rather than a <sup>large</sup>NP.

(10) (Surface) OS-type configuration II:

PF: [ ...  $\beta$  ... ]-ACC/DAT ...  $\alpha$ -NOM ... V  
 $\alpha$  does not precede  $\beta$  at PF.

LF:  $\alpha$ -NOM ... [ ...  $\beta$  ... ]-ACC/DAT ... V (before QR)  
The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.

(6) Configuration type 4:

- a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
b.  $\alpha$  does not precede  $\beta$  at PF.

### 3.2.5. Summary of the observations

Let us summarize the observations made so far.

We have distinguished A-type QPs from B-type QPs, as given in (12).

(12) a. A-type QPs:

NP-sae 'even NP'  
kanarinokazu-no NP 'most of the NPs'  
10 izyoo-no NP 'ten or more NPs'  
55%-no NP '55% of the NPs'  
NP1 to NP2 (to) 'NP1 and NP2'  
NP1 ka NP2 (ka) 'either NP1 or NP2'



- b. B-type QPs:  
*do-no* NP 'which NP'  
*do-no* NP-*mo* 'every NP'  
(*subete-no* NP 'every NP')

We have also differentiated <sup>large</sup>NPs from <sup>small</sup>NPs, although this distinction should not be regarded as absolute, as discussed in section 3.2.1.

- (13) a. <sup>large</sup>NPs:  
*so-no zidoosya-gaisya* 'that automobile company'  
*so-no daigaku-insei* 'that graduate student'
- b. <sup>small</sup>NPs  
*so-ko* 'it/that institution'  
*so-re* 'it/that thing'  
(*so-itu* 'he/that guy')

The preceding subsections have examined whether a BVA reading obtains between each type of the QP and the dependent term in the four types of configurations as in (3)-(6), which is schematized as in (7)-(10), respectively.

- (3) Configuration type 1:  
a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
b.  $\alpha$  precedes  $\beta$  at PF.
- (7) SO-type configuration I:  
PF:  $\underline{\alpha}$ -NOM ... [ ...  $\underline{\beta}$  ... ]-ACC/DAT ... V  
 $\alpha$  precedes  $\beta$  at PF.  
LF:  $\underline{\alpha}$ -NOM ... [ ...  $\underline{\beta}$  ... ]-ACC/DAT ... V (before QR)  
The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.
- (4) Configuration type 2:  
a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.  
b.  $\alpha$  does not precede  $\beta$  at PF.
- (8) SO-type configuration II:  
PF: [ ...  $\underline{\beta}$  ... ]-NOM ...  $\underline{\alpha}$ -ACC/DAT ... V  
 $\alpha$  does not precede  $\beta$  at PF.  
LF: [ ...  $\underline{\beta}$  ... ]-NOM ...  $\underline{\alpha}$ -ACC/DAT ... V (before QR)  
The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.
- (5) Configuration type 3:  
a. The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.  
b.  $\alpha$  precedes  $\beta$  at PF.
- (9) (Surface) OS-type configuration I:  
PF:  $\underline{\alpha}$ -ACC/DAT ... [ ...  $\underline{\beta}$  ... ]-NOM ... V

- $\alpha$  precedes  $\beta$  at PF.  
LF: [ ...  $\underline{\beta}$  ... ]-NOM ...  $\underline{\alpha}$ -ACC/DAT ... V (before QR)  
The QR-trace of  $\alpha$  does not c-command  $\beta$  at LF.

- (6) Configuration type 4:  
a. The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.  
b.  $\alpha$  does not precede  $\beta$  at PF.
- (10) (Surface) OS-type configuration II:  
PF: [ ...  $\underline{\beta}$  ... ]-ACC/DAT ...  $\underline{\alpha}$ -NOM ... V  
 $\alpha$  does not precede  $\beta$  at PF.  
LF:  $\underline{\alpha}$ -NOM ... [ ...  $\underline{\beta}$  ... ]-ACC/DAT ... V (before QR)  
The QR-trace of  $\alpha$  c-commands  $\beta$  at LF.

Thus, there are four considerations altogether concerning the availability of a BVA reading.

- (2) Structural considerations:  
a. Does the QR-trace of  $\alpha$  c-commands  $\beta$  at LF?  
b. Does  $\alpha$  precede  $\beta$  at PF?
- (62) Lexical considerations:  
a. Is  $\alpha$  one of the A-type QPs, which are listed in (12a) in contrast to (12b)?  
b. Is  $\beta$  a <sup>large</sup>NP, as exemplified in (13a) in contrast to (13b)?

The result of the observation is shown in the table (63):

(63)

	LF c-command	PF precedence	$\alpha$	$\beta$	BVA ok?
SO-type configuration I	yes	yes	A-type	<sup>large</sup> NP	*
			A-type		ok
				<sup>large</sup> NP	ok
					ok
SO-type configuration II	no	no	A-type	<sup>large</sup> NP	*
			A-type		*
				<sup>large</sup> NP	*
					*
OS-type configuration I	no	yes	A-type	<sup>large</sup> NP	*
			A-type		*
				<sup>large</sup> NP	ok
					ok
OS-type configuration II	yes	no	A-type	<sup>large</sup> NP	*
			A-type		ok
				<sup>large</sup> NP	*
					ok

The next section will provide an analysis which explains this apparent complicated distribution of BVA in a simple way.

### 3.3. Proposal: Formal Dependency and Indexical Dependency

This section claims that the observations made in the preceding section, which is summarized in table (63), are accounted for by assuming that there are two syntactic bases for a BVA reading. Let us call them *Formal Dependency* (FD) and *Indexical Dependency* (ID), and state the idea informally as in (64).<sup>29</sup>

- (64) A dependent term  $\beta$  can enter into BVA only if either FD( $\alpha, \beta$ ) or ID( $\alpha, \beta$ ) is established.<sup>30</sup>

Suppose that the two types of dependency have the following conditions.

<sup>29</sup> One of the central notions in Fiengo & May 1994 is named 'Indexical Dependency', but it is clearly distinct from what is called ID in this work.

<sup>30</sup> (64) is an informal statement whose content will be explicated in the subsequent chapters. Meanwhile ' $\alpha$ ' in FD( $\alpha, \beta$ ) refers to the QR-trace of the QP, while ' $\beta$ ' in ID( $\alpha, \beta$ ) refers to the QP itself.

- (65) a. Structural condition on FD:  
\*FD( $\alpha, \beta$ ) if  $\alpha$  does not c-command  $\beta$  at LF.  
b. Lexical condition on FD:  
\*FD( $\alpha, \beta$ ) if  $\beta$  is a <sup>large</sup>NP.
- (66) a. Structural condition on ID:  
\*ID( $\alpha, \beta$ ) if  $\alpha$  does not precede  $\beta$  at PF.  
b. Lexical condition on ID:  
\*ID( $\alpha, \beta$ ) if  $\alpha$  is an A-type QP.

Then as shown in the table in (67), the distribution of BVA examined in the preceding section is predicted straightforwardly from the assumptions in (64)-(66).

(67)

LF c-command	PF precedence	$\alpha$	$\beta$	FD ok?	ID ok?	BVA ok?
yes	yes	A-type	<sup>large</sup> NP	*	*	*
		A-type		FD	*	ok
			<sup>large</sup> NP	*	ID	ok
				FD	ID	ok
no	no	A-type	<sup>large</sup> NP	*	*	*
		A-type		*	*	*
			<sup>large</sup> NP	*	*	*
				*	*	*
no	yes	A-type	<sup>large</sup> NP	*	*	*
		A-type		*	*	*
			<sup>large</sup> NP	*	ID	ok
				*	ID	ok
yes	no	A-type	<sup>large</sup> NP	*	*	*
		A-type		FD	*	ok
			<sup>large</sup> NP	*	*	*
				FD	*	ok

While this analysis is proposed on the basis of the observation in Japanese, the conclusion can also be attested in English, as shown in the next section.

### 3.4. Further Remarks and Predictions

#### 3.4.1. Supporting evidence from English

The analysis presented above in effect states that the so-called WCO effects may

not arise with a B-type QP, and that the so-called reconstruction effects will not obtain with a <sup>large</sup>NP, among other things. Let us examine in this section whether this conclusion also holds in English.

First (68) shows the expressions which we can use in examining the availability of BVA. Since an expression such as *most NPs* or *John and Bill* cannot enter into BVA with a singular-denoting dependent term in English, there is not so much variety as in Japanese.<sup>31</sup>

- (68) a. A-type QPs in English:  
even NP  
(who)
- b. B-type QPs in English:  
which NP  
(every NP)  
(no NP)

The dependent terms in English are listed in (69):

- (69) a. <sup>large</sup>NPs in English:  
that NP  
(this NP)
- b. <sup>small</sup>NPs in English:  
it/its  
he/him/his  
she/her

Although it is by far unmarked to use pronouns as a dependent term in English, it is not impossible to use a demonstrative NP in BVA, as pointed out in Evans 1977:491.<sup>32</sup>

- (70) Every logician was walking with a boy near that logician's house.

According to our analysis, the use of a <sup>large</sup>NP as a dependent term should be

<sup>31</sup> There is a possibility that expressions such as *only one NP* and *at most one NP* in English are instances of the A-type QP, but I have not been able to check if this is really the case.

<sup>32</sup> Evans 1977:491 notes that "[i]n fact, almost any singular term can be used to make a back-reference provided it is reduced in stress" "[n]ot just expressions like 'the bastard' and 'the fool' as seems to be suggested by R.S. Jackendoff on p.110 of *Semantic Interpretation in a Generative Grammar* (MIT Press, Cambridge Mass., 1972)." The construction such as (68) is also extensively discussed in Hoji 1995a. We will review his analysis in section 3.4.2 below.

possible only with a B-type QP. Thus, the contrast between (70)-(71) and (72) is predicted by our analysis.<sup>33</sup>

- (71) a. Which logician was walking with a boy near that logician's house?  
b. No logician was walking with a boy near that logician's house.
- (72) a. ?\*Even this logician was walking with a boy near that logician's house.  
cf. Even this logician was walking with a boy near his house.  
b. ?\*Even Toyota has sued that company's subsidiary.  
c. ?\*Even that company has sued that company's subsidiary.

The following examples show that there are cases in which a B-type QP does not induce the so-called WCO effects.<sup>34,35,36</sup>

- (73) a. ?Which student<sub>i</sub> did that student's professor recommend  $t_1$  for a lucrative project?  
b. ??Which student<sub>i</sub> did his professor recommend  $t_1$  for a lucrative project?  
c. ?Which one of these boys<sub>i</sub> did his wife divorce  $t_1$  ?  
d. ?No matter which one of those guys<sub>i</sub>, his wife might divorce  $t_1$ , I would hire him.

In addition, the so-called reconstruction effects does not obtain if the BVA involves a <sup>large</sup>NP, as expected from our analysis.<sup>37</sup>

- (74) a. Every linguist insisted that John had demanded a special evaluation of

<sup>33</sup> As noted in footnote 7 in section 3.2.1 above, it seems that there is more to say regarding the incompatibility of an A-type QP and a <sup>large</sup>NP, and hence, I do not consider it to be a defining property of either the A-type QP or the <sup>large</sup>NP.

<sup>34</sup> (73a) is from Hoji 1995b:7 (17), where he states that it is "judged fairly to perfectly acceptable." Although (73b) may be less acceptable than (73a) especially for some speakers, it will improve if the stress is put on *him*, as pointed out to me by Robert May (personal communication; March 1997). I thank Chris Kennedy for helping me constructing the examples in (73c,d).

<sup>35</sup> The more or less acceptable status of (73b,c,d) is not predicted by the analysis in Hoji 1995a, since he in effect states that a pronoun in English must enter into FD in order to yield BVA: "Given the assumption that him does not contain a demonstrative in it, the dependency of him upon which linguist must be based on Arg-binding" (Hoji 1995a:section 2.3, after (27)).

<sup>36</sup> Obviously the observation in (73) is related to the issue of 'D-linking' in the sense of Pesetsky 1987, but I cannot discuss the issue here.

<sup>37</sup> I thank Ken Safir for helping me constructing the examples in (75)-(76).

- him.  
 b. Every linguist insisted that John had demanded a special evaluation of that linguist.

(75) Reconstruction effects with a <sup>small</sup>NP:

- a. [Which evaluation of him]<sub>1</sub> did every linguist insist that John had demanded  $t_1$  ?  
 b. [A special evaluation of him]<sub>1</sub>, every linguist insisted that John had demanded  $t_1$  .

(76) No reconstruction effects with a <sup>large</sup>NP:

- a. ?\*[Which evaluation of that linguist]<sub>1</sub> did every linguist insist that John had demanded  $t_1$  ?  
 b. ?\*[A special evaluation of that linguist]<sub>1</sub>, every linguist insisted that John had demanded  $t_1$  .

Thus, the main predictions made by the analysis proposed above are also confirmed in English.

### 3.4.2. Hoji 1995a

Since Hoji 1995a is virtually the starting point of this work, I would like to make a review of the relevant portion of Hoji 1995a, and compare it with the analysis proposed in this work.

Hoji 1995a proposes that there are two types of syntactic bases for BVA, which he calls Arg(ument)-binding and Dem(onstrative)-binding.

- (77) The value of [ $\beta$ ] can be covariant with that of [ $\alpha$ ] only if  
 a. [ $\beta$ ] is formally dependent upon [ $\alpha$ ] (Arg-binding), or  
 b. Dem([ $\beta$ ]) is formally dependent upon Dem([ $\alpha$ ]) (Dem-binding),  
 where Dem( $\alpha$ ) is a demonstrative that is in the checking domain of  $\alpha$  in the sense of Chomsky (1993).  
 (Hoji 1995a: 257 (9))

Thus, in Arg-binding, a nominal category  $\beta$  formally depends on another nominal category  $\alpha$ . In Dem-binding, on the other hand, the demonstrative part of  $\beta$  formally depends on the demonstrative part of  $\alpha$ . He expresses the relevant formal dependency by means of a superscript and a subscript as in (78), where DemP stands for a maximal projection of a demonstrative:

- (78) a. Arg-binding: ... [ $\alpha$  ]<sup>1</sup> ... [ $\beta$  ]<sub>1</sub> ...  
 b. Dem-binding: ... [ $\alpha$  DemP<sup>1</sup> N ] ... [ $\beta$  DemP<sub>1</sub> N ] ...

While Arg-binding and Dem-binding seem to be considered as two different syntactic relations, both of them are claimed to be an instance of formal

dependency, which is contingent upon the c-command relation. He characterizes the formal dependency as in (79), where *the syntactic domain* is assumed to be determined based on the c-command domain in principle:<sup>38</sup>

- (79) [ $\beta$ ] is formally dependent upon [ $\alpha$ ] only if [ $\beta$ ] is in the syntactic domain of [ $\alpha$ ]  
 (Hoji 1995a: 258 (10))

He claims that Dem-binding is an instance of formal dependency characterized as in (79), for the reason that the unavailability of Dem-binding in (80) is accounted for as an instance of the WCO effects under that assumption.<sup>39</sup>

- (80) \*So-ko-no kumiai-ga do-ko-o uttaeta no?  
 that-place-GEN labor:union-NOM which-place-ACC sued COMP  
 'Which institution did its labor union sue?'  
 (Hoji 1995a: 256 (5a))

It is assumed that (77) is not a sufficient condition for Arg-binding and Dem-binding, although most of the necessary specifications are just hinted at in Hoji 1995a, presumably because of the page limit. I list some of them here.

Dem-binding is defined to be available only between the two NPs of the form of [<sub>NP</sub> DemP N ], as stated in (77b).<sup>40</sup> Therefore, a QP such as *do-ko* 'which place', but not a QP such as 'NP1 and NP2' or 'even NP', can be involved in Dem-binding. In addition, it is stated that a pronoun (and presumably an expression such as *the linguist* as well) cannot enter into Dem-binding since it "does not contain a demonstrative in it" (Hoji 1995a: 261 (section 2.3)).

Arg-binding, on the other hand, does not have a constraint on the form of the QP, and hence, any QP can enter into Arg-binding.<sup>41</sup> It does have a

<sup>38</sup> He states in footnote 4 that "[t]he syntactic domain of  $\alpha$  is based on its c-command domain, as in Reinhart (1983[a]), but it must be modified to cover the so-called Spec-binding cases in the sense of Reinhart (1987)."

<sup>39</sup> (80) is an instance of Configuration type 2 (SO-type configuration II) in our terms (see section 3.2.2). It is expected in our analysis that a BVA reading does not obtain in (80) since (i) FD is not established because the QR-trace of the QP does not c-command the dependent term at LF, and (ii) ID is not established because the QP does not precede the dependent term at PF.

<sup>40</sup> Obviously, it has to be assumed that not all demonstratives can be a Dem-bindee, since it is known that a demonstrative *a-* in Japanese cannot participate in a covariant relation. This is implied in Hoji 1995a: 263-4 (section 2.5), where he states that "UG must specify what can be the Dem-binder and the Dem-bindee and the child has the task of identifying the morphemes that qualify as such."

<sup>41</sup> Hoji 1995a: 264 (section 2.5) states that "I assume that any argument can be an

restriction on the bindee, though: it is stated in Hoji 1995a: 267 (section 3) that "the more content on the N head a given nominal projection  $\alpha$  has, the more difficult it is for  $\alpha$  to be an Arg-bindee."

His claim in (77) is motivated by the observation that the BVA in (81) does not exhibit the local disjointness effects, in contrast to the one in (82):<sup>42</sup>

- (81) Do<sup>1</sup>-ko-ga so<sub>1</sub>-ko-o suisensita no?  
 which-place-NOM that-place-ACC recommended COMP  
 'Which {institution/place} recommended it?'  
 (Hoji 1995a: 256 (4))
- (82) a. \*/?\*[USC to UCLA]<sup>1</sup>-ga [so-ko]<sub>1</sub>-o suisensita (no-wa)  
 USC and UCLA-NOM that-place-ACC recommended (COMP-TOP)  
 sensyuu-no kaigi-de desu).  
 last:week-GEN meeting-at COPULA  
 '(It was at the meeting last week that) [USC and UCLA]<sup>1</sup>  
 recommended it<sub>1</sub>.'  
 (Hoji 1995a: 260 (19a))
- b. \*(Toyota-ga) [Arizona koozyoo-sae]<sup>1</sup>-ga [so-ko]<sub>1</sub>-o suisensita  
 Toyota-NOM Arizona factory-even-NOM that-place-ACC recommended  
 (n desu).  
 COMP COPULA  
 '(It was Toyota that) [even (its) Arizona factory]<sup>1</sup> recommended it<sub>1</sub>.'  
 (Hoji 1995a: 260 (20a))

Assuming that the Binding Principle B is a condition on the formal dependency, *i.e.*, assuming that it states that  $\beta$  cannot be formally dependent upon  $\alpha$  in a local context, he claims that (81) does not show local disjointness effects because "the dependency of *so* upon *do* is not local, in the way analogous to the non-local binding of *his* by *who* in the so-called Spec-binding examples" such as (83), discussed in Reinhart 1987 among others.

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Arg-binder."

<sup>42</sup> I have not discussed the local disjointness effects in this work, since it seems to me that the contrast between (81) and (82) is due not only to the way the BVA is yielded, but also to several other factors the articulation of which goes beyond the scope of this work. Nevertheless, since this is an independent issue, one can tentatively transport the claim in Hoji 1995a into the analysis proposed in this work by stating that FD is constrained by Principle B while ID is not. The adequacy of this statement has to be discussed under a separate work.

- (83) Whose<sup>1</sup> father admires his<sub>1</sub> work?  
 (Hoji 1995a: 258 (12))

Let us compare his analysis with the proposal in this work. Recall that (64)-(66) are the main claims made in this chapter.

- (64) A dependent term  $\beta$  can enter into BVA only if either FD( $\alpha, \beta$ ) or ID( $\alpha, \beta$ ) is established.
- (65) a. Structural condition on FD:  
 \*FD( $\alpha, \beta$ ) if  $\alpha$  does not c-command  $\beta$  at LF.  
 b. Lexical condition on FD:  
 \*FD( $\alpha, \beta$ ) if  $\beta$  is a <sup>large</sup>NP.
- (66) a. Structural condition on ID:  
 \*ID( $\alpha, \beta$ ) if  $\alpha$  does not precede  $\beta$  at PF.  
 b. Lexical condition on ID:  
 \*ID( $\alpha, \beta$ ) if  $\alpha$  is an A-type QP.

Assuming that Arg-binding and Dem-binding could be considered to correspond to FD and ID, respectively, it is seen that the empirical claims in (64), (65) and (66b) are already made in Hoji 1995a. However, the analysis in Hoji 1995a does not contain (66a): it is stated in Hoji 1995a that both Arg-binding and Dem-binding are subject to the c-command requirement, both being instances of formal dependency. Therefore, all the observations made in sections 3.2.4 and 3.2.5 above are not accounted for under his theory. Thus, stated in the terms of Hoji 1995a, I have shown in this chapter that formal dependency is not a necessary condition for BVA, and that Dem-binding is not an instance of formal dependency.

Although one can consider that Dem-binding corresponds to ID in some respects, there are also some differences other than the structural condition in (66a). First, it is assumed in Hoji 1995a that Dem-binding is formally a dependency between two demonstratives, nonetheless yielding BVA between the two nominals. It is stated in Hoji 1995a: 258 (section 2.1) that "[b]y virtue of *so* being formally dependent upon *do* in [(81)], the value of *soko* is covariant with that of *doko*, which one may consider as dependency that is derivative of formal dependency." But it is not entirely clear what he exactly means by this, as he admits that "[q]uestions remain as to precisely how Dem-binding is to be expressed syntactically and how it is to be translated into a semantic representation. To answer these questions is beyond the scope of this paper." In contrast, ID is considered to be a dependency between two nominals, and its semantics will be given later in section 5.2 and 5.3.3.

In addition, Hoji 1995a defines the lexical conditions on Dem-binding in structural terms, as stated in (78b) above. Therefore, if he is to express the fact that *subete-no NP* 'every NP' can enter into 'Dem-binding' marginally while

*kanarinokazu-no NP* 'most NPs' cannot, he would be forced to claim that *subete-no* is marginally a demonstrative while *kanarinokazu-no* is not. In contrast, I will argue in section 5.3.4 that the distinction between A-type QPs and B-type QPs is basically a semantic one, and hence, the contrast between the two QPs are less problematic in our analysis. We will also see in section 5.3.4 that a bare NP, which apparently do not have any 'demonstrative', can enter into ID.

As discussed in this section, this work has succeeded from Hoji 1995a the idea that there are (i) two types of BVA, (ii) two types of QPs and (iii) two types of dependent terms, and aims to construct the Grammar incorporating it.

### 3.4.3. BVA and OS-type construction

I have suggested above that BVA is possible in (84) and (86) because it is the Deep OS-type and the Surface OS-type, respectively.

(84) 'No WCO effects in the OS-type construction':

a. QP-ACC/DAT<sub>i</sub> ... [ ... NP ... ]-NOM ... *ec*<sub>i</sub> ... V

b. Toyota-sae-o<sub>i</sub> [so-ko-o tekitaishiteiru kaisya]-ga  
Toyota-even-ACC that-place-ACC be:hostile company-NOM  
*ec*<sub>i</sub> uttaeta.  
sued

'[Even Toyota]<sub>i</sub>, [the company which is hostile to it] sued *ec*<sub>i</sub>.'

(85) Representation of (84) as the Deep OS-type:

PF: QP-ACC/DAT<sub>i</sub> ... [ ... so-ko ... ]-NOM ... *ec*<sub>i</sub> ... V

LF: QP-ACC/DAT<sub>i</sub> ... [ ... so-ko ... ]-NOM ... *ec*<sub>i</sub> ... V  
(before QR)

(86) 'Reconstruction effects in the OS-type construction':

a. [ ... NP ... ]-ACC/DAT<sub>i</sub> ... QP-NOM ... *ec*<sub>i</sub> ... V

b. [So-ko-o tekitaishiteiru kaisya]<sub>i</sub>-o Toyota-sae-ga *ec*<sub>i</sub>  
that-place-ACC be:hostile company-ACC Toyota-even-NOM  
uttaeta  
sued

'[The company which is hostile to it]<sub>i</sub>, even Toyota sued *ec*<sub>i</sub>.'

(87) Representation of (86) as the Surface OS-type:

PF: [ ... so-ko ... ]-ACC/DAT<sub>i</sub> ... QP-NOM ... *ec*<sub>i</sub> ... V

LF: QP-NOM ... [ ... so-ko ... ]-ACC/DAT ... V  
(before QR)

Let us consider some of the further predictions that the proposed theory makes

regarding the availability of BVA in the OS-type construction.

#### 3.4.3.1. Long distance OS-type construction and the WCO effects

It is shown by the observations in section 3.2.3 that the Surface OS-type induces the WCO effects with an A-type QP and that the long distance OS-type construction is necessary the Surface OS-type. Let us make a brief remark on what has been reported in the literature regarding the WCO effects in the long distance OS-type construction. As mentioned in sections B.1.3 and B.1.4 above, Yoshimura 1992 and Saito 1992 conclude that a long distance OS-type construction does not induce the WCO effects. One may consider that the relevant sentences given by them should be counterexamples to my claim, but the reported observations are in fact consistent with the analysis proposed in this work.

I have exhausted the relevant examples in Yoshimura 1992 and Saito 1992 here. Schematically, the examples in (89) and (90) have the configuration given in (88a) and (88b), respectively.

(88) a. NP-ACC/NP-DAT<sub>i</sub> NP-NOM [CP ... NP ... *t*<sub>i</sub> ... ] ...  
b. NP-ACC/NP-DAT<sub>i</sub> [NP ... NP ... ]-NOM [CP ... *t*<sub>i</sub> ... ] ...

(89) Long distance OS-type construction and WCO effects:

a. Daremo-o Mary-ga [CP [NP [*e*<sub>i</sub> bizin kontesuto-de {e/so-itu-  
everyone-ACC Mary-NOM beauty contest-at that-guy-  
o] mikaketa] hito]-ga *t*<sub>j</sub> sukininata to] itta (koto)  
ACC saw person-NOM fell.in:love COMP said fact

'(Lit.) (the fact that) everyone<sub>i</sub>, Mary said [that [the person who saw her at the beauty contest] fell in love with *t*<sub>j</sub> ]'

b. Ittai do-no daigaku-ni Mary-ga [CP [NP [*e*<sub>i</sub> zyuunen maeni  
the:hell which-GEN university-to Mary-NOM ten:year before

{e/so-ko-ni} ryuugakusiteita] hito]-ga mata *t*<sub>j</sub>  
that-place-to studied person-NOM again

nyuugakusita to] itta no  
entered COMP said COMP

'\*Which university the hell, did Mary say [that [the person who studied there ten years ago] entered *t*<sub>j</sub> again]?'

c. Ittai dare-o Mary<sub>i</sub>-ga [CP [PP zibun-ga {e/so-itu-o]  
the:hell who-ACC Mary-NOM self-NOM that-guy-ACC

sonkeisiteiru kara] Chomsky-ga *t*<sub>j</sub> osieta-nitigainai to]  
admire because Chomsky-NOM taught-must COMP

omotteiru no  
think COMP

'\*Who the hell<sub>i</sub> does Mary think [that [because she admires him]<sub>j</sub>],  
Chomsky must have taught <sub>t<sub>j</sub>]</sub>?'

- d. Daiva to rubii<sub>k</sub>-o John-ga [CP Mary-ga [NP <sub>e<sub>i</sub></sub> [NP <sub>e<sub>j</sub></sub>  
diamond and ruby-ACC John-NOM Mary-NOM  
{ e /so-re-o } katekureru hito]<sub>j</sub>-o sagasite kakuti-o  
that-thing-ACC buy person-ACC look.for.and various:places-ACC  
mawatteiru gyosyooinin]<sub>i</sub>-kara <sub>t<sub>k</sub></sub> katta to] itta (koto)  
travel merchant-from bought COMP said fact

'(Lit.) (the fact that) the diamond and ruby<sub>k</sub>, [John said [that Mary  
bought <sub>t<sub>k</sub></sub> from [the merchant who was traveling in various towns  
looking for [the person who would buy it]]]]'.  
(Yoshimura 1992:126-130 (44c)-(47c))

- (90) a. daremo-o<sub>i</sub> [NP bizin kontesuto-de { e /so-itu-o } mikaketa hito]-  
everyone-ACC beauty contest-at that-guy-ACC saw person-  
ga [CP John-ga <sub>t<sub>i</sub></sub> sukininata to] itta (koto)  
NOM John-NOM fell.in:love COMP said fact  
'(Lit.) (the fact that) everyone<sub>i</sub>, [the person who saw her at the beauty  
contest] said [that Mary would fall in love with <sub>t<sub>i</sub>]</sub>']
- b. Ittai do-no daigaku-ni<sub>i</sub> [NP zyuunen maeni { e /so-ko-ni }  
the:hell which-GEN university-at ten:years before that-place-at  
ryuugakusiteita hito]-ga [CP Mary-ga kotosi <sub>t<sub>i</sub></sub> nyuugakusita  
studied person-NOM Mary-NOM this:year entered  
to] itta no  
COMP said COMP  
'Which university the hell<sub>i</sub> did [the person who studied there ten years  
ago] say [that Mary entered <sub>t<sub>i</sub></sub> this year]?'
- c. Ittai dare-o<sub>i</sub> Mary-ga [PP zibun-ga { e /so-itu-o } sonkeisiteiru  
the:hell who-ACC Mary-NOM self-NOM that-guy-ACC admire  
kara] [CP Chomsky-ga <sub>t<sub>i</sub></sub> osieta-nitigainai to] omotteiru no?  
because Chomsky-NOM taught-must COMP think COMP  
'Who the hell<sub>i</sub> does Mary think, [because she admires him]<sub>j</sub>, [that  
Chomsky must have taught <sub>t<sub>i</sub>]</sub>?'

- d. daiya to rubii-o<sub>i</sub> [NP [NP { e /so-re-o } katekureru hito]-o  
diamond and ruby-ACC that-thing-ACC buy person-ACC  
sagasite kakuti-o mawatteiru gyosyooinin]-ga [CP Mary-ga  
looking.for various:places-ACC traveling merchant-NOM Mary-NOM  
<sub>t<sub>i</sub></sub> katta to] itta (koto)  
bought COMP said fact  
'(Lit.) (the fact that) the diamond and ruby<sub>i</sub>, [the merchant who was  
traveling in various towns looking for [the person who would buy it]  
said [that Mary bought <sub>t<sub>i</sub>]</sub>']  
(Yoshimura 1992:132-136 (48c)-(51c))

Saito 1992 cites the examples in (91), which have a structure schematized in (88b).

- (91) a. ?Dare-o<sub>i</sub> [so-itu-no hahaoya]-ga [Hanako-ga <sub>t<sub>i</sub></sub> aisiteiru to]  
who-ACC that-guy-GEN mother-NOM Hanako-NOM love COMP  
omotteiru no?  
think COMP  
'(Lit.) Who<sub>i</sub>, [his mother] thinks [that Hanako loves <sub>t<sub>i</sub>]</sub>']
- b. ?Do-no hito-mo<sub>i</sub> [so-itu-no hahaoya]-wa [Hanako-ga <sub>t<sub>i</sub></sub>  
which-GEN person-also that-guy-GEN mother-TOP Hanako-NOM  
aisiteiru to] omottei-nai.  
love COMP think-not  
'(Lit.) Anyone<sub>i</sub>, [his mother] does not think [that Hanako loves <sub>t<sub>i</sub>]</sub>']  
(Saito 1992:109 (79))

The important points to bear in mind are given in (92):

- (92) a. When the DL is an accusative-marked NP, an apparent long distance OS-type construction may well be the clause-internal one, and hence the DL can be a Deep DL.<sup>43</sup>

<sup>43</sup> (i) and (ii) below show that a BVA reading is possible, irrespective of the distinction between A-type and B-type QPs, in case the DL in the apparent long distance OS-type construction is an accusative NP.

(i) A-type QP:  
Toyota-sae-o [so-ko-no bengosi]-ga [John-ga <sub>ec</sub>  
Toyota-even-ACC that-place-GEN attorney-NOM John-NOM  
uttaeta to] omotteiru.  
sued COMP think

- b. B-type QPs can yield a BVA reading even in the long distance OS-type construction.

Thus, even if a BVA reading obtains in an apparent long distance OS-type construction, the sentence is not a counterexample to my claim, if (i) the DL is an accusative-marked NP, or if (ii)  $\alpha$  is a B-type QP. Among the examples above, (89a,c,d), (90a,c,d), and (91a,b) qualify (i), and at least (89b) and (90b) qualify (ii).<sup>44</sup> Therefore, the observations reported there are covered by the analysis proposed in this work. On the other hand, if one adopts the conclusion drawn in Yoshimura 1992 and Saito 1992, the fact that a BVA reading does not obtain in (33) is left unexplained, repeated here.

(33) A-type QP & <sup>small</sup>NP:

?\*Toyota-ni-sae [so-ko-no bengosi]-ga [John-ga *ec*  
Toyota-DAT-even that-place-GEN attorney-NOM John-NOM

ayamatta to] omotteiru.  
apologized COMP think

'its attorney thinks [that John apologized to even to Toyota].'

?\*EVEN(Toyota) (*x*'s attorney thinks that John apologized to *x*)

PF: even to Toyota [so-ko's attorney]-NOM [John-NOM apologized  
COMP] think

LF: [so-ko's attorney]-NOM [even to Toyota [John-NOM  $t_i$  (-DAT)  
apologized] COMP] think (after QR)

### 3.4.3.2. Deep OS-type and the reconstruction effects

I have attributed the absence of the WCO effects to the Deep OS-type, and the reconstruction effects to the Surface OS-type. This analysis predicts that the nullification of WCO and the reconstruction effects do not occur with respect to the same DL, since the former is a property of the Deep DL and the latter is a

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'Even Toyota, its attorney] thinks [that John sued *ec* ].'

(ii) B-type QP:

Do-no kaisya-o [so-no kaisya-no bengosi]-ga  
which-GEN company-ACC that-GEN company-GEN attorney-NOM  
[John-ga *ec* uttaeta to] omotteiru no?  
John-NOM sued COMP think COMP

'Which company does [that company's attorney] think [that John sued *ec* ]?'

<sup>44</sup> In fact (91b) does not have even a case-marker. As demonstrated in Hoji & Ueyama 1998, the presence of a case-marker is very important in distinguishing the type of a construction in Japanese; for example, a construction without a case-marker does not exhibit subadjacency effects in general. Thus, (91b) is not really an instance of OS-type construction, strictly speaking.

property of the Surface DL.<sup>45</sup> This prediction is borne out, as illustrated in (93).

- (93) ?\*[So-ko<sub>i</sub>-no kaikeisi-o-sae]<sub>j</sub> [so-itu<sub>i</sub>-no kookoo-no  
that-place-GEN accountant-ACC-even that-guy-GEN high:school-GEN  
sensei]-ga [subete-no zidoosyagaisya]<sub>j</sub>-ni *ec*<sub>j</sub> suisensita.  
teacher-NOM every-GEN automobile:company-DAT recommended  
[Even its<sub>j</sub> accountant]<sub>j</sub>, [his<sub>j</sub> high school teacher] recommended to  
[every automobile company]<sub>i</sub>.'

Intended (but impossible) interpretation:

EVERY<sub>x</sub> (*x*=automobile company) [EVEN<sub>y</sub> (*y*=*x*'s accountant) [*y*'s  
high school teacher recommended *y* to *x* ]]

One may consider that the fact that a BVA reading is possible in (94), which is mentioned in (206) in section B.1.3 above, should demonstrate that a Deep DL can also be reconstructed.

- (94) a. ?[Ittai dare-o]<sub>j</sub> Mary-ga [Susan-ga so-itu<sub>i</sub>-no atarasi sensei-ni  
the:hell who-ACC Mary-NOM Susan-NOM that-guy-GEN new teacher-DAT  
*t<sub>i</sub>* syookaisita ka] siritagatteiru (koto)  
introduced Q want:to:know fact

'(Lit.) (the fact that) [who the hell]<sub>j</sub>, Mary wants to know [Q [Susan  
introduced to his new teacher *t<sub>i</sub>* ]]'

- b. ?[Do-no kaisya-ni]<sub>j</sub> John-ga [so-ko-no syain-ga *t<sub>i</sub>*  
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]<sub>j</sub>, John wants to know [Q [its  
employees submitted a petition *t<sub>i</sub>* ]]'

(Yoshimura 1992:263-264 (54c)-(55c))

Considering the fact that the proposed *wh*-phrases in (94) have to be related to the embedded COMP, the DL should be an element of the embedded clause. Yoshimura 1992 thus argues on the basis of the acceptability of (94) that the WCO effects have to be accounted for by a condition which applies at S-structure. However, there is another possibility that the DL is a Deep DL in the embedded clause. Since the dependent term is contained in the subject NP of the embedded

<sup>45</sup> Hajime Hoji (p.c.;1996) originally pointed out to me that my analysis makes this prediction. Incidentally Mahajan (1990:47-52) exactly reports that this is the case with the scrambling construction in Hindi.



clause, a BVA reading should be available if it is related with a Deep DL in the embedded clause. Thus, it is fully expected in our analysis that a BVA reading is available in (94).<sup>46</sup>

Therefore, we can conclude that the Deep OS-type is not a construction which induces reconstruction effects.<sup>47</sup> Hoji & Ueyama 1998 also draws the same conclusion on the basis of the observation of resumption in the OS-type construction.

#### 3.4.4. A note on the so-called strong crossover effects

The observation of the so-called strong crossover (SCO) effects in Japanese adds another piece of evidence that FD and ID exhibit different syntactic behaviors. Note that the nature of the effects is still very obscure, and hence, the primary aim of this subsection is to introduce the relevant paradigms for the sake of future research, rather than to present an analysis at this stage.

According to the analysis of the OS-type construction given in chapter 2, a DL can be base-generated outside the  $\theta$ -domain of the predicate provided that an empty operator movement takes place from the  $-$ -marked position. Thus, the Deep OS-type a structure as follows:

<sup>46</sup> If the account in the text is correct, it is predicted that an A-type QP cannot enter BVA with a dependent term contained in the matrix subject. This prediction is borne out, as shown in (i). Since both (94b) and (i-b) involve a B-type QP, the so-called WCO effects do not arise as long as the dependent term follows the QP in the PF representation.

- (i) a. ?\*[Ittai dare-o], so-itu-no atarasii sensei-ga [Mary-ga  
the:hell who-ACC that-guy-GEN new teacher-NOM Mary-NOM  
Susan-ni  $t_i$  syookaisita ka] siritagatteiru (koto)  
Susan-DAT introduced Q want:to:know fact  
'(Lit.) (the fact that) [who the hell], his new teacher wants to know [Q [Mary introduced to Susan  $t_i$ ]]'
- b. [Do-no kaisya-ni], so-ko-no syain-ga [John-ga  $t_i$   
which-GEN company-DAT that-place-GEN employee-NOM John-NOM  
tangansyo-o dasita ka] siritagatteiru (koto)  
petition-ACC submitted Q want:to:know fact  
'(Lit.) (the fact that) [to which company], its employees wants to know [Q [John submitted a petition  $t_i$ ]]'

<sup>47</sup> Hoji 1987 claims on the basis of observation of the cleft construction in Japanese that in a construction involving an empty operator movement, the reconstruction effects are observed with respect to bound variable anaphora while they do not obtain with respect to scope interpretation. This leaves a question why the reconstruction effects seem to obtain in the case of the cleft construction in Japanese. This discrepancy between the OS-type and the cleft construction raises a question which may be relevant to the nature of the empty operator that is involved in the Deep OS-type. Readers are referred to Hoji & Ueyama 1998 for this issue.

- (95) NP-ACC/DAT (=DL) Op NP-NOM ...  $t$  ... Verb

I suppose that a case-marker is not properly interpreted without being syntactically related to the verb, assuming that (i)  $-$ -marked positions are syntactically related to the verb and that (ii) an empty operator movement forms a syntactic relation.

Now consider the case in which the QP is the DL and the dependent term is the nominative-marked NP itself, rather than being contained in it.

- (96) PF: QP-ACC/DAT NP-NOM ... Verb

There can be two LF representations for the PF representation in (96):

- (97) Deep OS-type:  
LF: QP-ACC/DAT Op NP-NOM ...  $t$  ... Verb (before QR)

- (98) Surface OS-type:  
LF: NP-NOM ... QP-ACC/DAT ... Verb (before QR)

According to the claims made in this chapter, it is expected that this configuration allows a BVA reading with any type of QP as long as it can be the Deep OS-type.

However, the relevant BVA reading is not available when an A-type QP is used, as shown in (99)-(100).

- (99) a. Nissan-sae-ga Toyota-ni so-ko-o suisen-saseta.  
Nissan-even-NOM Toyota-DAT that-place-ACC recommend-caused  
'Even Nissan made Toyota recommend it.'
- b. \*Nissan-sae-o so-ko-ga Toyota-ni  $t$  suisen-saseta.  
Nissan-even-ACC that-place-NOM Toyota-DAT recommend-caused  
'It made Toyota recommend even Nissan.'
- (100) a. A-sya to B-sya to-ga Toyota-ni so-ko-o  
A-company and B-company and-NOM Toyota-DAT that-place-ACC  
suisen-saseta.  
recommend-caused  
'(Each of) Company A and Company B made Toyota recommend it.'
- b. \*A-sya to B-sya to-o so-ko-ga Toyota-ni  $t$   
A-company and B-company and-ACC that-place-NOM Toyota-DAT  
suisen-saseta.  
recommend-caused  
'It made Toyota recommend (each of) Company A and Company B.'

Since this is reminiscent of what is often called *Strong Crossover* (SCO) effects, let us suppose for now that (99b) and (100b) are in fact instances of the SCO effects.

The unavailability of BVA in (99b)-(100b) can be accounted for by assuming the following constraint.

(101) SCO constraint (tentatively stated):

\*FD(A,B) if B c-commands an NP that is syntactically related to A.

Obviously more investigation is required with respect to the nature of this constraint, but what is relevant to the discussion in this chapter is the fact that a B-type QP is not restricted by this condition, as shown in (102):

(102) a. Do-no zidoosya-gaisya-ga Toyota-ni so-no  
which-GEN automobile-company-NOM Toyota-DAT that-GEN

zidoosya-gaisya-o suisen-saseta no?  
automobile-company-ACC recommend-caused COMP

'Which automobile company made Toyota recommend that automobile company?'

b. Do-no zidoosya-gaisya-o so-no zidoosya-gaisya-ga  
which-GEN automobile-company-ACC that-GEN automobile-company-NOM

Toyota-ni *t* suisen-saseta no?  
Toyota-DAT recommend-caused COMP

'Which automobile company did that automobile company make Toyota recommend?'

This suggests that ID is not subject to the SCO constraint in (101).<sup>48</sup> I will not explore the nature of the SCO effects any further in this work, but this observation add a piece of evidence that the syntactic properties of ID are different from those of FD.

<sup>48</sup> It seems that in English a B-type QP also exhibits the SCO effects; at least (i) is not as acceptable as a Japanese example such as (102):

(i) *?\*/??Which linguist did that linguist recommend for a lucrative project?*

Notice that the representation of (i) parallels with (98) in that the dependent term c-commands the trace of the QP itself; in contrast, (102) can have representations in (97), in which the dependent term c-commands the trace of the empty operator which is to be syntactically related to the QP. Therefore, the contrast between (102) and (i) may be accounted for by postulating (ii):

(ii) \*ID(A,B) if B c-commands the trace of A.

I leave this issue for the future research.

### 3.5. Summary

I have claimed (64)-(66) in this chapter.

(64) A dependent term  $\beta$  can enter into BVA only if either FD( $\alpha,\beta$ ) or ID( $\alpha,\beta$ ) is established.

(65) a. Structural condition on FD:  
\*FD( $\alpha,\beta$ ) if  $\alpha$  does not c-command  $\beta$  at LF.  
b. Lexical condition on FD:  
\*FD( $\alpha,\beta$ ) if  $\beta$  is a <sup>large</sup>NP.

(66) a. Structural condition on ID:  
\*ID( $\alpha,\beta$ ) if  $\alpha$  does not precede  $\beta$  at PF.  
b. Lexical condition on ID:  
\*ID( $\alpha,\beta$ ) if  $\alpha$  is an A-type QP.

It has been shown that the apparently complicated distribution of BVA in Japanese which is given in section 3.2 is accounted for by the assumptions in (64)-(66). The result is presented in the table in (67).

(67)

LF c-command	PF precedence	$\alpha$	$\beta$	FD ok?	ID ok?	BVA ok?
yes	yes	A-type	<sup>large</sup> NP	*	*	*
		A-type		FD	*	ok
			<sup>large</sup> NP	*	ID	ok
				FD	ID	ok
no	no	A-type	<sup>large</sup> NP	*	*	*
		A-type		*	*	*
			<sup>large</sup> NP	*	*	*
				*	*	*
no	yes	A-type	<sup>large</sup> NP	*	*	*
		A-type		*	*	*
			<sup>large</sup> NP	*	ID	ok
				*	ID	ok
yes	no	A-type	<sup>large</sup> NP	*	*	*
		A-type		FD	*	ok
			<sup>large</sup> NP	*	*	*
				FD	*	ok

This analysis in effect claims that the so-called WCO effects may not arise with a B-type QP, and that the so-called reconstruction effects will not obtain with a <sup>large</sup>NP. Section 3.4.1 further demonstrates that these claims also apply to English.

The observation in this chapter is made possible on the basis of the analysis of the OS-type construction in Japanese which is given in chapter 2. In particular, the distinction between the Deep OS-type and the Surface OS-type is crucial, since it turns out that the WCO effects are only found in the Surface OS-type. While the two kinds of the OS-type construction has been distinguished solely in terms of the scope interpretation in chapter 2, the observations in this chapter add further evidence for the claim that the Surface OS-type has to be distinguished from the Deep OS-type and that there are syntactic environments in which only a Surface DL is allowed.

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