BRIDGE & NON-BRIDGE VERS ARMATURES
IN JAPANESE

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by
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* * * * *

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INTRODUCTION

The syntactic properties of English bridge and non-bridge verbs have attracted much attention in the current syntactic theories, in particular, in the framework of Government and Binding (e.g., Chomsky 1981). Bridge verbs include say, think, and believe, while non-bridge verbs include whisper, murmur, shout, and whine. Following Kayne (1981), Stowell (1981a,b) notes that the complementizer that of a subordinate clause may be phonetically empty if the clause is a complement of a bridge verb, while the empty complementizer does not occur if the matrix verb is a non-bridge verb. This difference is shown below.

(1) a. John said that/\, he\, Mary dumped Tom
    b. John murmured that/\, he\, Mary dumped Tom

The matrix verb of (1a) is say, a bridge verb, and the matrix verb in (1b) is murmur, a non-bridge verb. In this thesis, I will call a sentence containing a bridge verb as the matrix verb a 'bridge sentence', and the one with a non-bridge verb in the matrix clause a 'non-bridge sentence'. (1a) above is a typical English bridge sentence, and (1b) is a typical English non-bridge sentence.

Note that sentence (1a) is grammatical with an overt complementizer that or with one phonetically empty. On the other hand, in (1b), the sentence with the non-bridge verb cannot have the
empty complementizer. Stowell (1981a,b) claims that (1a) is grammatical because the bridge verb lexically governs the subordinate clause (=CP) and also its head, the complementizer, while the non-bridge verb in (1b) does not.

The syntactic properties of bridge and non-bridge verbs in Japanese have also attracted attention recently (e.g., Lasnik & Saito 1984, Saito 1986a, Fukui 1988). Saito (1986a:312) and Fukui (1988:508) note that a distinction between bridge and non-bridge verbs can be made in Japanese as well. That is, some verbs in Japanese western dialects allow empty complementizer optionally, while other verbs require an overt complementizer.*

(2) a. John-ga [o=Koobe-ni iku (te)] yusta
    John-nom Kobe-to go Comp said
    'John said that he was going to Kobe.'

(Saito 1986a:312)

b. John-ga [o=Koobe-ni iku *(te)] sasayaita (koto)
    John-nom Kobe-to go Comp whispered fact
    'John whispered that he was going to Kobe.'

(2a) has the bridge verb *ya 'say' while (2b) has the non-bridge verb *sasayaku 'whisper'.

The main purpose of this thesis is to investigate the properties of bridge and non-bridge verbs in Japanese, primarily using western dialects including the Sanuki dialect. In fact, similar to English asymmetry between bridge and non-bridge sentences, I will show that Japanese bridge verbs govern the subordinate CP and its head, the complementizer. I will also show that the non-bridge verbs in
Japanese govern neither the subordinate CP nor the complementizer. I will present empirical evidence for government by bridge verbs, and non-government by non-bridge verbs, as observed at two levels of representations, namely S-structure and Logical Form (LF).

This thesis is organized as follows. Chapter I presents an inventory of Japanese bridge verbs. Further I will investigate which Japanese verbs are bridge verbs, and which are not. I will use complementizer deletion which occurs in Sanuki dialect spoken in the northeastern region of the Shikoku island in Japan as the test to make this distinction.2

In Chapter II, I will present evidence for government by Japanese bridge verbs at S-structure. First, I will claim that it is theta-government that is crucial to the bridge and non-bridge asymmetries. Second, I will review the account by Saito (1986a) for scrambling the subordinate clause out of a bridge sentence, which results in an ungrammatical sentence. Third, I will show that scrambling of an adjunct phrase from the subordinate CP in a non-bridge sentence results in a ungrammatical sentence, while the same type of scrambling from a bridge sentence is fine. Finally, I will show that the scrambling of an argument from the subordinate clause in a non-bridge sentence results in an awkward sentence. I will show that all these phenomena are accounted for if bridge verbs theta-govern the subordinate CP, while non-bridge verbs do not.

In Chapter III, I will further discuss evidence for government by Japanese bridge verbs at another level of grammar, Logical Form (=LF). First, I will review Fuku's account of naze 'why' extraction
(wh-adjunct movement) at LF. I will accept his claim of an ECP account for əzəx 'why' extraction. Moreover, I will show that the extraction of wh-argument such as dəənx 'who' or ənnl 'what' from a non-bridge sentence results in an awkward sentence, although it is not as bad as the wh-adjunct extraction. I will show that all these phenomena are accounted for if the bridge verbs theta-govern the CP, while non-bridge verbs do not. Further, I will claim that in order to capture the unacceptability of two different types of LF movement, both ECP and subjunction must be postulated at LF.

The idea that subjunction applies at LF is different from what has been assumed in the past. Huang (1981, 1982) and Salto (1985) claimed that subjunction does not apply at LF. On the other hand, Nishiguchi (1986) and Pesetsky (1987) claim that it applies at LF. By postulating subjunction at LF, I will show that the scrambling of an argument phrase at S-structure parallels the extraction of wh-argument at LF. I will also show that the scrambling of an adjunct phrase at S-structure parallels the extraction of wh-adjunct at LF. Throughout this thesis, I will use the Sanuki dialect because it allows the complementizer te to drop in bridge sentences.

I will adopt the assumption of Government and Binding Theory (e.g., Chomsky (1981)). I assume the so-called T-model of grammar, as follows. It consists of four different levels of representation.
D-structure is the basic structure projected from the lexicon. The rules of transformation (=move alpha) apply between D-structure and S-structure. The phenomenon of 'scrambling' in Japanese, which I will cover in Chapter II, is considered to be an instance of move alpha.

(Saito 1986a:304)

PF is the phonological representation of the components. LF is the level in which only the semantically interpretable components are represented.

I assume the LF level for a more universal account of Japanese grammar. In other words, by assuming LF, both English wh-questions and Japanese wh-questions are represented in an unified way. Japanese wh-phrase at S-structure is in situ, but at LF, both English and Japanese wh-phrases are at COMP SRRC position, as below.

(4) a. What did John eat?  
   b. [=what. [=John ate L,]]
(5) a. John-wa nani-o tabeta n?  
   John-top what-acc ate Q  
   'What did John eat?'  
   b. [=nani, [=John-wa L, tabeta]]

(4) is a typical English wh-question, in which the wh-phrase what is extracted from the argument position of the verb. (5) is a typical
Japanese wh-question. Note that wh-phrase *nani* 'what' is *in situ*, at the argument position of the verb. At S-structure, English wh-question and Japanese wh-question seem to share little in common. However, at LF, the wh-phrase in both is extracted to COMP SPEC position, and the parallelism is observed. By assuming LF, the two languages are represented in a unified way. I will present evidence for bridge and non-bridge asymmetries at the LF level in Chapter III.
NOTES TO INTRODUCTION


In this thesis, I will use the following abbreviations in the gloss. nom: Nominative Case Marker; top: Topic Marker; acc: Accusative Marker; dat: Dative Case Marker; Comp: Complementizer; cop: Copula; past: Past Tense Marker; prog: Progressive Tense Marker; pas: Passive Morpheme.

The syntactic behavior of bridge and non-bridge constructions in the Sanuki dialect are identical to the Osaka and Kobe dialect.

Standard Japanese, which is spoken in the Tokyo area, does not allow complementizer deletion even in bridge sentences.

(i) a. John-ga [e=Taro-ga hon-o katta *(to)] itta
   John-nom Taro-nom book-acc bought COMP said
   'John said (that) Taro bought a book'

   b. John-ga [e=Taro-ga hon-o katta *(to)] sasayaita
          John-nom Taro-nom book-acc bought COMP whispered
   'John whispered *(that) Taro bought a book'

Lasnik and Utiagereka (1988:5) summarizes move alpha proposed by Chomsky as follows.

Move alpha means "take anything and put it anywhere else, leaving behind a trace" (a trace being an empty category of the same syntactic type as the item that moved).
CHAPTER I

JAPANESE BRIDGE VERBS AND NON-BRIDGE VERBS

1.0. INTRODUCTION

In this chapter, I will examine a group of verbs which take a subordinate clause in Japanese. Using the distribution of empty complementizer as a test, I will see which verbs allow the phonetically empty complementizer (complementizer deletion) as well as an overt one in the Sanuki dialect. As noted by Fukui (1985) and Saito (1986a), the verbs that allow empty complementizers are the equivalent of English bridge verbs, and the ones that do not correspond to English non-bridge verbs.

In section 1, a brief summary of the informal research method is presented. Section 2 will present a list of verbs that allow the complementizer deletion and the ones that do not in the Sanuki dialect. In section 3, I will examine the characteristics of Japanese bridge verbs.

1.1. INVENTORY OF JAPANESE BRIDGE & NON-BRIDGE VERBS

In English, verbs such as say and think allow the complementizer of a subordinate CP to be empty, as shown in the example below.

(1) John said [say [that Tom bought a book]]

In (1), the sentence is grammatical with or without the overt
complementizer **that**. In the Sanuki dialect in Japanese, a certain
group of verbs exhibit the same phenomenon. I conducted an informal
research in order to enumerate the list of Japanese bridge verbs as
exhaustively as possible.

The verbs that allow their complement **CP** to appear without the
overt complementizer and the ones that do not were identified using
the following procedures. First, the verbs that take a **CP** were
collected from Banruu Gôi Hyoo (The Chart of Classified Vocabularies)
(Kokuritsu Kokugo Kenkyûsho, 1964)². Then, each of the verbs was put
in a sentence as follows.

(2) Taroo-wa ico sakana-ga takoo naru tei y 
    Taro-top fish-nom expensive become Comp²
    'Taro ___ that the fish will become expensive.'

All the verbs that allow the subordinate structure were placed
in the frame sentence in order to confirm that they allow this
structure. Then, I checked to see if the sentence created by the
structure in (2) with each verb would remain grammatical if the
complementizer **to** is not phonetically realized. The sentence pattern
used to test for the allowance of an empty complementizer is as
follows.

(3) Taroo-wa ico sakana-ga takoo naru g y 
    Taro-nom fish-nom expensive become Comp
    'Taro ___ that the fish will become expensive.'

Sometimes the context of the **CP** was changed to avoid semantic
anomaly, but the sentence structure was kept the same. Approximately
140 verbs were examined. The test sentences were provided orally to
two native speakers of Sanuki dialect.

1.2. A LIST OF JAPANESE BRIDGE VERBS AND NON-BRIDGE VERBS

The results are as below. Among the verbs which allow the CP complement, only a few allowed the complementizer deletion.

(4) VERBS THAT ALLOW THE COMPLEMENTIZER DELETION

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>lu</td>
<td>'say'</td>
</tr>
<tr>
<td>omou</td>
<td>'think'</td>
</tr>
<tr>
<td>ii-kiyu</td>
<td>'say assuredly'</td>
</tr>
<tr>
<td>omoi-komu</td>
<td>'think wrongly'</td>
</tr>
<tr>
<td>nukasu</td>
<td>'say imprudently'</td>
</tr>
</tbody>
</table>

(5) VERBS THAT DO NOT ALLOW THE COMPLEMENTIZER DELETION

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>siru</td>
<td>'know'</td>
</tr>
<tr>
<td>seinjiru</td>
<td>'believe'</td>
</tr>
<tr>
<td>tuhouyaku</td>
<td>'whisper'</td>
</tr>
<tr>
<td>kanjiru</td>
<td>'feel'</td>
</tr>
<tr>
<td>morasu</td>
<td>'give vent to'</td>
</tr>
<tr>
<td>honnoukashasu</td>
<td>'give a hint'</td>
</tr>
<tr>
<td>kannasuru</td>
<td>'think'</td>
</tr>
<tr>
<td>kinoku</td>
<td>'notice'</td>
</tr>
<tr>
<td>seikeyaku</td>
<td>'whisper'</td>
</tr>
<tr>
<td>dorasu</td>
<td>'shout'</td>
</tr>
<tr>
<td>kobosu</td>
<td>'complain'</td>
</tr>
<tr>
<td>omoi-tigau</td>
<td>'think wrongly'</td>
</tr>
<tr>
<td>omoi-dasu</td>
<td>'remember'</td>
</tr>
<tr>
<td>sakebu</td>
<td>'shout'</td>
</tr>
</tbody>
</table>
hinan-suru  'accuse'

rugere  'tell, sentence'

utagen  'doubtful of'

li-kaeru  'say in other words'

All the verbs that belong to category (4) are listed above, but not all of the ones for category (5) are listed. All the verbs that allow CP as their complement and that do not belong to (4) are the ones that should be listed in (5). Here, only a part of the entire list is presented.

All of the five verbs in (4) allowed the empty complementizer in the subordinate CP optionally, in unscrambled sentences. I assume that they are Japanese bridge verbs. The bridge verb list (4) is by no means complete. More elaborate research with a larger number of verbs will be required.

1.3. CHARACTERISTICS OF JAPANESE BRIDGE VERBS

It seems that all of the verbs in (4) refer to 'saying' or 'thinking'. In 'to say', nukasu 'to say imprudently' and li-ki ru 'to say assuredly' refer to the human articulation taking place, and the rest, omou 'to think' and omoi-ku 'to think wrongly' refer to the thinking. Three of the five, in, omou and nukasu are single verbs, while li-ki ru and omoi-ku are compound verbs whose base verbs are in or omou.

However, not all compound verbs of in 'to say' or omou 'to think' are bridge verbs. As shown in list (5), omoi-ten 'to remember' omoi-tigasu 'to think wrongly', and li-kaeru 'to say in other
ways' are not bridge verbs. What type of compound verbs of ju and 
emou are bridge verbs is not investigated here, but it deserves a 
through examination in the future.

The non-bridge verbs in (5), on the other hand, are mainly the 
verbs which describe the 'manner' of speaking or thinking (Stowell 
1981b). Tabuyaku 'murmur', sakebu 'shout', and saayayku 'whisper' all 
describe the manner in which a person articulates something. Tabuyaku 
'whisper' for instance, conveys not only some kind of articulation 
taking place but also that the words are articulated in a low, small 
voice, by a man with no intention of conveying the message to anyone. 
This parallels the English bridge and non-bridge verb distinction.

1.4. saayayku

In this chapter, the complementizer deletion noted by Saito 
(1986a) was used to determine whether a verb is a bridge verb or not.
in general, Japanese bridge verbs refer to the action of saying and 
thinking. The single verbs, ju 'say' and emou 'think', and some of 
the compound verbs of ju and emou are shown to be Japanese bridge 
verbs. However, not all the compound verbs of these two verbs are 
classified as bridge verbs. It is not clear what distinguishes 
certain compound verbs as bridge verbs as opposed to non-bridge verbs. 
Most Japanese non-bridge verbs are 'manner' of speaking or thinking. 
English non-bridge verbs have the same characteristic.
The word 'deletion', used by Saito (1986a), is somewhat misleading. If a complementizer actually drops, it means that we have to posit two rules for complementizer distribution, one to keep it and the other to delete it. This is redundant. Following Stowell (1981b), Miyagawa (1987) and Fukui (1988), I assume that it is not that the complementizer that (in English), or *te (in Japanese) drops, but that there is an empty complementizer placed in the head of CP (complementizer phrase). The empty complementizer, being an empty category, is subject to the Empty Category Principle, which I will cover in Chapter II and III. In this thesis, however, I keep the traditional terminology 'complementizer deletion' in both English and Japanese cases.

The verbs that allow the CP as their complement has the following structure in Japanese. The other possibilities for structure of non-bridge sentences will be presented in Chapter II.

---

Two native speakers I consulted accepted both yuuta and *te as the Complementizer that functions in exactly the same way. In this paper,
be will be used.

"The investigation regarding the two groups of verbs needs to be elaborated in the following way. As shown in the lists, the compound verbs which contain the same verb as their base are not necessarily classified in the same category. What determines the classification of each compound verb needs to be investigated. I suspect that it is semantic factors that determine the classification.

The Sino-Japanese verbs also need to be investigated."
CHAPTER II
EVIDENCE FOR GOVERNMENT AT S-STRUCTURE

2.0. INTRODUCTION

In the Introduction, I showed that in English, if the matrix verb is a bridge verb, the complementizer that need not be phonetically realized.

(1) a. John said [he that Mary went to Paris].
   b. John said [he e Mary went to Paris].

   On the other hand, if the matrix verb is a non-bridge verb, that must be phonetically realized.

(2) a. John whispered [he that Mary went to Paris].
   b. *John whispered [he e Mary went to Paris].

Stowell (1981a, b), following Kayne (1981), accounts for the difference between (1b) and (2b) by employing the notions of the Empty Category Principle (ECP) (Chomsky 1981, Lasnik & Saito 1984) as follows.

(3) [e] must be properly governed. (Lasnik & Saito 1984:240)

The definition of proper government that Stowell employs is as follows.
(4) Proper Government:

In the configuration \[ \ldots B \ldots A \ldots B \ldots \], A properly governs B if:

(a) A c-commands B, and (b) where P is a maximal projection, if P dominates B then P also dominates A, and

(i) \( A = CP \), or

(ii) A is co-indexed with B

(41) is the case of lexical government, and (411) is the antecedent-government.

Stowell claims that a bridge verb takes the subordinate clause as its complement and theta-marks it. He notes that the bridge verb lexically governs the head of CP, Complementizer, and virtually governs the CP, by employing the definition of government by Belleretti & Rizzi (1981).

(5) If X governs Y and Z is the head of Y, then X governs Z.

On the other hand, the non-bridge verbs do not govern their clausal complements nor give theta-role to it. Compared with (1b), which has the bridge matrix verb, (2b) is ungrammatical because the empty complementizer is not governed. This is an explanation of the asymmetry between bridge and non-bridge sentence in English. In this chapter, I will show evidence that the bridge and non-bridge asymmetries are observed also in Japanese.

In section 1, I will present the configuration for bridge sentences in English and Japanese. I will compare it with the configuration of non-bridge sentences. From section 2 on, I will show that it is the theta-government of CP by the matrix verb that
causes the asymmetrical phenomena between bridge and non-bridge sentences. I will present pieces of evidence that are accounted for only if we define the bridge and non-bridge distinction in terms of theta-government.

In section 2, I will review the evidence based on empty complementizer (=complementizer deletion) and scrambling in Japanese, which were originally discussed by Saito (1986a). I will show that the account for the distribution of empty complementizer is possible only if we assume that the bridge verb theta-governs the subordinate CP and the non-bridge verb does not.

Section 3 will discuss theta-government, which is crucial to the bridge and non-bridge asymmetries. I will show that it is not Case that is crucial to the asymmetries. In section 4, I will show that scrambling an adjunct phrase out of a subordinate CP violates the ECP if the matrix verb is a non-bridge verb. This also is accounted for only if we assume that the bridge verb governs the subordinate CP and the non-bridge verb does not. I will also show that the scrambling of an argument from the subordinate clause presents the effect of subadjacency violation if the matrix verb is non-bridge. Based on the scrambling of an argument from the subordinate clause, I will propose that in scrambling, 'crossing one barrier' (status of 1-subadjacency) results in subadjacency violation, although the acceptability is not as bad as crossing two barriers.
2.1. **CP AND THE BRIDGE & NON-BRIDGE VERBS**

In this section, I will show the configuration of bridge sentence in English and Japanese. I will agree with Stowell in assuming that the subordinate CP in English bridge sentence is a complement of the matrix verb, while the CP in a non-bridge sentence is not. I will show that the configurations of Japanese bridge and non-bridge sentences parallel the ones for English. I will show that in both English and Japanese, the subordinate CP and the matrix verb in the bridge sentence must be sisters to each other, while the position of subordinate CP in the non-bridge sentence is anywhere under the matrix VP except the complement position.

2.1.1. **BRIDGE SENTENCE CONFIGURATION AND NON-BRIDGE SENTENCE CONFIGURATION IN ENGLISH**

If we employ the hypothesis by Stowell (1981b) a bridge verb in English theta-marks the subordinate CP and takes it as a complement. The positions of the matrix bridge verb and the subordinate CP in sentence (1a) is represented as below.

(6) Bridge verb configuration (relevant portion only)

```
  VP
    \-- V'
       \-- CP
          \-- SPEC
               \-- C'
                   \-- Comp
                       \-- IP
                           (that) Mary go to Paris
```

The CP and the matrix verb are adjacent to each other under the same
node, $v'$. The subordinate CP is in the complement position of the matrix verb, in which a theta-role is assigned by the verb to the CP. The relationship between the subordinate CP and the matrix verb is best described by the theta-government (Chomsky 1986:15), since the bridge verb theta-marks the CP and the verb (a zero-level category) and the CP are sisters under the same mother node. In this thesis, instead of definition of government using the notion of lexical government and antecedent-government, as is used by Stowell, I will use the definition of the theta-government and antecedent-government.

(7) X properly governs Y iff X theta-governs Y or antecedent-governs Y.

(8) X theta-governs Y iff X is a zero-level category that theta-marks Y, and X, Y are sisters.

The definition of sisterhood is as follows.

(9) A set of nodes are sisters if they are all immediately dominated by the same (mother) node.

(Radford 1981:84)

Following Chomsky (1986), I assume that theta-government holds both at S-structure and LF. With the definition of (5) (8) and (9), in (6), $v'$, may, theta-governs the subordinate CP and virtually the Comp. (6) is the only possible configuration for bridge sentences, since the subordinate CP must be in the complement position of the matrix verb in order to receive a theta-role.

Stowell (1981b:364) also notes that a non-bridge verb absorbs the thematic object position. The subordinate CP in non-bridge
sentences is not a complement but rather it is interpreted as an adjunct. In the notion presented in (5) and (8), this means that the non-bridge verb does not theta-govern the Comp, since the verb does not theta-mark the CP. The subordinate CP in non-bridge sentences may be placed where the matrix verb does not assign a theta-role, i.e., the CP in a non-bridge sentence may be positioned anywhere under the matrix VP except the complement position.

2.1.2. BRIDGE SENTENCE CONFIGURATION AND NON-BRIDGE SENTENCE CONFIGURATION IN JAPANESE

Saito (1986a:912) notes that in some western Japanese dialects, the distribution of the complementizer parallels English. He notes that the head of the subordinate CP, Japanese complementizer と, need not be phonetically realized if the matrix verb is the bridge verb.

(10) a. Anta-ga i=Taroo-ga kekkon-sita te i yuuta (koto)
    you-nom Taro-nom got married Comp said fact
    'You said that Taro got married'

b. Anta-ga i=Taro-ga kekkon-sita e i yuuta (koto)
    you-nom Taro-nom got married Comp said fact
    'You said that Taro got married'

(11) a. Anta-ga i=Taro-ga kekkon-sita te i sasayaita (koto)
    you-nom Taro-nom got married Comp whispered fact
    'You whispered that Taro got married'

b. Anta-ga i=Taro-ga kekkon-sita e i sasayaita (koto)
    you-nom Taro-nom got married Comp whispered fact
    'You whispered that Taro got married'
(10) has the bridge verb, _lu 'say'. The verb _asayaku 'whisper' in
(11) is the non-bridge verb. Only (10) is grammatical if the
complementizer is phonetically empty. This parallels the English
bridge and non-bridge sentence shown in (1) and (2). Assuming the
property of Japanese bridge verb parallels English bridge verb, the
configuration of (10) is shown below (relevant portion only).

(12)

```
VP
  /\       
 SPSC       IP
  /\       /\  
   C'     vo  lu
      /\   /\  
     Comp "Taro-ga kekkon sita (te)"
```

In (11), the subordinate CP and the matrix verb _lu 'say' are
sisters. This configuration satisfies the condition of theta-
government presented in (8) and (9). Thus, if the complementizer _is
is phonetically empty, it is properly governed and XP violation does
not occur. The position of the subordinate CP in bridge sentences in
Japanese must be at the complement position of the matrix verb, in
order to satisfy the condition of theta-assignment.

If the English bridge verbs govern the subordinate CP and
Japanese bridge verbs does the same, there is a good possibility that
Japanese non-bridge verbs behave the same way as English non-bridge
verbs. In fact, as in English, Japanese non-bridge verbs do not allow
the empty complementizer, as follows.

(13) Anta-ga [e-Taro-ga kekkon-sita *(te)] _asayaita (koto)
    you-nom  Taro-nom got married Comp whispered fact
'You whispered that Taro got married.'

(14) Anata-ga [wa-Taroco-ga hou-ya *(te)]] tubuyaita (koto)
    you-nom Taro-nom silly-cop Comp murmured fact
    'You murmured that Taro is nuts.'

(15) Anata-ga [wa-Taroco-ga usuiki-sita *(te)] sinzitoru (koto)
    you-nom Taro-nom cheated Comp believe fact
    'You believe that Taro has cheated.'

All sentences above are non-bridge sentences, and the empty complementizer is not allowed. This suggests that as in English, Japanese non-bridge verbs do not take the subordinate CP as the complement, nor give a theta-role. Therefore, the position of the subordinate clause in Japanese non-bridge sentences may be anywhere under the matrix VP, except the complement position of the matrix verb.

In this section, I showed the configurational difference between bridge and non-bridge sentences in English and Japanese. I showed that in both languages, while the subordinate CP in bridge sentence must be in the complement position of the matrix verb, the CP in non-bridge sentence may be anywhere under the VP.

2.2. COMPLEMENTIZER DELETION AND SCRAMBLING

Salto (1986a:312) proposes that the phenomenon of complementizer deletion in western dialects can be accounted for by the BCP, in just the same way as English. He uses the Kobe dialect, a dialect spoken in the Hyogo Prefecture in western Japan. This dialect allows the complementizer to be dropped when the matrix verb is a bridge verb.
The following examples are from Salto (1986a).²

(16) a. John-ga (ê-Koobe-ni iku (te)) yuuta
    John-nom Kobe-to go Comp said
    'John said that he was going to Kobe.'

b. John-ga (ê-zibun-ga tensai-ya (te)) omootaru (koto)
    John-nom self-nom genius-cop Comp think fact
    'John thinks that he is a genius.'

Both yu ‘say’ and omou ‘think’ are bridge verbs. Both of the sentences are grammatical with or without the phonetically realized complementizer, ê. Salto notes, however, that if the subordinate CP is scrambled out of its D-structure position, the overt complementizer becomes obligatory.³

(17) a. (ê-Koobe-ni iku *(te)) John-ga yuuta
    Kobe-to go Comp John-nom said
    'John said that he was going to Kobe.'

b. (ê-zibun-ga tensai-ya *(te)) John-ga omootaru (koto)
    self-nom genius-cop Comp John-nom think fact
    'John thinks that he is a genius.'

The subordinate CP in these two sentences above is scrambled out from the original D-structure position. The sentences are ungrammatical if the overt complementizer is replaced with the empty complementizer.

Assuming the definition of government in (4) and (5), Salto claims that the empty complementizer [g] in (16) is lexically governed by the matrix verb.⁴ The sentences in (17), on the other hand, have a subordinate CP that has been moved out of its original position, and,
therefore, the empty complementizer is not governed. This violates ECP, and the sentences are ungrammatical.

As shown in section 1, Japanese non-bridge sentence does not allow the empty complementizer.

(18) Anta-ga [c-Tarou-ga kekkon-sita *(te)l] sasayaita (koto)
you-nom Taro-nom got married Comp whispered fact
'You whispered that Taro got married'

(19) Anta-ga [c-Tarou-ga aho-ya *(te)l] sinzitoru (koto)
you-nom Taro-nom silly-cop Comp believe fact
'You believe that Taro is nuts'

(18) and (19) have the non-bridge verb, sasayaku 'whisper' and sinziru 'believe'. Neither sentence is grammatical with the empty complementizer. Note that the judgement for (18) and (19) remain the same if their subordinate CP is scrambled, as in (20) and (21).

(20) [c-Tarou-ga kekkon-sita *(te)l], anta-ga l, sasayaita (koto)
Taro-nom got married Comp you-nom whispered fact
'You whispered Taro got married.'

(21) [c-Tarou-ga aho-ya *(te)l], anta-ga l, sinzitoru (koto)
Taro-nom silly-cop Comp you-nom believe fact
'You believe that Taro is nuts.'

The ungrammaticality of (20) and (21) with empty complementizers is also due to an ECP violation. The empty complementizer is neither governed at the original position, nor at the scrambled position.

In this section, I presented Saito's analysis of complementizer deletion with Japanese bridge verbs. It has been shown that an empty complementizer can occur in unscrambled bridge sentence. It has also
been shown that the empty complementizer is not allowed to appear if the matrix verb is a non-bridge verb or if the subordinate CP is scrambled away from its D-structure position, since both of these structures violate the ECP.

2.3. GOVERNMENT OR CASE?

In the previous subsection, position of the subordinate CP and the matrix verb has been shown to be crucial for licensing the empty complementizer. For CP to have the empty complementizer, the CP and the matrix verb must be sisters to each other, i.e., they must be adjacent to each other under the same node with nothing intervening between them.

Note, however, that the sisterhood is also the requirement for 'adjacency' of the CP and the matrix verb, an important factor for Case assignment. There is a possibility that the ungrammaticality of sentences such as (17) are due to the violation of Case filter.

Stowell (1981a) suggested the requirement for Case assignment as below.

(22) X assigns Case to Y if
   a. X is a Case assigner;
   b. X governs Y;
   c. X is adjacent to Y.

The matrix verb in (16) theta-governs the subordinate CP and it is adjacent to the CP. These conditions resemble the one for Case assignment shown in (22). Are sentences in (17) ungrammatical because the CP is not adjacent to the matrix verb, not being assigned Case?
In this subsection, I will agree with Saïto that the CP does not need Case, unlike NPs (Saïto 1983:249). I will give evidence of empty complementizer that the subordinate CP does not need Case. I will suggest that what is crucial in the question of the asymmetrical property between bridge and non-bridge verbs is not the issue of Case assignment but that of theta-government.

2.3.1. Passive and NP Movement

Miyagawa (1989) notes that in Japanese, the passive morpheme (future "suppresses" the external theta-role and absorbs Case. For example, the verb *korosu 'kill' has two theta-roles, the agent (=external) and theme (=internal). The D-structure is as follows.

(23) [CP [NP Taro [vo koros-are-ta]]]

Taro kill pass past

The external theta-role of 'agent' is suppressed, and only the internal theta-role 'theme' is assigned to Taro. However, even though Taro is an NP, it does not receive Case since the passive morpheme absorbs the Case assignment ability of the verb. Therefore, if the NP Taro stays in the original D-structure position, it violates the Case filter.

(24) *NP if it's lexical and has no Case. (Chomsky 1981:49)

This is why the NP, Taro, moves to the subject position at S-structure, where it is assigned nominative Case. The S-structure representation of (23) is as follows:

(25) [NP Taro-va [L, koros-are-ta]]

Taro nom kill pass past
2.3.2. **Passivization Test of Bridge Sentence**

Whether the subordinate CP in (16) and (17) need the Case from the matrix verb or not is tested by passive construction. If the CP receives Case from a bridge verb, then if a bridge sentence is passivized the CP is not assigned Case from the verb. In order to avoid the Case filter, the CP then must move to the subject position of the passive sentence, so that it receives Case from IP. Saito (1983:249) notes that the CP in the passive sentence (26b) below does not move to the subject position to receive Case.


John-nom Yamada-nom Tanaka-acc killed Comp think fact

'(the fact that) John believes that Yamada killed Tanaka'

b. [o-Yamada-ga Tanaka-o korosita to] ippanni onowarete iru

Yamada-nom Tanaka-acc killed Comp generally think(pass.)

koto fact

'(the fact that) it is widely believed that Yamada killed Tanaka'

(Saito 1983:248)

(26b) is the passive equivalent of (26a). Saito notes that at O-structure of (26b), there is no NP complement that requires Case at S-structure, and the CP is not forced to undergo Move alpha due to the absorption of the objective Case by the passive morphology.

Following Saito, I will claim that the CP does not need Case. I
will show that the position of the CP in the passive sentence at S-structure can be revealed by the distribution of the empty complementizer. If a bridge sentence with an empty complementizer is passivized, and the sentence is still grammatical, it shows that the CP is not moved to get the Case from the matrix NP. It shows instead that the CP and the matrix verb are still sisters to each other. The sentences below show that in fact the CP does not move from its original D-structure position.

(27) [i=g pro [-[e-bukka-ga agaru (te)] omoo-toru]
    price-nom rise Comp think-prog
    '(They) think that the price will go up.'

(28) [i=g [-[e-bukka-ga agaru (te)] omow-are-toru]
    price-nom rise Comp think-pas prog
    '(It is) thought that the price will go up.'

Sentence (27) is a grammatical active bridge sentence. The fact that the complementizer can be either overt or empty shows that the subordinate CP is adjacent to the matrix verb. (28) is the passive equivalent of (27). Note that here, too, the sentence is grammatical with an empty complementizer. This shows that the CP is still adjacent to the matrix verb, omow 'think'. Hence, CP need not to be assigned Case, unlike NP.

I have shown that Case assignment does not play a crucial role in the ungrammaticality of (17). The subordinate CP in bridge and non-bridge sentence does not need Case. It is theta-government that is crucial to the distribution of empty complementizer. A few more examples of this nature is provided in (29) – (31). Note that all (b)
sentences, the passive equivalent of (a), allow the empty complementizer. The (b) sentences are grammatical with or without the overt complementizer.

(29) a. [i, pro [w-[en-bukka-ga agaru (te)] yuu-toru]]
    price-nom rise Comp say-prog
    'They are saying that the price will go up.'

b. [i, g [w-[en-bukka-ga agaru (te)] iw-are-toru]]
    price-nom rise Comp say-pas prog
    'It is being said that the price will go up.'

(30) a. [i, pro [w-[en-bukka-ga agaru (te)] yuu-ta]]
    price-nom rise Comp say-past
    'They said that the price will go up.'

b. [i, g [w-[en-bukka-ga agaru (te)] iw-are-ta]]
    price-nom rise Comp say-pas past
    'It was said that the price would go up.'

(31) a. [i, pro [w-[en-bukka-ga agaru (te)] omon-to-tta]]
    price-nom rise Comp think-prog-past
    'They thought that the price would go up.'

b. [i, g [w-[en-bukka-ga agaru (te)] omon-are-to-tta]]
    price-nom rise Comp think-pas-prog-past
    'It was being said that the price would go up.'

2.4. SCRAMBLING ELEMENTS FROM INSIDE SUBORDINATE OF

In this section, I will present another property that distinguishes bridge sentences from non-bridge sentences. I will show that the scrambling of an adjunct phrase such as an adverbial phrase
out of the subordinate CP is allowed only with the bridge sentence, and not with the non-bridge sentence.

2.4.1. **SCRAMBLING AN ADJUNCT FROM SUBORDINATE CP**

When an adjunct is scrambled out from the subordinate CP, only bridge sentence is grammatical. The scrambled non-bridge sentence is ungrammatical.

(32) a. Anta-ga anoko-ni (c= Taroo-ga naisyode 3-kai uwaki-sita te) you-nom her-to Taro-nom secretly 3-times cheated Comp luta (koto) said fact

'You told her that Taro secretly cheated three times.'

b. Naisyode 3-kai, anta-ga anoko-ni (c= Taroo-ga te) uwaki-sita secretly 3-times you-nom her-to Taro-nom cheated tel luta (koto) Comp said fact

'You told her that Taro secretly cheated three times.'

(33) a. Anta-ga anoko-ni (c= Taroo-ga naisyode 3-kai uwaki-sita te) you-nom her-to Taro-nom secretly 3-times cheated Comp sasayaita (koto) whispered fact

'You whispered to her that Taro secretly cheated three times.'

b. Naisyode 3-kai, anta-ga anoko-ni (c= Taroo-ga te) uwaki-sita te secretly 3-times you-nom her-to Taro-nom cheated Comp sasayaita (koto) whispered fact
'You whispered to her that you secretly cheated three times.' The sentences in (32) are bridge sentences and in (33) are non-bridge sentences. 3-kal 'three times' is an adverbial phrase which is an adjunct. The only way its trace is properly governed is through antecedent-government. If the subordinate CP is a barrier, both (32b) and (33b) should be ungrammatical. However, only (33b) is ungrammatical.

I will claim that this difference in judgement between (32b) and (33b) is due to the fact that the CP in the former is theta-governed by the matrix verb, while the latter is not. This is based on the notion of 'L-marking' and 'barrier' (Chomsky 1986).

(34) X L-marks Y iff X is a lexical category that theta-governs Y.
(35) Z is a BC (=blocking category) for Y iff Z is not L-marked and Z dominates Y.
(36) X is a barrier for Y iff (a) or (b):
    a. X immediately dominates Z, Z a BC for Y;
    b. X is a BC for Y, X = IP.

(Chomsky 1986:14-5)

The subordinate CP of (32b) is theta-governed by its matrix verb. Therefore according to (35) and (36), the CP is not a barrier. Thus, antecedent-government is not hindered. (33b), on the other hand, has a CP as a barrier. The subordinate CP is not theta-governed by the matrix verb, since the matrix verb is a non-bridge verb. Thus, the CP is a barrier, and neither lexical government nor antecedent-government is possible. Thus, the trace in the subordinate CP is left ungoverned, violating the ECP.
Some more examples of the same phenomenon are provided below.

(37) a. Naisyode 3-kai, anta-ga [ sento Taro-ga 5, uwaki-sita tel] secretly 3-times you-nom Taro-nom cheated Comp
    thought fact
    'You thought that Taro secretly cheated three times.'

b. Naisyode 3-kai, anta-ga [ sento Taro-ga 5, uwaki-sita tel] secretly 3-times you-nom Taro-nom cheated Comp
    sinzitoru (koto) believe fact
    'You believe that Taro secretly cheated three times.'

(38) a. Sensyu 3-kai, anta-ga [ sento Taro-ga 5, huraretu tel] last week 3-times you-nom Taro-nom was dumped Comp
    iuta (koto) said fact
    'You said that Taro was dumped three times last week.'

b. Sensyu 3-kai, anta-ga [ sento Taro-ga 5, huraretu tel] last week 3-times you-nom Taro-nom was dumped Comp
    tubogita (koto) murmured fact
    'You murmured that Taro was dumped three times last week.'

2.4.2. SCRAMBLING AN ARGUMENT OUT OF SUBORDINATE CP: THE EFFECT OF 1-SUBJACENCY

In the previous subsection, I showed that an adjunct phrase is allowed to be scrambled from subordinate CP of bridge sentences. If
the matrix verb is a non-bridge verb, the scrambling results in ungrammaticality. This ungrammaticality is due to the violation of the ECP, because antecedent-government, the only possible government for an adjunct trace, is hindered because of the existence of a barrier.

There is another example of asymmetry between bridge and non-bridge verbs. Only the bridge verbs allow an argument to be scrambled out of the subordinate CP. If an argument is scrambled out of the CP from non-bridge sentences, the sentences are ungrammatical. Observe the following sentences.

(39) a. Anta-ga anoko-ni [e=Taroo-ga Naomi-o hutta te] juta (koto)
       you-top her-dat Taro-nom Naomi-acc dumped Comp said fact
       'You said to her that Taro dumped Naomi,'

   b. Naomi-o, anta-wa anoko-ni [e=Taroo-ga E, hutta te] juta
       Naomi-acc you-top her-dat Taro-nom dumped Comp said
       (koto)
       fact
       'You said to her that Taro dumped Naomi'

(40) a. Anta-wa anoko-ni [e=Taroo-ga Naomi-o hutta te] sasayaita
       you-top her-dat Taro-nom Naomi-acc dumped Comp whispered
       (koto)
       fact
       'You said to her that Taro dumped Naomi'

   b.77Naomi-o, anta-wa anoko-ni [e=Taroo-ga E, hutta te]
       Naomi-acc you-top her-dat Taro-nom dumped Comp
       sasayaita (koto)
whispered fact

'You whispered to her that Taro dumped Naomi.'

The sentences in (39) are bridge sentences, while those in (40) are non-bridge sentences. The judgment is subtle, but there is a significant decrease in the acceptability of (40b), compared with (39b). It is clear that this is not due to the BCP violation since the trace of the argument scrambled from each CP is lexically governed.

The awkwardness of (40b) is accounted for if we employ the notion of subjacency. Chomsky (1987:30) defines subjacency as follows:

(41) If \((X_i, X_{i-1})\) is a link of chain, then \(X_{i-1}\) is subjacent to \(X_i\).

(42) \(Y\) is \(n\)-subjacent to \(X\) iff there are fewer than \(n + 1\) barriers for \(Y\) that exclude \(X\).

In (40b), \(X_i\) is 1-subjacent to its antecedent, the scrambled NP. There is only one barrier. Chomsky notes that if there are two or more barriers between \(X_i\) and \(X_{i-1}\), there is a considerable decremen in the acceptability of the resulting sentence. However, he also notes that 1-subjacency play "a special role" (Chomsky 1986:30). He notes that "1-subjacency is a form of adjacency but to specify n-subjacency for higher values of \(n\) requires counters." However, if the type of subjacency is represented by counters, so is 1-subjacency. It is not unnatural to assume that 1-subjacency presents a somewhat intermediate effect between 0-subjacency (very acceptable structure) and 2-subjacency (unacceptable structure).

This suggests that subjacency represents a gradational effect.
While 0-subjacency and 2 or more subjacency mark the two extreme ends of judgement, 1-subjacency represents a somewhat awkward result. Indeed, the judgement of (40b), 1-subjacency, is 'awkward' but not totally ungrammatical. Some more examples of the same acceptability by 1-subjacency are below:

(43) (bridge sentence)

a. Anta-wa [e=Taroo-ga Naomi-o husta tel omootoru (koto)]  
   you-top Taro-nom Naomi-acc dumped Comp think fact  
   'You think that Taro dumped Naomi'

b. Naomi-o. anta-wa [e=Taroo-ga husta tel omootoru (koto)]  
   Naomi-acc you-top Taro-nom dumped Comp think fact  
   'You think that Taro dumped Naomi'

(44) (non-bridge sentence)

a. Anta-wa [e=Taroo-ga Naomi-o husta tel utagoota (koto)]  
   you-top Taro-nom Naomi-acc dumped Comp suspected fact  
   'You suspected that Taro dumped Naomi'

b.??Naomi-o. anta-wa [e=Taroo-ga husta tel utagoota (koto)]  
   Naomi-acc you-top Taro-nom dumped Comp suspected fact  
   'You suspected that Taro dumped Naomi'

In this section, I have presented two differences between bridge and non-bridge sentences, the scrambling of adjuncts out of subordinate CP and the scrambling of arguments out of the CP. It has been shown that the former is subject to the ECP if the matrix verb is a non-bridge verb. The latter is subject to 1-subjacency in non-bridge sentences, i.e., it results in an awkward but not totally ungrammatical sentence.
2.5. SUMMARY

In this chapter, I have illustrated some asymmetrical phenomena observed between bridge and non-bridge sentences. In section 1, I showed the configurational difference between the bridge verb and the non-bridge verb, both in Japanese and English. In both languages, the subordinate CP and the bridge verb must be sisters, while the CP in the non-bridge sentence is placed anywhere under the VP except the complement position of the matrix verb.

In section 2, I reviewed the complementizer deletion and scrambling, which were noted by Stowell (1981a,b) and Saito (1986a). It was shown that the empty complementizer is allowed only where it is properly governed, i.e., the CP is theta-governed. I demonstrated that the bridge verb and the subordinate CP must be sisters for the verb to theta-govern the CP. The empty complementizer in unscrambled non-bridge sentence is always ruled out by the ECP, since the complementizer is not theta-governed.

In section 3, I showed that placing the empty complementizer in the scrambled CP in a bridge sentence results in ungrammaticality. The sentence with the adverbial insertion between the empty complementizer in the unscrambled CP and the bridge matrix verb was also ungrammatical. Using the passivization test, I showed that the ungrammaticality of those sentences are not due to Case assignment, which requires adjacency between the Case assigner and the assignee. I claimed that it is theta-government that is crucial to the grammaticality of those sentences.

In section 4, I showed that ECP violation occurs if an adjunct
phrase is scrambled out of a subordinate clause of a non-bridge sentence, and that a 1-subjectivity effect appears if an argument phrase is scrambled out of a CP.

All these phenomena are accounted for if the bridge verb takes the subordinate CP as its complement and theta-marks the CP, and the non-bridge verb does not.
I define the proper government by theta-government and antecedent-government. The definition of theta-government is used in this thesis due to its applicability to the notion of 'L-marking' and 'barriers' (Chomsky 1966) which will be used in section 4 in Chapter II and Chapter III. Although Stowell (1981b) employs the notion of proper government defined by lexical government and antecedent-government, he notes that bridge verb theta-marks the subordinate clause and that non-bridge verb does not. This suggests that theta-government, rather than lexical government, captures the notion of government by a lexical item and generalizes it better.

'S' is used in his original work. In this thesis, S' in some original work cited is replaced with CP. Also, S is replaced with IP.

Stowell (1981a) showed that this phenomenon is observed in English. When a subordinate CP is topicalized, the complementizer that is not allowed to be empty.

(1) Ben knew the teacher was lying.
(11) *(That) the teacher was lying, Ben know.

*Saito (1986:314) uses 'maximal projection' for the definition of government. Below are his definition of government.

(1) X governs Y if every maximal projection dominating X dominates Y and conversely. (Aoun & Spottiche 1983)

However, this definition of government does not account for the ungrammatical sentence in which an adverbial is inserted between the
empty complementizer and the matrix non-bridge verb, as in (13b).

*The gloss is Saito's original.

*Personal communication: Shigeru Miyagawa.

*Some may find (35b) acceptable only marginally. However, compared to (36b), there is a significant difference between the two.
CHAPTER III
FURTHER EVIDENCE FOR GOVERNMENT

3.0. INTRODUCTION

In Chapter II, I argued that bridge verbs such as *omou 'think' and *ju 'say' govern their complement and complementizer, while non-bridge verbs such as *tobu 'murmur' and *sasayaku 'whisper' do not. This claim is supported by the phenomenon of complementizer deletion which is possible only when the complement clause is adjacent to the bridge verb.

(1) a. Taro-o-wa Zito-o-ga Oosaka-ni iku e yuu-ta.
   Taro-top Jiro-nom Osaka-to go Comp say past
   'Taro said that Jiro would go to Osaka.'

b. *Taro-o-wa Zito-o-ga Oosaka-ni iku e sasayai-ta.
   Taro-top Jiro-nom Osaka-to go Comp whisper past
   'Taro whispered that Jiro would go to Osaka.'

(1a) has a bridge verb as the matrix verb, and the sentence is grammatical without an overt complementizer. On the other hand, (1b) is ungrammatical without an overt complementizer. I reviewed the claim by Saito (1986a) that this asymmetry is due to the fact that bridge verbs such as *ju 'say' and *omou 'think' take the lower CP as its complement and hence theta-govern it, while non-bridge verbs such as *sasayaku 'whisper' do not.

40
Scrambling provided further evidence of theta-government. If the complement clause is scrambled away from the verb, the complementizer cannot drop even if the verb is a bridge verb. This is due to the position of the CP, which is not sister to the matrix verb and thus is not theta-governed by the verb.

(2) *(Jiro-ga Osaka-ni iku g de) Taro-wa you-ta.
   Jiro-nom Osaka-to go Comp Taro-top say past
   ‘Taro said that Jiro would go to Osaka.’

I also showed that if an adjunct such as an adverb is scrambled out of the subordinate CP in a non-bridge sentence, a BCP violation occurs.

(3) a. Anta-ga anoko-ni [c=Taro-ga 3-kai uwaki-sita te] sasaysita
   you-nom her-to Taro-nom 3times cheated Comp whispered
   (koto)
   fact
   ‘You whispered to her that Taro cheated three times.’
b. *[3-kai, anta-ga anoko-ni [c=Taro-ga ga, uwaki-sita te]
   3times you-nom her-to Taro-nom cheated Comp
   sasaysita (koto)
   whispered fact
   ‘You whispered to her that Taro cheated three times.’

I claimed that this is due to a violation of BCP. 3-kai ‘three times’ is an adverbial, and it is an adjunct. The only possibility for the trace in (3b) to be governed is by antecedent-government. Since the non-bridge verb in (3b) does not theta-govern, hence it does not L-mark the subordinate CP, the CP is a barrier for antecedent-
government. Hence, (3b) is ungrammatical.

In this chapter, more empirical evidence will be given that bridge verbs theta-govern the subordinate clause, CP, while non-bridge verbs do not. I will give two arguments that the bridge verb theta-governs its complement at the level of LF.

I will begin by reviewing Fukui’s observation concerning naze ‘why’ extraction at LF. I will accept his ECB account of adjunct extraction. However, I will show that not only ‘why’ extraction but also extraction of argument wh-phrases such as naij ‘what’ and dare ‘who’ results in awkwardness. In order to account for the awkwardness of extraction of an argument wh-phrase, I will claim that not only ECB but also subadjacency needs to be postulated. I will support my claim using the notion of D-linking (Perehovsky 1987).

Finally, further evidence for theta-government will be given for bridge verbs using the notion of reconstruction (Hoji 1985, Saito 1986b).

3.1. EXTRACTION OF WH-PHRASES AT LF

In English, wh-phrases in the regular wh-question arc in the COMP SPEC position. Wh-phrases in situ move into CP SPEC position at LF. (Chomsky 1966:4). The LF of (4) is represented as (5).

(4) Who will read what
(5) (*-What [Who, i], [i, will read k])

(Lasnik and Uriagereka 1988:103)

Lasnik & Saito (1984) argue that extraction of wh-phrase exists in Japanese also. According to them, the LF representation of
sentence (6) below is (7).

(6) John-wa naze kubi-ni natta no?
    John-top why was fired Q
    'Why was John fired?'

(7) [c=] [John-wa [n, kubi-ni natta] naze, I no
    (Lasnik & Salti 1984:224)'

The wh-phrase, naze 'why', is extracted from the IP. In this thesis, I will assume extraction of wh-phrases for Japanese at LF.

3.1.1. Extraction of Naze 'why' and Theta-Assignment

Fukui (1988:517) claims that the difference in acceptability between the sentences below can be accounted for by ECP, if we employ the notion of L-marking.

(8) a. Bill-wa [c=John-ga naze kubi-ni natta tte] itta no?
    Bill-top John-nom why was fired Comp said Q
    'Why did Bill say that John was fired?'
    (Lasnik & Salti 1984:244)

b. Bill-wa [c=John-ga naze kubi-ni natta tte] tubuyaita no?
    Bill-top John-nom why was fired Comp whispered Q
    (Fukui 1988:508)
    'Why did Bill whisper that John was fired?'

(8a) has the bridge verb itu 'say', while (8b) has the non-bridge verb, tubuyaku 'whisper'. Fukui claims that the difference in judgement between the two sentences arises from whether the matrix verb governs its complement or not.

At LF, naze 'why' is extracted from the lower CP. Therefore the
LF representation of (8a) and (8b) is as follows.

(9) a. (for (8a))

[\text{c-f \text{Bill-wa} \text{c-f \text{John-ga} 1.} \text{kubi-ni natta} tte 1.}] 
\text{itta} \text{na} \text{na} \text{no}

b. (for (8b))

[\text{c-f \text{Bill-wa} \text{c-f \text{John-ga} 1.} \text{kubi-ni natta} tte 1.}] 
\text{tubuyaita} \text{na} \text{na} \text{no}

Both LF representations above are parallel in structure, but only (8a) is acceptable. The intermediate trace \text{\_1} is also subject to ECP. \text{na} \text{na} 'why', being an adjunct, cannot be lexically governed by the verb in the subordinate CP in either sentence, thus the only possibility to satisfy ECP is to satisfy antecedent-government.

Employing the notion of 'barrier' by Chomsky (1986), Fukui claims that antecedent-government becomes impossible with the existence of a barrier. The relevant notions, part of which have been introduced in Chapter II, are repeated below.

(10) Y is n-subjacent to X if there are fewer than n+1 barriers for Y that exclude X.

(Chomsky 1986:30)

(11) If \((X_1, X_{-1})\) is a link of chain, then \(X_{-1}\) is n-subjacent to \(X_1\).

(a) subjacency (movement) : \(m = 1\)
(b) antecedent-government : \(m = 0\)

(Chomsky 1986: summarized by Fukui 1988)

(12) X L-marks Y if Y is a complement of X, and Y is lexical.

(Chomsky 1986: summarized by Fukui 1988)
(13) Z is a blocking category (BC) for Y iff Z is not L-marked and Z dominates Y.  
(Chomsky 1986:14)

(14) X is a barrier for Y iff (a) or (b):
   (a) X immediately dominates Z, I a BC for Y;
   (b) X is a BC for Y, Y = IP

(Chomsky 1986:14)

Fukui claims that in (8a), the verb in 'say' theta-governs and L-marks its complement clause, CP. Since CP is L-marked, the sentence has no barrier to the extraction of *naze*. The intermediate trace is antecedent-governed, thus there is no BCP violation. (8b), on the other hand, has a non-bridge verb *tobosoku* 'whisper' as the matrix verb. It does not take CP as its complement, therefore the verb neither L-marks nor theta-governs the CP. Therefore, in (8b), CP is a barrier that prevents the extraction of *naze*.

The unacceptability of extraction of an adjunct wh-phrase from an adjunct phrase was accounted for by Fukui with the analysis using the notions of L-marking, blocking category, and BCP.

3.1.2. EXTRACTION OF Nande 'WHY' IN SANSHI DIALECT

The phenomenon of wh-extraction noted by Fukui also holds in the Sanshí dialect. The Sanshí dialect evidences the same asymmetry for LF *naze* 'why' extraction that was observed for the standard dialect.

(15) a. Bill-wa [John-ga nande kubi-n natta te] luta n ?
    Bill-top John-nom why was fired Comp say Q
    'Why did Bill say that John was fired?'
b. *Bill-wa [i-e John-ga nande kubi-n natta te] sasayaita n?
   Bill-top John-nom why was fired Comp whispered Q
   'Why did Bill whisper that John was fired?'

Recall from Chapter II that the complementizer deletion effect distinguishes bridge verbs from non-bridge verbs.

(16) a. Bill-wa [i-e John-ga nande kubi-n natta g] iuta n?
   Bill-top John-nom why was fired Comp said Q
   'Why did Bill say that John was fired?'

b. *Bill-wa [i-e John-ga nande kubi-n natta g] sasayaita n?
   Bill-top John-nom why was fired Comp whispered Q
   'Why did Bill whisper that John was fired?'

In (16b), the matrix verb is a non-bridge verb, and the complementizer is empty. The non-bridge verb does not theta-govern the subordinate clause, and the empty complementizer violates the ECP. Hence, the fact about empty complementizer parallels what we observed for *naze 'why' extraction. In both, the non-bridge verb does not allow the empty complementizer or *naze extraction.

3.2. **Extraction of WH-Phrase Reconsidered**

The phenomenon of *naze 'why' extraction in Japanese was first noted by Lasnik & Saito (1984), and later further investigated by Fukui (1983). In this section, I will show that the asymmetry between bridge and non-bridge verbs not only holds with *naze 'why', an adjunct, but also with argument wh-phrases. I will argue that both ECP and subadjacency are required to account for LF extraction of wh-phrases. As I will suggest, this is evidence for subadjacency at LF.
3.2.1. **ARGUMENT WH-PHRASES**

Fukui notes the LF-extraction of *naze* 'why', an adjunct wh-phrase, from non-bridge sentence results in unacceptability. However, I will show that a similar phenomenon is observed with argument wh-phrases. If a wh-phrase such as *dare* 'who' or *nani* 'what' appears in an argument position, the sentence is fine only if the matrix verb is a bridge verb. A sentence is awkward if the matrix verb is a non-bridge verb.

(17) a. Anata [n=Ziroo-ga dare-o negutta te] luta n?
    you Jiro-nom who-acc hit Comp said Q
    'Who did you say Jiro hit?'

b. ??Anata [n=Ziroo-ga dare-o negutta te] sasayaita n?
    you Jiro-nom who-acc hit Comp whispered Q
    'Who did you whisper Jiro hit?'

(17a) is a bridge sentence, and (17b) is a non-bridge sentence. *Dare* 'who' in both sentences is an argument, because it is in the object position. While (17a) is grammatical, the judgment of sentence (17b) is considerably worse. Following are some more examples. If an argument wh-phrase is extracted at LF, the sentence is grammatical only when the matrix verb is a bridge verb. (a) sentences below are bridge sentences, and (b) are non-bridge sentences.

(18) a. Anata [n=Taroo-ga nani kowasita te] luta n?
    you Taro-nom what broke Comp said Q
    'What did you say Taro broke?'

b. ??Anata [n=Taroo-ga nani kowasita te] tubuyaita n?
    you Taro-nom what broke Comp murmured Q
'What did you murmur Taro broke?'

(19) a. Taroo·wa is=Ziroo·ga dare-o kirotto-ru te] omnō to n?
   Taro-top Jiro-nom who-acc hate prog Comp think prog Q
   'Who does Taro think Jiro hate?'

b. ??Taroo·wa (=Ziroo·ga dare-o kirotto-ru te) sinzi- to n?
   Taro-top Jiro-nom who-acc hate prog Comp believe prog Q
   'Who does Taro believe Jiro hate?'

(20) a. Taroo·wa is=Ziroo·ga mani-o utta tel iuta n?
   Taro-top Jiro-nom what-acc sold Comp said Q
   'What did Taro say Jiro sell?'

b. ??Taroo·wa is=Ziroo·ga mani-o utta tel sakerda n?
   Taro-top Jiro-nom what-acc sold Comp shout Q
   'What did Taro shout Jiro sell?'

3.2.2. Extraction of Wh-Phrases: An Alternate Account

We have observed that there is a difference in acceptability between bridge and non-bridge sentences not only with the extraction of *naze 'why'* but also with the extraction of argument wh-phrases. As a point of departure, we can make the following generalization.

(21) Any type of extraction of wh-phrase from the subordinate CP is hindered if the matrix verb does not theta-govern the subordinate CP.

Note that Fukui's account of extraction by antecedent-government no longer holds. His account, which is based on antecedent-government, is relevant only if the wh-word is an adjunct. As we saw earlier, the trace of *naze 'why'* an adjunct, can only be properly
governed by antecedent-government. However, antecedent-government is hindered if the subordinate CP is not theta-governed, since the CP is a barrier. This leads to ECP violation, as noted by Pukui (1988:517).

However, if the wh-phrase is an argument, it is lexically governed by the predicate. Therefore, the trace of the argument wh-phrase is properly governed. It does not have to leave an intermediate trace but directly moves into the highest COMP position (Huang 1981:373). The extraction of the argument wh-phrase does not violate ECP, and it should not result in an awkward sentence.

However, according to what we have seen, extraction of an argument wh-phrase also leads to ungrammaticality. The account by Pukui, which only uses ECP, is therefore insufficient.

I claim that it is necessary to postulate both ECP and subjacency in accounting for LF extraction of wh-phrases. As pointed out by Pukui, ECP can rule out extraction of adjunct wh-phrases such as (8), repeated below as (22).

(22) a. Bill-wa [c=John-ga nande kubi-n natta te] iuta n?
   Bill-top John-nom why was fired Comp say Q
   'Why did Bill say that John was fired?'

   b. *Bill-wa [c=John-ga nande kubi-n natta te] sasayatta n?
      Bill-top John-nom why was fired Comp whispered Q
      'Why did Bill whisper that John was fired?'

However, ECP cannot account for the asymmetrical behavior of argument wh-phrases such as in (17a) and (17b), repeated below as (23).

(23) a. Anta [c=Ziroo-ga dare-o nagutta te] iuta n?
      you Ziroo-nom who-acc hit Comp said Q
'Who did you say Jiro hit?'

b. ??Anta [e-Ziroo-ga dare-o nagutta tel masyaita n?

you Jiro-noo who-acc hit Comp whispered Q

'Who did you whisper Jiro hit?'

We can account for not only (22) but also (23) by employing the claim by Pesetsky (1987) that subadjacency applies at LF. (23a) has a bridge verb that L-marks the embedded CP, hence this CP is not a barrier. On the other hand, (23b) has a non-bridge verb which does not take CP as its complement. This CP is not L-marked. Not being L-marked, CP becomes a barrier and extraction across this barrier violates subadjacency.

3.2.3. D-LINKING OF ARGUMENT WH-PHRASES AND LF EXTRACTION

The idea that problem with (23b) results from subadjacency can be supported by the phenomenon of discourse linking (D-linking), which was first observed by Pesetsky (1987).

According to Pesetsky, argument wh-phrases can be optionally D-linked, and when it is D-linked it need not raise at LF. He notes that in a question in which a phrase such as which man or which book is used, the range of felicitous answers is limited by a set of nominals that both the speaker and the hearer have in mind. Hence which-phrases are different from what or who in syntactic behavior. In essence, which-phrases are not always quantifiers that undergo wh-movement.

According to Bolinger (1978) and Pesetsky (1987), who and what can be D-linked especially when heavy stress is given. The D-linked
wh-phrase does not undergo wh-movement. Pesetsky's generalizations of wh-movement at LF is as follows.

(24) D-linked wh- phrases are not quantifiers.

(25) Non-D-linked wh-phrases are quantifiers and adjoin to S'.

(Pesetsky 1987:108)

Pesetsky claims that D-linking is cut off (non-D-linked) when a phrase such as the hell or in the world, with its as the Japanese equivalent, is attached to the which-phrase. The wh-phrase with the hell attached is forced to have the non-D-linked reading, and it must undergo wh-movement to Comp position at LF. He suggests that when examining the acceptability of constructions with extraction, one should examine whether the wh-phrase is D-linked or not.

If his claim in (24) and (25) are correct, we predict that a non-bridge sentence with a D-linked argument wh-phrase is grammatical. A D-linked wh-phrase need not move at LF to take scope, hence it does not cross the CP barrier and violate subcyclicity. This prediction is borne out in (26). *Dono ko* 'which child' is D-linked.

(26) Anta [sa-Ziroc-ga dono-ko-o nagutta te] samayitsu n?

you *child-nom which child-acc hit* Comp whispered Q

'Which child did you whisper Jiro hit?'

In (26), *dono-ko* 'which child' is an argument NP, but is D-linked. This means that it does not undergo wh-movement. The sentence is perfectly acceptable in spite of the presence of the barrier CP. The CP is a barrier to the extraction of the wh-phrase if there is movement, since it is not L-marked by the non-bridge verb, *samayaku* 'whisper'. This is evidence that the wh-phrase does not move but
stays in the argument position.

When *ittal* 'the hell' is added, the extraction is forced
(Pesetsky 1987:111). As shown below, this leads to a subadjacency
violation.  

(27) ?? Anta [co-Ziroo-ga ittal dare-o nagutta tel] saasayalta
     you Jiro-nom the hell who-acc hit Comp whispered
     n Q

'Who the hell did you whisper Jiro hit?'
The only difference between (26) and (27) is the existence of D-
linking. In (27), D-linking is excluded by the phrase *ittal*, and
subadjacency effect appears. This suggests that in (27), the wh-phrase
has moved.

For contrast, note that excluding D-linking of an argument wh-
phrase in bridge sentences does not affect the acceptability.

(28) Anta [co-Ziroo-ga done-ko-o nagutta tel] luta n?
     you Jiro-nom which-child-acc hit Comp said Q

'Which child did you say Jiro hit?'

(29) Anta [co-Ziroo-ga ittal dare-o nagutta tel] luta n?
     you Jiro-nom the hell who-acc hit Comp said Q

'Who the hell did you say Jiro hit?'

*Done-ko* 'which child' in (28) is D-linked, but *dare* 'who' in (29) is
not. Despite this difference, both sentences are grammatical. (28)
is grammatical because *done-ko* 'which child' is D-linked hence does
not raise at LF. In (29), *ittal dare* 'who the hell' is forced to
raise to Comp position at LF, yet the sentence is grammatical. This
shows that the extraction of barcode, 'who', is not hindered by the subordinate CP, which confirms that the CP is L-marked by the bridge matrix verb.

What I have shown supports the claim that subjacency applies at LF. When an argument WH-phrase in a non-bridge sentence raises at LF, it crosses a barrier and therefore it results in a (mild) subjacency violation. This idea of application of subjacency at LF is different from what has been generally assumed in the past (Huang 1981; 1982; Saito 1985). In the next section, I will further support my argument by examining LF-extractions from other phrases.

3.3. EXTRACTIVE OF WH-PHRASE FROM OTHER PHRASES

I argued above that subjacency applies at LF. However, it is well known that the extraction of an argument from complex NP or adjunct phrase in Japanese is fine (Lasnik & Saito 1984). In this section, I will use the claim by Nishigauchi (1986) that these cases of extraction of WH-phrase do not constitute counterexamples to the argument that subjacency applies at LF. It will be shown that what appears to be an apparent counterexample to subjacency at LF is in fact accounted for by the ' pied-piping' analysis (Choe 1984, Nishigauchi 1986).

3.3.1. EXTRACTION OF ARGUMENT WH-PHRASES FROM COMPLEX NP: A CASE OF PIED-Piping

Traditionally, the extraction of argument WH-phrases in LF out of Complex NP has been used as evidence that subjacency does not apply
at LF (Huang 1981,1982). For instance, the extraction of argument
wh-phrases appears not to obey the Complex NP Constraint.

(30) Keesatsu-wa [nani-o tottal hitol-o tukamaeta n?]
     police-top what-acc stolen man-acc arrested Q
     'What did the police arrest the man who stole $\lambda$?'

If subadjacency applies at LF, (31), which is the LF representation of
(30), violates subadjacency.

(31) [nani,$\langle$Keesatu [$\langle$to,$\langle$hitol,$\langle$hitol,$\langle$tukamaeta]$\rangle$]$\rangle$]$\rangle$]

Nani 'what' is extracted from complex NP and has crossed two barriers.
If we postulate subadjacency at LF, we wrongly predict that (30) is
ungrammatical.

However, according to Nishigauchi (1986), (31) is not the
correct LF representation. He claims that it is a case of 'pied-
 piping', which raises the entire complex NP to the Comp position. The
revised LF representation of (30) is as follows:

(32) [$\langle$to,$\langle$hitol,$\langle$nani,$\langle$hitol,$\langle$tukamaeta]$\rangle$]$\rangle$]

As shown above, if the entire NP is raised, there is no wh-
 extraction out of NP and no subadjacency violation occurs.'

The application of 'Felicity Principle' (Pesetsky 1987:114)
supports this claim.

(33) A felicitous answer to a wh-question consists of a phrase
struclurally identical to the wh-phrase whose index is
immediately dominated by the Comp of the question at LF.

The felicitous answer to (30) confirms that the whole complex NP
is under the matrix Comp node:
(34) a. Monet-no-e desu.
   Monet-gen-picture cop
   'It's the picture of Monet.'

b. Monet-no -e -o totta bito desu.
   Monet-gen-picture -acc stole man cop
   'It's the man who stole the picture of Monet.'

The felicitous answer to (30) requires the entire complex NP. This suggests that it is not nani 'what' by itself but is the entire NP that is raised into COMP position of the question."

In this section, I showed that in Japanese, extraction of wh-argument out of Complex NP, which has traditionally been considered to be counter-evidence for subadjacency at LF, is not so. It was noted, following Nishigauchi (1986), that what appears to be a violation of subadjacency is an instance of pied-piping.

3.3.2. EXTRACTION OF WH-PHRASES OUT OF ADJUNCT PHRASES

The wh-phrases undergo LF extraction from clauses other than complement CP. Wh-phrases in an adjunct CP raise at LF as well. The following (a) sentences are wrongly predicted ungrammatical if we assume subadjacency at LF.

(35) a. Anta [e-Taroo-ga nani koota ken ] okott-o-n?
   you Taro-nom what bought because mad pres Q
   'What the hell, are you angry because Taro bought it?'

b. Anta [e=Taroo-ga nande kuruma koota ken ] okott-o-n?
   you Taro-nom why car bought because mad pres Q
   'Why, are you angry because Taro bought a car?'
(36) a. Anita [c-Taroo-ga nani musunda atode] kubi-ni siti n?
you Taro-nom what stole after fired Q
'What, did you fire after Taro stole a car?'?

b. *Anita [c-Taroo-ga nande kuruma musunda atode] kubi-ni siti n?
you Taro-nom why car stole after fired Q
'Why, did you fire after Taro stole a car?'?

In (35), ken 'because' phrase is an adjunct. In (36), atode 'after' phrase is also an adjunct phrase. (a) sentences, in which an argument wh-phrase is extracted at LF, are grammatical. Note that the CP in (a) sentences is not L-marked by the matrix verb, hence it is a barrier. The extraction of nani 'what' crosses one CP. If subjacency applies at LF, these sentences are wrongly predicted to be ungrammatical. This appears to be a counterexample to the claim that subjacency applies at LF.

However, as shown in Nishigauchi (1986) and Choe (1984), they need not be considered as counterexamples. If pied-piping applies at LF, the entire adjunct phrase moves into the matrix Comp position.

The LF representation of (35a) is as follows.

(37) [c-[c= Taroo-ga nani koota ken, [i=anta L okotte]n
Taro-nom what bought because you angry Q

The felicitous answer to (35a) is not a simple fulfillment but it requires the entire CP.

(38) * Pisororu ya.
Pistol cop
'Pistol.'
(39) Pisutoru-o koota ken ya.
  Pistol-acc bought because cop
  'Because (he) bought a pistol.'

This shows that nani 'what' is not extracted from CP, crossing a barrier, but rather stays in its original position at LF. (35a) appeared to be a counterexample to subadjacency at LF, but it is the case that wh-phrase is pied-piped and does not undergo the extraction.

The ungrammaticality of (35b) and (35d) can be explained by ECP and subadjacency. **Nande** 'why' is an adjunct wh-phrase. Nishigauchi (1986:122) notes that the CP including adjunct wh-phrases does not undergo pied-piping. The wh-phrase must be [+N] in the sense of X' feature system in order for the [+wh] to climb up (percolate) to the CP. **Nande** 'why' is not [+N], hence the percolation does not take place, as shown below.

(40)

Therefore, **nande** 'why' in (35b) and (35d) must raise at LF. The trace is not lexically governed by the verb in subordinate CP. Also, the un gov erned adjunct CP is a barrier, which hinders antecedent-government of the wh-trace by its antecedent. Neither the lexical-government nor antecedent-government is possible, thus the ECP violation results. Moreover, the extraction of **nande** 'why' crosses one barrier, and it also violates subadjacency.

In this section, two cases of extraction of wh-phrase out of
clauses other than a complement of a matrix verb have been accounted for. One was the extraction of an argument wh-phrase out of complex NP, and the other was the extraction of wh-phrases out of an adjunct clause.

I reviewed Nishiguchi’s (1986) account of the extraction of argument wh-phrases from complex NP. It was shown that at LF, the entire complex NP is raised as a result of pied-piping. The extraction of argument wh-phrases from adjunct phrase has also been accounted for by pied-piping. The wh-phrase does not raise at LF to the matrix Comp position by itself. Rather, the entire clause undergoes pied-piping, which moves the entire clause to the matrix Comp position. Although subadjacency applies at LF, subadjacency violation does not occur with these two cases.

3.4. 1-SUBJACENCY AND 2-SUBJACENCY

The ‘traditional’ definition of subadjacency is that crossing two bounding nodes results in ungrammaticality. However, in this thesis, I have demonstrated that crossing one barrier results in awkwardness, although it is not as bad as crossing two bounding nodes. I suggested that this awkwardness is also due to subadjacency violation.

Two cases of extraction introduced so far manifest this contrast between 1-subadjacency and 2-subadjacency. The extraction of an adjunct wh-phrase out of a complex NP is worse than the extraction from the subordinate CP in a non-bridge sentence.
(41a) Antaraiwa [nande sono hon-o totta] otokoku-tamaeta
detective-top why the book-acc stolen man-acc arrested Q

Q

‘Why did the detective arrest the man who stole the book?’

(41b) Antaraiwa [o toko-ga nande sono hon-o totta tel]
detective-top that man-nom why the book-acc stolen Comp

‘Why did the detective whisper that man stole the book?’

(41a) is a case of extraction of an adjunct wh-phrase from a complex
NP, while (41b) is a case of extraction of an adjunct wh-phrase from
an un goverened CP. The judgement is subtle, but there is a clear
difference between the two. Note that both of the extracted wh-
phrases are an adjunct, therefore both violate the BCP. The only
difference between the two is the number of boundaries. (41a) has two
boundaries, NP and CP. (41b) has one, CP. Therefore, the former is an
instance of 2-subjacency and the latter is that of 1-subjacency.

Hence, when both BCP and subjacency are violated, there appears to be
a subtle difference between 1-subjacency and 2-subjacency, the latter
being slightly worse.

This difference in acceptability parallels the one between
extraction of an adjunct wh-phrase out of bridge sentence and the one
of non-bridge sentence, which are repeated here.

(42a) Antaraiwa [Jiro-ga dare-o nagutta tel] iuta n?
you Jiro-nom who-acc hit Comp said Q
'Who did you say Jiro hit?'
b. ??Anta [ke-Ziroo-ga dare-o nagutta tel] samayalta n?
   you Jiro-nom who-acc hit Comp whispered Q
'Who did you whisper Jiro hit?'

The only difference between the two sentences is the number of the barriers. There is no barrier in (42a), while (42b) has one barrier. The former is 0-subjacency, while the latter is 1-subjacency. The difference in acceptability shown in (41) and (42) further supports the effect of 1-subjacency.

3.5. EXTRACTION OF WH-PHRASE AND RECONSTRUCTION

In this section, I give further evidence for theta-government by bridge verbs. As discussed in Chapter II, complementizer deletion cannot occur with a bridge verb if the lowest CP is scrambled away from the verb.

(43) Taro-o-ga [ke-Ziroo-ga America-e iku (te)] luta.
    Taro-nom Jiro-nom -to go Comp said
'Taro said that Jiro would go to America.'

(44) [ke-Ziroo-ga America-e iku #(te)] Taro-o-ga luta.
    Jiro-nom -to go Comp Taro-nom said
'Taro said that Jiro would go to America.'

Both sentences have a bridge verb in 'say'. The subordinate CP is scrambled to the front of a sentence in (44). Note that (43) is grammatical without a complementizer, while (44) is not. As shown in Chapter II, Salto (1986) accounts for this with the notion of ECP.

The complementizer, the head of CP, is not theta-governed in (44).
because it no longer is immediately adjacent to the matrix verb. The relevant phenomena regarding scrambling are summarized below.

\[(45)\]

<table>
<thead>
<tr>
<th>Complementizer Deletion</th>
<th>Unscrambled</th>
<th>Scrambled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Verbs</td>
<td>grammatical</td>
<td>*</td>
</tr>
<tr>
<td>Non-Bridge Verbs</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

3.5.1. An Apparent Counterexample to Theta-Government

When the subordinate CP with a wh-phrase is scrambled, an interesting phenomenon is observed.

\[(46)\] a. Taroo-wa [\text{i=Ziroo-ga nande America-e iku te}] luta n?
   Taro-top Jiro-nom why -to go Comp said Q
   'Why did Taro say Jiro would go to America?'

b. *Taroo-wa [\text{i=Ziroo-ga nande America-e iku te}] \text{masayalta} n?
   Taro-top Jiro-nom why -to go Comp whispered Q
   'When did Taro whisper Jiro would go to America?'

\[(47)\] a. [\text{i=Ziroo-ga nande America-e iku te}] Taroo-wa luta n?
   Jiro-nom why -to go Comp Taro-top said Q
   'Why did Taro say Jiro would go to America?'

b. *[\text{i=Ziroo-ga nande America-e iku te}] Taroo-wa \text{masayalta} n?
   Jiro-nom why -to go Comp Taro-top whispered Q
   'When did Taro whisper Jiro would go to America?'

\[(47)\] is a scrambled form of \[(46)\]. Note that the judgement of bridge/non-bridge verb asymmetry stays the same in \[(46)\] and \[(47)\]. The scrambling does not affect the judgment of extraction.

It should be expected that \[(47a)\], the scrambled form, is
ungrammatical. The LF representation of (47) is as below.

(48) \[
\begin{array}{l}
\text{luta} \\
\text{sasayaita}
\end{array}
\]

When the subordinate CP is scrambled to the front of the sentence, it no longer is theta-governed by the matrix verb. Even if the matrix verb is a bridge verb, the lowest CP should be a barrier since it is not theta-governed. However, (47a) is just as grammatical as (46a). This appears to be a counterexample to theta-government by a bridge verb.

The same phenomenon is observed in the extraction of argument wh-phrases.

(49) a. Taroo-wa [e=Ziroo-ga nan koota te) iuta n?
    Taro-top Jiro-nom what bought Comp said Q
    'What did Taro say Jiro bought?'
    b. ??Taroo-wa [e=Ziroo-ga nan koota te] sasayaita n?
    Taro-top Jiro-nom what bought Comp whispered Q
    'What did Taro whisper Jiro bought?'

(50) a. [e=Ziroo-ga nan koota te] Taroo-wa iuta n?
    Jiro-nom what bought Comp Taro-top said Q
    'What did Taro say Jiro bought?'
    b. ??[e=Ziroo-ga nan koota te] Taroo-wa sasayaita n?
    Jiro-nom what bought Comp Taro-top whispered Q
    'What did Taro whisper Jiro bought?'

(50) is the scrambled form of (49). The judgment of the scrambled sentence is the same as the unscrambled one. The LF representation of
(51) [nan, [te-Ziroo-ga le koota te, Taro-ga le, { luta } mtsa yasa irrita] ]

When the subordinate CP is scrambled to the front of the sentence, it
no longer is theta-governed by the matrix verb. Even if the matrix
verb is a bridge verb, the lowest CP should be a barrier since it is
not theta-governed. (49a) is expected to be as awkward as (50b).
However, the scrambled form of (50a) is just as grammatical as its
unscrambled form, (49a). This also appears to be a counterexample to
theta-government by a bridge verb. The summary of all the relevant
phenomena introduced so far is as follows.

(52) COMPLEMENTIZER DELETION

<table>
<thead>
<tr>
<th>UNSCRAMBLED</th>
<th>SCRAMBLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Bridge Verbs</td>
<td>grammatical</td>
</tr>
<tr>
<td>(ii) Non-Bridge Verbs</td>
<td>*</td>
</tr>
</tbody>
</table>

EXTRACTION OF AN ADJUNCT WH-PHRASE

<table>
<thead>
<tr>
<th>UNSCRAMBLED</th>
<th>SCRAMBLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Bridge Verbs</td>
<td>grammatical</td>
</tr>
<tr>
<td>(iv) Non-Bridge Verbs</td>
<td>*</td>
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</tbody>
</table>

EXTRACTION OF AN ARGUMENT WH-PHRASE

<table>
<thead>
<tr>
<th>UNSCRAMBLED</th>
<th>SCRAMBLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(v) Bridge Verbs</td>
<td>grammatical</td>
</tr>
<tr>
<td>(vi) Non-Bridge Verbs</td>
<td>??</td>
</tr>
</tbody>
</table>
3.5.2. SOLUTION: RECONSTRUCTION

The acceptability of (47a) and (50a) can be explained if we employ the notion of 'reconstruction' (Hoji 1985:117). Before we discuss it, it is necessary to refer to the weak crossover effect (hereafter WCO)\(^\circ\).

3.5.2.1. WEAK CROSSOVER EFFECT AND RECONSTRUCTION

The definition of WCO modified for Japanese by Saito and Hoji (1983:256) is as follows.

(53) A variable cannot be the antecedent of a pronoun or an anaphor if it does not c-command.

(Saito and Hoji 1983:256)

This WCO effect appears at LF. The S-structure representation below show the contrast with regard to WCO.

(54) a. \(\text{hitome}_1\text{ga} \rightarrow \text{mita}_1\text{gari} \rightarrow \text{Bill}_2\text{-o sukininatta}\)

one glance saw person-acc Bill-ace fell in love

\(\text{koto}\)

\(\text{fact}\)

'The person that took a glance at him, fell in love with Bill.'

\(\text{Bill}_2\).

b. \(*\text{hitome}_1\text{ga} \rightarrow \text{mita}_1\text{gari} \rightarrow \text{dare}_0\text{-o sukininatta}\) no

one glance saw person-acc who-acc fell in love Q

'\#Who, did the person that took a glance at him, fall in love with?'

(Hoji 1985:51)

(54a) is a sentence in which the subject zero pronoun is coindexed
with a R-expression, \textit{Bill}. When the R-expression is replaced with an
operator, \textit{dare} 'who', the sentence becomes ungrammatical. The LF
representation of (54b) shows that this is due to WCO violation.
(55) (for (54b))
\[ i_{-} \text{dare}_{-2} [\ldots i_{-} g_{-1} \text{ hitome } g_{-1} \text{ mitalhito}_{-1} -ga[i_{-}] \text{-o sukini natta}] \text{ no} \]
Here, the variable \( i_{-} \) does not c-command its zero pronoun, \( g_{-1} \).
Therefore this sentence is ungrammatical. Now observe below.
(56) \[ i_{-} \text{hitome mitalhito}_{-1} -o_j \text{ i_{-} daremo}_{-1} -ga[i_{-}] \text{ sukini natta}] \text{ (koto)} \]
\[
\text{one glance saw person-acc everyone-nom fell in}
\text{nattal]} \text{ (koto)} \]
\[
\text{'The person that he, saw, everyone, fell in love with.'}
\]
The bound variable interpretation for \( g_{-1} \) is possible. The LF
representation of (56), shown below, appears to be a violation of WCO.
(57) \[ i_{-} \text{hitome mitalhito}_{-1} -o_j \text{ notify delbear } -ga[i_{-}] \text{ sukini natta}] \text{ daremo}_{-1} \]
The variable, \( i_{-} \), does not c-command the zero pronoun in the object
position. Hoji (1985:119), however, accounts for this as an example
of 'reconstruction'. The scrambled \( NP \) returns to its original
position at LF. If in (57), the scrambled object returns to the
complement position of the matrix predicate, \( i_{-} \) does c-command the
zero pronoun. The configuration of reconstruction, according to Hoji,
is as follows.
(58) "Reconstruction" configuration (at S-structure)
\[ [\ldots g_{1} / h_{2} \ldots]_{1} [\ldots q_{1} \ldots]_{1}] \]
\[(\text{Hoji 1985:120})\]
3.5.2.2. **Extraction of Wh-Phrase and Reconstruction**

If we employ the notion of ‘reconstruction’, the phenomena observed in (5211) - (522v) are accounted for. Let us take a look at the sentence.

(59) a. [=Ziroo-ga nande America-e iku tel] Taro-wa iuta n?
   Jiro-nom why -to go Comp Taro-top said Q
   'Why did Taro say Jiro would go to America?'

b. ??[=Ziroo-ga nande America-e iku tel] Taro-wa tubuya~ita n?
   Jiro-nom why -to go Comp Taro-top whispered Q
   'Why did Taro whisper Jiro would go to America?'

The LF representation of (59) is as follows.

(60) Modified LF configuration

```
[ nande, to:Jiro-ga = America e iku tel, ]
[ Taro-ga to: iuta ]
```

In (60), the scrambled CP returns to the complement position of the predicate at LF. Therefore, the CP is theta-governed by the matrix verb, and extraction of wh-phrase is possible with bridge verbs. The scrambled brige sentence appears as a counterexample to the theta-government at S-structure, but at LF, it is theta-governed by the verb. Thus it is not a counterexample to the theta-government. Note also that the judgement of scrambled non-bridge verb sentence is as bad as the original sentence. Below are some more examples of reconstruction.

(61) a. [ga, mani-o koota tel, daremo-ga to: iuta n?]
   what-acc bought Comp everyone-nom said Q
   'What did everyone say (he) bought?'
b. ??[g, nani-o koota te], daremo-ga 1a tubuyaita n?
   what-acc bought comp everyone-nom murmured Q
   'What did everyone, murmur (he,1) bought?'

(62) a. [g, dare-o dotui-taru te], daremo-ga 1a ita n?
   who-acc hit comp everyone-nom said Q
   'Who did everyone, say (he,2) will hit {?}'

b. ??[g, dare-o dotui-taru te], daremo-ga 1a sukenda n?
   who-acc hit comp everyone-nom shouted Q
   'Who did everyone, shout (he,1) will hit {?}'

(a) sentences in (61) and (62) are bridge sentences, in which the subordinate CP is scrambled away from the matrix verb. If we do not assume reconstruction at LF, all (a) sentences violate WCO, since the variable does not c-commands its antecedent. They also violate 1-subjacency, since the CP is scrambled away from the matrix verb and is a barrier. Contrary to the prediction, the sentences are fine, thanks to the reconstruction.

(b) sentences in (61) and (62) are non-bridge sentences. They should be worse than ??, since they both violate 1-subjacency and WCO. Nani 'what' or dare 'who', is extracted from the subordinate CP and crosses one barrier. The trace of nani or dare does not c-command its antecedent, the zero pronoun. Contrary to the prediction, the judgment is affected only by the 1-subjacency.

(63) and (64) below are expected to be affected by BCP, 1-subjacency, and WCO. At LF, the subordinate CP is a barrier for nande 'why' extraction. It is also a barrier to antecedent-government of the trace of nande and the antecedent. The trace of daremo
'everyone' does not c-command its antecedent ə, therefore it violates WCO. Despite all these factors, the sentences are grammatical. They can be grammatical only if the reconstruction occurs at LF.

(63) [ə, nande kubi-n-natta tel, daremo,-ga ə, omoota n?
  why was fired Comp everyone-nom thought Q
  'Why did everyone, think (he.) was fired?'

(64) [ə, nande okane-ga iru tel, daremo,-ga ə, iuta n?
  why money-nom need Comp everyone-nom said Q
  'Why did everyone, say (he.) need money?'

Following summarizes all the relevant phenomena we have looked at in this thesis.

(65)

D-structure

---------- Empty Complementizer
---------- Scrambling (Move alpha)

s-structure theta-governement

Phonetic Form Logical Form

{ theta-governement
  { Reconstruction
   { wh-extraction
    { BCP, subjacency

3.6. SUMMARY

In this chapter, I gave further evidence for theta-government by bridge verbs. First, I reviewed Fukui's (1988) account for asymmetry
of extraction of *why* phenomenon. I further extended the
account not only for adjunct wh-phrases but also for argument wh-
phrases. I claimed that both ECP and subjacency are required at LF to
account for the asymmetry of wh-extraction out of subordinate CP.
This was supported by Pesetsky's D-linking analysis, in which only
non-D-linked wh-phrases are forced to raise as a quantifier at LF.
This idea that subjacency applies at LF is different from what has
been generally assumed in the past (Hoang 1981).

Second, two cases of wh-movement at LF were presented as
potential problematic cases of the application of subjacency at LF.
One was the extraction of an argument wh-phrase from a complex NP, and
the other was the extraction of argument wh-phrase from an adjunct
phrase. Employing ' pied-piping' by Nishigauchi (1986) and Choe
(1984), I showed that neither of these is a counterexample. Both of
the cases were the case of pied-piping, in which the entire complex
phrase is raised to Comp position. The wh-phrase does not undergo the
extraction, crossing a barrier, but it is raised with the rest of the
phrase to the Comp position. Even though subjacency applies at LF,
there is no violation of subjacency in either case.

Third, it was shown even if the subordinate CP containing a wh-
phrase is scrambled away from a matrix verb, the grammaticality is the
same as the unscrambled sentence. For instance, if a CP containing an
adjunct wh-phrase in a bridge sentence is scrambled, the sentence
stays grammatical, despite the apparent existence of a barrier. This
was account for by employing the notion of reconstruction on LF, in
which the scrambled constituent returns to its original position.
Therefore it is not a counterexample of theta-government.

Note that the LF movement introduced in this chapter parallels the effect of scrambling introduced in Chapter 2, as shown below.

(66) a. scrambling: adjunct out of un-theta-governed subordinate CP

*Nainsode 3-kai, anta-ga [n=Taro-ga 3, umaki-sita te] secretly 3-times you-nom Taro-nom
sasayalta (koto)
whispered fact

'You whispered that Taro secretly cheated three times.'

b. LF extraction: adjunct wh-phrase out of un-theta-governed subordinate CP

* Bill-wa [n=John-ga nande kubi-n natta te] sasayalta n?
Bill-top John-nom why was fired Comp whispered Q

'Why did Bill whisper that John was fired?'

(67) a. scrambling: argument out of un-theta-governed subordinate CP

?? Naomi-o anta-wa anoko-ni [n=Taro-ga 3, bita te]
Naomi-acc you-top her-to Taro-nom dumped Comp
sasayalta (koto)
whispered fact

'You whispered to her that Taro dumped Naomi.'

b. LF extraction: argument wh-phrase out of un-theta-governed subordinate CP

?? Anta [n=Ziro-ga ittai dare-o nagatta te] sasayalta
you Jiro-nom the hell who-acc hit Comp whispered
Q
'Who the hell did you whisper Jiro hit?'
The relevant portion of two parallel phenomena in (67) and (68) are as follows.

(68) (for 66))
a. scrambling: adjunct out of un-theta-governed subordinate CP
   * adj.₁ = [CP...CP...non-bridge verb]
b. LF extraction: adjunct wh-phrase out of un-theta-governed subordinate CP
   * [CP wh-adj.₁ = [CP...CP...[CP non-bridge verb]]]

(69) (for 67))
a. scrambling: argument out of un-theta-governed subordinate CP
   ??arg₁ = [CP...CP...non-bridge verb]
b. LF extraction: argument wh-phrase out of un-theta-governed subordinate CP
   ??[CP wh-arg₁ = [CP...CP...[CP non-bridge verb]]]

This parallelism is due to the application of subadjacency at LF.
The movement at LF (wh-extraction) behaves identically to the movement at S-structure (scrambling).
NOTES TO CHAPTER III

'S' for CP and S for IP are used in their original work.

*All of his examples are in standard Japanese, which is spoken in Tokyo area.

The judgement for sentence (8b) by Fukui has two question marks. However, if we compare (8b) with the case of extraction of argument wh-phrase, (8c), the former is significantly worse than the latter.

(8) b *Bill-wa [c-]John-ga nande kubi-n natta tel sasayaita n?
Bill-top John-nom why was fired Comp whispered Q
'Why did Bill whisper that John was fired?'

c ??Bill-wa [c-]lltal dere-ga kubi-n natta tel sasayaita n?
Bill-top the hell who-nom was fired Comp whispered Q
'Who, the hell did Bill whisper was fired?'

(8a) is the case of ECP violation and (9b) is the 1-subjacency. It has been observed in the literature that the ECP violation results in ungrammaticality that is worse than subjacency. Therefore in this thesis, (8a) is marked with *.

*It might be pointed out that the awkwardness of (12)b is due to the lack of dative NP, which has a 'goal' theta-role. However, the judgments remain the same with it, as shown below.

(1) a. Taro-wa Hanako-ni [c-dare-ga kuru] te] luta n?
Taro-top Hanako-to who-nom come COMP said Q
'Who did Taro say, to Hanako, would come?'

b. ??Taro-wa Hanako-ni [c-dare-ga kuru tel] sasayaita n?
Taro-top Hanako-to who-nom come COMP whispered Q
"Who did Taro whisper, to Hanako, would come?"

"The judgement is the same with subjects, as shown below.

(1) a. Anta [i-e-dare-ga] Jiro-o hutta tel luta n?
   you who-nom -acc jumped COMP said Q

   'Who did you say jumped Jiro?'

b. ??Anta [i-e-dare-ga] Jiro-o hutta tel tubuyaite n?
   you who-nom -acc jumped COMP murmured Q

   'Who did you murmurumped Jiro?'

Nishigauchi (1986) notes that it is possible that the Japanese subject is always properly governed by Inflected, as Huang (1982a) originally suggested in Chinese. Nishigauchi notes that Japanese, like Chinese, has argument-adjunct asymmetry rather than subject-object asymmetry, which is the only possible way to account for the different acceptability between the two sentences below:

(11) a. Kimi-wa [[dare-ga kaita] hon-o yomi-masi-ta ka?
   you-top who-nom write-past book-acc read-past Q

   'You read books that who wrote?' (Nishigauchi 1986:52)

b. ??Kimi-wa [[kare-ga naze kaita] hon-o yomi-masi-ta ka?
   you-top he-nom why write-past book-acc read-past Q

   'You read books that he wrote why?' (Nishigauchi 1986:54)

"Usually nano 'what' and dare 'who' are non-D-linked. However, it seems that some speakers' grammar tends to allow D-linking with no emphasis by discourse. Therefore, speakers with that kind of grammar interpret the sentences such as (11b), which may or may not be D-linked, as b-linked consistently. I have treated nano 'what' and dare 'who' without ittal 'the hell' as non-D-linked wh-phrase in this
thesis.

"Here, *dono NP *which NP* is not used because when *ittai *the hell* is used with which phrase, the sentence is always ruled out by the *conflict between aggressively D-linked dono and aggressively non-D-linked *ittai*" (Pesetsky 1987:111). Note that the bridge sentence (1) is ungrammatical since *ittai* is attached to *dono-ko.*

(1) *'Anta ich-Taroo-ga ittai dono-ko-o sagutta tel luta n? you Taro-nom the hell which child-acc hit COMP said Q

'Which child the hell did you say Taro hit?'

*Dono-ko* is used in (38) to guarantee the D-linking. This is because a regular *wh*-phrase such as *dare* may or may not be D-linked, depending on the person, the context, or emphasis put on it.

*Contrary to the claim by Huang, Nishigauchi (1986) and Pesetsky (1987) claim that subadjacency applies at LF.*

*Nishigauchi (1986:120) notes that the complex NP with *wh*-adjunct does not undergo pied-piping. He notes that the *wh*-phrase must be [+N] in the sense of X’ feature system in order for the [+wh] to climb up (percolate) to the complex NP. *Maze* 'why' is not [+N], hence the percolation does not take place.

(Nishigauchi 1986:121)
The WCO was first noted by Vasow (1972), and has been further studied by Higginbotham (1980), Koopman and Sportiche (1982/83), Haik (1983), Aoun (1983), Saïce & Hoài (1983), Jaeggli (1984), and Safir (1984).
CONCLUDING REMARKS

In this thesis, I took up the difference in property between bridge verbs and non-bridge verbs. I claimed that Japanese bridge verbs theta-govern the subordinate CP, and that non-bridge verbs do not. This distinction between Japanese bridge and non-bridge verbs parallels English bridge and non-bridge verbs. In order to support the claim that bridge verbs theta-govern the subordinate CP and that non-bridge verbs do not, I presented both the evidence observed at S-structure, and the one at LF.

The first evidence presented is the phenomena observed at S-structure. First, as noted by Saltto (1966a), if the subordinate CP in a bridge sentence is scrambled to the front of the sentence, the empty complementizer is not allowed.

(1) a. John-wa [c-Mary-ga America-e iku (fg)] iuta.
   John-top Mary-nom -to go Comp said
   'John said that Mary would go to America.'

   b. [c-Mary-ga America-e iku [(fg)]. John-wa la] iuta.
      Mary-nom -to go Comp John-top said
      'John said that Mary would go to America.'

(1b) is the scrambled form of (1a). The sentence is ungrammatical if the complementizer is empty. This is explained by Saltto with NCP. In (1b), the empty complementizer is not properly governed by the matrix
verb, since it is not sister to the matrix bridge verb.

Second, the asymmetrical results between bridge sentence and non-bridge sentence appeared when an element is scrambled out from the subordinate CP.

(2) a. Naisyo-de 3-kai, John-ga anoko-ni [e-Bill-ga 1, uwaki-sita te] secretly 3-times John-nom her-to Bill-nom cheated Comp iuta (koto) said fact

'(The fact that) John told her that Bill cheated secretly three times.'

b. *Naisyo-de 3-kai, John-ga anoko-ni [e-Bill-ga 1, uwaki-sita te] secretly 3-times John-nom her-to Bill-nom cheated Comp masayaita (koto) whispered fact

'(The fact that) John whispered to her that Bill cheated secretly three times.'

(3) a. Bill-o, John-ga anoko-ni [e-Mary-ga 1, hutta te] iuta (koto) Bill-acc John-nom her-to Mary-nom dumped Comp said fact

'(The fact that) John told her that Mary dumped Bill.'

b. ??Bill-o, John-ga anoko-ni [e-Mary-ga 1, hutta te] masayaita Bill-acc John-nom her-to Mary-nom dumped Comp whispered (koto) fact

'(The fact that) John whispered to her that Mary dumped Bill.'

*Naisyo-de 3-kai 'secretly three times', an adjunct phrase, is scrambled from the subordinate CP in sentences in (2). While the
bridge sentence (2a) is fine, (2b), the non-bridge sentence is ungrammatical. The ungrammaticality of (2b) is due to the ECP violation, since the subordinate CP is a barrier for antecedent-government of the trace in and the antecedent, *naiyo no 3-kai.

Bill-top 'Bill' in sentences in (3) is an argument. While the bridge sentence (3a) is grammatical, the non-bridge sentence (3b) is awkward. This asymmetry in acceptability is accounted for by employing the notion of 1-subjacency. (3b) has one barrier, the un-L-marked subordinate CP, therefore 1-subjacency results. (3a) does not have any barrier, since the matrix verb L-marks the CP. I proposed that crossing one barrier results in awkwardness, which is not as bad as crossing two or more barriers, but significantly worse than crossing no barrier.

Some evidence is observed at LF also. I have presented two types of LF extraction. One is the extraction of なな 'why', which is noted by Fukui (1988), and the other is the extraction of argument wh-phrases such as だれ 'who' or なに 'what'.

(4) a. *Bill-wa [œ=John-ga nande kubi-n natta te] made n? Bill-top John-top why was fired Comp said Q
   'Why did Bill say that John was fired?' b. *Bill-wa [œ=John-ga nande kubi-n natta te] sasayaita n?
   Bill-top John-top why was fired Comp whispered Q
   'Why did Bill whisper that John was fired?' Compared with the bridge sentence in (4a), the non-bridge sentence in (4b) is ungrammatical. Fukui (1988) accounts for this with the notion of ECP. We assumed the LF-extraction of wh-phrase in Japanese. The
subordinate CP in (4b), which is not L-marked by the matrix verb, is a barrier for the antecedent-government of the trace and the antecedent, nande.

Similar asymmetry is observed in extraction of argument wh-phrase also.

(5) a. Bill-wa [e=Mary-ga dare-c hutta te] iuta n?
   Bill-top Mary-nom who-acc dumped Comp said Q
   'Who did Bill say that Mary dumped L1?'

b. 77Bill-wa [e=Mary-ga dare-o hutta te] tubuyaita n?
   Bill-top Mary-nom who-acc dumped Comp whispered Q
   'Who did Bill whisper that Mary dumped L1?'

Compared with the bridge sentence (5a), the non-bridge sentence (5b) is awkward. I accounted for this by proposing subadjacency at LF. In wh-extraction, (5a) does not have any barrier since the matrix verb L-marks the subordinate CP. In (5b), the subordinate CP is a barrier for extraction since the subordinate CP is not L-marked by the matrix verb.

In (2)-(5), the (a) sentences and the (b) sentences share the same construction. The only difference between them is that the (a) sentences have a bridge verb as the matrix verb, while (b) sentences have a non-bridge verb. The asymmetries observed between (a) and (b) sentences can be accounted for only if the bridge verbs theta-govern the subordinate CP, and the non-bridge verbs do not.

I have shown that the extraction of wh-phrase from Japanese complex noun or adjunct phrase does not constitute the counterexample to subadjacency at LF in Japanese. Following Choe (1984) and
Nishigauchi (1986), I showed that they are the cases of pied-piping, in which the entire CP is raised.
LIST OF REFERENCES


81


(1986b) 'Scrambling as Semantically Vacuous A'-movement,' ms. University of Southern California.


