THE GENITIVE SUBJECT IN JAPANESE
AND
UNIVERSAL GRAMMAR

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This thesis provides an analysis of the genitive subject in Japanese. The genitive Case marker no can optionally replace the nominative Case marker ga in relative clauses. This is the so-called ga/no conversion. I argue that this phenomenon is not peculiar to Japanese, but is governed by universal principles. I employ the notions 'argument/adjunct' and the Unaccusative Hypothesis. In combination with the Subjacency Condition, these universal notions help us to predict which genitive subjects are grammatical.

[Signature]
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To My Family
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INTRODUCTION

Japanese is a language with overt Case marking. Case markers in Japanese include the nominative Case marker に, the accusative Case marker が, the dative Case marker に, and the genitive Case marker と. The function of a Case marker is simply to indicate the Case of an NP; the Case marker itself has no semantic content. In this sense, the Case markers should be distinguished from the so-called postpositions which have semantic content. Some of the postpositions are ケーキ 'from,' まで 'till,' も 'at,' に 'in' and so on.

Compared with abstract Case marking systems as observed in English (Choensky 1981, Stowell 1981), the overt Case marking system allows relatively free word order because each NP is marked with an overt Case marker.

(1) a. John が Tom から 本 を 買った。
   NOM from book ACC bought
   'John bought a book from Tom.'

b. 本 を John が から 買った。

c. 本 を John が Tom から 買った.

d. 本 を Tom から John が 買った.
e. To e kara John ga hon o katta.

f. To e kara hon o John ga katta.

In this thesis, I will to investigate a syntactic phenomenon called "ka/na conversion." In ka/na conversion, the nominative Case marker ka can be replaced by the genitive Case marker na in a certain environment.

In an ordinary sentential structure, ka and na are not interchangeable.2

(2) a. John ka hon o katta.

NOM book ACC bought

'John bought a book.'

b. *John na hon o katta.

(3) a. John na hon

GEN

'John's book' (Lit., 'a book of John'

b. *John ka hon

In contrast to (2b), ka/na conversion is possible in (4c) below, which is a relative clause.

(4) a. John ga hon o katta.

'John bought a book.'

b. [John ka katta] hon

'a book that John bought'

c. [John na katta] hon

'a book that John bought'

Note that Japanese is a head-final language so that the relative
clause head is preceded by the modifying clause. In (4b), the object NP is relativized and John is marked by the nominative Case marker さ. In (4c), the genitive Case marker に marks the subject John instead of the nominative Case marker さ. (4b) and (4c) indicate that さ/に conversion is an optional syntactic rule. Henceforth, I will call a subject marked by に in a relative clause "genitive subject."

(4) shows that に can optionally replace さ in a relative clause. However, に cannot replace the accusative Case marker と.

(5) a. John さ hon ど katta
   b. (Hon ど ketta) John
   c. え(Hon に katta) John

Thus far, we have seen that さ/に conversion rather freely takes place in relative clauses. However, there is a well-known condition which blocks さ/に conversions if there is more than one element intervening between the さ-phrase and the main verb, さ/に conversion cannot be applied. Observe the following.

(6) a. [Kodomo tachi に minna de ikioi-yoku kakenobotte] kaidan
   children NOM together vigorously ran up stairway
   'the stairway which those children ran up vigorously'

b. [Kodomo tachi に minna de ikioi-yoku kakenobotte] kaidan
   (Harada 1971:30)

However, I have noticed that in a certain type of relative clause, さ/に conversion cannot be applied even if there is no intervening element between the さ-phrase and the main verb. One
example is (7).

(7) a. [John *ga waratta* toki, Tom *no* waratta.

NDM laughed time also

'(At) the time John laughed, Tom also laughed.'

b. *[John no waratta* toki, Tom *no* waratta.

The ungrammaticality observed in (7b) suggests that the *ga/no* conversion must be analyzed in a more detailed way.

The purpose of this thesis is to present an analysis that can account for all cases of the *ga/no* conversion. More precisely, my analysis will explain why the *ga/no* conversion is possible in some cases but not possible in other cases. I will propose that the Sublatency Condition proposed by Chomsky (1973) is the crucial universal condition.

In Chapter I, I will review five studies of *ga/no* conversion by various linguists. I will discuss the "nominitive analysis" proposed by Harada (1971) and the "genitive analysis" proposed by Bedell (1972) and others. In Chapter II, I will introduce the notions "argument" and "adjunct." In my analysis of *ga/no* conversion, the argument and the adjunct play a key role since they provide a basic distinction between the acceptability and the unacceptability of *no* in a relative clause. In Chapter III, I will present a notion called the "Unaccusative Hypothesis." I will discuss the characteristics of "unaccusative verbs" in contrast with "unergative verbs" and incorporate the Unaccusative Hypothesis into my analysis of *ga/no* conversion along with the argument/adjunct distinction.
In order to demonstrate the point I propose, I will mainly focus on relative clauses headed by a "time"-NP, namely the tokí-phrase, which occurs both in the argument and adjunct position.

In Chapter IV, I will look at other types of "time"-NP's and elaborate on the points discussed in Chapter III. Finally, I will attempt to demonstrate that my analysis accounts for ak/na conversion in all types of relative clause.
NOTES TO INTRODUCTION

1 In this thesis, I will adopt the following notations.
   NOM -- nominative Case marker
   GEN -- genitive Case marker
   ACC -- accusative Case marker
   DAT -- dative Case marker
   TOP -- topicalizer

2 Historically speaking, ga was used as both nominative and
genitive Case marker. In modern Japanese, ga functions as genitive
Case marker only in fossilized expressions.

(i) Wa ga ya
    I GEN home
    'my home' (Lit.) 'house of mine'

(ii) Wa ga kuni
     country
     'my country' (Lit.) 'country of mine'
CHAPTER I

RA/NA CONVERSION -- REVIEW OF PREVIOUS STUDIES

INTRODUCTION

In Japanese, cases are marked by overt case markers. Such Case markers include the nominative Case marker は, the accusative Case marker に and the genitive Case marker に. In this thesis, I will focus on the nominative case marker and the genitive Case marker. More precisely, I will look at a phenomenon in Japanese in which the genitive Case marker に can optionally replace the nominative Case marker は in subject position of a relative clause. This is called "RA/NA conversion."

The purpose of this chapter is to review previous studies on RA/NA conversion. First, I will briefly introduce the basic characteristics of RA/NA conversion. Second, I will introduce and compare two types of analysis concerning RA/NA conversion, namely "nominative analysis" and "genitive analysis." Third, I will review the discussion by Murada (1971) for the "nominative analysis" and discussions by Bedell (1972), Matsunaga (1983), Saito (1993) and Torada (1987) for the "genitive analysis."
1.1 GA/NO CONVERSION

GA/no conversion is a phenomenon in which the genitive Case marker no optionally marks the subject NP instead of the nominative Case marker ga. This phenomenon can be observed only in relative clauses. (1) is a simple sentence and (2) is the relative clause that corresponds to (1). (a) stands for an empty pronoun.

(1) Taro no hon, o katta.
    NOM book ACC bought
    'Taro bought a book.'

(2) [Taro ga no, katta] hon,
    'a book that Taro bought'

Note that in (2), Taro is marked by the nominative Case marker ga. As shown in (3), GA/no conversion allows the genitive Case marker no to optionally mark this NP.

(3) [Taro no ga, katta] hon,
    'a book that Taro bought'

GA/no conversion is applicable only in a relative clause. Hence, (4b) is ungrammatical.

(4a) Taro ga hon, o katta.
    NOM book ACC bought
    'Taro bought a book.'

(4b) *Taro no hon, o katta.

Harada (1971) has noted a condition on GA/no conversion, namely, if there is more than one element intervening between the subject phrase and the main verb, GA/no conversion cannot apply.
(5) a. [Kodomotachi ga minna de ikii-ru kakenobottara kaidan children NOM together vigorously ran up stairway
    'the stairway which those children ran up vigorously'

b. *(Kodomotachi na minna de ikii-ru kakenobottara kaidan

In (5b), minna de and ikii-ru intervene between the subject NP, kodomotachi, and the verb, kakenobottara, to block the ga/na conversion.

It should be noted that ga/na conversion means that ga is a relative clause can be replaced with na, but not vice versa. Thus, na/ga conversion is not allowed.

(6) a. [Taro ga hon o yonda] Hanako
    GEN book ACC read
    'Hanako who read Taro's book'

b. *[Taro ga hon o yonda] Hanako

Likewise, ga cannot replace na in a simple noun phrase.

(7) a. John na hon

b. *[John ga hon

1.2 NOMINATIVE ANALYSIS AND GENITIVE ANALYSIS

Ga/na conversion has been studied by a number of linguists. I will categorize these analyses into two types. I will call them the "nominative analysis" and the "genitive analysis."
1.2.1 Nominative analysis

The nominative analysis assumes that when the "na-relative clause" becomes the "no-relative clause," the structure remains the same.

(8) (*1)
[ no Taro no ga hon, o ketta].

(9) (*2)
[ no Taro ga g. kettai hon,]

(10) [* no Taro no g. kettai hon,]

In (10), Taro no is within the S of the relative clause; in other words, no functions as a nominative Case marker instead of its normal function as the genitive case marker (cf. Harada 1971). Because of the structure as seen in (10), I call this treatment of ga/no conversion the "nominative analysis."

1.2.2 Genitive analysis

The genitive analysis does not treat no as a nominative Case marker. In other words, no maintains its syntactic function as the genitive Case marker. Therefore, in the genitive analysis, the structure of the no-relative clause is different from that of the ga-relative clause. Now, recall (2) again.

(11) (*2)
[ no Taro ga kettai hon]

When ga/no conversion applies to (11), the result is roughly as follows (cf. Bedell 1972).
As shown in (12), *Taro* moves out of the S domain and is dominated by the NP node, hence the function of *no* as the genitive Case marker is maintained.

Matsunaga (1983) states that the genitive Case marker *no* appears only in the following context:

(13) \[ \text{MOD Insertion Rule (Kitegawa and Ross 1982)} \]

\[ [X \text{ NP} \rightarrow] \rightarrow [X \text{ MOD NP} \rightarrow] \]

In (13), *X* stands for any category functioning as a modifier and \text{MOD} stands for a modifier, *no* in Japanese.

(14) a. \[ [\text{NP} \rightarrow \text{John} \text{ NP} \rightarrow \text{ hon}] \]

'John's book'

b. \[ [\text{NP} \rightarrow \text{nihon kara} \text{ NP} \rightarrow \text{ tegasa}] \]

Japan from letter

'a letter from Japan' (Saito 1983:250)

In (14a), *no* connects two NP's and in (14b), *no* connects PP and NP. Since a PP is marked [-V], (14b) satisfies (13). Also, (13) predicts the grammaticality of the structure in (12). This suggests that the syntactic function of *no* remains the same in the genitive analysis.

1.3 REVIEW OF PREVIOUS STUDIES OF GA/WO CONVERSION

In this section, I will review various analyses of *ga/wo* conversion. I will first review Harada (1971) for the nominative analysis and Bedell (1972), Matsunaga (1983), Saito (1983) and Terada
(1987) for the genitive analysis.

1.3.1 Harada's analysis

Harada's analysis (1971) is the "nominate analysis." In this analysis, は is optionally converted to は in a relative clause. The structure of は/は conversion he proposes is as follows.

\[(\text{NP}) (\text{NP} は は PRED) NP] \rightarrow (\text{NP} は は PRED) NP\]

Harada states that は/は conversion is an optional syntactic rule. Observe the following example. (Note that the parenthesized asterisk (*) indicates that the sentence was judged as acceptable by speakers of Dialect A but as unacceptable by speakers of Dialect B.)

(16) a. ナスミはニクソンが使用するとの い事実
   I TOP Nixon NOM use ACC telling fact ACC
   realized

   'I realized that Nixon was telling a lie.'

b. (a)ナスミはニクソンが使用するとの い事実
   (Harada 1971)

(16b) is considered an acceptable sentence by speakers of Dialect A but an unacceptable sentence by speakers of Dialect B. Harada suggests that the difference between Dialects A and B in regard to the acceptability of は is due to the presence of an intervening element between the は-phrase and the verb. In (16b), は is an intervening element. If there is no intervening element in a relative clause, both groups accept the sentence, as in (17).
(17) a. Taro おもちゃを買った
"a book which Taro bought"
b. Taro おもちゃを買った

Harada suggests that the difference in the acceptability of おもちゃ with an intervening element is a matter of idiolectal variation. Due to this, he presents a おもちゃ/おもちゃ conversion rule for Dialect A and the other rule for Dialect B.

(18) a. おもちゃ/おもちゃ conversion for speakers of Dialect A

\[
X - \{e\} \rightarrow Y - NP - おもちゃ - (A) - PRED - N - N
\]

\[
\rightarrow 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8
\]

=> 1 \ 2 \ 3 \ おもちゃ \ 5 \ 6 \ 7 \ 8

Notes:
(i) This rule is optional.
(ii) This rule applies before Relativization.

b. おもちゃ/おもちゃ conversion for speakers of Dialect B

\[
X - \{e\} \rightarrow Y - NP - おもちゃ - PRED - N - N
\]

\[
\rightarrow 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7
\]

=> 1 \ 2 \ 3 \ おもちゃ \ 5 \ 6 \ 7

Notes:
(i) This rule is optional.
(ii) This rule applies after Relativization.

(ibid:32-33)

Note that in (18a), A is an intervening element, but in (18b) such an intervening element is not present.

Harada states that the following, (19b), is unacceptable even for speakers of Dialect A, who accept an intervening element in a relative clause.
(19) a. Taro ga Hanako kara katta budoosyu
   NOM from bought wine
   the wine which Taro bought from Hanako

b. *Taro no Hanako kara katta budoosyu
   (Ibidi 30)

Recall that (16b) is accepted by speakers of Dialect A. Thus, there
is a discrepancy observed between (16b) and (19b). Harada accounts
for this problem by stating that (19b) undergoes Relativization in
order to set budoosyu in the head NP location. In contrast, (16b)
does not undergo Relativization since toto 'fact' is a base-generated
NP which does not leave an empty category in the complex NP. Based
on this difference, Harada claims that (19b) has two intervening
elements before Relativization applies.

(20) [a. Taro-ga Hanako-kara budoosyu-e katta].

On the other hand, the underlying structure of (16b) has only
one intervening element. As stated in 1.1, ga/no conversion cannot
apply if there is more than one intervening element. Thus, the
above statement indicates that there is no discrepancy between (16b)
and (19b).

Thus far, Harada's analysis accounts for the acceptability of no
in relative clauses. Now, consider the following:

(21) Taro ga kita toki, minna wa nate ita.
   NOM case time everyone TOP sleeping was

(21) is different from ordinary relative clauses we have seen so far.
This type of relative clause shown in (21) is called Free Relative
Clause (Radford 1981:208). Similar to koto 'fact', toki 'time is
also a base-generated noun in a relative clause. (22) can undergo 

\( ga/na \) conversion as in (22).

(22) Taroo \( na \) kita toki, minna wa neta ita.

Below, I will present a pair of relative clauses. Compare (23) with (24) below.

(23) a. Taroo \( ga \) odotta toki, Hanako mo odotta.

\( NOM \) danced time also

'(At the time that Taro danced, Hanako also danced.'

b. \( na \) Taroo odotta toki, Hanako mo odotta.

First of all, there is no intervening element between the \( na \)-phrase and the verb in (23b) but the sentence is considered ungrammatical. That is to say, Harada's analysis cannot provide any account for the ungrammaticality of (23b). I will take up this problem in Chapter IV.

Summarizing Harada's analysis, he proposes the nominative analysis as illustrated in (15). One serious problem of Harada's analysis is that the Case marker \( na \) has to have two syntactic functions as the nominative Case and the genitive Case. However, \( na \) as the nominative Case marker is only limited to relative clauses. Therefore, Harada's claim that \( na \) has a dual function seems less plausible.

1.3.2 Redell's analysis

Redell proposes the genitive analysis. Unlike the nominative analysis, the Case marker \( na \) holds the genitive status. Below is
the structure for \( \text{ra/ra} \) conversion proposed by Bedell.

\[(24) \text{[np [a np, \text{ra} pred n ] n ] \implies \text{ [np, \text{ra} [a, \text{pred} ] n ]}]}\]

In (24), when \( \text{ra/ra} \) conversion takes place, the subject NP attached \text{ra} moves out of the S domain and adjoins to the highest NP. Since this position is dominated by the NP node, NP, receives the genitive Case marker \text{no}. Bedell calls this movement "Restructuring." In (24), NP, is restructured from the position in the S domain to the position in the NP domain.

One advantage of Bedell’s Restructuring is that the status of \text{no} as the genitive Case marker is maintained, unlike the nominative analysis. Also, Nakai (1980) claims that Bedell’s analysis can account for ungrammaticality caused by Scrambling whereas Harada’s cannot. Observe the following.

\[(25) \text{a. Taroo ra, hon o katta aise} \quad \text{GEN book ACC bought store 'the store where Taroo bought a book'}\]

\[\text{b. Hon o Taroo ra katta aise} \quad \text{(Nakai1980)}\]

\[\text{c. Hon o Taroo no katta aise} \quad \text{(Nakai1980)}\]

Bedell’s analysis treats (25c) as follows.

\[(26) \]

\[
\begin{array}{c}
\text{NP} \\
\text{Taroo-no} \\
\text{hon-o katta aise} \\
\end{array}
\]
In general, Scrambling changes the position of the sister nodes which are dominated by the same B-node. In (26), since *Tara* is restructured to the position dominated by NP, it is no longer dominated by S. Hence it is impossible to move *Tara-no*, which is outside the embedded S, into the embedded S. In other words, the object NP ahead of the genitive subject is excluded. Therefore, the ungrammaticality of (25c) is accounted for by Bedell’s analysis. In the case of Harada’s analysis, on the other hand, *Tara-no* and *hon-o* are sister nodes under the same B-node. Accordingly, *Tara-no* should be able to move freely by Scrambling. Thus, Harada’s analysis incorrectly predicts that (25c) is grammatical.

Nakai suggests that there is a problem in Bedell’s analysis concerning the treatment of an adverbial phrase such as *kinoo* ‘yesterday’ and *kyoo* ‘today.’ The following example cannot be accounted for by his analysis.

(27) kore wa kinoo John no katta hon desu.
this TOP yesterday GEN bought book COP

‘This is a book which John bought yesterday.’ (Nakai1314)

(27) is structurally represented in (28).

In Bedell’s analysis, it is not clear to which node *kinoo* belongs.
1.3.3 Matsunaga's analysis

Matsunaga's analysis (1983) is similar to Bedell's genitive construction. However, unlike Bedell's, Matsunaga's analysis does not involve restructuring. In her analysis, ね-relative clauses do not have a sentential structure (S-node).

(29) ね-Relative Clause

\[ \text{NP} \text{ ね} \text{ [i.e. V N]} \]

(30) が-Relative Clause

\[ \text{NP} \text{ が} \text{ [i.e. V N]} \]  (Matsunaga 1993:63)

Compare (29) with Bedell's structure (24).

(31) \((=)\) (24)

\[ \text{NP} \text{ ね} \text{ [i.e. PREM N]} \]

The difference between (29) and (31) is whether the relative clause contains an S-node.

At first glance, (29) seems odd since the verb attaches to a noun in the NP domain. In other words, the verb in (29) functions as if it were an adjective. Matsunaga states that a relative clause (the embedded clause within an NP) might not constitute a "pure sentence" (Matsunaga 1983:60). This statement is supported by her research on the diachronic aspect of Case marking in Japanese. That is, が, which is considered the nominative Case marker in Modern Japanese, used to function syntactically in the same way as ね did (i.e., が appeared as a genitive Case in NP's and embedded clauses but not in independent clauses). More precisely, in Old Japanese, there are verbal inflections called the "attributive" form.
(rentai-kei in Japanese) and "conclusive" form (syuuji-kei). The attributive form has an adjectival function which modifies an NP but one function of the conclusive form is to complete the sentence. Based on this fact, both ga and no, which had a genitive function in Old Japanese, appear before the attributive form of a verb.

Matsunaga claims that the structure of ga- and no-clauses in Old Japanese is as follows.

(32) [NP [NP] ga/no [VP ATTRIBUTIVE N]]

Observe the following Old Japanese examples.

(33) Wa ga yuku mite
     I going road
     'the road where I walk'
     (Lit.) 'my going road'

(34) Hito no wuru to
     people cultivate rice field
     'the rice field which people cultivate'
     (Lit.) 'people's cultivating field'

Yuku 'going' in (33) and wuru 'cultivating' in (34) are both attributive forms. Hence both ga and no are possible in these examples. Based on the above discussion, the structure (29) proposed by Matsunaga seems plausible.

Employing the structure (29), Matsunaga claims that her analysis differs significantly from that of others in her treatment of certain ungrammatical forms, which occur in coordinate relative structures. Observe the following examples.
(35) a. Hanako が katte Ziroo が yonda hon
   NOM bought NOM read book
   \textit{the book that Hanako bought and Ziroo read}

b. Hanako が katte Ziroo に yonda hon
c. Hanako に katte Ziroo が yonda hon
d. Hanako に katte Ziroo に yonda hon

The ungrammaticality of (35c) and (35d) shows that the first に attached to Hanako causes the ungrammaticality.

Matsunaga notes that Harada's nominative analysis cannot predict the ungrammaticality of (35c) and (35d) since the conditions for the が/に conversion rule (cf. 1.3.1) are met without any violation. Also, she claims that Bedell's Restructuring cannot account for the ungrammaticality. By Restructuring, the following will be generated from (35d).

(36) On the other hand, according to Matsunaga's analysis, (35d) is treated as follows.

(37) a. \textit{[V [NP [NP [NP [NP [NP [t. katte t. yonda]]]]]]]}

b. \textit{[NP [NP [NP [NP [NP [NP [t. katte t. yonda]]]]]]]}

\textit{the book that Hanako bought and Ziroo read}
In (37), although the second no combines two NP’s, the first no does not since no illegally connects NP and V. Thus, she states that the ungrammaticality of (35d) is predicted by her analysis.

Though Matsuoka claims that Bedell’s analysis cannot account for coordinate structure as in (36), it seems to me that Matsuoka’s analysis cannot account for this problem either. Coordination means that two (or more) identical phrases (nodes) are dominated by the same node, as in (38).

(38)

Let us look at the structure of (35a).

(39)

The lower S’s are dominated by the S node so that it can be said that the two S’s are coordinated.
Now, consider the following grammatical sentence.

(40) Taroo ga katte Ziroo no yonda hon.

(40) is structurally illustrated as follows. Notice that (41) is Matsunaga’s analysis and (42) is Bedell’s.

(41) **Matsunaga’s structure**

```
      NP
     /   \      
    S     NP   NP
   /\      /\    
  I-ga katte NP yonda hon
```

(42) **Bedell’s structure**

```
      NP
     /   \      
    S     NP   NP
   /\      /\    
  I-ga katte NP S   NP
       /\     /\ 
    yonda hon
```

In both (41) and (42), the highest NP node conjoins two different nodes, namely, S and NP.

It appears that neither Matsunaga’s nor Bedell’s analysis can account for the so-called “coordinate structure.” Furthermore, Harada’s analysis cannot account for this problem either. Now the question arises as to whether a sentence such as (40) can be considered a coordinate structure. None of the **ga/no** analyses thus far can satisfactorily account for this problem. I will leave this an open question.
Another possible problem in Matsunaga's analysis is how to treat an object NP in no-relative clause such as seen in the following.

(43) Taroo no wara o tuita koto
   GEN lie ACC told fact
   'the fact Taroo told a lie'

As noted in 1.1, one intervening element is acceptable among some speakers of Japanese (cf. speakers of the group A). Matsunaga's analysis of no-relative clause is displayed again below.

(44) (=1(29))

In (29), there is no possible slot to which wara-o in (43) belongs, whereas this is not a problem for Bedell's analysis, since his analysis admits S-node in a relative clause.

1.3.4 Saito's analysis

In "Case and Government in Japanese," Saito (1983) briefly discusses Case/no conversion on the basis of "subject/object asymmetry." Saito hypothesizes that "objective Case is assigned by the verb to its object, whereas nominative Case is inherent in that it is not assigned by any element, e.g., INFL" (ibid:24).

Before reviewing his analysis of Case/no conversion, it is necessary to present some points he discusses in his article. First, observe the following.
(45a) *Dare ni kore ga dekiri ka.*

who DAT this NOM can G

'Who can do this?'

(45b) *Dare ga kore ga dekiri ka.*

NOM

(Keio 1973:57)

He claims that in (45a) *dare-ni* is a PP and *kore-ga* is the subject.

(45b) is illustrated as follows.

(46) *Dare-ga (w kore-ga dekiri) ka.*

There is disagreement among linguists as to the determination of whether verbs like *dekiri* are transitive or intransitive. Saito argues that "*ga* attached to the object is not a phonetic variant of the objective Case marker *ga* furthermore, these verbs are not case assigners" (Ibid:247).

Consider the following examples. In (47) the verb *kaita* assigns Case whereas in (48) the verb *wogaru* does not assign Case.

(47a) *[a John ga hon o kaita].*

NOM book ACC wrote

'John wrote a book.'

b. *John ga/no kaita hon*

GEN

'the book that John wrote'

c. *hon o/no kaita hito*

GEN person
(48) a. [John ga eigo ga yoku yosseru] koto
    NOM English NOM well read-can fact
    'the fact that John can read English well'

b. John no eigo ga yoku yosseru koto
    BEN NOM

c. John no eigo no yoku yosseru koto

(Saito 1985) (Ibid 250)

Saito claims that (48c) can be accounted for Bedell’s framework of Restructuring. (48c) is illustrated as follows.

(49)

Comparing (48a,b,c) with (47a,b,c), Saito suggests that even Bedell’s analysis cannot systematically explain why only ga/no conversion is present in Japanese but not g/no conversion. Saito relates this particular question to his hypothesis described above; that is to say, objective Case is assigned to its bearer by a Case assigner but nominative Case is not assigned by any element.

Let us see how Saito’s hypothesis accounts for (47c) and (48c). He first points out that in the case of restructuring, an NP which moves to the restructured position does not leave a trace in its original position.
In (48c), the restructuring rule applies to NP's in nominative positions, namely *John* and *also*, and these NP's appear in genitive Case position as in (49). As Saito claims, since there is no element that assigns nominative Case, there is no Case conflict. Thus, (48c) is grammatical.

On the other hand, in (47c), suppose the restructuring rule applies to an NP in object position, namely *hon*, and it appears in genitive Case position. Since *hon* has genitive case now, the verb *halten* cannot assign Case to the NP because it will lead to a Case conflict if the verb assigns accusative Case to *hon*. Also, since the restructured NP does not leave a trace in its original position according to Saito, the verb fails to assign Case anyway. Thus, (47c) is ungrammatical. Saito claims that when restructured from the nominative Case position, although there is no trace of the NP left in the original position, this does not pose a problem since there is no element that assigns Case.

In sum, Saito concurs with Bedell's Restructuring analysis. Objective Case here is assigned by the verb to its object, whereas nominative Case is inherent in that it is not assigned by any element. In this sense, Saito shows the subject/object asymmetry in terms of Case assignment in *ga/no* conversion.

1.3.5 Terada's analysis

In the article "Unaccusativity in Japanese" (Terada 1987), Terada discusses *ga/no* conversion. As with Saito's argument, Terada
also attempts to show a subject/object asymmetry. However, her argument is developed in terms of unaccusativity and unergativity. In other words, her analysis of \textit{na/na} conversion is conducted in order to support a discussion of unaccusativity/unergativity analysis. The distinction between unaccusativity and unergativity will be briefly discussed in this section and at length in chapter III.

Unaccusativity has received attention from a number of linguists recently (cf. Perlutter 1978, Burzio 1981 and 1986), and referred to by some linguists as "ergativity" (for example, Perlutter). The most notable characteristic of unaccusative verbs is that the "subject" of such verbs as \textit{taku} ("arrive") and \textit{kuru} ("come") are actually in the direct object position. On the other hand, the subject of unergative verbs is inherently in the subject position. Some intransitive verbs are unaccusative and the rest are unergative. The difference can be shown as follows.

(50)

\begin{equation}
\begin{array}{c}
\text{Unaccusative} \\
\text{Unergative}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{c}
\text{NP} \\
\text{VP} \\
\text{V}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{c}
\text{NP} \\
\text{VP} \\
\text{t}_3 \\
\text{V}
\end{array}
\end{equation}

In \textit{Structure and Case Marking in Japanese} (to appear), Miyagawa shows the distinction between unaccusatives and unergatives in Japanese.
First, let us examine the following sentences.

(51) a. Kodo-o ga *hutari kono kagi de dos-o aiketa.
    children NOM 2-ci this key with door ACC opened
    The two children opened the door with this key.

b. *Kodo-o ga *hutari kono kagi de *hutari dos-o aiketa.

(Miyagawa 1988)

In (51b), the ungrammaticality is due to the movement of the quantifier *hutari. Miyagawa claims that a notion, mutual c-command requirement, accounts for the grammaticality of (51a) and the ungrammaticality of (51b). (52) below is the definition of c-command and (53) is the mutual c-command requirement for the numeral quantifiers in Japanese.

(52) C-command (Reinhart 1979)

A c-commands B if neither A nor B dominates the other and the first branching node dominating A also dominates B.

(53) Mutual C-command Requirement (Miyagawa 1988, to appear)

For an NP to modify an NP, the NP or its trace and the NG or its trace must c-command each other.

(54a) and (54b) are the structural representations of (51a) and (51b), respectively.

(54) a.  

```
    S
   / \  
  /   \  
 kodo-o 2-ri kono kagi-de dos-o aiketa
    NP    NG   UP
```

b. *kodo-o 2-ri kono kagi-de *hutari dos-o aiketa.

(Miyagawa 1988)
In (54a), *kodomo* and *2-ri* mutually c-command each other. In (54b), they do not mutually c-command each other, hence the sentence is ungrammatical.

Examine an alternative structural representation for (51b).

In (55), since the NP and NQ mutually c-command each other, it incorrectly predicts that (51b) is grammatical. From (54b), the PP *kono kagi de* must be within the VP.

Now, observe the following.

(56) a. *Door ga hutsu kono kagi de aita.*
   
   *Door NOM 2-cl this key with opened*
   
   *The two doors opened with this key.*

b. *Door ga kono kagi de hutsu aita.*

( Ibid. )

Unlike (51), the verb in (56) is intransitive. Interestingly, (56b) is not ungrammatical. *Kono kagi de* is within the VP, and when the quantifier *hutsu* occurs in the VP, the sentence is grammatical. This suggests that the trace of the NP modified by the quantifier is also in the VP in the case of (56). Thus, the mutual c-command requirement predicts that (56b) is grammatical since the trace of *door* and the NQ mutually c-command each other in the VP.
Now, returning to Terada's analysis of $\alpha/\alpha$ conversion, she claims that NP-$\alpha\alpha$ can change to NP-\(\text{no}\) when it is a "subject" of unaccusative verbs, but NP-$\alpha\alpha$ cannot change to NP-\(\text{no}\) when it is a subject of unergative verbs. Her analysis of $\alpha/\alpha\alpha$ conversion thus involves movement.

Similar to Bedell's Restructuring, Terada proposes a movement of an NP to the Spec (Specifier) position of NP. The "subject" of unaccusative verb is in VP, and is therefore lexically governed by the verb. The NP can move to the Spec position and receive a genitive Case as follows.

\[(57)\]

In the case of unergative verbs, the subject is in the subject position to begin with, and therefore cannot be lexically governed.

The result is the unacceptability of the subject trace. Terada gives the following examples to demonstrate the difference between unaccusativity and unergativity.
Terada claims that in (54), the verb is unaccusative and in (55) it is unergative. However, in (59), the verb *kankaku sita* is not an unergative verb but a transitive verb. Unaccusatives and unergatives are made distinctive within intransitive verbs. That is, transitive verbs are independent of unergative verbs.

Furthermore, Terada's analysis of (58) and (59) is not consistent. The relativized head *toki* appears differently in both cases. In (58), *toki* is followed by the postposition *ni* whereas in (59), *toki* is not followed by the postposition. My analysis shows that the presence of *ni* causes a significant difference in grammaticality of the genitive subject. Therefore, this distinction must be made clear when *ga*/*no* conversion is investigated in the
framework of unaccusativity. I will return to this in section 3.3.2.1.

Moreover, Terada states that an NP in nominative Case position is not allowed to move to the restructured genitive Case position. However, this statement does not seem to apply to all instances of *na/no* conversion. Consider the following.

(50) [Taro no waratta] toki o no ooidata.

GEN laughed time ACC remembered

'I remembered the time Taro laughed.'

Employing Miyagawa's analysis of numeral quantifiers to determine whether a verb belongs to the unaccusative class or the unergative class (cf. 1.3.5, 3.2.2), in (60), the verb *waratta* is unergative but the appearance of *na* is perfectly acceptable. Terada's analysis cannot systematically explain the unaccusative/unergative asymmetry in terms of *na/no* conversion.

1.4 SUMMARY

In this section, I first introduced *na/no* conversion in general. There are two main analyses of *na/no* conversion. One is referred to as "nominative analysis" and the other as "genitive analysis."

For the nominative analysis, I reviewed the discussion by Harada (1971). For the genitive analysis, I introduced the discussions by Bedell (1972), Matsunaga (1983), Saito (1983) and Terada (1987). Although Saito's and Terada's reviews take slightly different approaches than the other ones, they are related to Bedell's
analysis. Terada’s unaccusative analysis is of particular interest for examining the internal structure of \textit{ka/\textsc{id}} conversion.

In my discussion, I will adopt Bedell’s Restructuring analysis. In Chapter III, I will discuss \textit{ka/\textsc{id}} conversion in terms of the unaccusative/unergative discussion. In this sense, my discussion and Terada’s are similar in that they both adopt the Unaccusative Hypothesis. However, the crucial difference between my analysis and Terada’s is that I incorporate the argument/adjunct distinction to account for \textit{ka/\textsc{id}} conversion in relation to the Unaccusative Hypothesis.

In the following chapter, I will introduce two notions, "argument" and "adjunct."
NOTES TO CHAPTER I

In his article, Saito (1983:251) states that in the case of the Restructuring rule, an NP which is moved to the restructured position does not leave a trace in its original position.

See section 3.2.2 for a more detailed discussion by Miyagawa (to appear).
CHAPTER II

ARGUMENT AND ADJUNCT

INTRODUCTION

The purpose of this chapter is to introduce the notions "argument" and "adjunct." These notions play a key role in my analysis of Ga/Na conversion. First, I will introduce the characteristics of both arguments and adjuncts in general, employing English examples. Second, I will discuss what the argument structure is like in Japanese and how this structure can be recognized in Japanese as opposed to English. I will introduce the argument/adjunct distinction proposed by Miyagawa (1988, to appear) and present Nemoto's study (1997), which incorporates this distinction into Japanese relative clause.

2.1 CHARACTERSICS OF ARGUMENTS AND ADJUNCTS

I will first discuss some fundamental characteristics of arguments and then those of adjuncts.
7.1.1 Characteristics of arguments

For defining the term 'argument,' the selectional restriction determined by a given verb is a key notion (cf. Rieussec and Williams 1986). Let us observe the following.

(1) John loves Mary.

From (1), it is obvious that the verb *loves* obligatorily requires a noun such as *John* as the "subject" and a noun such as *Mary* as the "object" of the verb. When an NP is required by a verb, it is called an "argument" of the verb. Examples (2) and (3) are ungrammatical due to the lack of an argument required by the verb.

(2) *loves Mary.*

(3) *John loves.*

(2) lacks the subject and (3) lacks the direct object.\(^1\)

Now, let us turn to two types of arguments. First, observe the following.

(4) (= (1))

John, loves Mary.

(5) [NP, *loves VP*]

(5) is the structural representation of (4). In (5), NPs, *Mary,* is located inside the maximal projection of the VP and also is an element required by the verb (cf. (3)). This NP is called an "internal argument" of the verb. On the other hand, NP, *John,* is located outside the maximal projection of the VP and also is an element required by the verb (cf. (2)). This NP is called the "external argument" of the verb (Williams 1981).
Looking at (1), (2) and (3), it is clear that only (1) is grammatical since it meets the requirement that the verb necessitates one internal argument and one external argument. Thus, the verb *love* can be called a "two-place predicate" since it requires two arguments.

It is necessary to mention that there may be no more than one external argument while a verb may assign more than one internal argument. For example, the verb *give* is a three-place predicate since it requires one external argument and two internal arguments (cf. Lyons 1977:149).

(6) John, gave Mary a book.

(7) [[a NP, [x NP, NP]]]

In (7), NP, refers to *John* and NP, and NP, refer to *Mary* and *a book*, respectively.

The term "argument types" refers to "thematic roles" in the GB framework (Rieusdijk and Williams 1986:241). *John* in (1) receives the thematic role "Agent" and *Mary* receives the thematic role "Patient." The argument structure of *love* is illustrated as follows.

(8) love: (Agent, Patient)

In (8), the underlined element stands for the external argument of the verb.

Concerning thematic roles, Lasnik (1988:4) states that the semantics of a verb determines its thematic properties. He uses two verbs, *sleep* and *hit*, as examples. *Sleep* assigns the thematic role
“Experiencer” to the external argument, and assigns no thematic role to internal arguments. Hit assigns either the thematic role “Agent” or “Instrument” to the external argument. It also assigns the thematic role “Patient” to the internal argument.¹

(9) #John slept Bill.

(10) #John hit.

(Lasnik 1988:4)

In relation to the thematic role assignment, it is necessary to introduce two important notions, the Theta Criterion and the Projection Principle.

(11) Θeta-Criterion (Chomsky 1981)

A lexical NP must occupy one and only one theta-position.

(12) Projection Principle (Chomsky 1981:201)

Representation at each syntactic level (i.e., LF, D- and S- structure) is projected from the lexicon, in that it observes the subcategorization properties of lexical items.

Let us look at an example. Below, according to the Projection Principle, if we move which problem as in (14) from its D-structure in (13), we still have an NP in the direct object position. But this time, the NP is null, namely a trace as in (14).

(13) Bill will solve which problem.

(14) Which problem, will Bill solve t.
2.1.2 Characteristics of adjuncts

First, observe the following.

(15) [\textit{John [\textit{\textit{read the book}} for two hours}].]

In (15), it is clear that \textit{John} is the external argument and \textit{the book} is the internal argument of the verb \textit{read}. The question here is whether the PP \textit{for two hours} is also an argument of the verb. In order to see if this is the case, let us look at the following example.

(16) [\textit{\textit{John \textit{\textit{read d}} the book}}].

In (16), the PP \textit{for two hours} is not present, but the sentence is grammatical. This suggests that \textit{for two hours} is not subcategorized by the verb. Thus, the verb \textit{read} is a two-place predicate and \textit{for two hours} is considered a non-argument. This is called an adjunct.

It should be noted that a PP is not always an adjunct. In some cases, a PP is subcategorized by its verb, hence is an argument of the verb, as in (17).

(17) John put the book \textit{on the table}.

In (17), \textit{on the table} is an argument. This is shown by the following examples.

(18) a. \textit{\textit{\textit{John put}} the book}.

b. \textit{\textit{\textit{John put on the table}}}.

The ungrammaticality of (18) shows that the verb \textit{put} is a three-place predicate.

The argument/adjunct distinction is a universal notion, hence the same distinction should be exhibited in Japanese.
2.2 THE ARGUMENT/ADJUNCT DISTINCTION IN JAPANESE

We saw that in English, *but* requires three arguments, so that all of the arguments must be present in the sentence (i.e., they must be "phonetically" realized in the sentence). However, this is not the case in Japanese. It is claimed (cf. Perlmutter 1972, Saito 1985) that Japanese is a "pro-drop" language and that it is possible for a sentence to lack overt arguments ("missing arguments").

Observe the following. ([§ represents an "empty" element.)

(19) § moo dekaketa yoo desu.

already went out seem

'(It seems that (he/she/they) went out already.)'

(20) § [n. John ga motte-kuru to] oositasse.

NOM bring think

'(I think that John will bring (it/them)).'

(Saito 1985:293)

In (19), an external argument is missing and in (20), both an external and an internal argument are missing, but both sentences are grammatical. Since (19) and (20) show that missing arguments are possible in Japanese, an argument cannot be distinguished from an adjunct in Japanese simply by determining if the phrase is required (as in (18) for the English *but*). Therefore, in Japanese the argument/adjunct distinction must be realized in a different way.

(21) If a 'particle' assigns a thematic role to the NP, the particle has a projection (postposition); if the NP-particle receives its thematic role from an external source, the particle has no projection but instead criticizes onto the NP (Case marking).\(^4\)

By applying (21), we can say that if an NP is marked by a PP, it is an adjunct and if an NP is marked by a Case marker, it is an argument. I will explain this in more detail. Examine (22) and (23) based on Miyagawa's generalization.

(22) [へ uti kara kita]
    house from case

(23) [へ hon o ketta]
    book ACC bought

(24) below is the structure of (22).

(24)

\[ \text{VP} \]
\[ \text{PP} \]
\[ \text{NP} \]
\[ \text{P} \]
\[ \text{kita} \]
\[ \text{uti kara} \]

Kara 'from' itself has semantic content and assigns the preceding NP a thematic role, namely Relative. Thus, kara has a projection and is considered a postposition. Hence, uti kara is an adjunct. This is shown in (25) where kita stands alone in the VP and the sentence is grammatical.
(25) John ga [ur kita].
    NOM case
    'John case.'

(25) indicates that uti kara is not a required element, hence is not an internal argument.

Now, let us look at the structure of (21).

(26)

\[
\begin{array}{c}
\text{VP} \\
\text{NP-o} \quad \text{V} \\
\quad \text{hon} \quad \text{kara}
\end{array}
\]

Unlike kara, o neither has semantic content nor assigns a thematic role to the NP, hon. Instead, the NP-particle, hon-o, receives its thematic role from an external source, the verb kara. According to the generalization in (21), the particle o does not have a projection, hence criticizes onto the NP hon. Therefore, o is considered a Case marker, not a postposition. This is shown in (27), where an object is not present as a required element and in (28), where pro for the object is realized.

(27) Taro ga [ur yonda].
    NOM read
    'Taro read.'

(28) Taro ga [ur o o yonda].
    'Taro read (it).'

In sua, a phrase with a particle which has no PP projection is an argument, and the one in which the particle has a projection is an
adjunct.

2.3 APPLICATION OF THE ARGUMENT/ADJUNCT DISTINCTION IN JAPANESE

In this section, I will introduce a study of Japanese relativization and the argument/adjunct distinction by Nemoto (1987) and show how the argument/adjunct distinction is exemplified in relative clauses in Japanese.

In Behind The Parallelism Between Relativization And Thematization: A Study of The Argument-Adjunct Distinction in Japanese (1987), Nemoto demonstrates how the argument/adjunct distinction is relevant to relativization and thematicization in Japanese. I will focus on relativization to demonstrate the applicability of the argument/adjunct distinction.

First, Nemoto argues that a relativized head does not undergo movement in Japanese (cf. also Saito 1985). Thus, the so-called "complex NP" in Japanese is not subject to the Subjacency Condition. The Subjacency Condition is given in (29).

(29) Subjacency Condition (Chomsky 1973)

No constituent can be moved out of more than one containing NP- or S-node (in any single rule application).

Compare the example in English (30) with that in Japanese (31).

(30) What do you believe [NP the fact [S that [S John ate t_i,t_j]].
(31)  suita ga yohuku, ga yogorete iru
       wearing suit NOM dirty
       sinsi,
       gentleman

'a gentleman who the suit that (he) is wearing is dirty'

(Kuno 1973:239)

(30) is ungrammatical since what is moved out of two bounding
nodes, S and NP. On the other hand, (31) is grammatical though
there are two bounding nodes. This suggests that the relativized
head does not undergo movement and does not leave a trace in its
clause. Instead, there is an empty pronominal as in (31). Now,
observe the following.

(32) Taro ga hon, o katta.
       NOM book ACC bought

'Taro bought a book.'

(33) E Taro ga, katta hon.

'A book that Taro bought'

In (33), the relativized head hon and the empty category in the
internal argument position are coindexed. Nemoto states that when
the argument is relativized, there is always an empty category to be
coindexed with the head.

Look at the following sentence.

(34) Taro ga Hanako ni koen de atta.

NOM DAT park at go

'Taro set Hanako at the park.'
In (29), *kōzen de* is an adjunct since the postposition *de* has semantic content and assigns the thematic role "locative." (35) below shows that in Japanese, even an adjunct can be relativized.

(35) a. Taroo ga Hanako ni atta kōzen  
    "the perk where Taroo met Hanako"

In (35), although the adjunct *kōzen* is not coindexed with anything, it can be relativized.

However, Neeoto shows that an adjunct cannot always be relativized.

(36) a. Taroo ga eizakan, de poppukōkun, o katta.  
    NOM movie theater at popcorn ACC bought  
    "Taro bought popcorn at the movie theater."

b. [[Taroo ga poppukōkun, o katta] eizakan,  
    "the movie theater where Taro bought popcorn"

c. Taroo ga eizakan, de ga, katta.  
    "Taro bought (it) at the movie theater."

d. [[Taroo ga ga, katta] eizakan,  
    "the movie theater where Taro bought popcorn"

(36d) is ungrammatical with the intended meaning. It is acceptable only with the reading "the movie theater that Taro bought" since the relativized head is coindexed with *ga* in that case. However, that is not the intended meaning for (36d). (36) indicates that an adjunct cannot be relativized when there is an empty category within the VP.

In contrast, Neeoto demonstrates that an adjunct can be relativized if *ga* is in the external argument position (i.e., *ga* is not
in the VP, as in (37).

(37) a. Taro ga mise de poppukoon o katta.
   ① store at
     'Taro bought popcorn at the store.'
 b. ②mise de poppukoon o katta.
     '(He) bought popcorn at the store.'
 c. ③ mise de poppukoon o katta ④mise
     'the store where (he) bought popcorn'

What is significant here in (36) and (38) is that the argument/
adjunct distinction reveals a clear instance of a subject/object
asymmetry in Japanese.

Returning to (36), we have seen that an adjunct cannot be
relativized if ② is in the VP. There is one exception to this.

(38) a. John ga ano-hi, hazisete kuru ga o katta.
    ⑤ that day first time car ⑥ bought
     'John bought a car for the first time that day.'
 b. ⑤John ga hazisete ⑦kattal ano-hi,
     'that day when John bought (it) for the first time'

Now, compare (38b) with (36d). In both cases, the adjunct is moved
as a relativized head, but only (38b) is grammatical. Notice that
in (36d), the extracted NP attaches to a PP but this is not the case
in (38b). Based on the observation above, Neeote presents the
following generalization.
(39) If there is only one empty category in the relative clause, and that empty category is in the VP, the relativized head must be coindexed with the empty category.

(39) suggests the following constraint on relativization in Japanese.

(40) An empty category in any argument position in the VP blocks relativization of an adjunct which takes a postposition.

We can use the generalization in (39) to see whether a certain element is an argument or an adjunct. For example, Neato presents the following in order to see whether or not an indirect object with the particle ひ is an argument of its verb.

(41) a. Taro ga inu, ni mizu o yatta.
    "Taro gave water to the dog."

b. Taro, ga inu, ni mizu o yatta.
    "Taro gave (it) to the dog."

c. [Taro, ga mizu o yatta] inu
   inu = mizu, "the dog (to which) Taro gave (it)"
   inu = inu, "the dog (which) Taro gave"

d. [mizu o yatta] inu
   inu = mizu o yatta, "the dog (to which) gave water"
   inu = mizu, "the dog (which) gave water"

Based on (41c), Neato concludes that the indirect object is an adjunct since the empty category in the direct object position blocks relativization of the indirect object.
2.4 "TIME"-NP'S AND THE ARGUMENT/ADJUNCT DISTINCTION

So far in this chapter we have observed argument-type NP's and adjunct-type NP's in a rather limited sense. That is, we have not seen an NP containing an S node (= complex NP). As long as the maximal projection of such a complex phrase has a status of NP, the argument/adjunct distinction is relevant to the complex phrase. Observe the following examples.

(42) John ga [aza Hanako ga kaitsai tegasi] o yonda.  
NOM NOM wrote letter ACC read  
'John read the letter which Hanako wrote.'

(43) John ga [aza (sinna ga iru) heya] del naita.  
NOM everyone NOM be room at cried  
'John cried in the room where everyone was.'  
(Lit) 'John cried in the room where everyone is (present).'

In (42), the complex NP attaches to the particle o, which has no semantic content. Also, this NP-particle receives its thematic role from an external source, namely yonda, hence the complex NP in (42) is an argument as the generalization (21) predicts.

In (43), on the other hand, the embedded sentence sinna ga iru is dominated by the NP heya. This complex NP headed by heya is assigned the thematic role by the locative particle de. Hence, this particle has a projection and it is considered a postposition.

Since it is clear that de is a postposition, the phrase dominated by the postposition, sinna ga iru heya de, is an adjunct.
Now, we turn to the so-called "time"-NP's. As the term suggests, a "time"-NP means an NP containing time reference. For example, ano-hit 'that day' is a "time"-NP since it refers to time.

Besides ano-hit, there is a number of "time"-NP's such as toki 'time,' ano 'after,' waan 'before,' kawanka 'moment' and so on.

These NP's can stand alone as an independent NP or can be a head of a complex NP containing an embedded clause. Below, the "time"-NP toki in (44) and ano-hit in (45) are each the head of a complex NP.

(44) [Taro ga kuruma o katta] toki

NOM car ACC bought time

'the time that Taro bought a car'

(45) [Taro ga kuruma o katta] ano-hit

that day

'that day that Taro bought a car'

(44) is similar to (45) in the sense that the "time"-NP is a relativized head. The difference between ano-hit and toki is that toki cannot fit in a sentence like (46) below.

(46) Taro ga ano-hit kuruma o katta.

'Taro bought a car that day.'

(47) Taro ga toki kuruma o katta.

The relative clause represented in (44) is called a "Free Relative Clause." Radford states that "free relative clauses are characterized by the fact that they are apparently antecedentless" (1981:258).
In my discussion, I will call this particular "time"-NP a "toki-phrase." Toki-phrases can appear in both an argument position and an adjunct position.

(48) (Taro no hon o yonda) toki o omoidesita.

NUM book ACC read time ACC remembered
'I remembered when Taro read the book.'
(Lit.) 'I remembered the time that Taro read the book.'

(49) (Taro no hon o yonde-ru) toki, Hanako wa naite ita.

NUM ACC reading TOP crying was
'When Taro was reading the book, Hanako was crying.'
(Lit.) '(At) the time that Taro is reading the book, Hanako was crying.'

The toki-phrase in (48) has the status of argument, and that in (49) has the status of adjunct. Note again that toki as well as ano-hi does not have to attach to a postposition in order to maintain an adjunct status. Thus, this kind of NP is called a "bare time NP."

2.5 SUMMARY

In this chapter, I presented the characteristics of arguments and adjuncts by comparing English examples and Japanese examples. We saw that in English, argument and adjunct are distinguished in terms of required elements. However, since Japanese is a pro-drop language, the method used for English cannot be used. I introduced the generalization of the argument/adjunct distinction proposed by Miyagawa (1988, to appear). I also reviewed the study of Japanese
relativization by Nemoto (1987) and showed that the argument/adjunct distinction plays an important role in relativization.

In Chapters III and IV, I will demonstrate how the argument/adjunct distinction relates the fundamental property of 3A/no conversion. I will also show that the Unaccusative Hypothesis is exhibited clearly in the 3A/no conversion.
NOTES TO CHAPTER II

Williams and Rieuddedijk (1986:245) note that the number of arguments may vary in accordance with the verb. For example, although the verb *eat* is believed to be a two-place predicate, the following is also grammatical.

(i) John ate.

They claim that there are two possible proposals for the above problem. One is that it is not necessary for every argument to be syntactically realized, and the other is that such a verb has two lexical entries, namely a one-place predicate and a two-place predicate.

Williams (1980) suggests that the reason why there must be only one external argument in an argument structure is based on the notion of predicate structure.

He states that all NP's are assigned referential indices in S-structure. In the following example, the rule of predication requires that the NP be coindexed with the VP.

(i) (John [NP], [left [NP].

Williams suggests that the c-command restriction functions as a filter on the representation derived by the rule of predication as in (i). Williams calls this "Predicate Structure" (PS). Below, (ii) is the definition of c-command and (iii) is Williams' proposal of the predicate structure.
(ii) C-command (Reinhart 1979)

A c-commands B if neither of A nor B dominates the other and the first branching node dominating A also dominates B.

(iii) Predicate Structure (Williams 1980)

In PS (Predicate Structure), NP must c-command any predicate or trace coindexed with it.

Returning to (i), since the NP c-commands the VP, it is assumed that the NP and the VP are coindexed, hence the subject-predicate relation is assured. Thus, Williams suggests that the claim that the subject-predicate relation is indicated by the indices entails that there can be only one subject for any maximal projection since any maximal projection can bear only one index (Williams 1981:64).

Bresnan (1972) shows that certain verbs cannot have a "subject," as in (iv).

(iv) a. *That John is here sees.
   b. *John's presence sees.

Williams (1981:65) suggests that for verbs such as sees, there can be no external argument for these verbs. That is, when sees heads a VP, all of its arguments must be located internal to that VP.

There are other types of terminology for the thematic roles used by linguists. For example, Gruber (1976) uses terms such as "Actor", "Goal", "Source" and so on (see also Williams 1981).
Japanese is a head-final language, so that instead of prepositions, there are postpositions.

(1) PP
    NP P

There are instances in which a Case marker may optionally be left out. The so-called "Case marker drop" is observed in Japanese as in the following (cf. Saito 1983).

(1) John-đ kita no?
    case Q
    "Did John come?"

(11) Nani-đ yonderu no?
     what reading Q
     "What are you reading?"

Nominal Case ą is dropped in (1) and accusative Case ą is dropped in (11).

See section 4.3 for a detailed discussion of the Subjacency Condition.

See Saito (1983) for a detailed discussion of the subject/object asymmetry. See also section 1.4 for a brief review of his discussion.
CHAPTER III
THE UNACCUSATIVE HYPOTHESIS AND GA/NO CONVERSION

INTRODUCTION

In recent years, a number of linguists have investigated the topic of unaccusativity in various languages. Perlutter (1978) originally introduced the notion of unaccusativity, which has been incorporated into the GB framework by Burzio (1981, 1986). Since my analysis of toki-phrase relativization assumes the notion of unaccusativity, it is necessary to first explain in some detail what the notion is. I will discuss this topic in this chapter, and will demonstrate how it applies to toki-phrase relativization.

3.1 CHARACTERISTICS OF UNACCUSATIVES AND UNERGATIVES

3.1.1 Distinction between Unaccusatives and Unergatives

Generally speaking, there are two main categories for verbs. They are called transitive verbs and intransitive verbs. A transitive verb always subcategorizes an object whereas an intransitive verb does not.1

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Intransitive verbs are further divided into two subtypes. One type requires that the thematic role of its subject be Agent, and the other requires that it be Patient. The former is called unergative and the latter is called unaccusative. Perišutter (1978:162) classifies intransitive verbs in English as follows.

(i) a. Unergative: predicates describing willed or volitional acts; manner-of-speaking verbs; sounds made by animals, certain involuntary bodily processes.

b. Unaccusatives: predicates expressed by adjectives in English; predicates whose 'nuclear term' is a Patient; predicates of existing and happening; non-voluntary emission of stimuli that impinge on the senses; aspectual predicates; duratives.

It is important to note in (i) that the 'nuclear term' of an unergative predicate is referred to as Agent, whereas that of the unaccusative is referred to as Patient. Thus, verbs such as talk, shout and hide are categorized as unergatives since these verbs require an Agent subject, and those such as arrive, come and remain are categorized as unaccusatives since they require a Patient subject.

3.1.2 Syntactic resemblance between the Unaccusatives and Passives

The occurrence of 'Patient' as a 'nuclear term' of the unaccusatives can be demonstrated by the following example.
(2) The vase broke.

The *vase* is obviously not the "Agent" but the "Patient" of the verb. Hence, *broke* is an unaccusative verb. Note that the verb has a transitive function as in the following.

(3) John broke the vase.

In (3), the *vase* is also a Patient whereas *john* is an Agent.

Comparing the semantic similarity between (2) and (3), Grimshaw points out that "unaccusatives behave in some ways transitively rather than intransitively, closely resembling passive verbs..." (Grimshaw 1986:244). Indeed, a passive construction with an active counterpart shows a significant resemblance to the relationship seen between (2) and (3). Observe the following.

(4) John hit Mary.

(5) Mary was hit (by John).

In (4), *Mary*, the object NP of the verb, has a Patient theta-role. In (5), *Mary* is moved to the subject position by movement and its theta-role remains the same.²

Returning to (2) and (3), the same phenomenon is observed. In (5), the *vase*, the object NP of the verb, has a Patient theta-role, and in (2), the *vase*, the surface subject, also has the Patient theta-role. The resemblance between the passive and the unaccusative suggests that an NP of unaccusative verbs also involves movement.³

In the case of the unaccusative, if we use the notion of "argument," we can say that in the underlying structure there is no external argument but only an internal argument. I will return to
this point in Section 3.1.4.

3.1.3 Characteristics of Unergatives

So far we have seen the general characteristics of unaccusatives. Let us look at the property of the unergatives. First, observe a typical unaccusative case.

(6) The book slid across the table. (Levin 1980:15)

The transitive use of the verb slide is shown below.

(7) Sarah slid the book across the table. (Ibid:15)

As mentioned earlier, the book in (6) behaves like an object of the verb.

Consider the verb which has both transitive and intransitive uses.

(8) Karen ate.

(9) Karen ate an apple. (Ibid:15)

(8) shows the intransitive use of eat and (9) shows the transitive use. The difference between (6)-(7) and (8)-(9) is that the subject of the intransitive use of eat in (8) holds the same semantic relation to the verb as the subject of the transitive use in (9) (Ibid:15). The subject of the intransitive use of eat does not behave like the object of the verb; hence the verb is not an unaccusative but an unergative.

In use, the surface subject of the unergative verb corresponds to the external argument position where the "Agent" theta-role is assigned, whereas the surface subject of the unaccusative verb is
derived from the underlying internal argument position where the "Patient" theta-role is assigned.

3.1.4 Summary of Unaccusatives/Unergatives

Based on the two types of the verbs above, I will summarize the distinction between the two categories, namely, the unaccusatives and the unergatives.

(10) a. Unergatives --- A class of verbs whose surface subject is an underlying subject.

b. Unaccusatives --- A class of verbs whose surface subject is an underlying object.

The distinction between (10a) and (10b) can be illustrated as follows:

(11) a. Unergative

\[ \text{NP} \rightarrow \text{VP} \rightarrow \text{V} \]

b. Unaccusative

\[ \text{NP} \rightarrow \text{VP} \rightarrow \text{V} \]

(Note: Japanese is a head-final language, therefore, an object NP precedes its verb.)

Burdig (1981) states that unergative verbs only assign a theta-role indirectly and never assign one directly. Unaccusative verbs do not assign a theta-role indirectly but may assign one directly.

In other words, unergative verbs only assign a theta-role to an external argument whereas unaccusative verbs only assign a theta-role to an internal argument at 0-structure. (This is seen in (11). In
the case of the unaccusative in (11b), the NP, originally the object of the verb at D-structure, moves to the vacant external argument position, leaving a trace in the object position. But a question arises: why does the NP have to move to the subject position? Burzio (1986) states that an unaccusative verb does not assign Case to an underlying object NP, hence the NP is forced to move to the vacant subject position in order to receive Case from INFL.

We have assumed that the unaccusative verb does not assign Case. Burzio (1986) proposes a generalization that accounts for the claim that the unaccusatives lack Case assigning ability.

(12) **Burzio's Generalization (Burzio 1986).**

If a Verb does not assign a theta-role to its subject, it does not assign Case to its object.

Let us see how this generalization accounts for both the unergatives and the unaccusatives with respect to Case. The underlying representation of the unergative in (11a) shows that the subject position is filled with an NP; therefore, it is obvious that the verb assigns an external theta-role (i.e., the verb assigns a theta-role *indirectly*). On the other hand, the unaccusative in (11b) does not assign an external theta-roles; therefore, according to Burzio's Generalization, the verb does not assign Case to its object NP at D-structure. Since the NP has no Case, it is forced to move to the vacant subject slot in order to receive Case. As predicted by the Theta Criterion, the NP has Patient theta-role, and the status of the role remains the same even after movement takes place (cf.
Note to Chapter III, 2). The movement is illustrated in the following.

(13) **Unaccusatives**

\[ S \rightarrow \{ NP_s, VP \} \rightarrow \{ NP_s, t, V \} \]

3.2 **UNACCUSATIVES IN OTHER LANG UAGES**

The Unaccusative Hypothesis has been studied in various languages. Below, I will present some of the research on this topic in Italian, Spanish and English. I will also introduce current research on unaccusativity in Japanese.

3.2.1 **Italian: Ne-Clinicization and Auxiliary Selection**

In Italian, ne is considered a subpart of an NP, namely a pronoun, and its meaning is "of it", "of his", "of them", and so on. It is well-known that ne can be clinicized from the subject when its verb is an unaccusative, as in (14):

(14) Ne\_arrivano molti.

*of them* arrive many

'Of them arrive many.' (Burzio 1983)

Arrivano 'arrive' is an unaccusative verb in Italian. This so-called Ne-clinicization does not apply when the verb is an unergative.
telephone

'Do the telephone many.'  (Ibid)

In Italian, auxiliary selection also shows the unaccusative/unergative distinction. An unaccusative verb selects essere 'be' and an unergative verb selects avere 'have.' (Ib) has the unaccusative verb arrivare 'arrive', and (Iiib) has the unergative verb telefonare 'telephone'.

(Iiib) a. Giovanni arriva/e arrivato.
   'Giovanni arrives/has arrived.'

b. Giovanni telefona/ha telefonato.
   'Giovanni telephones/has telephoned.' (Ibid;1986)

3.2.2 Spanish Arbitrary plural reading of a null subject

Unlike English, a null subject is possible in Spanish and Italian, hence, they are called a pro-drop language. For example, in Spanish, the following two sentences are possible with roughly the same meaning.

(Iiic) a. Ellos hablan inglés.
   'They speak English.'

b. pro hablan inglés.
   (Same as above)

(Notes In (Iiic), the notation pro represents a null subject.)
Jaeggli claims (1986:44) that a null subject with plural verbs has an "arbitrary" plural reading when the verb is an active transitive or unergative. In the case of the unaccusatives, a null subject can only have a definite reading. (18a) below is an example of an unergative verb whereas (18b) is an unaccusative verb.

(18) a. *pré llamaron por teléfono para avisar que la mercadería estaba lista.
   call-3PL by phone for to-say that the merchandise is ready.

   'They telephoned to say that the merchandise is ready.'
   (Notes: *pré stands for "arbitrary" plural reading rather
      than "they", a definite reading.)

b. *están cansados después de un viaje tan largo.
   arrive-3PL tired after of a trip so long

   'They arrive tired after such a long trip.'
   (Jaeggli, 1986:50-51)

3.1.5 English Participle-Adjective Conversion

Levin and Rappaport (1986) argue that participle-adjective conversion (known as "adjectival passivization") in English is only possible in the case of unaccusative verbs. (19a) shows participle-adjectives derived from the unaccusatives while (19b) shows that unergatives do not allow this form of the passive.

(19) a. wilted lettuce, a fallen leaf, an escaped convict, a collapsed tent, burst pipes, rotted railings, sprouted
3.2.4 *Japanese* Numeral Quantifiers


(20) Tomodati ga 2-ki Sinzyuku de Tanaka-sensei ni atta.
friend NOM 2-cl in proi. Tanaka DAT met
'Two friends met Prof. Tanaka in Shinjuku.'

(21) *Tomodati ga Sinzyuku de Tanaka-sensei ni 2-ki atta.*
(Same as above)

In (21), the numeral quantifier fails to modify the subject NP *tomodati*. Miyagawa claims that the notion, *mutual c-command requirement*, accounts for the grammaticality of (20) and the ungrammaticality of (21). (22) below is the definition of c-command and (23) is the mutual c-command requirement for the numeral quantifiers.
(22) **C-command (Reinhart 1979)**

A \( \gamma \)-command of \( B \) if neither of \( A \) nor \( B \) dominates the other and the first branching node dominating \( A \) also dominates \( B \).

(23) **Mutual C-command Requirement (Miyagawa 1988, to appear)**

For an \( A \) to modify an \( B \), the \( A \) NP or its trace and the \( B \) NP or its trace must c-command each other.

Consider (20) and (21) again in terms of the mutual c-command requirement. (24) is the structural representation of (20) and (25) of (21).

(24) \((\ast)(20)\)

```
S
  \(\text{NP} \quad \text{VP} \)
   \(\text{Tomodati-ga} \quad \text{Sinzyuku de T-sensee ni atta} \)
  \(\text{-NOM} \quad \text{T-ci} \)
```

(25) \((\ast)(21)\)

```
\(\ast\) S
  \(\text{NP} \quad \text{VP} \)
    \(\text{Tomodati-ga} \quad \text{Sinzyuku de T-sensee ni \(\text{Z-ri} \) atta} \)
```

First, (24) is grammatical since the \( A \) NP c-commands the \( B \) NP and vice versa; thus, (24) meets the mutual c-command requirement. On the other hand, (25) is ungrammatical since the \( B \) NP does not c-command the \( A \) NP because the first branching node dominating the \( B \) NP, namely the VP, does not dominate the NP. Thus, (25) violates the mutual c-command requirement.
Since the mutual c-command requirement specifies that the NP or its trace and the NO or its trace must c-command each other, the following are also possible (Miyagawa 1988, to appear).

(26) \textit{όra}, kodomo ga sar\textsubscript{3} ga \textsubscript{1} \textsubscript{ACC} e \textsubscript{1} \textsubscript{PASS} (koto).
3-cl children NOM plates ACC broke (fact)
'The fact that the children broke 3 plates.'

(27) \textit{ǎkuma}, o, Taro ga \textsubscript{2} \textsubscript{ACC} \textsubscript{1} \textsubscript{NOM} \textsubscript{2-cl} \textsubscript{PASS} \textsubscript{bought}
'Taro bought 2 books.'

In (26), the NP and the trace of the NO c-command each other, and in (27), the NO and the trace of the NP c-command each other.

Miyagawa argues that the mutual c-command requirement gives evidence for the movement analysis of the direct passive. Using the same condition, he demonstrates that the indirect passive does not involve movement. (28) is a direct passive and (29) an indirect passive (cf. Miyagawa 1988, to appear).

(28) Yuube, \textit{\textsl{kuruma}} ga \textsubscript{1} \textsubscript{NOM} \textsubscript{2} \textsubscript{ACC} \textsubscript{\textsl{no-roobo ni t} \textsubscript{2-cl} \textsubscript{PASS} \textsubscript{ustedaretai}.}

last night cars \textsubscript{NOM} \textsubscript{ACC} \textsubscript{thief by} 2-cl steal-PASS
'Last night, two cars were stolen by a thief.'

(29) \textit{\textsl{kodomo}} ga \textsubscript{1} \textsubscript{NOM} \textsubscript{2-cl} \textsubscript{\textsl{fur-arate-ta}.}

children \textsubscript{NOM} \textsubscript{ACC} \textsubscript{rain \textsubscript{DAT} 2-cl} \textsubscript{fallen-PASS}
'Two children were rained on.'

The grammaticality of (28) shows that the trace of the NP and the NO mutually c-command each other. The presence of a trace implies that movement is involved, hence \textit{\textsl{kuruma}} moves to the subject position and
receives nominative Case as a Patient argument in (28). On the other hand, the ungrammaticality of (29) shows that the mutual c-command requirement is violated, suggesting no movement is involved. **Kodoso** is simply added as an extra argument, namely, the Experiencer argument, in the nominative Case position.

Miyagawa also shows that the same analysis of movement holds for the unaccusatives. Let us look at NP's with unaccusative verbs (30)-(31), and those with unergative verbs (32)-(33).

(30) Bakusei ga (ur unwofstu ni) **2-ri kita**.
  students NOM office to 2-cl case
  '2 students came to the office.'

(31) Doo ga (ur kono kagi de) **2-ri sita**.
  door NOM this key with 2-cl opened
  '2 doors opened with this key.'

(32) Bakusei ga (ur zibun no kane de) **2-ri denwa-sita**.
  students NOM self's money with 2-cl telephoned
  '2 students telephoned using their own money.'

(33) Kodomo ga (ur wa ni natte) **10-nin odottal**.
  children NOM circle become 10-cl danced
  '10 kids danced in a circle.'

It is assumed that in (30)-(33), the intervening element between the NP and the NP, as in **kono kagi de** 'with this key' is in the VP.

Naturally, this assumption has to be proved. Otherwise, there would be no assurance that the NP is in the VP just because it follows the PP **kono kagi de**. The following demonstrates that the intervening
element is actually in the VP (Miyagawa 1988, to appear).

(34) Kodono ga 2-ri kono kagi de doso o aketa.
   children NOM 2-cl this key with door ACC opened
   '2 children opened the door with this key.'

(35) Kodono ga [\text{NP} kono kagi de 2-ri doso o aketa].

As seen above, (35) is ungrammatical. If we assume that kono kagi
\text{NP} is outside the VP, (36a) is the structure of (35). On the other
hand, if we assume that it is in the VP, (36b) is the structure.

(36) a.

\[ \begin{array}{c}
\text{NP} \\
Kodono-ga \\
\text{PP} \\
kono kagi de 2-ri \\
\text{VP} \\
doso o aketa \\
\end{array} \]

b.

\[ \begin{array}{c}
\text{NP} \\
Kodono-ga \\
\text{VP} \\
kono kagi de 2-ri doso o aketa \\
\end{array} \]

If we accept the structure in (36a), the NP Kodono and the NP 2-ri,
mutually
c-command each other. This would incorrectly predict that (35) is
grammatical. Hence (36b) is the right representation for (35).

Since it violates the mutual c-command requirement, the structure
correctly predict the ungrammaticality of (35).

Returning to (30)-(33), the grammaticality of (30) and (31)
suggests that the NP in the VP must mutually c-command the NP or the
trace of the NP within the VP. Thus, (30) and (31) should have the
following representations.

(30') **Rakusei** ga i, ofuu ni L, 2-ri kitai.

(31') **DAI** ga i, kono kagi de L, 2-tou site.

In contrast, the ungrammaticality of (32) and (33), the unergative examples, is due to the fact that the NP and the NP fail to mutually c-command each other. In other words, since there is no trace of the NP in the VP, movement is not involved in the case of the unergatives.

3.3 UNACCUSATIVES AND RELATIVIZATION IN JAPANESE

I will now turn to relativization in Japanese and demonstrate that the Unaccusative Hypothesis is crucial for the analysis of *na*/*to* conversion. I will focus on *toki* (*when*)-phrases in this chapter. But before going into the Unaccusative Hypothesis in relation to *na*/*to* conversion, I will first review the argument/adjunct distinction discussed in Chapter II.

In Chapter II, we saw how an argument is distinguished from an adjunct. Recall the generalization of the argument/adjunct distinction in Japanese proposed by Miyagama (to appear).

(38) If a *particle* assigns a thematic role to the NP, the particle has a projection (postposition); if the NP-particle receives its thematic role from an external source, the particle has no projection but instead criticizes onto the NP (Case marking).

(39) shows a particle with a projection.
(39) a. [\text{VP uti kara kita}]  
\text{house from case}  
\text{‘case from the house’}  

b. 
\begin{tikzpicture}
    \node (VP) {VP};
    \node (PP) [below left of=VP] {PP};
    \node (V) [below right of=VP] {V};
    \node (NP) [below left of=VP] {NP};
    \node (P) [below right of=NP] {P};
    \node (kita) [below right of=P] {kita};
    \node (uti) [below left of=NP] {uti};
    \node (kara) [below right of=NP] {kara};
    \draw (VP) -- (NP);
    \draw (NP) -- (P);
    \draw (P) -- (kita);
    \draw (uti) -- (NP);
    \draw (kara) -- (NP);
\end{tikzpicture}

\textit{kara} has semantic content and assigns a thematic role to the preceding NP. Thus, \textit{kara} has a projection and hence is an adjunct. Unlike \textit{kara}, \textit{g} itself has no semantic content so that it does not assign a thematic role to the preceding NP.

(40) a. [\text{\text{VP hon o katta}}]  
\text{book ACC bought}  
\text{‘bought a book’}

This \textit{NP-particle} receives a thematic role from an external source, namely the verb \textit{katta}. Thus \textit{g} is a Case marker, hence its NP is an argument of the verb.

It should be noted that certain types of NP have the status of adjunct even without a postposition. Recall that \textit{ma-hi} and \textit{toki} are such cases. I call these NP's "time"-NP's. Of course, these NP's can also have the status of argument if they attach to a Case marker such as nominative \textit{ga} and accusative \textit{go}. The following show a \textit{toki}-phrase in an argument position and in an adjunct position.
(41) **Argument position**

[Taroo ga hon e yonda] toki o omoide wita.

NOM book ACC read time ACC remembered

'I remembered the time Taroo read the book.'

(42) **Adjunct position**

[Taroo ga hon o yonde iru] toki, Hanako wa naitte ita.

NOM reading TOP crying was

'(At) the time when Taroo was reading the book, Hanako was crying.'

In what follows, I will first demonstrate how the argument/adjunct distinction constrains the appearance of *no*, and then show how these characteristics are explained by the Unaccusative Hypothesis.

The following is the generalization of acceptability of *no* in relativizations.

(43) **Generalization of the acceptability of *no* in relative clauses in argument/adjunct positions with unaccusative/unergative verbs**

a. *No* in a relative clause in an argument position

   acceptable no matter which verb class, unaccusative or unergative in a given relative clause.

b. *No* in a relative clause in an adjunct position

1. Unergative verbs —— *no* is not acceptable.

2. Unaccusative verbs — *no* is acceptable.

(Notes: Since *no* never causes any ungrammaticality in any of
the above cases, we exclude the case of ga in the generalization; henceforth, ga will not be discussed unless necessary.

In this section, I will examine data on the basis of this generalization. Recall that Miyagawa (1988, to appear) shows that numeral quantifiers help us to determine whether a verb belongs to the unaccusative class or the unergative class. In the following discussion, we will use this as an independent method to see if a verb is unaccusative or unergative.

3.3.4 No in arguments

No can mark the subject of the toki-phrase if the toki-phrase is in an argument position, regardless of whether the verb of the toki-phrase is an unaccusative or an unergative. Observe the following.

(44) [Taro no kita] toki o osoidas-e-nai.

'time ACC remember-can-not

'I cannot remember when Taro came.'

(Lit.) 'I cannot remember the time Taro came.'

(45) [Sono mondai no toketa] toki ga itiban insyoutei datta.

'the problem solved*most.Impressive was

'it was the most impressive time when that problem was solved.'

(Lit.) 'The time that that problem was solved was the most impressive.'
(46) [Taro no naite] toki e wasidasita.
cried
ACC remembered
'I remembered when Taro cried.'
(Lit.) 'I remembered the time Taro cried.'
(47) [Taro no odotta] toki ga inyooteki da.
danced
NOM impressive is
'The time when Taro danced is the most impressive.'

(44) and (45) contain an unaccusative verb while (46) and (47) contain an unergative verb. The toki-phrase in (44) and (46) is in the object position whereas that in (45) and (47) is in the subject position. Comparing the two verb classes, there is no ungrammaticality observed in either case as the above generalization states.

What we observed for the argument toki-phrase pertains to the case of "ordinary" relative clauses, namely non-toki-phrases. The unaccusative/unergative distinction is irrelevant to an ordinary relative clause since an ordinary relative clause does not appear in the position where an adjunct toki-phrase can appear. That is, unlike the toki-phrases, an ordinary relative clause does not have an adverbial function.
3.3.2 No in adjuncts

3.3.2.1 No and unergatives

Let us recall (43b) here.

(48) (= (43b))

No in a relative clause in an adjunct position

1. Unergative verbs ---- no is not acceptable.
2. Unaccusative verbs -- no is acceptable.

No is not allowed to occur in toki-phrases when the verb is unergative.

(49) たろー ㄹ לדנה sitemap toki, kaigi ma sudeni owatte ita.
    telephoned meeting TOP already ended had

    'When Taro telephoned, the meeting had already ended.'
    (Lit.) '(At) the time Taro telephoned, the meeting had
    already ended.'

(50) たろー ㄹ 도도 toki, minna mo soo sita
    danced everyone also so did

    'When Taro danced, everyone else did also.'
    (Lit.) '(At) the time Taro danced, everyone also did so.'

(51) たろー ㄹ 까이 toki, hanako wa doo subeki ka sayotta.
    cried TOP how should-do Q hesitated

    'When Taro cried, Hanako hesitated as to what she should
    do.'
    (Lit.) '(At) the time Taro cried, Hanako hesitated as to
    what she should do.'
(52) (Sen sense no waratta) toki, gekusee no waratta.
   teacher laughed students also
   'When the teacher laughed, the students also laughed.'
   (Lit.) '(At) the time the teacher laughed, the students also laughed.'

(53) (Sen seyu-tati no undo-su) toki, kooti wa itu no inai.
   athletes exercise coach TOP always absent
   'When the athletes exercise, the coach is always not present.'
   (Lit.) '(At) the time the athletes exercise, the coach is always not present.'

In (49)-(53), the subject NP's are Agent. This suggests that
unergative verbs do not assign Patient to a subject NP.

It should be noted that when toki is attached to the "temporal"
postposition ni, the above examples (49)-(53) seem to sound slightly
better. This appears to be due to the fact that the NP toki becomes
the argument of the postposition by attaching itself to ni.

3.3.2.2 No and unaccusatives

As noted in (43b), no can appear in the toki-phrase if the verb
is unaccusative, even if the toki-phrase is in an adjunct position.

(54) (Taro no tuita) toki, yado wa suite-ita.
   arrived inn TOP was vacant
   'When Taro arrived, the inn was vacant.'
   (Lit.) '(At) the time Taro arrived, the inn was vacant.'
(55) [Sensee no kita] toki, seeto-ta-ti wa saawaid-ita.

teacher case students TOP make noise-PAST

'When the teacher case, the students were making noise.'

(Lit.) '(At) the time the teacher case, the students were making noise.'

(56) [Doo no aita] toki, soko ni hitor no otoko ga tatte-ita.

door opened there LOC 1-cl GEN man NOM stand-PAST

'When the door opened, there stood a man.'

(Lit.) '(At) the time the door opened, there stood a man.'

(57) [Tsakara no situkatta] toki, anna wa odotte yorokonda.

treasure found everyone TOP dancing was glad

'When the treasure was found, everyone danced with joy.'

(Lit.) '(At) the time the treasure was found, everyone danced with joy.'

(58) [Hyuuza no kireta] toki, subete no denki ga kieta.

fuse burnt out all GEN lights NOM went off

'When the fuse burnt out, all of the lights went off.'

(Lit.) '(At) the time the fuse burnt out, all of the lights went off.'

In (54)-(55), the subject NP's are Patient. If the verb is unaccusative, the NP in the subject position is Patient but not agent. This contrasts sharply with the unergative cases in (49)-(53) above. There, no marking of the subject of the adjunct toki-phrase was shown to be sad.
3.4 DISTINCTION BETWEEN UNACCUSATIVES/UNERGATIVES OF TOKI-PHRASES IN

ADJUNCT

When the toki-phrase appears in an argument position, ga/no conversion can take place freely. This pertains to an ordinary relative clause since an ordinary relative clause, unlike the adjunct toki-phrase, does not have an adverbial function. On the other hand, when the toki-phrase appears in an adjunct position the unaccusative/unergative distinction plays an important role. That is, when the toki-phrase contains an unaccusative verb, ga/no conversion is possible whereas when the toki-phrase contains an unergative verb, ga/no conversion is not possible. In this section, we will look further into this phenomenon and make the generalization in (43) more explicit.

First, we will briefly review the ga/no conversion in 3.4.1, then we will look at the case of the unaccusatives and of the unergatives.

3.4.1 Ga/no conversion -- a brief review

In Chapter 1, we have observed various analyses of the ga/no conversion. It was stated that there are two main types of analyses: one is the nominative analysis proposed by Harada (1972) and the other is the genitive analysis originally suggested by Bedell (1975). I have assumed Bedell's analysis, which is known as the Restructuring analysis. Bedell's Restructuring is illustrated in (59). Bedell did not assume a trace, though this is quite
consistent with his analysis.

(59) a. Ga-Relativization

\[
\begin{array}{c}
\text{NP} \\
\text{S} \\
\text{NP-Ga} \\
\text{S} \\
\end{array}
\]

b. No-relativization

\[
\begin{array}{c}
\text{NP} \\
\text{NP-Ga} \\
\text{S} \\
\text{VP} \\
\text{NP} \\
\end{array}
\]

(59) shows that an NP in a nominative position is "restructured" into a genitive position.

3.4.2 Unergatives in the adjunct toki-phrases

In order to review the characteristics of an unergative verb, let us recall (10a).

\[(\Delta) \quad (-10a)\]

\textbf{Unergatives} -- A class of verbs whose surface subject is an underlying subject.

The following is the underlying structure of the toki-phrases with an unergative verb.
As noted earlier, no is not permitted when the verb is an unergative in an adjunct toki-phrase. This fact implies that an NP in subject position is not allowed to be restructured. In other words, no is not allowed to undergo movement. This point is illustrated in (62).

(62) a. 

b. 

In (62a), the subject NP receives an external theta-role (Agent) from the verb and also receives the nominative Case. Therefore, in the case of Ga, nothing violates the Theta-Criterion and the Case Filter. (62b) shows that when the NP, which was assigned the theta-role and Case at D-structure, moves to the restructured genitive Case position, the sentence becomes ungrammatical.
3.4.3 Unaccusatives in the adjunct toki-phrases

The unaccusatives are described as follows.

(63) (≈(10b))

Unaccusative -- A class of verbs whose surface subject is an underlying object.

The significance of this is that the surface subject of the unaccusative is an underlying object of the verb. Thus the underlying structure of the toki-phrase containing an unaccusative verb is as follows.

(64)

The verb assigns an internal theta-role to its object but does not assign an external theta-role, thus, the verb does not assign Case to its object as stated in Burzio's Generalization, repeated below.

(65) Burzio's Generalization

If a Verb does not assign a theta-role to its subject, it does not assign Case to its object.

Now, recall that in the case of the unaccusatives, both no and na are allowed to occur in the toki-phrase. First, let us look at D- and S-structure of the "unaccusative" toki-phrase for no.
In (66), the object NP at D-structure, which has received a Patient theta-role from the verb, moves to subject position in order to receive Case at S-structure. The moved NP receives the nominative Case. Let us now look at D- and S-structure for no.

The object NP of the unaccusative verb receives Patient theta-role at D-structure, but not Case. The NP moves directly to the restructured position where it receives the genitive Case.

A point to note here is that in (65), "two-step" movement should not be considered. That is, it cannot be the case that the underlying object NP lands at subject position and then moves further to the genitive Case position. If we admitted this alternative analysis, there would be no distinction between the unergatives and
the unaccusatives. In both, the NP would in effect move from the subject position to the restructured position.

3.5 FURTHER EVIDENCE FOR THE UNACCUSATIVE HYPOTHESIS AND NA/NO CONVERSION

I have stated that the surface subject of an unaccusative verb actually originates in the VP in D-structure. I will present two additional pieces of evidence for this.

In 3.1.2, I showed the syntactic resemblance between passives and unaccusatives. That is, the surface subject of both passives and unaccusatives is derived from the underlying object position by movement. I have also presented the unaccusative/nergative distinction to show this point. What I would like to demonstrate here is that an adjunct toki-phrase containing a passive verb allows the appearance of no. This should be true since passives and unaccusatives are believed to share a similar underlying structure. That is, the surface subject is derived from the underlying object position. Observe the following.

(48) [Yurusa no nusun-are] toki, motunushi wa rusu datta.
   car GEN was stolen       owner TOP absence was
   'When the car was stolen, the owner was not at home.'

(49) [Sabishisa no kanzip-are] toki, hito wa si o kaku.
   loneliness GEN is felt     man TOP pose ACC write
   'When one feels lonely, he writes a poem.'

(Lit.) 'When loneliness is felt, one writes a poem.'
both (68) and (69) are grammatical, which suggests that passives, as well as unaccusatives, involve movement from an underlying object position to the subject position.

Miyagawa (to appear) presents further evidence in that, in adjunct *toki*-phrases, NP movement is possible if the NP originates in the underlying object position. This is not possible if the NP originates in the underlying subject position. He points out that a predicate such as *suki*(da) marks both its subject and object with the nominative *na*.

(70) a. Boku ga kanoyo ga suki da.
    1 NOM her NOM like COP
    'I like her.'

b. Boku no kanoyo no suki na koto wa daremo miranai.
   GEN GEN fact TOP no one know not
   'No one knows that I like her.' (Miyagawa, to appear)

He suggests that if *boku* does not appear in the surface sentence, the sentence is ambiguous as the following example illustrates.

(71) Kanozyo no suki na koto wa, daremo miranai.

(i) 'No one knows that (I) like her.'

(ii) 'No one knows that she likes (me).' (Ibid.)

When the relative head *koto* in (71) is replaced by *toki* and appears in an adjunct position, this ambiguity disappears.
(72) Kanōzo no suki datta toki, boku wa nanimo dekinakatta.
GEN liked time TOP nothing could not  
(i) 'During the time that (I) liked her, I could not do anything.'

(ii) 'During the time that she liked (me), I could not do anything.' (Ibid.)

This example indicates that in adjunct relative clauses, NP movement to the restructured position is possible only if the NP originates within the VP. In (72i), kanōzo is derived from the object position, and, as we can see, this interpretation is possible. On the other hand, in (72ii), kanōzo is derived from the subject position, and the interpretation is impossible. Miyagawa’s observation further supports the claim that the surface subject of unaccusative predicates, originates in the VP.

3.6 Summary

In this chapter, I demonstrated how the argument/adjunct distinction determines the acceptability of no in a relative clause. A relative clause in an argument position always allows the appearance of no. I also demonstrated that the unaccusative/ unergative distinction determines the acceptability of no with adjunct clauses. No is allowed to occur in an adjunct relative clause if the clause contains an unaccusative verb, but it is not allowed to occur if the clause contains an unergative verb.
The above observation leads to the following. When the verb is unergative, the surface subject originates in the same position at D-structure. This NP is not allowed to move to the restructured position, hence na is not allowed to appear in the relative clause. On the other hand, when the verb is unaccusative, the surface subject originates in the object position at D-structure. This NP receives a theta-role but not Case at D-structure, due to the nature of unaccusative verbs according to Burzio's Generalization. Therefore, the NP is allowed to move to either the nominative Case position or the genitive Case position.

I also showed two pieces of evidence in order to demonstrate that the surface subject of an unaccusative verb is derived from the underlying object position. I first demonstrated that the go/no conversion is possible in an adjunct toki-phase when the toki-phase contains a passive verb since the underlying structures of both unaccusatives and passives are similar to each other. That is, the surface subject is derived from the underlying object position in both the passives and the unaccusatives. I also introduced evidence presented by Miyagawa (to appear). When a predicate that takes two NP's with the nominative Case marker na is contained in an adjunct toki-phase, NP movement to the restructured position is possible only if the NP originates in the VP, i.e., the NP is the underlying object.
1. In Japanese, empty *pro* arguments are possible.

   (i) *Moo* *pro* *pro* *kaemasita.*
   
   already bought
   
   'I/He/She/They bought it/them.'

   There is no agreement between *pro* and the verb. It can be said that
   the identity of *pro* is determined by context. On the other hand,
   languages such as Spanish show agreement between *pro* and the verb.

   (ii) *pro* *vivo* en *Tokyo*.
   
   live-1SG in
   
   'I live in Tokyo.'

   (iii) *pro* *viven* en *Tokyo*.
   
   live-3PL
   
   'They live in Tokyo.'

2. Theta-role of an NP never changes because of movement, according to the Theta-Criterion.

   (i) Theta-Criterion (Chomsky, 1961)

   Each argument bears one and only one theta-role, and each
   theta-role is assigned to one and only one argument.

3. Subject Raising also resembles the characteristics which hold
   for the unaccusatives and the passives. In the case of raising
   predicates such as *esse*, empty subject NP position at D-structure is
filled by an NP by means of movement. (ia) is the D-structure and
(1b) is the D-structure in the case of VP be likely.

(1) a. * he is likely John, to win.
   b. John is likely to win. (Lasnik 1988:16)

*Theta-roles (or "thematic relations") provide semantic
information whereas subcategorization provides information about the
syntactic form of an argument (Bells 1985:35). In the case of a
two-place predicate, the verb assigns a theta-role to its internal
argument and one to its external argument. By "direct" theta-role
assignment, we mean the theta-role assignment to an internal
argument, and by "indirect" theta-role assignment, we mean the
theta-role assignment to an external argument.

*The discussion in this section is indebted to Bresnahan's
"Unaccusatives -- An Overview" (1986).

*PRs has a feature [+p,-a] whereas PRs has [+p,-a], where [p] is
'pronoun' and [a] is "anaphora".
Note that English does not allow the following sentence:

(1) * I speak English.
     (Note: The reading of (1) is non-sapative.)

From (1), it is clear that English is not a pro-drop language; in
other words, prs does not exist although PRs does in English.
The unaccusative/unergative distinction not only indicates the grammatical nature of na in the toki-phrase in adjunct position, but also shows the "stativity." In Japanese, there is a construction as follows.

(i) Verb + ta (gerund) + iru.
(i) has two grammatical functions: (1) progressive (or action); (2) stative. When an unaccusative verb attaches to iru, it always has a stative reading whereas an unergative verb with iru has a progressive reading. (ii) is an example of the unaccusatives and (iii) the unergatives.

(ii) Dea ga aite-iru.
door NOM open-STATE
'The door is open.'

(iii) Kodomo ga naite-iru.
child NOM cry-PROG
'A child is crying.'

The following examples indicate the degree of grammaticality.

(i) Taroo na naita toki e omoidasita.
cried  ACC remembered
'I remembered when Taro cried.'

(ii) Taroo na naita toki ni, minna wa waratta.
everyone TOP laughed
'When Taro cried, everyone laughed.'

(iii) Taroo na naita toki, minna wa waratta.
The *toki*-phrase is an argument in (i), and an adjunct in (ii) and (iii). It seems that (ii) is slightly better than (iii), but not as good as (i). This suggests that the status of an argument subcategorized by a verb is stronger than that subcategorized by a complement.

"The Case Filter is as follows."

Case Filter (Chomsky 1981)

- NP, where NP has no Case.
CHAPTER IV

THE UNACCUSATIVE HYPOTHESIS AND OTHER "TIME"-NP'S

INTRODUCTION

In the previous chapter, we have observed the particle **no** in *toki*-phrases in terms of the argument/adjunct distinction and also the unaccusative/unergative distinction. There are several other "time" NP's which can be the head NP of relativization besides *toki*. Such NP's are **maa** 'before,' **ata** 'after,' **sida** 'while,' **tora** 'when,' **temp** 'at' that time,' **svukun** 'moment' and so on.

In this chapter, I will focus on **maa** and **ata** and apply the unaccusative analysis to these NP's. I will demonstrate that **maa** and **ata** show a significant difference from *toki* in terms of the acceptability of **no** due to a crucial syntactic difference.

4.1 TENSE IN RELATIVE CLAUSES

4.1.1 Tense in ordinary relative clauses

In English, there is agreement of tense between the verb of the matrix clause and that of the relative clause, as shown in (1).
(1) a. John took away the book that Mary was reading.
   b. John took away the book that Mary is reading.

(Kuno 1973:261)

On the other hand, Japanese does not require an agreement (cf. Kuno 1973 and Josephs 1972).

(2) a. John wa Mary ga kare o aisite iru koto o sitta.
    TOP NOM him ACC loving is fact acc know
    'John found out that Mary was (lit. is) in love with him.'

b. John wa Mary ga kare o aisite itta koto o sitta.
   was
   'John found out that Mary had been (lit. was) in love
   with him.'

(Kuno 1973:261-262)

Kuno claims that (2b) is ungrammatical if it is to mean "John found out that Mary was in love with him." Therefore, Kuno states that "in complements in Japanese, the present tense must be used if an action or state represented by the verb of the complement clause is meant to be simultaneous with that of the main clause" (Ibid:262).

The above statement holds for toki-phrases in the argument.

Observe the following.

(3) a. Taro wa [terebi o sita iru] toki ga itiban suki datta.
    TOP TV ACC watching is NOM most liked
    'Taro liked most when he was (lit. is) watching TV.'
  (Lit.) 'As for Taro, the time he was (lit. is) watching
    was the most likable.'
b. Taroo wa [terebi o mitte itta] toki ga itsu-an muki datta.

was

'Taro liked most when he had been (lit. was) watching TV.'

4.1.7 Tense in adjunct toki-phrases

As seen in 4.1.1, in Japanese, when a relative clause is in an argument position, the tense of the relative clause is interpreted according to the tense of the matrix clause.

When toki appears as the head of a relative clause in an adjunct position, virtually any tense is possible; in other words, the NP toki does not require a specific tense in its clause. Observe the following.

4. Taroo ga tegami o kaku toki, Jiro wa hon o yomu.  
NOM letter ACC write time TOP book ACC read  
'When Taro writes a letter, Jiro reads a book.'

5. Taroo ga tegami o kaita toki, Jiro wa kakanakatta.  
NOM letter ACC write PAST  
'When Taro wrote a letter, Jiro did not write it.'

6. Taroo ga tegami o kaitte iru toki, Jiro wa nite ita.  
NOM letter ACC write sleep PAST  
'When Taro was writing a letter, Jiro was sleeping.'

7. Taroo ga tegami o kaitte ita toki, Jiro ga kita.  
NOM letter ACC write sleep PAST  
'When Taro was writing a letter, Jiro came.'
In (4), *suki* allows non-past tense in its clause, past tense in (5), present progressive in (6), and past progressive in (7).

4.1.3 Tense in adjunct *sae*-phrases

We now turn to another "time" NP, namely *sae* "before." *sae* requires that the tense of the preceding clause be non-past. Observe the following.

(B)a. [Taro ga susi o taberu] sae, ...
   NOM sushi ACC eat
   'Before Taro eats/ate sushi, ...'
(B)b. [Taro ga susi o tabeta] sae, ...
   ate
   (Lit.) 'Before Taro ate sushi, ...'
(B)c. [Taro ga susi o tabete iru] sae, ...
   eating is
   (Lit.) 'Before Taro is eating sushi, ...'
(B)d. [Taro ga susi o tabete ita] sae, ...
   eating was
   (Lit.) 'Before Taro was eating sushi, ...'

If one wanted to construct a sentence meaning "Before Taro ate sushi, he had already drunk sake," the following would be the appropriate expression (cf. (Bb)).
(9) Taroo wa susi o tabery mae, sake o suden no nande ita.

TOP ACC eat ACC already drinking was

'Before Taro ate (lit. eats) sushi, he already had drunk
(lit. was drinking) sake.'

In (9), non-past tense appears in the relative clause but not past tense. Hence, we can say the following for mae.

(10) The time-HP mae 'before' requires that the tense of the preceding clause be [-PAST, -PROG], where [-PAST] stands for "non-past" and [-PROG] for "non-progressive."

(10) contrasts with English, in which either non-past or past tense can appear in a 'before'-clause, such as the following.

(11) a. Before I eat an apple, ...

b. Before I ate an apple, ...

4.1.4 Tense in adjunct ato-phrases

Let us now look at a similar 'time'-HP, namely ato 'after.' In Japanese, ato requires that the tense of the preceding clause be past.

(12) a. [Taro ga susi o tabeta] ato, ...

NON ACC eat

'After Taro ate/eats sushi, ...'

b. *[Taro ga susi o taberu] ato, ...

eat

(Lit.) 'After Taro eats sushi, ...'
c. 「(Taro ga susi o tabete iru) ato, ...」
  eating is

  (Lit.) 「After Taro is eating sushi, ...」

  d. 「(Taro ga susi o tabete ita) ato, ...」
  eating was

  (Lit.) 「After Taro was eating sushi, ...」

Only (11a) is a grammatical sentence. If one wanted to construct a sentence meaning "After Taro eats sushi, he will go to school," the following would be the appropriate expression:

(13) Taro wa susi o tabete ato, gakko ni iku.
  ACC ate school to go

  「After Taro eats sushi, he will go to school.'

Based on the above data, we can say the following for ato.

(14) The time-NP ato "after" requires that the tense of the preceding clause be [+PAST, -PROG].

While ato requires only past tense in Japanese, the English "after" does not have such a restriction.

(15) a. After I eat an apple, ...

b. After I ate an apple, ...

In summarizing the discussion on wa and ato, I note that they require a particular tense on the verb in a relative clause which precedes the head time-NP's. wa specifies the feature [-PAST, -PROG] whereas ato specifies the feature [+PAST, -PROG].
4.2 Appearance of no in adjunct mae/ato-phrases

In Chapter III, we saw that no is not allowed to appear in adjunct toki-phrases if the verb is unergative; no is possible if the verb is unaccusative. Below are typical examples of unergatives and unaccusatives with toki-phrases.

(16) [Taro no odotta toki, minna no soo sita.
    GEN danced everyone also did so
    'When Taro danced, everyone also did so.'

(17) [Doa no sita] toki, soko ni otoko ya ita.
    door GEN opened there LOC man NOM was
    'When the door opened, there was a man.'

The verb in (16) is unaccusative and that of (17) is unergative.

Now, let us turn to the appearance of no in adjunct mae/ato-phrases.

4.2.1 Mae/ato and unaccusative

Let us recall the generalization regarding ga/no conversion (cf. Chapter III (45)). Here I will restate a part of the generalization.

(18) No in adjunct

Unaccusative verbs --- no is acceptable.

The following examples show that (18) holds for both mae ('before')- and ato ('after')-phrases.

(19) [Sensee no kuru] mae, seeto-tati wa saawaide ita.
    GEN come students TOP making noise was
"Before the teacher came, the students had been making noise."

(20) [Sense no kita] ato, kyouitsu wa sizuta ni natta.

"After the teacher came, the classroom became quiet because"

(21) [Doa no aku] sae, soko ni hitori no toto ga ita.

door opens there LOC 1-ci BEN san NOM was

"Before the door opened, there was a man."

(22) [Doa no sita] ato, ototo ga heya ni haitte kita.

opened san NOM room to enter case

"After the door opened, a man entered the room."

(23) [Takara no mitakaru] sae, minna wa hanshinhangi datta.

treasure found everyone TOP skeptical was

"Before the treasure was found, everyone had been skeptical (about it)."

(24) [Takara no mitaketta] ato, minna wa pastii o sita.

TOP party ACC did

"After the treasure was found, everyone had a party."

(19), (21) and (23) are sas-phrase and the others are tos-phrase.

These examples confirm that the generalization restated in (18) holds for sas/tos-phrases with unaccusative verbs, since all of the above examples are grammatical.
4.2.2 /ata and unergatives

Recall the generalization of the appearance of /o/ in an adjunct position with an unergative verb (cf. Chapter 3 (43)).

(25) /o/ in adjunct

Unergative verbs --- /o/ is not acceptable.

Let us see whether the above generalization holds for /ata/-phrases.

(26) [Taro no odoru] eee, Hanako ga odotta.

GEN dance NOM danced

'Before Taro danced, Hanako danced.'

(27) [Taro no odotta] ato, Hanako no yatto odotta.

danced also finally

'After Taro danced, Hanako finally danced too.'

(28) [Taro no denwa-suru] eee, Hanako kara denwa ga atta.

telephone from phone NOM was

'Before Taro telephoned, there had been a phone call from Hanako.'

(29) [Taro no denwa-sita] ato, Hanako mo denwa-suru daroo.

telephoned also telephone will

'After Taro telephones, Hanako will also telephone.'

(30) [Taro no syokuzi-suru] eee, Hanako wa kaimono ni itta.

dine TOP shopping to went

'Before Taro dined, Hanako went shopping.'

(31) [Taro no syokuzi-sita] ato, Hanako ga atokazuke-sita.

ate NOM straightened up
"After Taro ate, Hanako cleared the table."

(26), (28) and (30) are **aee**-phrases and the others are **ato**-phrases. Contrary to the statement in (25), **no** is acceptable in all of these cases. Does this fact indicate that (25) cannot be correct for all "time"-NP's? Below, I will propose that the Subjacency Condition will account for the discrepancy between **toki**-phrases and **aee/ato**-phrases.

4.3 **NO IN MAE/ATO-PHRASES**

In Chapter III, I argued that with an adjunct **toki**-phrase, an NP can move to a restructured position to receive the genitive Case when the verb is unaccusative, but it cannot move when the verb is unergative. This is shown structurally below.

(32) a. **unaccusative**

```
NP   NP
| V   |
 \->
    |   |
```

(32a) shows that the NP, originally the object of the V at 
0-structure, is moved to the restructured position since this NP must 
receive Case. (The theta-role is assigned by the V at 
b-structure.) On the other hand, (32b) shows that the NP, 
originally the subject of the S, is not allowed to move to the 
restructured genitive Case position.
Returning to the *may*/*to*-phrase, the grammaticality of (18)-
(24) shows that (32a) still holds for a *may*/*to* phrase with an
unaccusative verb. On the other hand, a *may*/*to*-phrase with an
unergative verb allows NP movement to the restructured genitive case
position, unlike (32b). The structure is as follows.

(33) *May/to* with unergative verb

4.3.1 Subjacency

Observe the following sentences.

(34) I believe [-M the fact [-G that John ate an apple]].

(35) What do you believe [-M the fact [-G that John ate t,]]?

The ungrammaticality of (35) suggests that WH-movement is blocked
from the lower S'. Ross (1967) proposed a constraint which accounts
for the ungrammaticality of (35).

(36) Complex Noun Phrase Constraint (Ross 1967)

No rule can move any element out of a Complex Noun Phrase
clause.

(36) indicates that an element X in S' domain cannot move out of the
NP domain dominating the S'.

(37) S [NP .... N = [G .... X ....] ....]....
Now, observe a different kind of sentence.

(38) For you to give up linguistics would be a pity.

(39) What, would for you to give up to be a pity?

(Radford 1981:219)

The ungrammaticality of (39) suggests that nothing can be extracted from a sentential subject, namely that/for-in-constructions.

Ross (1967) proposed the following constraint to account for (39).

(40) Sentential Subject Constraint (Ross 1967)

No constituent can be moved out of a sentential subject i.e. out of a clause which is itself the subject of another clause.

Ross's constraints above attain descriptive adequacy. That is to say, each constraint is adequate for describing a certain instance of ungrammaticality. Chomsky goes further and attempts to formulate an explanatorily adequate constraint that is both general and natural (Radford 1981:226). Chomsky proposed the following constraint, which has much more explanatory power than those proposed by Ross.

(41) Subjacency Condition (Chomsky 1973)

No constituent can be moved out of more than one containing NP- or S-node (in any single rule application.)

The Subjacency Condition can replace both of Ross's constraints.

Based on the Subjacency Condition, let us again consider (35) and (39). First, I will restate (35) as (42).

(42) What, do you believe the fact that John ate t,?
The structure of (42) is as follows.

(43) I., COMP[.]. you believe[..] the facts[.]. [omn that] John ate [what]].

As indicated above, in order for what to move to the sentential initial position, there are two possible ways of movement. One way is the "one fell swoop" movement. According to (41), what crosses three bounding nodes, namely S2, NP and S1. Therefore, it violates Subjacency. The other way is that what is adjoined to the subordinate COMP on the S2 cycle first and then adjoined to the main clause COMP on the S1 cycle (COMP-to-COMP movement). However, it is also a violation of the Subjacency Condition since in the second step, namely the movement from the COMP of the S2 cycle to that of the S1 cycle, what crosses two bounding nodes, NP and S1. Thus, the Subjacency Condition accounts for the ungrammaticality of (42).

Next, let us look at (39), repeated as (44).

(44) What would for you to give up t, be a pity?

The structure of (44) is as follows.

(45) I., COMP[.]. you believe[..] the facts[.]. [omn that] would be a pity]].

One fell swoop WH-movement to COMP on the S1 cycle violates the Subjacency Condition since what moves across three bounding nodes, namely S2, NP and S1. COMP-to-COMP movement also violates the Subjacency Condition since there are still two bounding nodes crossed, NP and S1, in the movement from COMP on the S2 cycle to that
4.3.2 **Subjacency in Japanese**

Kuno (1973) states that in Japanese, the extraction out of a Complex NP does not cause ungrammaticality; hence the Subjacency Condition does not appear to be observed.

(46) *sinsei ga yogorete iru* (Lit. 'the teacher who the students that (he) was teaching was flunked' (Kuno, 1973:239)

(47) *gentleman ga yoohuku* (Lit. 'a gentleman who the suit that (he) is wearing is dirty'

(46) and (47) are grammatical sentences although both sentences contain apparent instances of extraction from a Complex NP.

The Subjacency Condition applies only when movement is involved. If the relative clauses in (46) and (47) are produced by movement, each sentence would have to be a violation of the Subjacency Condition because the relativized head crosses more than one bounding node. Saito (1985) claims that relativization in Japanese does not involve movement. According to his account, *ga* in (46) and (47) is
not a trace of movement (cf. also Nesuto 1987). His claim is supported by Perlmutter (1972), who noted that Japanese is a pro-drop language, and the gaps in the relative clause need not be produced by movement. In Japanese, there are sentences which lack overt arguments ("missing arguments") such as follows.

(48) ga soo dekaketa yoo-desu.
    already went out seems
    "it seems that he/she/they went out already."

(49) ga to John ga sotte kuru to oomisau.
    NOM bring COMP think
    "I think that John will bring it/them."

(Saito 1985:293)

In (48) and (49), overt argument phrases are missing. These empty argument positions are occupied by phonetically null pronouns (gna). In the same way, gna in the relative clauses (46) and (47) can also be gna (Saito 1985:293). In other words, gna need not be a trace, unlike the gaps in English relative clause. This accounts for why there is no Subjacency Condition in relativization in Japanese. It is simply because there is no movement.

Saito further claims that NP-topicalization does not involve movement. For example, the topicalization of (46) is as follows.

(50) sono sinsen ga [sine[ ga kite iru yochoku], ga
     that gentleman TOP wearing suit NOM
     yogorete iru].
     dirty be
'Speaking of that gentleman, the suit he is wearing is dirty.'

(Kuno 1973:249)

In (50), \( g \) is not a trace of movement but is actually a PP, as is \( g \) in (46).

Even though Japanese relativization and NP-topicalization do not involve movement, Saito claims that PP-topicalization does involve movement, hence is subject to the Subjacency Condition. Observe the following.

(51a) John ga \( \text{Peking ni itta koto ga aru} \) hito o mituketa rasii.

NOM Peking to went fact NOM have person ACC

found over

'It seems that John found a person who has been to Peking.'

(51b) \( \text{Peking ni} \) wa John ga \( \text{mita koto ga aru} \) hito o to TOP

mituketa rasii.

The ungrammaticality of (51b) indicates that, unlike relativization and NP-topicalization, PP-topicalization actually involves movement.

When the PP is moved, it crosses more than one bounding node. Therefore, PP movement is subject to the Subjacency Condition.

4.3.3 Subjacency and ga/no conversion

In my analysis, when \( ga \) changes to \( no \), there is movement involved, namely movement to the restructured position. In this
section, I will discuss how the Subjacency Condition is relevant to toki- and maa/etn-phrases with unergative verbs.

4.3.3.1 Subjacency and toki-phrases

Let us first review (32b).

\[(52) \rightarrow (32b)\]

As indicated in (52), an NP which has external theta-role at D-structure cannot move to the restructured position at S-structure to receive the genitive Case. I suggest that the unacceptability of NP movement to the restructured position is due to the Subjacency Condition. As we can see in (52), the NP must move across two bounding nodes, namely S and NP dominating the S, in order to get to the restructured position. Thus, this movement violates the Subjacency Condition.

Let us consider an adjunct toki-phrase with an unaccusative verb. Recall (32a).
As mentioned earlier, the NP moves directly to the restructured position without stopping at the nominative Case position (cf. 3.4.3.). In the case of unaccusative verbs, since the NP also crosses the two bounding nodes, NP and S, it is considered to be subject to the Subjacency Condition. However, unlike (52), (53) does not cause ungrammaticality. This implies that there must be a crucial difference between (52) and (53). By comparing (53) with (52), what we can notice is that, in (53), the trace is in the object position whereas in (52), the trace is in the subject position. Saito (1983) discusses "subject/object asymmetry". The trace in the object position is governed by the verb whereas the trace in the subject position is not governed by anything (cf. Saito 1983). It appears, then, that in (53), the movement is licensed because the trace in the object position is governed by the verb. This "government" apparently allows the NP movement to overcome the violation of the Subjacency Condition. On the other hand, in (52), the movement is not licensed because the trace in the subject position is not governed by anything. Thus, (52) is ungrammatical because it violates Subjacency."
4.3.3.2 Subjacency and $mee/ata$ phrases with unergative verb

In contrast to adjunct $toki$-phrases containing an unergative verb, all of the examples of $mee/ata$-phrases in (26)-(31) are grammatical even though the verb is unergative and it is in an adjunct position. This suggests that, unlike $toki$-phrases, movement in adjunct $mee/ata$-phrases with an unergative verb is not subject to the Subjacency Condition. How can we account for this discrepancy? I will propose a solution to this problem based on the characteristics of the "time"-NP's, namely $toki$ and $mee/ata$ as discussed earlier in this chapter (cf. 4.1.2, 4.1.3 and 4.1.4).

In 4.1.2, I argued that the relativized head NP $toki$ does not require a specific tense in its clause. On the other hand, with $mee$ and $ata$, this is not the case. $mee$ requires [-PAST,-PROG] in its clause and $ata$ requires [+PAST,-PROG] in its clause as discussed in 4.1.3 and 4.1.4 respectively. In this sense, both $mee$ and $ata$ govern the tense of the preceding clause, while $toki$ has no such governing ability. Based on this difference, I suggest the following.

(54) If the tense of a clause is governed by its relativized head, the $S$ is not considered to be a bounding node."

Let us see how (54) accounts for the grammaticality of $mee/ata$-phrases.

(55) [Taro $na$ odoru] $mee$, Hanako $ga$ oodotta.

GEN dance before NOM danced

"Before Taro danced, Hanako danced."
(56) [Taro no odotta] ato, Hanako no yatto odotta.
danced after also finally danced

"After Taro danced, Hanako finally danced too."

In (55), *mazu* requires [-PAST, -PROB] in its clause and in (56), *ata*
requires [+PAST, -PROB] in its clause. In other words, the tense of
the clause is governed by its relativized head in both cases, hence
the embedded S is not considered to be a bounding node.

(54) accounts for not only *toki-* and *mazu/ata*-phrases but also
for other "time"-NP's. Let us take a look at few examples.

(57) *a* [Taro no oni no one] aida, minna wa nite itsa.
dancing is while everyone TOP sleeping was

*While Taro was dancing, everyone was sleeping.*

b. [Taro no dema-site iru] aida, boku wa nite itsa
telephoning is I TOP sleeping

*While Taro was making a phone call, I was sleeping.*

In (57), *aida* requires the non-past *te-iri* clause. This suggests
that the tense of the clause is governed by *aida*, hence the S node is
not considered a bounding node. Accordingly, *no* is acceptable with
unergatives.*

(58) *koro* "when"

a. [Taro no undo-site koro, boku wa asonde itsa.

exercised I TOP playing was

*When Taro exercised, I was playing.*
b. *[Sensee on denwa-sita] koro, boku wa ofisu ni ita. telephoned \[TOP office in was\]

"When the teacher called me, I was in my office."

Unlike \textit{side}, \textit{koro} is similar to \textit{toki} is that it does not require a specific tense. The result is, as (54) predicts, that the S-node of the relativized clause is still counted as a bounding node, and the S and the NP constitute the Subjacency Condition. This is the reason why \textit{no} is not acceptable in (59); in other words, the NP movement to the restructured genitive Case position is not allowed due to the Subjacency Condition.

4.3.3.3 \textbf{Subjacency and ordinary relative clauses}

Thus far, we have seen the relationship between the adjunct "time"-NP's and the Subjacency Condition. As the final discussion of this chapter, let us consider the relationship between ordinary relative clauses and the Subjacency Condition. It should be noted that ordinary relative clauses and argument "time"-NP's are characteristically identical since both occur in an argument position. (59) is an example for an ordinary relative clause and \textit{toki}-phrase.

(59) [Taro ga/no naita] koto/toki o omoidasita. NON/GEN cried fact/time ACC remembered

"(I) remembered the fact/time that Taro cried."

(59) is structurally illustrated in (60).
(50) a. **Ba-relative clause**

```
 S
  |   VP
  NP  V
     RCO
     NP,  osoidasita
        t-ga naita  koto/toki-o
```

b. **No-relative clause**

```
 S
  |   VP
  NP  V
     RCO
     NP,  osoidasita
        Taroo,-no
        t, naita  koto/toki-o
```

Notice in (50a) that the NP, is theta-marked by the matrix verb since the NP, is in an argument position.

Look at the following.

(51) ***** X..... [y, ***** Y.....]

In (50), W dominates Y but not X. Chomsky (1986) states that if X governs Y, W is not a barrier, and if X does not govern Y, W is a barrier.

Returning to (50a), NP, is governed by the V, osoidasita, before adjunction. Since NP, is governed, the Case marker 0 can appear. This point is assured by the generalization of the argument/adjunct distinction in Japanese proposed by Miyagawa (to appear).
(62) If a 'particle' assigns a thematic role to the NP, the particle has a projection (postposition); if the NP— particle receives its thematic role from an external source, the particle has no projection but instead criticizes onto the NP (Case marking).

From (62), it is obvious that NP is governed by the verb, hence it is not a barrier. In regard to the Subjacency Condition, since NP is not a barrier (i.e. NP is not considered a bounding node), (60b) is not subject to the Subjacency Condition, hence it is grammatical.

4.4 Summary

In this chapter, we observed other types of "time"-NP's such as eam 'before,' ato 'after,' aida 'while,' and tiko 'when.' I demonstrated that koru is similar to tiko 'when' since these NP's do not require a specific tense of their clauses. On the other hand, MAR, ato and aida require a specific tense of their clauses.

I appealed to the Subjacency Condition in order to account for the unacceptability of no. First, I considered both types of toki-phrases, namely those with an unaccusative verb and those with an unergative verb. Both cases are subject to the Subjacency Condition but no is possible in an unaccusative toki-phrase and not possible in an unergative toki-phrase. I argued that the unaccusative toki-phrase allows the appearance of no since the trace of the restructured NP is in the object position, which is governed. On the other hand, the unergative toki-phrase does not allow the
appearance of &ep since the trace of the restructured NP is in the subject position, which is un governed.

We found that "unergative" &ep/ep-phrases also allow the appearance of &ep. I argued that this is due to the fact that &ep/ep govern the tense of the preceding clause, hence the S node is not considered a bounding node.

Finally, I presented the reason why the appearance of &ep is not subject to the Subjacency Condition for relative clauses in argument positions. The NP node dominating the S is not considered a barrier (a bounding node) since the NP is governed by the matrix verb.
"There is an important assumption that sentential subject is an NP. Radford claims that "all sentential subject complements have the status not only of S' (clause), but also of NP - so that such complements are, in traditional terms noun clauses..." (Radford 1981:233). This is illustrated as follows.

(i) \( \text{NP [ \_ \_ \_ \_ \_ ]} \)

Kuno (1973) claims that topic in Japanese is base-generated, hence is not subject to movement.

Terada (1987) argues that NP moves to the Spec position of an NP rather than to the restructured position. However, I will not go into her discussion here. See Terada (1987:636-637) for the details.

The analysis presented in 4.3.2.1 is related to the Empty Category Principle (ECP) (Chomsky 1981). According to the ECP, a trace must be properly governed.

As briefly mentioned in Chapter I, Saito proposes a hypothesis of a subject/object asymmetry in Japanese (cf Saito 1983). That is to say, an object NP is properly governed by its verb but a subject NP is not, since in Japanese, there is no element which has a governing ability such as INFL.
However, my analysis in regard to the ECP on the basis of the subject/object asymmetry in Japanese is merely stipulative. I think this analysis, namely the ECP analysis, will require much further research.

"I am indebted to Shigeru Miyagawa (personal communication) for this point.

"V+te iru usually refers to [+PROG], but can also refer to [+STATIVE] such as the following.

(i) [Doe no site iru] aida, ..... open STATE

'While the door is open, .....'

Even though the verb is [+STATIVE], but not [+PROG], no is still acceptable with an unergative verb in adjunct.

"Although both toki and koro refer to "when" in English, koro has ambiguous time reference while toki has rather specific time reference.

(i) [Taro ga kita] toki, ..... NOM case

'When Taro came, .....'

(ii) [Taro ga kita] koro, ..... '(About) when Taro came, .....'
CONCLUDING REMARKS

In this thesis, I examined the genitive subject in Japanese. Called the GA/no conversion, the genitive subject is observed in relative clauses, in which the genitive Case marker no optionally replaces the nominative Case marker GA.

I discussed the fact that the genitive subject is not allowed to replace the nominative subject when a relative clause appears in an adjunct position whose function is adverbial, namely the toki-phrase. The purpose of the thesis was to propose an analysis which can account for the GA/no conversion not only in the toki-phrases but also for all types of relative clauses. In other words, my analysis demonstrates why the genitive subject is possible in some cases and not possible in other cases.

In Chapter I, we looked at the GA/no conversion in general and two types of analysis, the "nominative analysis" and the "genitive analysis." I reviewed Harada (1971) for the "nominative analysis" and Pedel (1972), Matsunaga (1983), Saito (1983) and Terada (1987) for the "genitive analysis." In the "genitive analysis," the genitive Case marker no maintains its genitive function while in the
"nominative analysis,"  have a dual function as both the genitive Case and the nominative Case. I adopted the "genitive analysis," following roughly Bedell's Restructuring analysis.

In Chapter II, I suggested that the notions "argument" and "adjunct" play a crucial role in distinguishing the acceptable from unacceptable genitive subjects in relative clauses. I noted that all relative clauses containing a genitive subject allow the genitive subject. The "time"-NP (toki-phrase) can appear in both an argument and adjunct position. In the toki-phrases appearing in an adjunct position, no is acceptable in a certain environment but unacceptable in other environment.

The purpose of Chapter III was to present a notion which accounts for the problem observed in Chapter II. I introduced the "Unaccusative Hypothesis." When the toki-phrase appears in an adjunct position, no is acceptable if the verb of the relative clause is an unaccusative verb and unacceptable if the verb is an unergative verb.

In Chapter IV, I examined other "time"-NP's in relative clauses. Unlike the toki-phrase, other "time" NP's show that no is acceptable even in an adjunct position with an unergative verb. I proposed that the Subjacency Condition accounts for the discrepancy between the toki-phrase and other "time"-NP's such as ato  'before' and ato  'after.' Since ato-type NP's require a specific tense in its clause, the S-node governed by the ato is not counted as a bounding node, hence it is not subject to the Subjacency Condition.
On the other hand, the 3-node of the toki-phrase in an adjunct position constitutes a bounding node since toki does not require a specific tense in its clause. Furthermore, ordinary relative clauses are not subject to the Subjacency Condition either since they appear in a position where the matrix verb theta-marks the relative clause. Therefore, the highest NP-node of the relative clause is governed by the verb before restructuring applies, hence the NP is not counted as a bounding node.

Summarizing this thesis, I first demonstrated that the universal notions, "argument" and "adjunct", play a key role for the genitive subject in a relative clause. Second, I showed that the Unaccusative Hypothesis, which has been studied in various languages, is also crucial for the occurrence of the genitive subject in an adjunct relative clause. Finally, I demonstrated that the Subjacency Condition, which is a part of Universal Grammar, is able to account for the acceptability and the unacceptability of the genitive subject for all types of relative clauses. In other words, the phenomenon of the genitive subject in Japanese is not idiosyncratic at all, but is accounted for by universal principles.
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