

JAPANESE SYNTACTIC STRUCTURES AND
THEIR CONSTRUCTIONAL MEANINGS

by

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Submitted to the Department of Linguistics and Philosophy in
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Abstract

This dissertation explores the sentential structures of Japanese, of both matrix and embedded clauses, with special attention given to the configurational relation between a predicate head X^0 and its arguments. It is argued that two quite distinct sentential forms, IP and CP, are possible in Japanese. A leading idea pursued here is that crucial factors determining the configurational relations are (i) whether a head goes through syntactic head movement (Travis 1984, Baker 1988) and (ii) whether a head is syntactically filled or empty (Emonds 1985). Among the sentence types researched are included not only sentences with single verbs, but also predicate attribute sentences, complex verb sentences containing causative, desiderative and potential suffixes, and a representative range of embedded sentences.

In relation to head movement, I argue for a strict structural case marking analysis in the spirit of Takezawa (1987) and Morikawa (1989) and show that the configurational relations between case-assigning heads and NPs are directly mirrored by morphological case. Both SPEC-HEAD agreement and government are motivated as case assigning mechanisms, the former being reserved, however, for only subject-predicate relations. A central discovery here is that the functional categories in Japanese, C, I, and D, each uniformly assign one and only one so-called nominative case ga; this in turn supports the existence of functional categories as a class.

Another effect of head movement, via case marking, relates to possible positions for subjects and their associated configurational meanings. That is, the two well-known interpretations of NP-ga, neutral and exhaustive, are argued to result from them occupying different positions in SPEC(I) and SPEC(C). The distributional distinctions between SPEC(C) and SPEC(I) are in turn determined by positions of the corresponding heads, which are governed by various

syntactic constraints. In the course of investigation, quite interesting parallels, until now obscured, are brought out between noun phrases and sentences.

This research can be taken as a concrete effort to investigate various structural configurations and their configurational meanings, on the basis of the idea that meaning is in essential parts simply form. Among the contrasts investigated are activity vs. stative verbs, exhaustive vs. neutral interpretations of NP-ga, and the differing syntactic and interpretive behaviors of the two clausal types CP and IP. In a final chapter, I motivate a correlation between these two clausal structures and Kant's two types of judgments, analytic and synthetic.

Thesis Supervisor: Noam Chomsky
Title: Institute Professor

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Chapter 1

Introduction: Subjects and Predicates in Japanese

1.1. The Topic Marker wa and Nominative ga

As is widely known, Japanese has a topic marker wa and a nominative marker ga, and each has two distinct interpretations. First, in Kuno's (1973, Chapter 2) terminology, thematic and contrastive wa must be distinguished.

(1) Taro-wa gakusei desu.

Taro-top student be

'Taro is a student.'

(1) is an example of the thematic wa and the sentence is interpreted to be about Taro. In Kubo (1988), I try to establish that thematic wa is an indication of the universal feature [+Definite].

The other use of wa does not need to be definite:

(2) Rajio-wa kikimasu-ga, terebi-wa mimasen.

Radio-top listen-but TV-top watch not

'I listen to radio, but I don't watch TV.'

(3) Taro-wa nichiyoo-ni-wa tsuri-ni dekake-ru.

Taro-top Sunday-at-top fishing-to go-pres

'Taro goes for fishing on Sundays.'

(2) and (3) examples of the contrastive wa; radio and TV are in contrast, and Sundays are in contrast with other days.

Kuno observes that, although the contrastive wa can appear more than once in a single sentence, the thematic wa is restricted to at most one occurrence, and must be the leftmost one in a sentence. In the sentence (3), Taro is a theme, while the other phrase which is marked by wa, a PP, is contrastive. Hoji (1985) suggests that PP-wa is typically contrastive. Since the distribution of the contrastive wa is not at all restricted, I will consider the contrastive wa as a secondary reading, as in Kubo (1988, 19); namely, when the principal thematic interpretation of wa isn't available, for example in a non-canonical position or with extra stress, the contrastive reading arises. In this work, I thus concentrate on only thematic wa.

Moving to the nominative marker ga, it is well known since observed by Kuroda (1965; 50) that the nominative ga in Japanese has two different interpretations. One is often called the neutral (description) ga and the other the exhaustive (listing) ga, again following Kuno's terminology (1973, Chapter 2).

- (4) a. Are, Taro-ga terebi-o mi-te i-ru-yo. NEUTRAL
 Look! Taro-nom TV-acc watch be-pres
 'Look, Taro is watching the TV.'

b. John-ga byooki da.

EXHAUSTIVE

John-nom sick be

'John is a sick.'

(Kuroda, 1965, 48, (58))

The sentence (4a) is just a description of a temporary state, with no special emphasis on the subject Taro, while the subject in the sentence (4b) gets an interpretation such as 'John and only John' or 'It is John who is' Kuroda characterizes a sentence with a neutral ga subject as one in which "the subject can be considered neither the premise of some judgment nor something about which a predication is made. Rather, the subject of the sentence is nothing more than an item which stands in a particular relation to the verb of the sentence, just as the object." (Kuroda, 1965, 37). On the other hand, with respect to a sentence with exhaustive ga, Kuroda (1965, 49) explains it by observing that "sentence [(4b)] characterizes John by the property of sickness, rather than just attributing that property to him."

Kuroda (1965, 50) thus distinguishes three types of sentences: (i) a sentence with thematic wa, (ii) a sentence with neutral ga, (iii) a sentence with a exhaustive ga.¹ At the same time, he claims that syntactically only predication, which is marked by a topic wa-phrase, is distinguished from description and characterization, which both are marked by a

¹ Each type is termed in Kuroda (1965) predication, (nonpredicational) description and characterization, respectively.

ga-phrase subject. In particular, he writes "It is claimed here that actually the distinction between a characterization and a description in Japanese is not syntactic but semantic. That is, a sentence with a ga-phrase as the subject is, in general [his emphasis], semantically ambiguous." (52)

In a sequence of works, Kuroda (1969, 1972, 1976, 1990) develops an idea that two kinds of judgments, which had been claimed to exist as a semantic-functional distinction by Anton Marty, are overtly manifested in Japanese as a difference between wa sentences and sentences without wa. An explicit contrast can be drawn between ga sentences and wa sentences such as the following.

(5) Inu-ga hashitte iru.

(6) Inu-wa hashitte iru.

dog-nom/top running be

'A/The dog is running.'

(Kuroda 1990, 80, (1)-(2))

(5), which has a ga marked subject, is an example of his "thetic" judgment, and (6) with a wa phrase is an example of his "categorical" judgment. Kuroda (1990, 87), when he examines cognitive acts involved in both judgments, claims that three cognitive acts are involved in a categorical judgment. "The first is a thetic judgement, which is a direct perceptual intake of an actual situation The second is the cognitive act of apprehending the subject of

the categorical judgment as a substance. And the last is the affirmation or denial of an attribute of the subject."

When he talks about ga sentences and wa sentences, however, the distinction between the neutral and exhaustive interpretations of ga is not explicit. For Kuroda, it probably doesn't matter, because he claims, as we saw just above, that the ga phrase is in general ambiguous, and that this interpretation difference is purely semantic.

On this point, I take issue with Kuroda's view. I claim that there is a syntactic structural difference between sentences with thematic wa and exhaustive ga (i.e., predications and characterizations) on the one hand and sentences with neutral ga (i.e., nonpredicational descriptions) on the other. I will show that the exhaustive listing ga-phrase occupies the same position as the thematic wa-phrase, which I will argue further is in bar notation terms the SPEC(C). On the other hand, I also claim that the neutral ga-phrase appears internal to IP, in SPEC(I), a canonical subject position.²

Throughout this research, I will adopt an X'-theory of full-fledged functional categories mainly developed by Chomsky (1986b), Fukui and Speas (1986), and Abney (1987). Although the status of functional categories in Japanese (Fukui 1986, Tateishi 1988, 1989, Ueda 1990, among others) is

² In a somewhat similar line of research, there is a work by Diesing (1990), which posits two positions for a subject, SPEC(I) and SPEC(V), each associated with different interpretations.

controversial, I will assume the existence of C, I and D, along the lines of Tateishi and Ueda. I hope to make the specific syntactic and semantic roles of each functional category clearer in this dissertation, thereby explaining aspects of Japanese previously not understood, and at the same time giving straightforward support to the universality of X'-theory.

With respect to nominative ga, the contrast between neutral ga and exhaustive ga makes a good testing ground for elucidating interesting interactions between the interpretations of subject NP-ga and predicates, or in other words, interactions between SPECs and corresponding predicative heads. Put another way, I will claim that the structural conditions on the distribution on neutral ga and exhaustive ga are best captured in the context of the structure of the whole sentence. Given that a core projection of a sentence is an extended projection of VP (Emonds 1985, chapter 3; Grimshaw 1991), Japanese sentences seems to divide into two general classes: one where a lexical V is the core of argument structure (chapter 3) and the other where lexical V is not (chapter 5). The latter case, it turns out, includes predicate attribute sentences, where, I will claim, I is occupied by a copula so as to confer sentential status, although the argument structure is due to an N, A, or P internal to VP.

For each sentence type, we will see that the positioning of V and I, which can both result from head movement, is the

most crucial aspect that determines syntactic phenomena: among those to be discussed here are variations on structural case marking, subject interpretation, the possibility of VP-fronting, suru-support with other types of emphasis, choice of copula, and sentential sizes and their overall interpretation.

1.2. A Structural Case Marking System: Preview

I will argue for strict structural case marking in Japanese in the spirit of Takezawa (1987) and Morikawa (1989), though my system for nominative and genitive case differs from theirs. One central notion I adhere to is the following:

- (7) (a) Each case assigner, C, I, D, V, and P, can assign case only once.
- (b) Each NP receives exactly one case.

It is of course not standard to claim that C can assign case. The justification for this is given in chapter 4. (7b) is just part of the generally accepted Case Filter.

A leading concept in this dissertation is that morphological cases directly reflect structural relations between an argument NP, either as a complement or specifier, and a case-assigning head, the structural relations often being affected by the (non)existence of head movement. The crucial relation between a case-assigning head and an NP

argument is established either by (i) a SPEC-HEAD agreement or (ii) a government (Koopman and Sportiche 1991).

(i) The SPEC-HEAD relation is a necessary and sufficient condition for an NP to be a subject of the corresponding head. Under this relation, there are two ways that the subject NP is licensed, depending on whether the head is a functional category or not. I argue in chapters 3, 4, and 7 that when a corresponding head is any functional category, I, C, or D, the structural case is realized as ga, the case which is often called nominative case in Japanese. When a corresponding head is not a functional category, any subject NP which remains in SPEC position must be projected in a PP, which is realized with ni, often called dative case (Takezawa 1987), when the head is V and with no, often called genitive case, when the head is N. My proposal can thus be summarized as follows:

- (8) The NP in SPEC(X) is realized with
- (i) ga, when X is a functional category, C, I, or D.
 - (ii) ni, when X is V, and
 - (iii) no, when X is N.

The last point, which involves a new analysis of no, is elaborated in Chapter 7.

In the course of this dissertation, some quite nice parallelisms between sentences and noun phrases are obtained in my analysis: (a) I and D both assign nominative case ga to

their corresponding SPEC. (b) In contrast, the NP specifiers of V and N, being subjects, cannot get case directly through government, but are not able to get a case from SPEC-HEAD agreement either, because the head is a lexical category. These subject NPs thus project in PPs as a last resort, either as ni or no, respectively. (c) Moreover, ni is possible not only in SPEC(V), but also in an unmarked PP complement of V (i.e., indirect objects), and in an analogous way no is possible not only in SPEC(N), but also in an unmarked complement of N. (d) Finally, no-phrases never occur inside VPs, and less well-known is the fact that ni-phrases never occur inside NPs (Kajihara 1991, e.g., Taro-e/*ni-no tegami 'a letter to Taro')

(ii) Objects are case marked by governments. When the case assigner is V, then the structural case is realized as o, so-called accusative case, while when it is I, then case is realized as ga, the so-called nominative case, because it is a case assigned by a functional category. The fact that both stative verbs and adjectives take ga marked objects will be uniformly accounted for: both are assigned by I under government (chapters 3 and 5). Since each case assigner, C, I, D, V, and P, can assign case only once and each NP receives exactly one case as in (7), this government case assignment by I and V can affect in intricate ways the case marking and possible positions of subjects.

1.3. Subject Interpretation and Sentential Structure

I argue in this work that the neutral and exhaustive interpretations of NP-ga discussed in section 1.1. can be best captured structurally: when NP-ga is in SPEC(C), then its constructional meaning in that specific position is the one called exhaustive interpretation. Otherwise, NP-ga, either a subject in SPEC(I) or SPEC(D), or an object case-marked by a predicate in I, gets interpreted as neutral. Further, whether an NP-ga subject can be in SPEC(C) strictly depends on the possibility of Infl movement to C, a head movement.

As a basis for these conclusions, I will try to establish the conditions under which the sentence-final verb in Japanese occurs in V, I, or C in S-structure. In particular, either V doesn't raise for activity verbs, or V raises to I in the case of stative verbs (chapter 3). However, there is no raising of V to I and then further to C if the only lexical element under I is a verb (chapter 6). A verb in C always results from being inserted to carry raised I features (chapter 4) or from lexical items base-generated under I such as the potential morpheme being raised (chapter 6).³

Thus, a sentence, an extended projection of V, always exemplifies an IP structure when V is lexically filled. On

³ A related but different view is pursued by Whitman (1991), where he argues that Japanese and Korean involve a process of V to C movement, as in Germanic languages.

the other hand, when a V is not lexically filled as in predicate attribute sentences, a copula base-generated under I can optionally raise to C (chapter 5). When the copula stays in I, the sentence form is IP and the subject is in SPEC(I), while when it raises to C, the sentence exemplifies a CP structure and a subject NP-ga is in SPEC(C). Throughout the discussion of these issues, I will adopt Baker's (1988) Government Transparency Collorary and Travis's (1984) Head Movement Constraint.

In contrast to NP-ga, an NP-wa can appear in SPEC(C), with or without I to C raising. This distinction between wa and ga, in my analysis, comes from different ways of legitimizing arguments: NP-ga is legitimized strictly by structural case marking assigned by a head X^0 through government or agreement, while NP-wa is rather an indication of structural predication (Williams 1980), which is defined in terms of a structural relation between NP-wa and rest of the sentence (chapter 4). It is this distinction which makes me concentrate more on NP-ga sentences, rather than NP-wa sentences, as a means to investigate the relations between predicates and subjects.

My proposals for syntactic analyses distinguishing CPs and IPs as clausal categories are further confirmed by case-marking and other syntactic patterns in the context of embedded clauses (chapter 7). It will be shown in detail that the distinction between CP and IP explains various (in)compatibilities of syntactic phenomena previously

unnoticed.

I am thus proposing that both IP and CP are possible sentential structures, more or less realizing what Kuroda callsthetic and categorical judgments, respectively, although I will suggest an alternative view of his distinction in chapter 8. Following an idea that the structure itself bears a (core) part of meaning, I will specifically call the meaning which comes from the structure (R. Jakobson's) "constructional meaning". I suggest that the constructional meaning of a CP sentence is "analytic", where the relation between a subject and a predicate is viewed such that a predicate is included, explicitly or implicitly, in a subject. On the other hand, the constructional meaning of an IP is "synthetic", where a predicate is connected to a subject, but where a predicate cannot be characterized as "part of" the subject.

Chapter 2

The Interpretations and Structures for Nominative Case

2.1. (In)compatibilities among Neutral ga, Exhaustive ga, and Thematic wa

As pointed out in Chapter 1, at most one thematic wa can appear in a single sentence and when there is more than one wa in a single sentence, thematic wa must always be the leftmost NP. A significant parallel can be drawn for the distribution of the two kinds of interpretation for nominative ga. The exhaustive ga can occur at most once in a single clause and in case of more than one ga, the leftmost one can get the exhaustive reading while the others must be interpreted as neutral.¹

To see this in more detail, we need to start from constructions in which two nominative marked NPs are allowed. One is when some adjectives and stative verbs take an object in addition to the subject; namely, transitive adjectives and stative verbs can have an object and a subject with two different theta roles.² Some examples are as follows:

¹ A. Marantz points out that the exhaustive-ga reading of an NP seems to be closely connected to the interpretation traditionally referred to as focus or new information. This line of research has been undertaken in Kuno (1973b, chap. 25); I take no position here on whether this reading can be completely reduced to the notion of focus.

² Sentences with two nominatives in Indo-European languages with overt case-marking exemplify predication,

- (1) a. Taro-ga eigo-ga waka-ru.
 Taro-nom English-nom understand-pres
 'Taro understands English.'
- b. Taro-ga kenka-ga yowa-i.
 Taro-nom fight-nom weak
 'Taro is weak at fighting.'
- c. Taro-ga suiei-ga kirai-da.
 Taro-nom swimming-nom dislike
 'Taro dislikes swimming.'

In sentences like (1), the first nominative marked NP gets an exhaustive listing reading (Kuroda 1969, Kuno 1973, and Kiss 1981), while the second one, a nominative marked object, must always have a neutral reading; this latter point is also made by Kuno (1973, 55).³

A second double ga construction is often characterized as one where the two nominative NPs are in a possessive relation (Tateishi 1991, Chap.2). This construction is possible only with adjectives. Some examples follow:

- (2) a. Hanako-ga te-ga naga-i.

rather than clauses in which each nominative NP gets a different theta role, as in Japanese. A predicate attribute NP in Japanese does not receive overt nominative case.

³ Although the exhaustive reading is forced in a root context, there are regular exceptions to this remark. As we will see in chapter 7, in an embedded clause, the neutral reading is the only possible interpretation.

Hanako-nom arm-nom long

'It is Hanako whose arm is long.'

b. Hokkaido-ga shizen-ga kirei-da.

Hokkaido-nom nature-nom pretty-be

'It is Hokkaido where nature is pretty.'

Also characteristic of this construction is the fact that no definite nouns can appear as the second nominative.⁴

(3) a.*Hokkaido-ga sono ki-ga kirei-da.

Hokkaido-nom that tree-nom pretty

'It is Hokkaido where that tree is pretty.'

b.*Hanako-ga kanajyo-no te-ga naga-i.

Hanako her arm-nom long

'It is Hanako whose arm is long.'

As Tateishi (1988) points out, there seems to be a dialect difference in how many of these nominative marked "possessive" phrases can iterate in a single sentence. In one dialect, which might be identified as Kansai dialect, maximally two nominative phrases in either the first type or the second type described above are allowed, while in another dialect, which can be characterized as Tokyo dialect, an indefinite number of nominative phrases, as long as they have possessive relations (i.e., the second type) are allowed. In

⁴ The existential construction in Japanese as well as English shows a similar definiteness restriction.

my dialect, at most two nominative phrases can appear in a single clause; thus, the well-known example of Kuno (1973, 34, (82)), as well as relevant examples from Tateishi (1991), are unacceptable in my dialect.

(4) a. *Bunmeikoku-ga dansei-da heikinzyumyoo-ga mizika-i.
civilized countries-nom male-nom average life span-nom short

'The average life-span of males of civilized countries is short.' (Grammatical in Kuno, 1973, 34, (82))

b. *Taro-ga chichioya-ga ootoo-ga nyuin-shi-ta.

Taro-nom father-nom younger brother-nom hospitalized-do-past

'It was Taro whose father's younger brother was hospitalized.' (Grammatical in Tateishi, 1991, 27, (1a))

In either dialect, however, it is true that both the thematic wa and the exhaustive ga have the same restriction that they appear at most once in a single sentence and must occupy the sentence-initial position, except possibly for certain adverbs. Specifically, even in the dialects which allow sentences such as (4), the second and successive NP-gas are all neutral in interpretation.

Let us now examine what kind of combinations are possible among the thematic wa-phrase and the exhaustive and neutral ga-phrases in a single clause. For example, can the thematic wa-phrase and the exhaustive ga-phrase occur at the same time in a single clause? When a wa-phrase gets the thematic interpretation, being in the initial position of a

sentence, a ga-phrase following it always receives a neutral reading.

- (5) a. Taro-wa Tokyo-ni musuko-ga i-ru.
 Taro-top Tokyo-ni son-nom be
 'Speaking of Taro, his son is in Tokyo.'
- b. Tokyo-wa koohii-ga taka-i.
 Tokyo-top coffee-nom expensive
 'In Tokyo, coffee is expensive.'
- c. Taro-wa seikaku-ga i-i.
 Taro-top nature-nom good
 'Taro has a good nature.'

All these predicates, which are uniformly stative, ordinarily allow the exhaustive listing reading for ga to appear; however, the nominative marked NPs in (5) cannot be interpreted as exhaustive listings; rather they have neutral readings.

Even when the first XP-wa has a contrastive reading, the nominative marked NP following it cannot be exhaustive.

(6) XP = Argument PP

- a. Hanako-ni-wa John-ga yasashi-i.
 Hanako-to-top John-nom kind-pres
 'To Hanako, John is kind.'

XP = Adjunct PP

- b. Tokyo-ni-wa John-ga i-ru.

Tokyo-at-top John-nom be-past

'At Tokyo, John lives.'

John-ga in both sentences in (6) is interpreted only as neutral.

On the other hand, when a ga-phrase gets an exhaustive reading, which is only available in sentence-initial position, then the following wa-phrase cannot be thematic, but must be contrastive.

(7) a. Taro-ga sentaku-wa deki-ru.

Taro-nom laundry-top can

'It is Taro who can do at least laundry.'

b. Taro-ga musuko-wa seijika da.

Taro-nom son-top politician be

'It is Taro whose son (opposed to his daughter) is a politician.'

It can thus be concluded that the exhaustive listing ga and the topic wa, either thematic or contrastive in its interpretation, are incompatible. Exhaustive listing ga and thematic wa thus seem to be competing for a single initial position, as indicated in chapter 1.

What if the nominative subject has a neutral reading? Even when a nominative subject is interpreted as a neutral ga, a wa-phrase which appears after it cannot be thematic.

- (8) a. Aa! Ano otoko-ga keshigomu-o tot-ta.
 look! that man-nom eraser-acc stole
 'Look! That man stole an eraser!'
- b. Aa! Ano otoko-ga keshigomu-wa tot-ta.
 look! that man-nom eraser-top stole
 'Look! That man stole at least an eraser!.'

The subject ano otoko-ga 'that man' has a neutral interpretation in a context such as when somebody watches a man stealing an eraser and shouts an exclamation to report his stealing. When the accusative marker o is replaced by the topic marker wa, as in (b), this object is necessarily contrasted with something else.

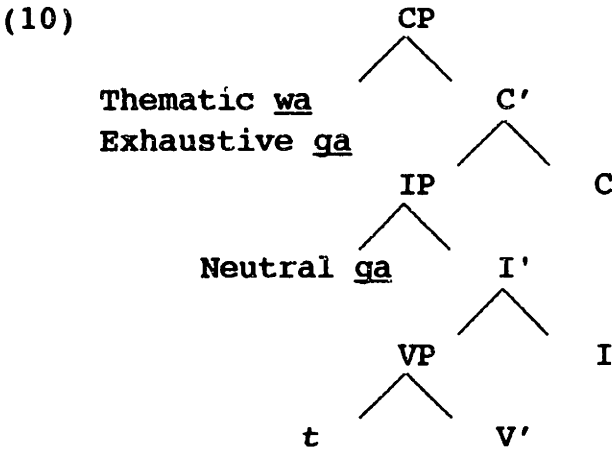
The patterns we have so far seen can be summarized as follows:

- (9) Linear order from the left
- | | |
|--------------|-------------|
| <u>wa</u> | <u>ga</u> |
| *thematic | exhaustive |
| thematic | neutral |
| *contrastive | exhaustive |
| contrastive | neutral |
| <u>ga</u> | <u>wa</u> |
| *exhaustive | thematic |
| exhaustive | contrastive |
| *neutral | thematic |
| neutral | contrastive |

<u>ga</u>	<u>ga</u>
*exhaustive	exhaustive
exhaustive	neutral
*neutral	exhaustive
neutral	neutral ⁵
<u>wa</u>	<u>wa</u>
*thematic	thematic
thematic	contrastive
*contrastive	thematic
contrastive	contrastive (PP-NP pattern)

The thematic wa and the exhaustive ga are incompatible and both must appear sentence-initially, while the neutral ga can follow both the thematic wa and the exhaustive ga. This distribution in (9) can be easily captured by assigning the following structure for the three kinds of noun phrases in question. The contrastive wa can appear in any position, including internal to IP.

⁵ See footnote 2.



Reinterpreting the conclusion of Saito (1985) and Hoji (1985) that the topic phrase is external to S in terms of Ueda's (1990) full-fledged functional category system, an NP topic phrase with wa should be analyzed to be in SPEC(C). Since NP with exhaustive ga is incompatible with thematic wa, I also claim that an exhaustive ga phrase is in SPEC(C). SPEC(I) has been typically thought to be a canonical position of a subject and in accord with this I propose that the subject with neutral ga is in SPEC(I).

In terms of the recent development of the VP-internal subject hypothesis (Zagona 1982, Kitagawa 1986, Kuroda 1988, Contreras 1987, Sportiche 1988, and Ueda 1990), a subject should be base-generated under the SPEC(V). If it raises to SPEC(I), it is ga-marked and gets a neutral interpretation, while if it raises to SPEC(C), the NP may be realized as an exhaustive NP-ga.

Certain Japanese root clauses with filled SPEC(C) are projections of C, parallel to an analysis of Korean by Choe

(1988). At the same time, I claim that IP can also be a matrix sentential phrase, since neither the exhaustive ga phrase nor the thematic wa phrase is obligatory for every sentence. One of the goals of this work is to determine what kind of distribution the two sentential forms IP and CP have and what kinds of interpretations are associated with each form as their constructional meaning.

I will start the investigation of the distribution of CP and IP and their interpretations from the already existing research by Kuno (1973). Kuno, on the basis of Kuroda (1965), notes that there is a correlation between an interpretation of a nominative marked NP, whether it gets an exhaustive or neutral reading, and kinds of predicates. Since Kuno, as well as Kuroda, assumes that the exhaustive vs. neutral difference is semantic, this relation between the interpretation of a subject and a choice of corresponding predicate has never been looked at as a syntactic correlation (cf. chapter 1). For me, as is obvious from the fact that exhaustive ga and neutral ga phrases have been assigned to two different positions as in (10), the distribution of the two interpretations of nominative marked NPs and the choice of their predicates are syntactic.

In the following sections, I will critically review Kuno's generalization concerning the interpretation of NP-ga, and discuss its problems.

2.2. Concerning the Distribution of Exhaustive and Neutral ga

Kuno (1973) examines the distribution of neutral and exhaustive ga-phrases in a rich range of contexts. He first makes a generalization about the interpretation of ga by using the distinction between stative predicates, which include all adjectives, nouns and stative verbs, and nonstative predicates, which include the rest of the verbs besides stative verbs.

"Roughly speaking, if the predicate is [-stative], as in [(11)], ga receives ambiguous interpretations between neutral description and exhaustive listing, whereas, if the predicate is [+stative], as in [(12)], only the exhaustive listing interpretation is possible." (Kuno 1973, 148)

(11) John-ga kita.

John-nom came

'John came.'

(12) John-ga gakusei desu.

'John is a student.'

(Kuno 1973, 148, (25)-(26))

For this generalization, Kuno himself immediately notes some complications. For example, in (13), a neutral reading is available with a stative predicate.

(13) John-ga hon-o yonde i-ru.

John-nom book-acc reading be-pres

'John is reading a book.' (Kuno 1973, 148, (28))

∴

Although the progressive form expressed by iru is considered stative, the sentence (13) actually has a neutral reading as a primary reading, violating the generalization exemplified in (12). Kuno (1973, 49) proposes a slightly different generalization, by which the example (13) is covered:

(14) Kuno's Generalization

"With regard to the descriptive and exhaustive listing ga, only the subject of action verbs, existential verbs, and adjectives/nominal adjectives that represent changing states can be followed by the descriptive [neutral, M.K.] ga, while there are no such restrictions in the case of exhaustive listing ga."

Notice here that he is talking about the verb itself; namely, the verb yomu 'read' in (14) itself is an action verb, even though it is made into a progressive form, which is considered by Kuno as stative; thus the subject can have a neutral interpretation as well as an exhaustive interpretation.

This generalization by Kuno, however, still suffers from inadequacy. I will first point out there is a restriction on

the distribution of the exhaustive interpretation, undercutting the generalization. The second problem is more basic: the conditions for neutral interpretation is a mere list of various predicates. These two problems are discussed in the following consecutive subsections.

2.2.1. An Effect of Contrastive Stress

I would like to first clarify whether the exhaustive listing is always available, as the generalization (14) above says. For example, take the case of (15), which Kuno (1973) claims is ambiguous between exhaustive and neutral interpretations of the subject. It is strongly felt that with normal intonation, the neutral reading is primary. The exhaustive interpretation becomes available only when a strong stress is put on the nominative NP. This is also true for other examples such as (16), which Kuno, along with Kuroda, would claim to be ambiguous.

(15) a. John-ga shinda. (neutral description)

died

'John died.'

b. Dare-ga shinda ka? John-ga shinda. (exhaustive)

who died died

'Who died? It is John who died.' (That is, John and only John died.)

(Kuno 1973, 53)

(16) a. Hanako-ga kinou uti-e asobi-ni ki-ta.

Hanako-nom yesterday my home-to play-dat come-past

'Hanako came to my place yesterday.'

b. Hanako-ga piano-no gakufu-o kat-ta.

Hanako-nom piano-gen score-acc buy-past

'Hanako bought a score for piano.'

c. Hanako-ga asu-no undookai-de 100m-o hashi-ru.

H-nom tomorrow-gen athletic meeting-at 100m-acc run-pres

'Hanako will run 100m at an athletic meeting
tomorrow.'

All the examples above have a neutral interpretation as an absolutely primary one. The exhaustive listing interpretation is only possible with contrastive stress on the nominative NP. I claim, however, that this is not because the sentence itself is semantically ambiguous, as claimed by Kuroda and Kuno, but rather because a *contrastive stress provides some kind of focus interpretation*.⁶

⁶ An effect of a contrastive stress can just be to indicate an intended interpretation is an unusual one. That is, a contrastive stress does not always yield a specific interpretation, but sometimes simply gives a signal that a normal interpretation is not intended. An appropriate interpretation is then determined by pragmatics.

Support for this idea can be seen in the following:

(i) John insulted Bill, and then he hit 'im.

With a normal intonation, the sentence (i) can only be interpreted such that John hit Bill. It is impossible to have a different interpretation, even in a context which would favor the opposite interpretation such as John is a non-violent guy, who has never hit anybody, while Bill is a person whose fists go faster than his brain. On the other hand, when the sentence is uttered with contrastive stress on the object, then various interpretations become available.

(ii) John insulted Bill, and then HE hit HIM.

The second clause can be interpreted as Bill hit John, or

And in fact even NPs marked by other case markers such as accusative or dative can get an interpretation which can equally well be characterized as "exhaustive o", "exhaustive ni", etc.

(18) a. Taro-wa SHI-O tsuku-ru.

Taro-top poetry-acc make-pres

'It is poetry which Taro makes.'

b. Taro-wa HANAKO-NI neko-o age-ta.

Taro-top Hanako-to cat-acc give-past

'It is Hanako who Taro gave a cat to.'

When a strong focus is put on the accusative marked object, capitalized in the above example, the sentence means that it is not a novel, nor a play, but poetry that Taro makes, and this interpretation can equally well be called "exhaustive". Therefore, it is not surprising that an NP-ga in SPEC(I) (moved from SPEC(V)) in my analysis (10), which is structurally a candidate for a neutral interpretation, can like any other NP get an additional "exhaustive" reading when it receives contrastive stress.

In light of this, the essential point is that there are some sentence patterns in which exhaustive listing readings are available and indeed required *without* stress.⁷

that surprisingly John hit Bill, etc.

⁷ We will examine exactly under what kind of condition only the exhaustive reading is available in Chapters 4 and 5.

(19) a. Hanako-ga shijin da.

Hanako-nom poet be

'Hanako (exhaustive) is a poet.'

b. Hanako-ga Hokkaido-ni iki-sae shi-ta.

Hanako-nom Hokkaido-to go-even do-past

'Hanako (exhaustive) even went to Hokkaido.'

Hanako-ga in (19) gets the exhaustive reading with normal intonation, and this reading is the only interpretation. What I wish to stress here is the fact that the exhaustive interpretation does not require contrastive stress in certain configurations. Therefore, we should clearly separate an "exhaustive" reading resulting from contrastive stress and an exhaustive reading resulting from syntactic position (i.e., SPEC(C) in (10)) with normal intonation. Since I am concentrating on the structural study of Japanese sentences, I will exclude the effect of contrastive stress (i.e., supplementary readings as in note 6) in the following discussion. Sentences such as (15) and (16), in this sense, will thus be characterized as having only a neutral reading for their subjects.

2.2.2. Correlations between the Interpretations of Subjects and of Predicates

According to Kuno's generalization (14), if a predicate is an adjective of the sort that represents "changing

states", both neutral and exhaustive readings are available, while if a predicate is an adjective representing "more or less permanent states, only the exhaustive listing interpretation of ga results." (53). However, we will see that the neutral reading is possible even with predicates of "more of less permanent states".

Let us start by reviewing the case of an adjective of "changing states" first.

(20) a. Sora-ga ao-i.

sky blue

'The sky is blue.'

(Kuno 1973, 149, (29))

Kuno claims that (20) "is ambiguous between neutral description (Oh, look. The sky is blue.')

and exhaustive listing ('[Among the things that we have been discussing] it is only the sky that is blue.')

"⁸ In the following, it will be important to recall that a neutral interpretation is possible in the context of an exclamation.

⁸ Whether aoi 'blue' really represents "changing states" is doubtful, for a word aoi 'blue' itself doesn't have any implication of "changing states". But rather a *reflection on* the word, such as realizing a color of a thing can change or that color cannot be an intrinsic feature because it is often changeable, re-categorizes the word aoi 'blue' into the class of "changing states". This is not a problem of vagueness in meaning, but rather is a confusion arising from identifying *reflection on* (or use of) the word with the *meaning of* the word.

1980 and Kratzer 1988⁹) to "changing states" and "permanent states", respectively, does not change the situation. The two levels are characterized as adjectives that "range over stages only, such as *alive, available, drunk, etc.*" and adjectives that "apply to individuals, and not to stages" such as "*intelligent, fat, female, incredible, and so on*" in Carlson (1980, 105-106)¹⁰.

⁹ Kratzer (1988) mentions that it is not that each adjective is specified in the lexicon as belonging to one of these two levels, but rather that every adjective can be used at either level depending on context; she feels that each adjective simply has a tendency to be interpreted at a certain level in a null context.

This treatment seems to me dubious if English is similar to Spanish with respect to syntactic restrictions on adjectives. It is well-known that in Spanish, two copulas, ser and estar, are distinguished. Estar appears with a certain group of adjectives (i.e., "stage level" adjectives) and PP complements, while ser appears with "individual level" adjectives and NP complements. Similarly there seems to be a distinction between get and become with respect to what kind of complements are possible (Emonds 1992).

- (i) The prices got/*became cheap after Christmas. (AP)
The supplies got/*became into small towns. (PP)
- (ii) The boy became/*got blue-eyed. (AP)
The boy became/*got Master of Ceremonies. (NP)

If the above distinction is real, two classes of adjectives, which can be called stage and individual level, must be distinguished syntactically in the Spanish and English lexicons, and it is not so, as Kratzer would claim, that every adjective can be used at either level.

On the other hand, Japanese does not seem to have any systematic corresponding restriction, as we will see in chapter 5. If this is so, Japanese adjectives are not specified for a level in the lexicon, in accord with Kratzer. However, it is doubtful whether the meaning, either stage or individual level, is determined by context. Take the case of (21) again. What aspect of the context, in which somebody is looking at Tokyo from an airplane, forces the stage level interpretation to come out is not clear. A different person can utter the same sentence without an exclamation, and the adjective ookii 'big' can be interpreted as individual level in the same context.

¹⁰ He also points out a third class: "there is a small class of adjectives whose domain of application is limited to

Rather, the correlation between a type of predicate and the interpretation of NP-ga should be considered as an effect, rather than a cause, of syntactic structure. More specifically, in a certain syntactic structure in which the NP-ga in question is under SPEC(C), the nominative subject is interpreted as an exhaustive listing and the predicate is perceived as a "more or less permanent state" of the subject. On the other hand, in a syntactic structure in which the NP-ga is internal to IP, the neutral reading arises and the corresponding predicate gets a "changing state" interpretation.

In the following chapters I attempt to define exactly the syntactic conditions which determine the distribution of exhaustive and neutral readings of the nominative marked subjects, examining the various forms and interpretations that their predicates can take. I aim to replace Kuno's generalization (14), which consists of an unstructured set of conditions, by a syntactically uniform condition, at the same time retaining and better explaining his many empirical observations related to nominatives and predicates.

kinds of things: *widespread, rare, extinct, numerous, indigenous to..., common* are in this class of adjectives."

Chapter 3

Position of the Verb as Structural Determinant

To examine a correlation between the interpretation of a subject, either exhaustive or neutral, and a kind of predicate, we need to know more about the syntax of sentences. We will investigate in this chapter structures of sentences where predicates are verbs (VP-centered sentences), as opposed to predicate attribute sentences where NP, AP, and PP are the main predicates (NP/AP/PP-centered sentences), which we deal with in chapter 5. We will start by examining an essential difference between so-called stative verbs and activity (or action) verbs. It will be argued that the principal distinction which underlies the other differences between the two classes of verbs, including their interpretation, reduces to the position of the verbs at S-structure. Specifically, I claim that stative verbs result from V-raising, while activity verbs stay in their base-generated position.

In analyzing some verbs to be in a V and others to be in I, I take a position that the phonetic uniformity of verb-suffix combinations typical of agglutinative languages like Japanese obscures a real distinction in syntax: phonetic representation shows nothing about the syntactic structure of verbs and endings other than their left to right order.

Of particular interest in this chapter is to spell out

how V-raising interacts with the case-marking system in Japanese. A strict structural approach to case-marking will be argued for, as previewed in section 1.2.

3.1. Differences between Activity and Stative Verbs

It has been recognized that Japanese verbs should be divided into two classes in terms of stativity (Kindaichi 1950, 1955, 1976, Kuno 1973, Teramura 1984, Soga 1986, among others). Several tests to distinguish these two classes have been discussed in the literature, and the solidity of these tests indicates this alleged distinction is real. Among them are tense interpretation, object case-marking, and compatibility with progressive forms. The generalizations are summarized as follows:

(1) Tense interpretation

When verbs are used with present tense form, stative verbs refer to present time, while action verbs refer to future time.

(2) a. Koko-ni isu-ga ar-u.

here-at chair-nom be-pres

'There is a chair here.'

b. Taro-ga hashi-ru.

Taro-nom run-pres

'Taro will run.'

The (2a) sentence with a stative verb means a chair is here presently as the gloss indicates, while the (b) sentence with an activity verb indicates future.

(3) Object case-marking

With action verbs, NP complements appear with accusative case, while with stative verbs, NP complements appear with nominative case.¹

(4) Compatibility with progressive constructions

Action verbs can be used in progressive constructions, while stative verbs cannot.

These significant generalizations strongly suggest the necessity for the distinction between the two classes of verbs in grammatical theory. Nonetheless, there has not been an adequate syntactic explanation for why the two classes differ and why these tests and not others distinguish the two classes.

Here I start from two criteria, object case-marking

¹ Of course there are verbs and adjectives which take PP complements.

(i) Hanako-ga Taro-ni at-ta.
Hanako-nom Taro-with meet-past
'Hanako met Taro.'

(ii) Taro-ga Hanako-ni yasashi-i.
Taro-nom Hanako-to kind-pres
'Taro is kind to Hanako.'

The discussions in the rest of the chapter does not say anything particular about these unproblematic cases.

(section 3.2) and compatibility with progressive forms (section 3.3) and seek a syntactic explanation for why precisely these differences between stative and action verbs arise.

3.2. Object Case Marking and the Position of the Verb

3.2.1. A Contrast in Object Case Marking

Kuno (1973, 143) notes that action verbs mark their object with accusative, while stative verbs mark their objects with nominative.² Putting aside how the case is assigned on each occasion, this is a significant descriptive generalization. This criterion distinguishes the following four verbs as stative verbs from the rest of the verbs.

(5) a-ru 'exist/be, have'

a. Koko-ni mafuraa-ga/*o a-ru.

here-dat scarf-nom/*acc exist-pres

'There is a scarf here.'

b. Kono hoteru-de enkai-ga/*o a-ru.

this hotel-at party-nom/*acc exist-pres

'There is a party at this hotel.'

i-ru 'need'

c. Taro-ni okane-ga/*o i-ru.

² Although his generalization includes adjectives, I will concentrate on verbs here. Adjectives are examined in detail in chapter 5.

Taro-at money-nom/*acc need-pres

'Taro needs money.'

deki-ru 'can'

f. Taro-ni **soroban-ga**/*o deki-ru.

Taro-dat abacus-nom/acc have a capacity for-pres

'Taro has a capacity for the abacus.'

waka-ru 'understand'

g. Taro-ni **eigo-ga** waka-ru.³

Taro-dat English-nom understand-pres

'Taro understands English.'

As is marked bold in the above examples, the objects are marked with nominative case, not with accusative case. With the rest of verbs, objects are marked with accusative rather than nominative case, as in the following examples.

(6) a. Taro-ga hon-o/*ga kat-ta.

Taro-nom book-acc/*nom buy-past

³ As we will see below in section 3.2.2., wakaru 'understand' is peculiar in the sense that it can be both an activity and a stative verb; thus, its object can be marked with an accusative.

(i) Taro-ga eigo-o waka-ru.

Taro-nom English-acc understand-pres

'Taro understand English.'

The subject case marking changes together with the object case marking; namely, in (5g), the subject is dative, while in (i) above it is nominative. We will see why this is so in section 3.4.

'Taro bought a book.'

b. Taro-ga toranpetto-o/*ga hui-ta.

Taro-nom trumpet-acc play-past

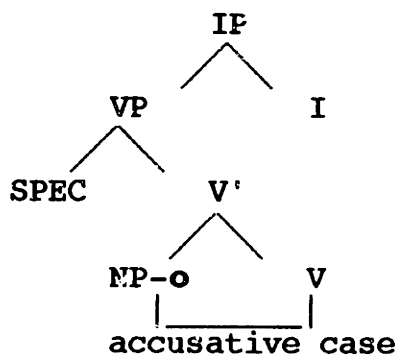
'Taro played trumpet.'

We have thus singled out four verbs which are stative with respect to the criterion of object case marking. Let us now see how this difference in case marking arises.

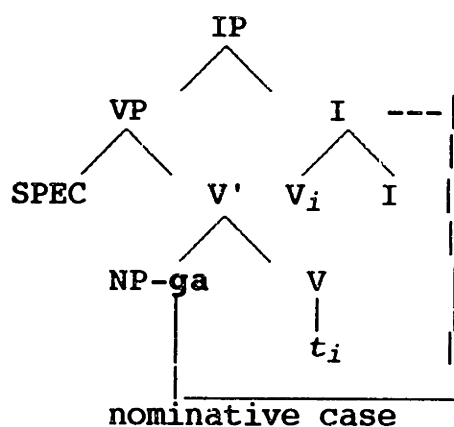
3.2.2. A V-raising Analysis of Stative Verbs

For accusative case, I simply follow a widely accepted view that accusative case is assigned by the head V to its NP sister (Chomsky, 1981). The issue here is how a nominative case can be assigned to the object. I propose that stative verbs raise from a base-generated V-position to I, as shown in the following tree.

(7) a. Action verbs



b. Stative verbs



When V adjoins to I, V is not a head anymore and can no longer assign case. Instead, I(nfl), which is often argued to be an assigner of nominative case in Japanese (Takezawa 1987, Morikawa 1989), assigns nominative to the object.⁴ This becomes possible because of the Government Transparency Corollary:

(8) Government Transparency Corollary (GTC)

A lexical category which has an item incorporated into it governs everything which the incorporated item governed in its original structural position.

(Baker 1988, 64)

Although he limits the GTC to "lexical" categories, I(nfl) must be included at least in the case of Japanese.

After incorporation, since I governs the object NP, it can assign nominative case through government. The stative verbs therefore must be specified in their lexical representation in such a way that they must raise. One way to do this is to adopt Baker's morphological subcategorization. Only these stative verbs have a morphological subcategorization such as V, +__I, to be checked in a derivation either at S-structure or in PF. Another way is to use Emonds's (1985) late insertion of

⁴ Takezawa (1987) argues for Infl-lowering to case mark an object of stative predicates. For problems in his analysis, see Morikawa (1989), Yoshida (1990) and Ueda (1990).

stative verbs after S-structure in the context +__I. In either view, the post-transformational effect of the feature +__I is the crucial characteristic of stative verbs.

There is an surprising contrast which gives further support to this proposal. It happens that VP-preposing is possible with action verbs, while it is not with stative verbs:

- (9) a. Gensaku-o yomi-sae Taro-ga shi-ta.⁵
 original-acc read-even Taro-nom do-past
 'Even read the original, Taro did.'
- b. Bessoo-o kai-sae Taro-ga shi-ta.
 second house-acc buy-even Taro-nom do-past
 'Even buy a second house, Taro did.'

As in the above examples, action verbs can undergo VP-preposing. On the other hand, VP-preposing with stative verbs results in ungrammatical sentences.

- (10) a.*Hon-ga ari-sae koko-ni shi-ta.
 book-nom exist-even here-at do-past
 'Even existing a book, here is.'
- b.*Konpuutaa-ga iri-sae Taro-ga shi-ta.

⁵ With VP-preposing, a dummy verb suru 'do' is inserted right before the tense ending. We will examine this phenomenon, which is similar to English do-support, in detail in chapter 4.

computer-nom need-even Taro-nom do-past

'Even need a computer, Taro did.'

c.*Sansuu-ga deki-sae Taro-ga shi-ta.

mathematics-nom can-even Taro-nom do-past

'Even be capable of mathematics, Taro did.'

This contrast between action and stative verbs can be shown in its sharpest form with the verb wakaru 'understand', which unlike other verbs can alternate between the two classes. As pointed out in footnote 3, wakaru 'understand' allows the following two patterns of case-marking.

(11) a. Hanako-ga kodomo-no kimochi-o waka-ru.

b. Hanako-ni kodomo-no kimochi-ga waka-ru.

H-nom/dat child-gen feeling-acc/nom understand-pres

'Hanako understands children's feelings.'

As is clear from the object case marking, (11a) is an instance of an action verb, where the verb stays in its base-generated position, while (11b) is like a stative verb, where the verb is raised. They look almost like free variants semantically, having almost indistinguishable meanings. Importantly, however, the pattern (11b) does not allow VP-preposing, while it is fine with (11a), as we expect from (7).

(12) a. Kodomo-no kimochi-o wakari-sae Hanako-ga shi-ta.

child-gen feeling-acc understand-even H-nom do-past
 'Understand children's feelings, Hanako did.'

b.*Kodomo-no kimochi-ga wakari-sae Hanako-ni shi-ta.
 child-gen feeling-nom understand-even H-dat do-past
 'Understand children's feelings, Hanako did.'

This contrast between action and stative verbs with respect to VP-preposing follows directly from my analysis: whether the part preposed is VP, as the name VP-preposing implies, or V', (7b) cannot arise because neither the preposed V nor the non-governing I can provide nominative case to the NP in the preposed part. That is, when V is in its base-generated position as in (11a), even after VP-preposing, V can still case mark its object. On the other hand, once VP or V' is preposed, V cannot raise to I and thus I cannot govern the object and the object cannot get any case-marking. We have thus argued that the action and stative verbs differ syntactically; namely, while action verbs stay in their base-generated position, stative verbs raise to incorporate into I. The case marking difference follows from this difference in the verb position, crucially using Baker's GTC.

There are several additional independent reasons to believe that an accusative object, which indicates the verb stays in VP, is associated with an activity interpretation of the verb, while a nominative object, which indicates the verb is under I, is associated with a stative interpretation. First, as a general observation, the internal arguments of

adjectives can take nominative, but never an accusative case. Since, as we will see in chapter 5, adjectives are stative, this confirms that a nominative object is associated with stative predicates.

Secondly, as Sugioka (1984) observes, the -to suru 'try to' construction can be used as a test for stativity.

(13) a. Taro-ga hashi-roo-to shi-te i-ru.

'Taro is trying to run.'

b.*Taro-ni okane-ga i-roo-to shi-te i-ru.

'*Taro is trying to need money.'

When this construction is used with wakaru 'understand', the (11b) pattern, that is the dative-nominative-pattern, becomes ungrammatical.

(14) a. Taro-ga conpuutaa-o wakaroo-to shi-te i-ru.

b.*Taro-ni conpuutaa-ga wakaroo-to shi-te i-ru.

'Taro is trying to understand computers.'

Since only an activity VP can be used in this construction, the correlation between the case-marking pattern and stativity is observed here; namely, the pattern (a) is activity, and the pattern (b), where the verb moves up to I, is stative.

Thirdly, it is well known (Sugioka 1984) that stative

verbs cannot be freely used in the imperative mood.⁶

Confirming our hypothesis that the position of the verb is associated with its interpretation, the (b) pattern is not available in the imperative mood.

(15) Kodomo-no kimochi-o/*ga waka-re.

child-gen feeling-acc/*nom understand

'Understand kids' feeling.'

To conclude, we have seen a strong correlation between the position of the verb and its stativity. When the verb is internal to VP, it has an activity interpretation, and the accusative marked object can be taken as a sign for this position of the verb. On the other hand, when the verb is under I at S-structure, it gets a stative interpretation, and the nominative marked object testifies that the verb is moved up to I.

Summing up, by using a criterion that the action verb takes accusative case for its object, while nominative case shows up with stative verbs, we have singled out four stative verbs, opposed to the rest, which are action verbs. Further, we have argued for a syntactic difference between the two

⁶ As D. Pesetsky points out, when a stative verb is used in the imperative mood, it seems to convey a pragmatic condition. For example:

(i) Know French *(by Monday) and I'll hire you.

(ii) Own a car *(by Friday) or I'll fire you.

Some time adverbial seems to be necessary for this usage.

classes of verbs: action verbs do not go through V-raising, while stative verbs do. Before going into the second test to distinguish action from stative verbs (i.e., compatibility with the progressive construction), I will show a somewhat different case where a structural change caused by V-raising is responsible for a case-marking distinction.

3.2.3. Causatives and Case Marking

Japanese causative constructions exhibit another instance of a regular case alternation caused by verb movement.

When a lexical verb which is a complement of a causative verb is either intransitive or has a non-accusative marked complement, its subject ("the causee") can be marked with either dative or accusative case, as shown in (16).⁷

(16) a. Hanako-ga Taro-ni/o Shirahama-e ik-ase-ta.

Hanako-nom Taro-dat/acc Shirahama-to go-caus-past

'Hanako let/made Taro go to Shirahama.'

b. Hanako-ga Taro-ni/o Yukie-to aw-ase-ta.

Hanako-nom Taro-dat/acc Yukie-with meet-caus-past

'Hanako let/made Taro meet with Yukie.'

On the other hand, when such a lexical verb is a transitive

⁷ It has been pointed out there is a meaning difference between the dative and accusative causee. See Shibatani (1973, 1976) and Kitagawa (1976) for more discussion.

verb taking an accusative marked object, only one means of case marking the causee is available: the causee is always marked dative.

(17) Taro-ga Hanako-ni/*o keeki-o kaw-ase-ta.

Taro-nom Hanako-dat cake-acc buy-caus-past

'Taro let/made Hanako buy a cake.'

Let us now start to examine the structure of causative constructions, focusing on the case alternation demonstrated above.⁸ The causative suffix sase has been analyzed as a V throughout previous research on Japanese causatives; here, we give some reasons to believe that it is an action verb, not a stative verb.

First, sase can be used in the imperative mood, as opposed to stative verbs or I(nfls) such as the potential suffix, eru (cf. chapter 6).

(18) a. Kodomo-ni ie-no tetsudai-o s-ase-ro.

kid-dat house-gen help-acc do-caus-imp

⁸ The causative construction seems to be one of the most controversial topics in Japanese generative grammar. Nakau (1973), Inoue (1976), and Tonoike (1979) argue for a Ni-extra NP analysis, borrowing Tonoike's terminology. On the other hand, Kuroda (1965), Kuno (1973), Shibatani (1973) argue for an Q-extra NP analysis, again using Tonoike's terminology. Further, the line of a lexical approach is taken by Miyagawa (1980, 1989) and Kitagawa (1986). Recently, Terada (1991) argues for a neo-Ni-extra NP analysis, crucially adopting an incorporation mechanism.

'Let a kid do housework help.'

b.*Uta-o utaw-e-ro.

song-acc sing-pot-imp

'Be able to sing a song.'

Second, the causative construction allows VP-preposing of the VP whose head is sase, while, as we saw in the previous subsection, a construction terminating in a stative verb doesn't.

- (19) Kodomo-ni ie-no tetsudai-o s-ase-sae Hanako-wa shi-ta.
 Kid-dat house-gen help-acc do-caus-even H-top do-past
 'Even let a kid do housework, Hanako did.'

Thirdly, the causative construction can be used in the progressive mood, the test for stativity given in (4).

- (20) Hanako-ga Taro-ni tetsudai-o s-ase-te i-ru.
 Hanako-nom Taro-dat help-acc do-caus-P be-pres
 'Hanako is letting Taro do housework.'

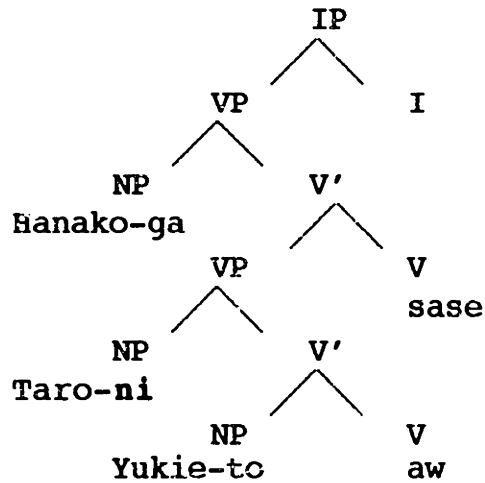
Further, the tense interpretation in the present tense form of sase is future, rather than present; cf. (1).

- (21) Hanako-ga Taro-ni Tokyo-e ik-ase-ru.
 Hanako-nom Taro-dat Tokyo-to go-caus-pres
 'Hanako will let Taro go to Tokyo.'

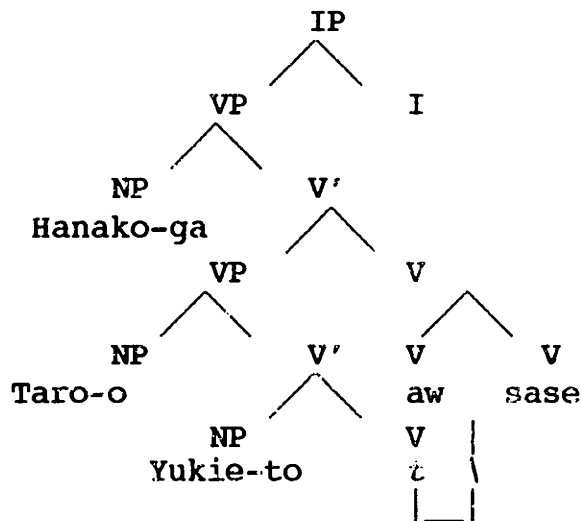
It thus has been shown that the causative suffix is a verb and further, it is an action verb; by our own previous analysis, sase stays under V.

My proposed structures for the dative causee in (16) with V in base-generated position and the accusative causee with V-raising are respectively as follows:

(22) a.



b.



I analyze the case alternation as follows: the causative verb is taking a deep VP complement with an internal subject NP, along the lines of Zagana (1988). When the lexical verb of this complement stays in its base-generated position as in (22a), the causee cannot be case-marked by any potential structural case-marker (i.e., I or V) and thus is projected inside a PP as a last resort, exactly as argued for embedded subject in gapless passives in Kubo (1989a). This unavailability of case in the SPEC(V) position shows that the VP is a barrier to government when it has a lexically filled V. In chapter 7, we will see that a lexical N also makes an NP into a barrier for a case-marking. I thus generalize as follows:

(23) Case-Barriers

Maximal projections X^{\max} which are not themselves extended projections are case-barriers iff X^0 is lexically filled.

It is in this way that the causee must be marked as dative when V doesn't raise.

On the other hand, when the lexical verb moves up to the next higher V as in (22b), then through the Government Transparency Corollary (Baker, 1988), the higher V, which dominates both the causative suffixal verb sase and the raised lexical verb, can case-mark the causee in the SPEC(V) position as accusative, since (23) no longer applies.

This interaction of causatives with suru-support shows that the analysis proposed is on the right track. When suru-support is involved, the case alternation on the causee NP which is possible with intransitive verbs and verbs with inherently case-marked objects, as in (16), becomes impossible.

- (24) a. Hanako-ga Taro-ni/*o Shirahama-e iki-sae s-ase-ta.
 H-nom Taro-dat/*acc Shirahama-to go-even do-caus-past
 'Hanako even let Taro go to Shirahama.'
- b. Hanako-ga Taro-ni/*o Yukie-to ai-sae s-ase-ta.
 H-nom Taro-dat/*acc Yukie-with meet-even do-caus-past
 'Hanako even let Taro meet with Yukie.'
- c. Hanako-ga Taro-ni/*o inaka-ni kaeri-sae s-ase-ta.
 H-nom T-dt/*acc hometown-to return-even do-caus-past
 'Hanako even let Taro return to his home country.'

When an embedded intransitive verb is separated from the causative verb by emphatic elements and suru 'do', the accusative case marking for the causee becomes unavailable, precisely because the lower V is blocked from raising to sase, bring (23) again into play. This paradigm therefore indicates again that the dative case marking of the causee is available when the lexical verb stays in its base-generated position, while the accusative case marker appears when the lexical verb incorporates into the causative suffix. It makes sense that an emphatic element can separate an embedded

V from the causative verb in (22a), while it cannot in (22b), since, as in Kubo (1989b), the emphatic elements cannot separate X^0 s inside of a single Y^0 .

In terms of this analysis, I can make a crucial additional prediction. When VPs with an intransitive lexical verb are coordinated under a causative V, accusative case-marking is again not available, because there is no way for the lower lexical verb to incorporate into the causative verb; Head Movement, like any movement, is subject to Ross's (1967) Coordinate Structure Constraint. This prediction is borne out:

- (25) a. Taro-ga Hanako-ni/*o tachiagari, aruk-ase-ta.
 Taro-nom Hanako-dat/*acc stand, walk-caus-past
 'Taro let Hanako stand up and walk.'
- b. H-ga Taro-ni/*o Jiro-to ai, kaimono-ni ik-ase-ta.
 H-nom T-dat/*acc J-with meet shopping-to go-caus-past
 'Hanako let Taro meet Jiro and go shopping.'

The analysis of optional V-raising in the syntax in the complement of the higher causative V sase is thus supported by a range of syntactic correlates, especially several involving case-marking alternations.

Note again that this proposed V-raising analysis implicitly assumes that phonologically connected parts do not necessarily reflect incorporation in the syntax. This seems to be a plausible assumption because in parallel fashion,

there is no reason to believe that a head noun is incorporated into a postposition in Japanese, even though here as well no phonological break separates a head noun and following postposition.

To sum up, in the causative construction with intransitive verbs and verbs with PP objects, the lexical verbs can either stay in their base-generated position or can move up to incorporate into the causative verb. When an intransitive main verb stays below, the causee NP is projected in a PP with a dummy case-marking P as a last resort and is realized with a dative marker, since no structural case marking is available to it. On the other hand, when a lexical verb raises to the causative V, the causee NP can be case-marked accusative by the causative verb by the GTC.

When the lower lexical verb is transitive, there is no reason to postulate a different analysis. The situation should be exactly parallel. The only difference is that the surface case pattern does not alternate, whether or not the lower lexical verb raises or not. When the lower verb stays its base-generated position under V, then the object gets an accusative from the lower verb. When the lower verb raises to the causative verb, then the object again gets an accusative, this time by the causative verb, because the causative verb can now govern the object due to the GTC. In both cases, the subject in the SPEC(V) can only be realized with a dative P, because the causative verb, being an

activity verb, does not itself incorporate into I; it rather remains in place so that (23) applies.

We have thus seen that V-raising is the key to the case alternations involving causatives, parallel to the several other patterns that were examined with stative verbs.

Coming back to the distinction between stative and action verbs, let us now move to the second criterion (4), whether a verb can be used in a progressive form. We will add two more stative verbs to the list of four in (5). The proposed V-raising analysis provides an explanation for why there is a restriction on stative verbs with respect to the progressive constructions.

3.3. On So-called Gerundive Forms

3.3.1. The Progressive Form as a Criterion for Stativity

According to Kindaichi (1950), Ootsuki (1897) noticed this contrast between stative verbs and the rest of the verbs. Stative verbs by definition express states of affairs and characteristically cannot be used with so-called progressive forms ending in -te iru (roughly glossed as a gerundive '-ing' followed by 'be'), while nonstative verbs can be.⁹

⁹ It has been noticed (Kindaichi 1950, Teramura 1984, 123-146, among others) that the usage of this -te iru is not at all simple. It provides a progressive form if it is attached to verbs which express action with some duration. Its meaning is resultative if it is attached to verbs whose

All the verbs which are grouped as action verbs by the earlier criterion (i.e., object case marking), can occur in the progressive construction.

(26) a. Hanako-ga hon-o yon-de i-ru.

Hanako-nom book-acc read-P be-pres

'Hanako is reading a book.'

b. Hanako-ga ocha-o non-de i-ru.

Hanako-nom tea-acc drink-P be-pres

'Hanako is drinking tea.'

There are two further intransitive stative verbs, which obviously escaped the first test of object case marking, but not the second one here.

(27) i-ru 'be'

Taro-no imooto-wa Tokyo-ni i-ru.

Taro-gen sister-top Tokyo-at be-pres

'Taro's sister is in Tokyo.'

*Taro-no imooto-wa Tokyo-ni i-te i-ru.

Taro-gen sister-top Tokyo-at be-P be-pres

atai-su-ru 'worth'

expressed action ends in a moment. Further it means a state if it is used with the verbs which according to Kindaichi lack the notion of time. These three classes are proposed by Kindaichi and together with the nonstative verbs constitute his classic four way distinction among the verbs.

Kono ronbun-wa chuumoku-ni atai su-ru.
 this paper-top attention-at worth do-pres
 'This paper is worth attention.'

*Kono ronbun-wa chuumoku-ni atai shi-te i-ru.
 this paper-top attention-at worth do-P be-pres

Now how about the verbs which were categorized as stative in (5)?

(28) a-ru 'exist/be, have'

Kono hoteru-de enkai-ga a-ru.
 this hotel-at party-nom exist-pres
 'There is a party at this hotel.'
 *Kono hoteru-de enkai-ga at-te i-ru.
 this hotel-at party-nom exist-P be-pres

i-ru 'need'

Taro-ni okane-ga i-ru.
 Taro-at money-nom need-pres
 'Taro needs money.'
 *Taro-ni okane-ga it-te i-ru.
 Taro-at money-nom need-P be-pres

As demonstrated above, the first two verbs in (5) do not take progressive form, their stativity being confirmed by the second criterion; however, the last two verbs, dekiru 'can' and wakaru 'understand' can occur in progressive forms,

contrary to our expectation.

(29)

(a) dekiru 'can'

Taro-ni-wa sude-ni sono repooto-ga deki-te i-ta.

Taro-dat-top already that report-nom can-P be-past

'For Taro, that report has finished.'

(b) wakaru 'understand'¹⁰

Taro-ni-wa sono kotae-ga wakat-te i-ta.

Taro-dat-top that answer-nom understand-P be-past

'For Taro, that answer was known.'

Although both dekiru and wakaru are categorized as stative, taking nominative marked objects by the first criterion, they are here behaving together with action verbs, being compatible with progressive forms. How can we account for this discrepancy between the two criteria (i.e., nominative object case marking and compatibility with progressive forms)?

I propose that these examples in (29) are instances of intransitive usage; namely, the nominative marked NPs in (29), sono repooto-ga 'that report-nom' and sono kotae-ga

¹⁰ As pointed out in footnote 3, since wakaru 'understand' can be both a stative and action verb, it is not surprising that the accusative case-marking pattern can be progressive.

(i) Taro-ga eigo-o wakat-te i-ru.
Taro-nom English-acc understand-P be-pres
'Taro is understanding English.'

'that answer-nom', are not complements of the verbs, but external arguments. For characteristically, the nominative marked NPs in progressive constructions as in (29) are definite, although, as we have seen in Chapter 2, objects in double ga constructions must be indefinite. Thus, with indefinite NP-ga, progressive sentences based on dekiru and wakaru become ungrammatical.

(30) a. Taro-ni yakyuu-ga deki-ru.

Taro-dat baseball-nom can-pres

'Taro can do baseball.'

b.*Taro-ni-wa yakyuu-ga deki-te i-ru.

Taro-at-top baseball-nom can-P be-pres

'Taro is having a capacity of doing baseball.'

(31) a. Taro-ni eigo-ga waka-ru.

Taro-dat English-nom understand-pres

'Taro understands English.'

b.*Taro-ni-wa eigo-ga wakat-te i-ru.

Taro-at-top English-nom understand-P be-pres

'Taro is understanding English.'

Secondly, the tense interpretation test goes in the same direction; namely, the intransitive uses in (29) (i.e., the definite object examples) pattern with action verbs, having a future interpretation, while the transitive ones in (30)-(31) (i.e., the indefinite object examples) pattern with stative verbs, having an present interpretation:

- (32) a. Taro-ni tejina-ga deki-ru.
 Taro-dat magic-nom can-pres
 'Taro can do magic.'
- b. (Taro-ni) kodomo-ga deki-ru.
 Taro-at baby-nom can-pres
 'Taro will have a baby.'
- (33) a. Taro-ni hooritsu-ga waka-ru.
 Taro-dat law-nom understand-pres
 'Taro understands law.'
- b. Taro-no kangae-ga waka-ru.
 Taro-gen thinking-nom understand-pres
 'Taro's thinking will become obvious.'

The (a) sentences have a present tense interpretation, while the (b) sentences have a future interpretation.

Furthermore, there is a crucial difference in the ni-phrases between the sentences in (29) and the ones in (30)-(31): the ni-phrases in (29) do not behave as subjects of reflexives, according to the well-known test for Japanese subjecthood (Inoue 1976, Shibatani 1978).

- (34) a.*Taro-ni-wa sude-ni sono repooto-ga jibun-no
 konpyutaa-de deki-te i-ta.
 Taro-dat-top already that report-nom self-gen
 computer-by can-P be-past
 'For T, that report has finished by his own computer.'

b.*Taro-ni-wa sono kotae-ga jibun-no chikara-de wakat-te
i-ta.

Taro-dat-top that answer-nom self-gen ability-by
understand-P be-past

'For Taro, that answer was known by his own ability.'

(35) a. Taro-ni-wa yakyuu-ga jibun-no ie-de deki-ru.

Taro-dat-top baseball-nom self-gen house-at can-pres

'Taro can do baseball at his own house.'

b. Taro-ni-wa eigo-ga jibun-no chikara-de waka-ru.

T-dat-top Eng-nom self-gen ability-by understand-pres

'Taro understands English by his ability.'

Although the ni-phrases in (35) can be antecedents of a reflexive jibun, the ones in (34) cannot, and therefore are not subjects.

It is thus reasonable to conclude that the intransitive versions of dekiru 'can' and wakaru 'understand' stay in their base-generated position like activity verbs, while their transitive versions must move up to I like other stative verbs, whereby nominative case is assigned to their objects.¹¹

To conclude, I have divided verbs into action and stative verbs in terms of compatibility with progressive forms and object case marking. There are only six stative

¹¹ The ni-phrases with intransitive dekiru and wakaru are not subjects, but benefactive adjuncts.

verbs in Japanese; the rest are activity verbs.

(36) Stative verbs

aru 'exist/have'

iru 'need'

iru 'be/exist'

atai suru 'worth'

dekiru (transitive) 'can'

wakaru (transitive) 'understand'

Action verbs

dekiru (intransitive) 'can'

wakaru (intransitive) 'understand'

hashiru 'run'

kau 'buy'

etc.

In section 3.3.4, rather than being content with a loose correlation to the effect that the progressive form is incompatible with stative verbs, I will try to explain what is wrong syntactically when so-called stative verbs are used in the progressive form. In particular, I will argue that the incompatibility with the progressive forms follows naturally if we assume the V-raising analysis for stative verbs bound on the feature +___I proposed in section 3.2.

3.3.2. Examples of the Gerundive Form

We have used progressive forms as a diagnostic for the

activity vs. stative distinction. In this section, we will examine the structure of the so-called gerundive form -te, which is used in the progressive construction, and thereby again confirm the analysis of stativity in terms of the position of the verb proposed in the previous section.

An important thing to point out first is that the te-form can be used with a dozen or so other roughly "aspectual" verbs besides iru 'be', which makes up the progressive form. Since these other constructions have nothing to do with progressive meanings, as shown below, this suggests that the incompatibility between the progressive form and stative verbs has nothing to do with a "meaning conflict", as is often said. The following examples of te-V constructions contain **activity** verbs in (a) and **stative** verbs or **adjectives** in (b).

(37)

te-ageru 'give'

a. Hanako-wa Taro-ni suugaku-o oshie-te age-ta.

Hanako-top Taro-to math-acc teach give-past

'Hanako kindly taught math to Taro.'

b. *Hanako-wa yoohuku-ga it-te age-ta.¹²

Hanako-top cloth-nom need-P give-past

¹² The following sentence is grammatical, precisely because the verb is in VP and thus has an activity sense.

Koko-ni i-te age-ru.

here be give-pres

'I will be here (for you).'

'Hanako needed cloth.'

te-aru 'have been'

a. Kono niku-ga sude-ni **choori-shi-te** a-ru.

this meat-nom already cook-do be-pres

'This meat has already cooked.'

b.*Taro-no hitogara-ga sonkei-ni **atai-shi-te** a-ru.

T-gen personality-nom respect-to worth-do-P be-pres

'Taro's personality has been worth respect.'

te-iku 'go on'

a. Boku-wa sono mondai-o motto fukaku **kangae-te** it-ta.

I-top that problem-acc more deeply think go-past

'I continue to think about that problem more deeply.'

b.*Boku-wa zaisan-ga **at-te** it-ta.

I-top property-nom have-P go-past

'I continue to have property.'

te-iru: progressive form

a. Taro-ga ringo-o **tabe-te** i-ru.

Taro-ga apple-acc eat be-pres

'Taro is eating an apple.'

b.*Taro-ni okane-ga **at-te** i-ru.

Taro-dat money-nom exist be-pres

'Taro has money.'

te-oku: past perfect

a. Taro-wa yuushoku-o **tsukut-te** oi-ta.

Taro-top dinner-acc make set-past

'Taro had cooked dinner.'

b.*Taro-wa eigo-ga **deki-te** oi-ta.

Taro-top English-nom have ability of set-past
 'Taro had been capable of English.'

te-kureru: 'give'

a. Taro-wa niwa-no souji-o shi-te kure-ta.

Taro-top garden-gen cleaning-acc do give-past
 'Taro kindly cleaned the garden.'

b.*Taro-wa musume-ga at-te kure-ta.

Taro-top daughter-nom exist give-past
 'Taro had a daughter.'

te-kuru: 'coming to be'

a. Taro-ga kashiko-ku nat-te ki-ta.

Taro-nom clever-at become come-past
 'Taro is getting to be clever.'

b.*Taro-ga tabemono-ga it-te ki-ta.

Taro-nom food-nom need-P come-past
 'Taro is getting to need food.'

te-shimau: 'finish'

a. Hanako-wa Maiami-ni it-te shimat-ta.

Hanako-top Miami-to go finish-past
 'Hanako has gone to Miami.'

b.*Hanako-wa Maiami-ni i-te shimat-ta.

Hanako-top Miami-at be finish-past
 'Hanako finished being in Miami.'

te-miru: 'try'

a. Hanako-wa neko-ni yasashi-ku shi-te mi-ta.

Hanako-top cat-to kind do attempt-past
 'Hanako attempted to be kind to a cat.'

b.*Hanako-wa eigo-o wakat-te mi-ta.

Hanako-top English-acc understand-P attempt-past

'Hanako attempted to understand English.'

te-morau: 'get'¹³

a. Hanako-wa kami-o kit-te morat-ta.

Hanako-top hair-acc cut receive-past

'Hanako got her hair cut.'

b.*Hanako-wa chuumoki-ni ataishi-te morat-ta.

Hanako-top attention-to worth-do-P receive-past

'Hanako got to be worth attention.'

te-yaru: 'give'

a. Taro-wa booru-o hirot-te yat-ta.

Taro-top ball-acc pick up give-past

'Taro kindly picked up the ball.'

b.*Taro-wa T-shatsu-ga it-te yat-ta.

Taro-top T-shirt-nom need-P give-past

'Taro kindly needed a shirt.'

te-hoshii (This is only an adjective.)

a. Boku-wa Taro-ni ayamat-te hoshi-i.

I-top Taro-dat apologize-P desirous

'I want Taro to apologize.'

b.*Boku-wa Taro-ni eigo-ga deki-te hoshi-i.

I-top Taro-dat English-nom be capable desirous

'I want Taro to be capable of English.'

¹³ See Kuroda (1965), Abe (1985), and Terada (1990) for more discussion of this construction.

The stative verbs in (b) are all ungrammatical in these gerundive examples, opposed to the activity verbs, which are grammatical in the (a) examples.¹⁴ The incompatibility of the stative verb with the progressive form is thus not due to the meaning of the progressive with the verb iru, but to the overall structure of the te-construction, which we now investigate.

3.3.3. Structure for the Gerundive Form

Let's start with the status of the morpheme te. Among the few works dealing with this construction, McCawley and Momoi (1986) treat V-te as one of the conjugation forms of the verb (i.e., V-te is dominated by a single V), while Shibatani (1978) treats te as a compound-marker (hukugoo-hyooshiki). Neither research, however, gives any reason to substantiate their view. Opposed to these views, there is good reason to believe that -te is a P.

Quite significantly, the te-construction can be conjoined with PP.

¹⁴ The stative verb iru 'be' behaves slightly irregularly: it can be used with ageru, miru, morawu, kureru, yaru, and hoshii, although it cannot be used with the other verbs discussed in (37). This irregularity might suggest that iru can sometimes be an action verb, as well as a stative verb. And in fact, iru can be used in the imperative mood.

(i) Hitiji-ni koko-ni i-ro.
 seven o'clock-at here-at be-imp
 'Be here at 7 o'clock.'

- (38) a. Taro-wa sono mama-no jyootai-de i-ta.¹⁵
 Taro-top the same way-at be-past
 'Taro stayed the same way.'
- b. Taro-wa damat-te i-ta.
 Taro-top quiet be-past
 'Taro was quiet.'
- c. Taro-wa [sono mama-no jyootai-de damat-te] i-ta.
- d. Taro-wa [damat-te sono mama-no jyootai-de] i-ta.
 'Taro was quiet and in the same situation.'¹⁶

(38a) and (38b) each include a single te phrase. (38c) and (38d) include the two te phrases in (a) and (b) in different orders. A parallel example follows:

- (39) a. Taro-wa hadaka-de sora-o miage-ta.
 Taro-top naked-at sky-acc look-past
 'Taro looked up at the sky naked.'
- b. Taro-wa damat-te sora-o miage-ta.
 Taro-top quiet sky-acc look-past
 'Taro looked up at the sky being quiet.'
- c. Taro-wa [hadaka-de damat-te] sora-o miage-ta.
- d. Taro-wa [damat-te hadaka-de] sora-o miage-ta.

¹⁵ There is a phonological rule which assimilates the first consonant of the morpheme te with the preceding sound. te is voiced as de when it follows vowels or nasals.

¹⁶ Actually, (c) and (d) have slightly different interpretations. The meaning of the first part of the conjunction precedes the second part in time, but this is typical: e.g., John ate carrots and cooked the fish.

'Taro looked up the sky naked and quiet.'

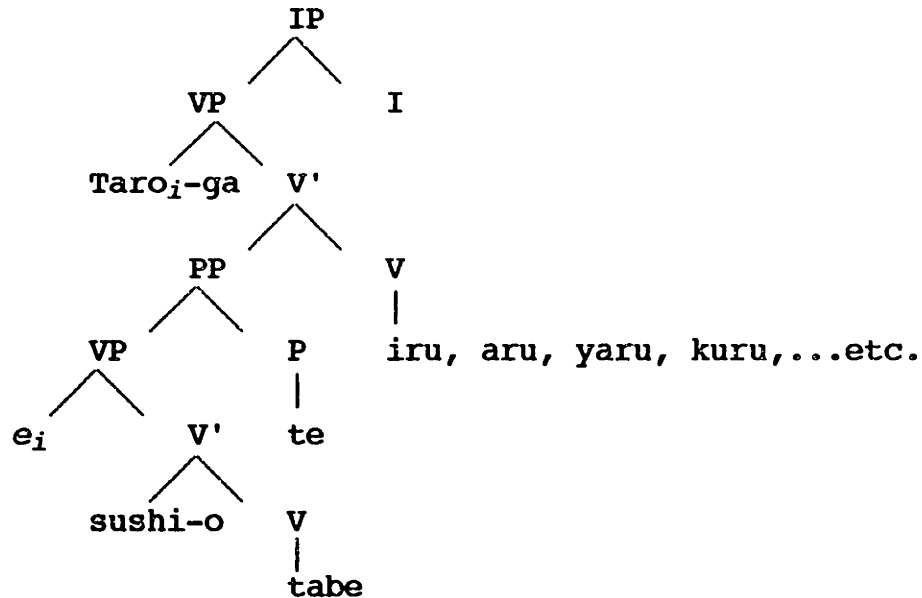
Since hadaka-de in (39) and sono mama-no jyootai-de in (38) must be straightforwardly analyzed as P with NP complements, the above fact that the V-te-construction can be conjoined with them suggests that the V-te-construction itself is also PP.

Because of the fact that the V-te-constructions are often translated with gerundive constructions in English, the V-te-construction is called a gerund and te/de is called the gerundive morpheme in the literature. However, as argued above, the structure of the V-te-construction in Japanese is [PP VP P], analogous to similar participles in Basque (Artiagoitia, 1992). I thus call the V-te-construction exemplified in (37) the *aspectual (postpositional) participle*.

3.3.4. Stative Verbs and the Aspectual Participles

Now, the incompatibility of the stative predicates in (37b) with the te-V-construction can be straightforwardly captured if we assume that the P (i.e., te) is taking a VP. Since stative verbs must move out from their VP to satisfy the feature +I, this requirement is incompatible with the aspectual participles, where an intermediate P (i.e., te) intervenes between V and I.

(40)



The embedded V cannot move next to I, because of the Head Movement Constraint (Travis 1984). Since stative verbs must obligatorily surface in ___I, this impossibility for raising predicts incompatibility between the stative verbs and all the aspectual participles exemplified in (37).

Among those verbs in (37) which occur as higher verbs taking [PP VP-P] complements, iru and aru themselves move up to I, because as we have seen previously they are stative verbs. The subject must then be in the SPEC of the higher verb phrase, because of case considerations: internal to PP, there is nothing to give nominative case. This becomes apparent when we examine the behavior of morawu 'get'. Among the verbs which subcategorize PPs with te in (37), morawu 'get' is an exception, in that the embedded clause has a subject distinct from the matrix one, while the matrix and embedded subjects are always the same for the other verbs.

In the case of morawu, the embedded subject is realized with dative case ni. A relevant example is as follows:

- (41) Taro-ga Hanako-ni shukudai-o tetsudat-te morat-ta.
 Taro-nom Hanako-dat homework-acc help.P get-past
 'Taro got Hanako to help with his homework.'

According to Kubo (1989a), a dative case shows up on an external argument in SPEC(V) only when it cannot otherwise receive nominative case; as a last resort, the NP can project up to PP and is realized with ni. Thus the fact that the subject in the embedded VP in morawu construction is realized with a dative case shows clearly that the SPEC(V) position internal to PP cannot get a structural case from an I.

To summarize in this section, we have investigated the structure of so-called gerundive forms and argued that they are PP whose P has a VP complement. The unavailability of the stative verbs in these aspectual participle constructions then directly follows from the V-raising analysis of stative verbs: even though stative verbs cannot stay in their base-generated position, there is no place for them to move up to satisfy the feature +__I.

3.3.5. Other constructions with te

3.3.5.1. V'-coordination

There is a construction which could be confused with the aspectual participle construction discussed above. For

example:

(42) Taro-wa ringo-o kat-te ki-ta.

Taro-top apple-acc buy-P come-past

a. 'Taro has bought an apple.'

b. 'Taro came after buying an apple.'

The sentence in (42) is ambiguous between the interpretation of (a) and (b). This ambiguity is available with all the other verbs in (37), except morawu 'get'.

We have argued in the previous section that examples as in (42a) contain a structure where the te-clause is a complement of a higher verb (i.e., kuru 'come' in the above example). I claim that the (42b) exemplifies a totally different syntactic structure from the one in (42a). More specifically, I propose that the te in (42b) is conjoining two V's, although a detailed argumentation for the proposed structure for (42b) is left for future work. Here, I will simply point out enough crucial differences between the two readings to postulate different syntactic structures.

First, in order for the sentence to be interpreted as (42b), there can be a pause after kat-te, while a phonological pause isn't allowed in (42a). As a general observation, a pause is allowed in typical coordination structures such as (43), but not between a complement and a head as in (44). This contrast is shown below:

(43) T-wa M-ga kai-ta hon to/K-ga tot-ta shashin-o sute-ta.

T-top M-nom write-past book and / K-nom take-past
picture-acc throw-past

'T threw away the book Masaru wrote and the picture
Kayoko took.'

(44) *Taro-ga hon-o / yon-da.

Taro-nom book-acc read-past

'Taro read the book.'

Although a pause (shown by the sign /) is allowed with typical coordination of NPs in (43), a pause is not allowed in (44) between the complement of the V and the head V. This suggests the structure for (42b) involves coordination, while the one for (42a) is that of complementation.

Secondly, once something intervenes between te and a verb (i.e., kuru 'come'), the interpretation of (42a) is no longer available.

(45) Taro-ga ringo-o kat-te paatii-ni ki-ta.

Taro-nom apple-acc buy-P party-at come-past

'Taro came to the party after buying an apple.'

This makes sense under our view. Two different PPs must be competing for status of one complement, if (45) is the aspectual participle construction; thus, the sentence (45) does not have the aspectual interpretation. On the other hand, the second verb (i.e., kuru 'come') in (45) can take

its PP arguments freely in a coordination.

Thirdly, when the te-clause in (42) is postposed, again only the (b) interpretation survives. That is, postposing is not allowed in the structure for (a), while it is fine in the coordinated structure (b).

(46) Taro-ga ki-ta, ringo-o kat-te.

Taro-nom come-past appled-acc buy-P

'Taro came, after buying an apple.'

This contrast again neatly follows from our view that (42a) involves a complement structure, while (42b) involves a coordination structure. Although it is not the case that complements can never be right-dislocated in Japanese, aspectual complements doesn't easily separate from their governing V even in English.

(47) a. John stopped smoking cigars when I asked him.

b. *John stopped when I asked him smoking cigars.

Fourth, the te-phrase is omissible in (42b), while it is not in (42a). This makes sense under our analysis in that (42a) involves a complement, while (42b) a conjunction; aspectual complements can be obligatory, while a conjoined constituent is not.

Summing up, it is now at least clear that (42a) and (42b) must be clearly distinguished as different

constructions. It is only in the aspectual participle construction (42a) that Travis's (1984) HMC prevents a stative verb from occurring in I rather than V.

3.3.5.2. IP-Subordinate Clauses with -te

There is another construction with te that is similar to the aspectual participle construction. Here, however, the contrast in stativity observed in the aspectual participle construction disappears. That is, when the te-clause is used with an adjective ii 'good', both stative and activity verbs as well as adjectives can occur inside of the te-clause.

(48) a. Taro-wa tennis-ga deki-te ii-ne.

Taro-top tennis-nom be capable-P good-isn't it

'It is good that Taro can play tennis, isn't it?'

b. Kono kabe-ni e-ga at-te-mo ii-naa.

this wall-at picture exist-P-if good-I guess

'I guess it would be nice to have a picture on the wall.'

c. Taro-wa subashikko-ku-te ii-ne.

Taro-top nimble-V-P good-isn't it

'It is good that Taro is nimble, isn't it?'

d. Kono shinbun-o yon-de-mo ii-desu-ka?

this newspaper-acc read-P-if good-plt-gues

'Is it OK if I read this paper?'

e. Sono eiga-o mi-te yo-kat-ta.

that movie-acc see-P good-V-past

'It was good that I saw that movie.'

There are again crucial differences between this construction and the aspectual participle construction, which suggests that this te-clause is an adjunct. That is, in the above construction, the te-clause can again be postposed.

- (49) Yo-kat-ta, sono eiga-o mi-te.
 good-V-past that movie-acc see-P
 'It was good, seeing that movie.'

It is thus reasonable to assume that te (which is P) takes IP as a complement and that the PP itself is an adjunct.

To sum up, the two constructions discussed in this subsection should be clearly distinguished from the aspectual participle construction, where PP headed by te is a complement of a higher verb, and inside which stative verbs may not occur.

3.3.6. Summary

We have examined in this section the so-called gerundive or aspectual participle construction with respect to its interaction with activity and stative verbs. The unavailability of stative verbs not only in the progressive construction, but also in the aspectual participle construction more generally, led us to seek a syntactic constraint, rather than a semantic explanation, for why stative verbs cannot occur in the progressive form. By

analysing te as a P which takes a VP complement, the V-raising analysis of stative verbs proposed in the preceding section explains the incompatibility of the stative verbs with the gerundive construction. That is, the stative verb, which must raise to satisfy +__I, cannot raise. The stativity of the progressive form is simply due to the fact that the matrix verb iru 'be' in the progressive form is itself stative; therefore the function of this stative verb is to allow embedding of the action verbs under stative verbs, and thus make the whole construction stative.

Starting from the previous section, we have continuously observed that the difference between activity and stative verbs plays a central role in the grammatical analysis of Japanese, and that the V-raising analysis of stative verbs captures two significant descriptive generalizations about differences between action and stative verbs, the object case marking and the compatibility with participle constructions.

The obligatory nature of V-raising for stative verbs can best be captured using Baker's morphological subcategorization. The stative verbs are specified for two subcategorizations: one such as +NP__ for deep complement selection and the other +__I for S-structure or perhaps PF checking.

3.4. Case and Interpretation of Subjects

3.4.1. Case Marking through Agreement and Government

We have been arguing that a stative verb raises to

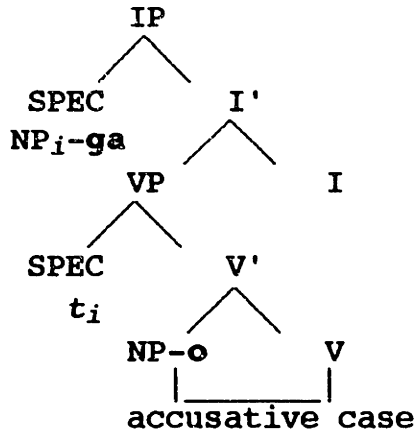
incorporate into I and that the structural change caused by this raising makes I a case-marker available to NPs inside of VP. Otherwise, VP is a case-barrier to case-marking from I, as we stated in (23). A natural question to ask now is, how do the subjects of action verbs get nominative case? That is, I cannot assign case to a subject in SPEC(V) if the structure is (7a), since VP is a barrier for this kind of government.¹⁷ With activity verbs which do not raise, the subject which is base-generated under SPEC(V) must move up to SPEC(I), where a nominative case is assigned by I through SPEC-HEAD agreement. In this case, the V still assigns accusative case to its complement.

On the other hand, with stative verbs, the subject base-generated under VP does not raise, because even if it would raise to SPEC(I), there would be nothing to case-mark it. As proposed in chapter 1, the I can case mark only once, and it case marks the object inside VP. The subject thus is realized in a PP as a last resort, without moving.

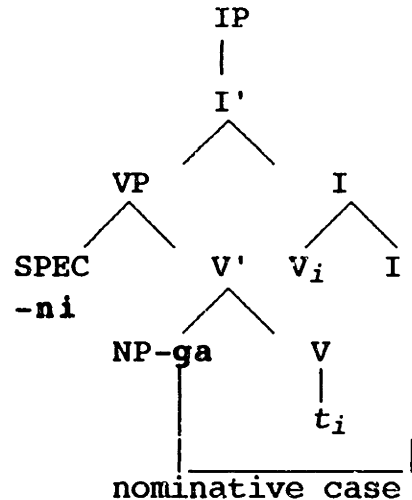
The structures for activity and stative verbs are thus schematically as follows:

¹⁷ I take IP to be an extended projection of V, together with Emonds (1985), Baltin (1990) and Grimshaw (1991). Further, I propose that tense is a feature associated with I; [+past] is a feature under I. According to the Invisible Category Principle (ICP) of Emonds (1987), features of a closed category such as I may be alternatively realized on the next lowest head, V. However, when a feature is thus realized on a lower head X, X remains a head and nothing alters any structural relation involving government, as opposed to the result of incorporation upwards.

(50) a. Action verbs



b. Stative verbs



The subject of an action verb thus gets nominative case through SPEC-HEAD agreement. The subject of a stative verb cannot get any structural case, because I assigns its case to the complement of V through the GTC; the subject is thus projected in a PP, which is realized as the dative PP ni. (cf. Takezawa 1987, for a partly similar treatment.)

3.4.2. Subject Interpretation in VP-centered Sentences

Coming back to the distribution of the two interpretations of a ga-subject, neutral and exhaustive, we now predict from the above structures in (50) that a subject of a *verb*, whether it is an activity or stative verb, gets a neutral interpretation, because such a subject is under SPEC(I). This is true. All the nominative subjects with a

verb are neutral, except for the ambiguity introduced by contrastive stress discussed in chapter 2.

3.5. The Constructional Meaning of I with Incorporated V

In the previous sections, we have seen that the V-raising analysis for stative verbs explains various syntactic phenomenon: several patterns of case-marking, facts about coordination, incompatibility with other constructions, etc. This section considers what this well-motivated syntactic distinction can say about meaning.

First, as summarized in (1), there is a well-known generalization about tense interpretation in Japanese with respect to the distinction between stative and action verbs. Universally, it seems that present tense with activity verbs typically means "other than present" such as future, habitual, etc. While I cannot go beyond a descriptive statement at this time, we can say that the interpretation of present as future in Japanese occurs only when I contains no V as in (50a).

Next, although it is obvious that the syntactic distinction in (50) is related to stativity, I would like to show that the stative interpretation itself results from the syntactic structure. Rather than a verb expressing a state causing it to raise to I, I have postulated that a verb raises to I because of a syntactic property specified in the lexicon (+__I), and that then a stative interpretation

arises. To show that the theoretically meaningful division between the two classes of verbs arises from syntactic structures, rather than from the meaning of each verb, let us start by comparing English and Japanese.

Compared to say English, the list of Japanese stative verbs specified in (36) is a surprisingly short one. Let us thus look at what corresponds in Japanese to many English stative verbs which don't have a counterpart in (36). Basically what we see is that all the stative verbs in English which are not directly matched to the few Japanese stative verbs are translated into Japanese either by adjectives or verbs in progressive form.

(51) Some English stative verbs which correspond to progressive forms of Japanese activity verbs:

know	=	shit-te i-ru
believe	=	shinji-te i-ru
own/possess	=	syoyuu-shi-te i-ru/mot-te i-ru
lack	=	kake-te i-ru
prefer	=	konon-de i-ru
hate	=	nikun-de i-ru
owe	=	ot-te i-ru

Although the word that corresponds to own, for example, is mots-u, John owns a car doesn't translate as John-ga kuruma-o mots-u, rather, a progressive form is necessary. When we reflect on the word motsu 'own', we think in English

of this as a stative property. However, syntactically, the Japanese verb does not behave as a stative verb, but rather as a action verb, taking an accusative object and being compatible with the aspectual participle (including progressive) construction. Thus if we start from the so-called meaning of a word, then we cannot arrive at significant generalizations. This correspondance between a simple English stative verb and the Japanese progressive shows that the progressive form indeed changes activity verbs into stative verbs.¹⁸ Nonetheless, this happens because the matrix verb iru is a stative verb and raises to I, and not because of its lexical "meaning".

Other English stative verbs correspond to Japanese adjectives:

(52) Some English stative verbs which correspond to adjectives in Japanese:

fear	=	kowa-i
want	=	hoshi-i
like	=	suki (da)
dislike	=	kirai (da)

¹⁸ In English, certain adjectives can be used in the progressive construction.

(i) John is being silly/unreasonable/polite.

(ii)*John is being dead/tall/cold.

However, even with those adjectives which can be used with the progressive such as in (i), the subject seems to be required to be animate.

(iii)*John's behavior is being silly/unreasonable/polite.

As we will see in chapter 5, with adjectives, I is always lexically filled. Since this is true for stative verbs as well, let us conclude with the following generalization:

(53) Interpretation as a State

The constructional meaning of a Japanese S-structure where I is filled with a lexical item is stative.

A constructional meaning is different from so-called meanings of words. As I demonstrated above with the example of own vs. motsu, if we start out from the meaning of a word obtained through reflection on it, we are not led anywhere. But rather, if a word has a certain syntactic property and thus occurs in a certain syntactic structure, then a certain interpretation can invariably be associated with it, at least throughout one language. Thus, structure is a more reliable basis for interpretation than lexical meanings.

Chapter 4

Suru-support and the CP Projection

In chapter 3 we have seen that a verb inserted under V can behave in two ways, depending on whether it raises to I or not, but a V does not raise up to C. In this chapter we will see, however, that a verb, in a limited environment, can be directly inserted in C.

4.1. Japanese suru-support and English do-support

I know in this section that there is a phenomenon in Japanese similar to English do-support.¹ Before going into a discussion of Japanese, a review of English do-support may be beneficial. The phenomenon called do-support is first formally recognized when Chomsky (1957: 62) claims that "do is introduced as the 'bearer' of an unaffixed affix." The main environments in which do-support is triggered are illustrated as follows:

(1) Emphatic elements:

- a. John did {so/n't either/too} eat sushi.

Negation:

- b. John did not eat sushi.

¹ Much of this section, in particular, the existence of suru-support and the paradigms which justify it, is drawn from Kubo (1989a,b).

Subject Inversion:

c. Did John eat sushi?

VP-preposing:

d. ... and eat sushi John did.

VP-deletion:

e. John eats sushi, and Mary does, too.

As shown above, do is inserted when emphatic elements or a negative element intervene between a subject and a verb, when a subject is inverted in questions, when a VP node is preposed or when a VP is deleted. Since these contexts (1a-e) for do mirror where modal verbs occur in English, these manifestations of do are analyzed in Emonds (1976, Chap. 6) as being dominated by what is I in the current X'-system of Chomsky (1986b).²

It is well-known, on the other hand, that English do is also used as a main V as in John did his homework. I would like to especially draw attention to a difference between the main verb do in the do-so construction (V) and the do in do-support (I). Although do-support does not distinguish one class of verbs from another, do so cannot be used when a subject lacks agentivity, which is often the case with stative verbs.

² For recent treatments of do-support, see Chomsky (1989) and Laka (1990).

- (2) a. *John understands English and Mary does so, too.
 b. John does {so/n't either/not} understand English.
- (3) a. *John said Mary might owe money, and do so she might.
 b. John said Mary might owe money, and owe money she does.
- (4) a. *John will weigh a lot, but will Mary do so?
 b. Did John weigh a lot?

Further, we can have the both usages at once; thus, the following sentence is grammatical.

- (5) We do so do so.

The first instance of do in (5) is do-support with an emphatic, and the second one is a part of the do so construction. These two different manifestations of do have been analyzed as a verb do inserted under I in the case of do-support and under V in the do so construction.³

³ There is another lexical item which has dual usages which are similar to do. As is well known, need is used as both a main verb and a modal auxiliary.

- (i) a. John does not need to go to school.
 b. John need not go to school.
 (a) is an example of need as a main verb and is formally captured by a verb need being inserted under V. On the other hand, in (b), as is clear from the position of negation, need is not inside of VP and must be inserted higher in the tree as a modal.

Despite the above described similarity, there is an interesting difference between do and need with respect to agreement. Agreement appears on do, while it does not on the modal need.

- (ii) a. John does not go to school.

Turning to Japanese, some usages of the verb suru 'do' seem to correspond to do-support in English. Observe the following sentences.

(6) Canonical pattern:

a. Taro-ga sushi-o tabe-ta.

Taro-nom sushi-acc eat-past

'Taro ate sushi.'

Emphatic elements:

b. Taro-ga sushi-o tabe-{sae/mo/saemo/wa} shi-ta.

T-nom sushi-acc eat-{even/even/even/at least} do-past

'Taro {even/at least} ate sushi.'

VP-preposing:

c. Sushi-o tabe-{sae/mo/saemo/wa} Taro-ga shi-ta.

sushi-acc eat-{even/even/even/at} least T-nom do-past

'Taro {even/at least} ate sushi.'

As shown in (6b), when emphatic elements such as sae/mo/saemo 'even' or wa 'at least' intervene between a verb stem and tense, suru 'do' is inserted right before the tense affix. Further in (6c), when a VP node is preposed, suru 'do' is again inserted.

b. *John do not go to school.

(iii)a. *John needs not go to school.

b. John need not go to school.

It can thus be argued that do is of the category V throughout all usages. On the other hand, need is a V in the main verb usage, while it belongs to a functional category in the other usage.

As with English do, suru 'do' can be also used as a main verb and further it appears in a so suru 'do so' construction as follows:

- (7) a. Taro-ga kinou tennis-o shi-ta.
 Taro-nom yesterday tennis-acc do-past
 'Taro did tennis yesterday.'
- b. Taro-ga kougai-ni ie-o kat-ta. Hanako-mo so shi-ta.
 T-nom suburb-at house-acc buy-past.H-also so do-past
 'T bought a house in the suburbs. H did so, too.'

Exactly as in English, the agentivity of a subject is necessary for suru 'do' to be used as a main verb in the so suru 'do so' construction. Compare the following pairs:

- (8) a. *Hanako-ga eigo-ga wakari, Taro-mo so su-ru.
 H-nom English-nom understand, Taro-also so do-pres
 'Hanako understands English, and Taro does so, too.'
- b. Hanako-wa/ga eigo-ga wakari-sae su-ru.⁴
 Hanako-top/nom English-nom understand-even do-pres
 'Hanako even understands English.'
- (9) a. *Hanako-wa okane-ga it-ta. Taro-mo so shi-ta.
 H-top money-nom need-past Taro-also so do-past
 'Hanako needed money. Taro did so, too.'

⁴ From now on, I will use sae as a representative of the set of emphatic elements mo/saemo/wa in (6).

b. Hanako-wa okane-ga iri-sae shi-ta.

Hanako-top money-nom need-even do-past

'Hanako even needed money.'

(10) a.*Sono seetaa-ga Taro-ni nia-u.Kono seetaa-mo so su-ru.

That sweater-nom T-to suit-pres this sweater-also so

do-pres

'That sweater suits Taro.This sweater does so, too.'

b. Sono seetaa-ga Taro-ni niai-sae shi-ta.

That sweater-nom Taro-to suit-even do-past

'That sweater even suited Taro.'

Although the (a) sentences with the so suru 'do so' construction are all ungrammatical with the non-agentive subjects of stative verbs, the (b) sentences, in which suru-support is triggered by the same verbs, are perfectly grammatical. This difference can be easily accounted for if there are two instances of suru 'do', each subject to different restrictions. And, as we saw in English (5), these two instances of suru 'do' can appear in a single sentence simultaneously:

(11) Taro-ga so shi-sae shi-ta.

Taro-nom so do-even do-past

'Taro does even do so.'

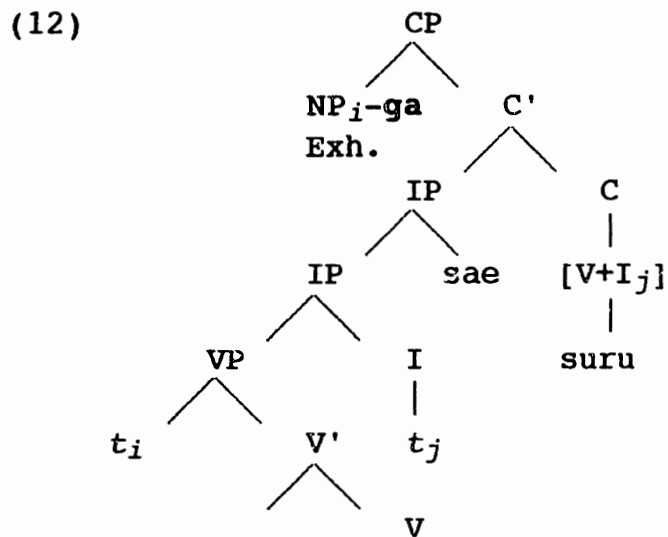
The first instance of suru is a main verb under V and the second instance is suru-support.

To conclude, we have seen that Japanese has a phenomenon similar to English do-support.⁵ A Japanese verb suru which corresponds to English do has an extra usage as suru-support besides its ordinary usage as an action verb in a VP.

In the next section, we will investigate the syntactic structure of the suru-support construction.

4.2. A Syntactic Structure for the suru-support Construction

I propose the following structure for the suru-support construction.



The placement of a stative verb in (12) is revealing. As argued throughout previous chapter, since stative verbs are

⁵ Park (1992) examines various constructions related to a verb ha, which is a Korean counterpart of suru or do. Among other things, he shows that there is also a phenomenon corresponding to do-support in Korean.

generated under V and move up to I, and since stative verbs appear before the emphatic elements in the suru-support construction, the emphatic elements must be taking the IP as their scope. When a whole sentence IP is in the scope of an emphatic element, then, since a sentence cannot terminate in an emphatic element (probably because of the strict V-finalness of Japanese), a sentence must take the form of a larger CP by I(nfl) raising into C. The verb suru is then inserted in C merely to "bear the I affixes", like do-support in English.

Further, I claim that the subject must move to SPEC(C) from SPEC(V) to get a case. For it cannot get any case in SPEC(V), since I cannot case mark it because of the intervening VP case-barrier. It cannot be in the SPEC(I) either, because the corresponding head I is moved to C, and V or I traces do not suffice to case-mark.⁶

The interpretation of the subject confirms this analysis: the nominative ga-subject of suru-support can never be interpreted as neutral. For example, Taro-ga in (6b) or sono seetaa-ga 'that sweater' in (10b) must be interpreted as exhaustive, not as neutral. The moved subject in SPEC(C) gets nominative case from the corresponding head C by SPEC-HEAD agreement, exactly parallel to the SPEC(I) subjects with activity and stative verbs which get case from SPEC-HEAD

⁶ See footnote 8.

agreement, as discussed in section 3.4.1.⁷ A CP which is headed by a raised I(nfl) is called here an "I-headed CP" to distinguish it from a natural (C-headed) CP. Although the SPEC position is optional, as it is usually the case for a specifier, in ordinarily (C-headed) CPs, the specifier for the I-headed CP seems to be obligatory. That is, we observe the following pattern (13).

(13) If C is filled with an I, SPEC(C) must be filled.

The three candidates for SPEC(C) from Chapters 2 and 3, a topic wa-phrase, a preposed VP, as we will see right below, and an exhaustive ga-phrase, all can satisfy (13).

Although we have seen V to I movement in chapter 3 and I to C movement in this chapter, there seems to be a difference between them. When V raises to I, V and I work in terms of the GTC and thus V is incorporated (i.e., adjoined to I). On the other hand, I to C movement does not seem to follow the GTC, but rather both I and C can assign separate nominative cases, as is clear from stative verbs with suru-support: both subject and object can be marked with nominative case assigned by C and I, respectively (cf. 8b). Descriptive adequacy requires I to be the head of C and to be able to

⁷ Ultimately, I argue that all the functional categories in Japanese, C, I and D, assign a nominative case, that is ga, through SPEC-HEAD agreement. We have now seen occasions of this with C and I, and we will see instances of D assigning nominative case in Chapter 7.

assign case, as well as C. I thus propose that I to C movement is a substitution, rather than adjunction and that both a head I directly dominated by C and C itself can assign case. For further discussion of the theory involved, see section 6.2.2.

Now let us move to the structure of VP-preposing as exemplified in (6c). Although VP-preposing is concomitant with suru-support, there is a difference between the VP-preposing construction as in (6c) and the suru-support construction without VP-preposing as in (6b).⁸ As is demonstrated in chapter 3, stative verbs cannot appear in the VP-preposing construction, although they can occur in the simple suru-support construction. To put it another way, both action and stative verbs can occur in the suru-support construction, while only action verbs but not stative verbs can occur in the VP-preposing construction.

The nominative subject is necessarily interpreted as exhaustive in suru-support without VP-preposing, since by (13) it must be in SPEC(C). On the other hand, the nominative marked subject must be interpreted as neutral, not exhaustive, in the VP-preposing construction (6c), even though suru is present, since it SPEC(C) is filled with VP. Moreover, the thematic (non-contrastive) wa-phrase cannot

⁸ I use the term suru-support somewhat ambiguously. When it contrasts with VP-preposing, it refers to the suru-support construction only caused by emphatic elements as in (6b). Otherwise, it refers to both types exemplified in (6b) and (6c); namely, suru-support with or without VP-preposing.

appear with VP-preposing, either, for the same reason; both compete for the SPEC(C) position.

(14) a. *Bosuton marason-o hashiri-saemo Hanako-wa shi-ta.⁹

Boston marathon-acc run-even Hanako-top do-past

'Even run the Boston marathon, Hanako did.'

b. *Juudoo-o narai-sae Hanako-wa shi-ta.

Judo-acc learn-even Hanako-top do-past

'Hanako even learned Judo.'

The preposed VP must land in SPEC(C), since the thematic wa-phrase and the exhaustive ga-phrase, which always occupy SPEC(C), are incompatible with VP-preposing, as shown at some length in chapter 2.¹⁰

Summing up, the Japanese counterpart to English do-support has been examined in this section. We have argued

⁹ These sentences are of course grammatical with a contrastive reading of wa, since contrastive wa can occur inside IP, as observed in chapter 1.

¹⁰ Exactly which constituent is preposed is controversial. Under a "strong" VP-internal subject hypothesis, which assumes all subjects must be base-generated under SPEC(V), the preposed constituent must be a V' rather than a VP, because a trace of a subject in SPEC(V) in its original position would not be properly governed if an entire VP moved to a position outside IP. Nonetheless, it is problematic to say that a single bar level constituent moves.

Let us slightly weaken the VP-internal subject hypothesis and assume that a subject is directly base-generated under any SPEC whose corresponding head contains a V. Now in the case of suru-support where the verb is directly inserted under C, the subject can also be directly base-generated under SPEC(C). Under this view, the preposed constituent in "VP-preposing" is a VP without a subject. For a discussion from a different point of view, see Chomsky (1992).

that although lexical verbs are to be inserted under V, the verb suru 'do' is peculiar in the sense that it has another insertion context under C. When a head C is filled by moved I features, this verbal element is inserted to bear these features. The corresponding SPEC(C) must then be filled by (13), and it can contain an nominative marked subject with exhaustive interpretation. This nominative case is assigned by C through SPEC-HEAD agreement.

On the other hand, thematic wa, I claim, is an indication of a predication, rather than case-marking; the structural conditions for predication such as argued for in Williams (1980) are satisfied, and the NP in SPEC(C) is licensed. Whether I is filled or not is irrelevant for thematic wa assignment; thus, the thematic wa is possible with verbs without employing suru-support. In this sense, the thematic wa is an exception to the Case Filter (Chomsky 1981): the thematic wa is assigned by a configuration of predication, and a configuration of predication is sufficient for an NP to be interpreted at LF.

4.3. Summary

This chapter has further supported the idea that the position of the verb at S-structure is crucial for structural relations relevant to case-marking and to interpretation. A syntactic structure has a "constructional meaning" associated with it. As seen in chapter 3, when a verb is under V at S-structure, it has an activity interpretation, while a verb

which is raised to I has a stative interpretation. With verbs, either action or stative, a sentence projects up to IP and a subject thus gets a neutral interpretation being in SPEC(I). The constructional meaning of this IP-structure is, as will be elaborated more in chapter 8, synthetic. That is, such a sentence is saying that the subject is just one argument "in relation to" a verb.

Although a VP-centered sentence is not in principle analytic (by projecting up to CP; again see chapter 8), there is a device studied in this chapter to make an IP with a verbal predicate head into an analytic form. This is the device of suru-support. When this occurs, a verb suru is inserted under C and a sentence takes on a CP structure. The constructional meaning of a CP sentence is analytic, whereby a speaker claims that the predicate is included in the subject in SPEC(C), as will be discussed in some detail in chapter 8. An additional effect of an NP being in SPEC(C) is that a nominative ga-subject gets an exhaustive rather than a neutral interpretation.

The distribution of neutral and exhaustive interpretations for a nominative marked subject is thus indirectly predictable from the position of the verb. With verbs, unless suru-support is employed, a subject is neutral inside IP. With suru support, it is exhaustive in CP. In the next chapter, we will continue to see how the syntactic position of a predicate determines the interpretation of a subject. The relation between syntactic structure and

interpretation will be further explored by looking at other sentences where not a verb, but AP, NP, or PP are the lexical predicates (AP-/NP-/PP-centered sentences).

Chapter 5

Structures of Predicate Attribute Sentences

We have investigated in the last two chapters the structures of VP-centered sentences, that is sentences in which the content predicate is a verb. In this chapter, we will explore the syntactic properties of predicate attribute sentences of AP/NP/PP-centered sentences, a topic which in previous generative studies of Japanese is dealt with under the assumption that predicate attribute sentences are trivial variants of VP-centered sentences. This approach will be shown to be inadequate. On the contrary, we will find a lot of interesting and crucial differences from VP-sentences, which argue for independent treatments of predicate attribute sentences.

The predicate attribute sentences are particularly revealing with respect to the two interpretations of the nominative marked subjects, exhaustive and neutral. For although the VP-sentences (without suru-support) are all matched with neutral ga subjects, predicate attribute sentences are potentially ambiguous; this has been the source of confusion, an issue raised in Chapters 1 and 2. One of the goals of this chapter is thus to see again how NPs in SPEC positions are properly matched with the corresponding heads filled with lexical verbal elements: when C is filled with I-features, the corresponding nominative marked subject

is exhaustive; otherwise its interpretation is neutral.

We will start from the syntactic properties of adjectives (APs).

5.1. Free and Bound Adjectives

In previous research on Japanese grammar, the status of adjectives (e.g., utsukushii 'beautiful', atsui 'hot', kanashii 'sad'), and so-called adjectival nominals (e.g., genki 'fine', shiyawase 'happy', binboo 'poor') has been controversial. For example, adjectival nominals are treated as an independent category generally called adjectival verbs in pedagogical grammar, as nouns in Tokieda (1950), and as adjectives in Mikami (1953). As for the adjectives, it is a moot question as to whether they directly combine with a tense or not.

5.1.1. External Structure of Adjectives and Adjectival Nominals

Let's start with the latter question, namely the question of the syntactic structure external to adjectives and adjectival nominals. As easily seen from the following conjugation patterns, the da that appears with adjectival nouns follows the same pattern as verbs, except in its present tense form.

(1)

Tense	Verb	Adjective	Adj.Nominal
-past	tabe-ru	utsukushi-i	sizuka da
+past	tabe-ta	utsukushi-kat-ta	sizuka dat-ta
volitional	tabe-yoo	utsukushi-ka-roo	sizuka da-roo
volitional(past)	tabe-ta-roo	utsukushi-kat-ta-roo	sizuka dat-ta-roo

Further, the meaning of da exactly corresponds to be in English adjectival sentences. It is thus quite straightforward to say that the adjectival nominals are APs subcategorized for by a copula verb which carries tense.¹

The situation for what are normally called adjectives in Japanese grammar is more subtle. First, we immediately notice that except for the present tense there seems to be something like a sequence kV(C) appearing before the following tense morpheme for every adjective. It is then natural to not consider this sequence as some nonpredictable termination of all adjective stems. Although in previous research (McCawley 1968, among others), this kat is thought of as a purely phonological consequence of allomorphic rules for tense morphemes, Kubo (1990, 42), in accord with Grignon (1990, 18), argues that it should be considered a verb.

The first argument is that if kat is a verb, the fact that it takes the same tense suffixes as a verb doesn't need any explanation. Otherwise, Japanese grammar needs many ad

¹ This view that the copula verb is in the position of V will be modified later in section 5.2.1.

hoc allomorphic rules such as the following:

(2)	verbal form	adjectival form
	ta (past)	katta / ADJ_____
	te (gerundive)	kute / ADJ_____
	ana (negation)	kuna / ADJ_____

Secondly, if kat isn't a verb, it causes a complication in word-internal subcategorizations in the sense of Lieber (1980). All the morphemes which undergo the above rules of allomorphy must also subcategorize for both verbs and adjectives.

(3)	<u>ta</u>	I [+past]	+V___ , +A___
	<u>te</u>	I	+V___ , +A___
	<u>ana</u>	A	+V___ , +A___

Thirdly, if the adjectives are directly connected to tense, this undercuts a possible universal that only verbs bear tense.

Further, it is not plausible to think of the sequence kat as a part of an adjective. To appreciate this, consider the fact that the emphatic markers such as even can appear on NPs, VPs, and PPs but not APs in English.

(4)	a. Even John went to that conference.	NP
	b. John went to even that conference.	NP

- c. John will even go to that conference. VP
- d. John went even to that conference. PP
- (5) a.*John went to that even boring conference. AP
- b.*John seemed even tired (of that conference). AP
- c.*John considered that conference even important. AP
- d.*John will travel there even quickly. AP²

Now look at the corresponding situation with sae 'even' in Japanese.

- (6) a. Hanako-wa kanashi-ku-sae at-ta.³
 Hanako-top sad-V-even be-past
 'Hanako was even sad.'
- b.*Hanako-wa kanashi-sae-ku at-ta.
- c. Hanako-wa toshi-no warini waka-ku-sae mie-ta.
 Hanako-top age-gen degree young-V-even appear-past
 'Hanako appeared to be even young for her age.'
- d.*Hanako-wa toshi-no warini waka-sae-ku mie-ta.

It appears cross-linguistically valid that the AP cannot be modified by certain emphatic markers; if so, the above Japanese paradigm directly confirms that the sequence in

² Even can modify comparative adjectives as in (i).
 (i) John will travel to that conference even more quickly.
 I am not, however, going to pursue this distinction, which is probably due to more being a noun. Here I simply use the contrast in the text as a test to distinguish AP from other XPs.

³ We examined this construction more closely in section 5.3.

question, kV(C), is not an A but a verb. (6a) and (6c) are grammatical because sae 'even' modifies the VP, while (6b) and (6d) are ungrammatical because the emphatic element, sae, appears inside of ku and thus modifies AP. The above paradigm is also problematic for the rejected allomorphic analysis in (2), since the allomorph katta would be separated in the middle in (6a).

To conclude, both adjectives and adjectival nominals basically need the same external structure to form a full sentence. They are followed by tense bearing verbs, kV(C) and da, respectively.⁴ Because of the parallel usage of kV(C) and da, I will call them both copulas. When I need to distinguish the two, I will call kV(C) the bound copula and da (and na) the free copulas, reflecting the fact that the former is a bound morpheme, while the latter is a free morpheme. We will come back to the structure of predicate attribute sentences with adjectives and adjectival nominals as well as with NPs and PPs in section 5.2.

5.1.2. The Syntactic Category of So-called Adjectives and Adjectival Nominals in Japanese

Now let's move on to the question of which categories in syntactic theory adjectives and adjectival nominals belong to. There are at least four non-trivial properties both share, which indicate that they are both As with the [+V, +N]

⁴ This view that the k(V)C and the copular verb are V will be slightly modified in section 5.2.1.

features in Chomsky's (1970) lexical feature system.

First, just as English adjectives exclusively select degree phrases such as very, quite, too, etc., only (and both) adjectives and adjectival nominals select totemo 'very', kanari 'quite', kekko 'somewhat', etc., as their specifiers.

- (7) a. Yukie-ga {totemo/kanari/kekko} atama-ga i-i. ADJ
 Yukie-nom {very/quite/somewhat} brain-nom good-pres
 'Yukie is {very/quite/somewhat} smart.'
- b. Yukie-ga {totemo/kanari/kekko} richi-teki da. AN
 Y-nom {very/quite/somewhat} intelligence-like be-pres
 'Yukie is {very/quite/somewhat} intelligent.'
- c.*Yukie-ga {totemo/kanari/kekko} hashit-ta. V
 Yukie-nom {very/quite/somewhat} run-past
 'Yukie runs quite a lot.'
- d.*Yukie-ga {totemo/kanari/kekko} hon-o yom-u. N
 Yukie-nom {very/quite/somewhat} book-acc read-pres
 'Yukie reads {very/quite/somewhat} book.'
- e.*Kaigi-ga {totemo/kanari/kekko} Tokyo-de ar-u. P
 conference-nom {very/quite/somewhat} Tokyo-at be-pres
 'Conferences are {very/quite/somewhat} at Tokyo.'

Degree words appear in (7a) and (7b) with adjective and adjectival nominals, respectively, and are grammatical, showing that both adjectives and adjectival nominals are the same syntactic category with [+N,+V] features. On the other

hand, the degree words in (7c)-(7e) with VP, NP and PP are ungrammatical.

Secondly, only adjectives and adjectival nominals allow comparatives. Or, to put it differently, an adjective or adjectival nominal is necessary in order to have a comparative of the form NP-yori.

- (8) a. Sayuri-wa Taro-yori isogashi-i. ADJ
 Sayuri-top Taro-than busy-pres
 'Sayuri is busier than Taro.'
- b. Sayuri-wa niku-ga sakana-yori suki-da. AN
 Sayuri-top meat-nom fish-yori like-be-pres
 'Sayuri is fonder of meat than of fish.'
- c.*Sayuri-wa niku-o sakana-yori tabe-ru. V
 Sayuri-top meat-acc fish-than eat-pres
 '*Sayuri eats meat than fish.'
- d. Sayuri-wa niku-o sakana-yori yoku tabe-ru.
 V+ADJ modifier
 Sayuri-top meat-acc fish-than more eat-pres
 'Sayuri eats more meat than fish.'
- e.*Sayuri-wa Tokyo-e Los Angeles-yori ik-u. V
 Sayuri-top Tokyo-to Los Angeles-than go-pres.
 '*Sayuri goes to Tokyo than Los Angeles.'
- f. Sayuri-wa Tokyo-e Los Angeles-yori yoku ik-u.
 V+ADJ modifier
 Sayuri-top Tokyo-to Los Angeles-than often go-pres.
 'Sayuri goes to Tokyo more often than Los Angeles.'

Sentences (8a) and (8b) are well formed, because the adjective and adjectival nominals immediately follow the comparative with yori. Sentences (8c) and (8e) are ill-formed, because they don't include any adjectives. When yoku 'more, more often, etc.', which is an adjective, is inserted, the corresponding sentences, (8d) and (8f) respectively, become grammatical. Since a comparative phrase is likewise required to be in a certain domain with an adjective in English, which we can see from the corresponding English glosses in (8), the above paradigm argues for the A-status of both adjectives and adjectival nominals.

Thirdly, there is a nominal suffix which corresponds to English -ness in Japanese. This suffix sa attaches only to adjectives and adjectival nominals (Kageyama 1982).

(9)	a.	takumashi-sa	'strongness' ('strength')	ADJ
	b.	ganjyoo-sa	'rigidness' ('rigidity')	AN
	c.	*otoko-sa	'*manliness'	N
	d.	*tabe-sa	'*eat-ness'	V

This again suggests that adjectives and adjectival nominals are of the same category A, since both can be made into nouns with the nominal suffix sa.

Finally, as Jackendoff (1977) and van Riemsdijk (1983) argue, it is taken as a universal that As don't assign any accusative case to their complements. As is well known (Kuno

1973; 81) and as can be seen from the examples in (7a-b), neither adjectives nor adjectival nominals take accusative complements and thus this also argues for them both being As.

It seems now safe to conclude that both adjectives and adjectival nominals belong to the same syntactic category A. They share several important structural properties of As. At the same time, however, we know of some significant and unneglectable differences between them. It is our next task to see what these differences are and how they should be accounted for.

Miyagawa (1987; 43) argues that in the lexical feature system of Chomsky (1970), adjectival nominals should be characterized as [+N, +V], while adjectives are neutralized [+V] elements unspecified for N; namely, adjectival nominals share non-trivial properties with nouns, while adjectives don't have anything in common with them. Keeping in mind that the [+N] feature is the claimed difference between adjectives and adjectival nominals, let's go over his arguments for the similarities between adjectival nominals and nouns.

The first fact pointed out by Miyagawa is that both nouns and adjectival nominals need the copula da, while verbs and adjectives can form a full sentence without them.

- | | | |
|------------------|----------------|------|
| (10) Ano hito-ga | kiree da. | (AN) |
| that person-nom | pretty be-pres | |
| Ano hito-ga | sensee da. | (N) |

that person-nom	teacher be-pres	
Ano hito-ga	*utsukushi da/utsukushi-i.	(A)
that person-nom	beautiful	
Ano hito-ga	*i da/ i-ru.	(V)
that person-nom	be	

'That person is {pretty/is a teacher/is beautiful/is (here)}.'

(Miyagawa 1987; 43)

However, this same copula da crucially appears with postpositions as follows:

- (11) a. Tugino kaigi-wa Tokyo-de da.
 next meeting-top Tokyo-at be-pres
 'The next meeting is at Tokyo.'
- b. Kono kozutumi-go Amerika-kara da.
 this parcel-nom America-from be-pres
 'This parcel is from America.'

Since P are categorized as [-V, -N], this shows that Miyagawa's correlation that the Ns and adjectival nominals need the copula da cannot be accounted for by any of the lexical features. Rather, I claim that the adjectival nominals are similar to Ns and Ps in the sense that all of them are free morphemes (i.e., they don't need to be bound to the following items), while Vs and traditionally termed adjectives must be bound to an immediately following

morpheme. Thus, the contrast in (10) can be explained by the difference that the adjectives are bound to V and further to the tense, while the adjectival nominals are not.

Specifically, the copula da occurs with NP, PP and adjectival nominals, which are all free, while it does not cooccur with the V heads of VP and adjectives, which are bound.

The second argument by Miyagawa turns into support for this same claim. He notes that the mitai 'seem like' only attaches to adjectival nominals and nouns, but not to adjectives.

- | | | | | |
|---------|--------------|---------------------|-------------------------|-----|
| (12) a. | sizuka-mitai | 'seems to be quiet' | AN | |
| | b. | otoko-mitai | 'seems like a man' | N |
| | c. | *utsukushi-mitai | 'seems to be beautiful' | ADJ |
| | d. | *tabe-mitai | 'seems to eat' | V |

(Miyagawa 1987; 44)

But in addition PPs as well as adjectives and verbs can occur before mitai 'seems like', provided that they are expressed in free forms.

(13)

- a. Sakki-no denwa-wa kare-no imoto-san-kara mitai da. PP
 just now-gen phone-top his-gen sister-from seem like be-pres
 'The phone call just now seems to be from his sister.'
- b. Ano too-wa totemo utsukushi-i mitai ne. AP
 that tower-top very beautiful-pres seem tag

'That tower seems to be very beautiful, doesn't it?'

- c. Kono inu-mo tootoo esa-o tabe-oe-ta mitai da. VP
 this dog-also finally food-acc eat-finish-past seem be-pres
 'This dog seems to have finished eating food finally.'

So, a necessary condition for the grammaticality of the construction in question is that whatever precedes mitai is a free form which need not be morphologically bound on its right. This thus shows that the alleged difference between adjectives and adjectival nominals attributed by Miyagawa to a [+N] feature of the adjectival nominal is better captured by the hypothesis that adjectives are bound, while adjectival nominals are free.

Finally, the last argument given by Miyagawa can be shown to be irrelevant to the point of whether adjectival nominals and nouns share a feature or not. The paradigm is that the adjectival nominals and nouns cannot appear with the conditional reba.

- | | | | | |
|---------|--------------|-------------------|----------------|---------------|
| (14) a. | *sizuka-reba | 'if quiet' | AN | |
| | b. | *sensei-reba | 'if a teacher' | N |
| | c. | utsukushi-ke-reba | 'if beautiful' | ADJ(with a V) |
| | d. | tabe-reba | 'if (you) eat' | V |

(Miyagawa 1987, 44)

The first thing to notice is that a PP again behaves the same way as nouns and adjectival nominals; thus this phenomenon is

irrelevant to the question of lexical category features.

(15) *Okinawa-kara reba 'if from Okinawa' P

Further, the three categories excluded above in (14a), (14b), and (15) can appear in a conditional clause if na, which is a variant of the copula verb da, follows them.

(16) a. sizuka na raba⁵ 'if it is quiet' AN
 b. sensei na raba 'if (s)he is a teacher' N
 c. Okinawa-kara na raba 'if it is from Okinawa' P

As we will see in Chapter 7, these facts follow from the lexical specification of the conditional reba taking IP, so that the ungrammaticality of (14a,b) results from a subcategorization mismatch.⁶

We have argued that the differences between adjectives and adjectival nominals are reducible to the fact that adjectives are bound to the following verb, while adjectival nominals are free morphemes. Other than this difference, these adjectives and adjectival nominals are exactly the same with respect to lexical category features; namely, they are AS, with the [+V, +N] features in Chomsky's (1970) lexical

⁵ The alternation between reba and raba is purely phonological. It basically reflects the vowel harmony which old Japanese had between the first vowel in the conditional suffix and the preceding vowel.

⁶ I will examine this construction more in detail in Chapter 7.

feature system. From now on, I will refer to adjectives as *bound adjectives* and adjectival nominals as *free adjectives*. *Adjectives* refer to both free and bound adjectives.

5.1.3. Borrowing and Morphology

This difference, bound or free, can be further reduced to the difference of whether the vocabulary is primary or secondary, in Emonds' (1985) terminology. Emonds proposes that a "secondary vocabulary" in a language is characterized by properties such as complete syntactic and morphological regularity combined with more detailed semantic and phonological specifications. He claims that large scale lexical borrowing must be into the secondary vocabulary. In de Hackbeil (1986), it is further proposed that borrowed lexical items (i.e., the secondary vocabulary) such as the Romance vocabulary in English enter a language as syntactically indivisible free open-class words. For example, she claims that none of the Romance endings (e.g., -tion, -ity, etc.) constitute in themselves independent lexical items in the Modern English lexicon.

Since we can trace back most Japanese adjectival nominals to borrowings from Chinese, de Hackbeil's proposal implies that they are secondary vocabulary and thus should be free morphemes. We can make a quick test of this line of thought with English loan words. Now suppose happy and kind are borrowed into Japanese.

- (17) a. John-wa kaindo da.
 John-top kind be-pres
 'John is kind.'
- b.*John-wa kaindo-kat-ta.
 John-top kind-V-past
- c. John-wa happee na hito-ni at-ta.
 John-top happy be person-dat meet-past
 'John met a happy person.'
- d.*John-wa happee-i.
 John-top happy-pres

There is a clear difference in a native speaker's intuition that the loan words are to be considered as adjectival nominals, rather than as bound adjectives. Thus (17b) and (17d), with the dummy verb kV(C), are completely out.

Since some feature such as primary vs. secondary is necessary for distinguishing classes of Japanese vocabulary in the lexicon, as we know from a sequence of phonological research works (McCawley 1968, Yoshida 1983, among others)⁷, we can distinguish two kinds of adjectives without introducing another feature such as [+/- free]. Adjectives with the [-primary] feature are free morpheme adjectives (adjectival nominals) while adjectives with the [+primary] feature are bound adjectives.

⁷ Given the fact that most of the borrowing is from Chinese, the feature [+/-Sino] sometimes proposed in phonology can be translated into [-/+primary] straightforwardly.

To sum up this section, we have seen that the traditionally termed adjectives and adjectival nominals are all bona fide adjectives and their superficial difference can be reduced to the feature [+/- primary].

5.2. Structure of Predicate Attribute Sentences

We have clarified in the previous section a longstanding confusion about the properties of Japanese adjectives. On the basis of this result, we will proceed to a more precise investigation of the structure of predicate attribute sentences with not only APs, but also with NPs and PPs.

5.2.1. The Predicate Head

We have argued in a previous section that both the bound copula kV(C) and the free copula da are verbs. We however need more clarification about this, because we did not seriously examine the possibility that they might be I(nfl)s. Actually, there are a couple of clear contrasts between the two morphemes in question and verbs. It will be argued that both kV(C) and the free copula are inserted under I.

The first difference between the copulas on the one hand and verbs on the other comes from compatibility with suru-support, a Japanese phenomenon similar to English do-support. As we have seen in chapter 4, there is no restriction with verbs with respect to whether they can appear with this suru-support or not; all verbs, either activity or stative verbs, are compatible with suru-support. On the other hand,

sentences in which the copulas take APs, NPs, or PPs are incompatible with suru-support.

- (18) a. Kenji-ga sutereo-o kowashi-sae shi-ta.
 Kenji-nom stereo-acc break-even do-past
 'Kenji even broke the stereo.'
- b. Koko-ni danro-ga ari-sae shi-ta.
 here-at fireplace-nom be-even do-past
 'There is even a fireplace here.'
- c.*Sayuri-ga hoso-ku-sae su-ru.
 Sayuri-nom slim-even do-pres
- d.*Sayuri-ga shinsetsu-de sae su-ru.⁸
 Sayuri-nom kind-at even do-pres
- e.*Sayuri-ga shachoo-de sae su-ru.
 Sayuri-nom president-at even do-pres
- f.*Sono tegami-ga itaria-kara su-ru.
 That letter-nom Italy-from do-pres

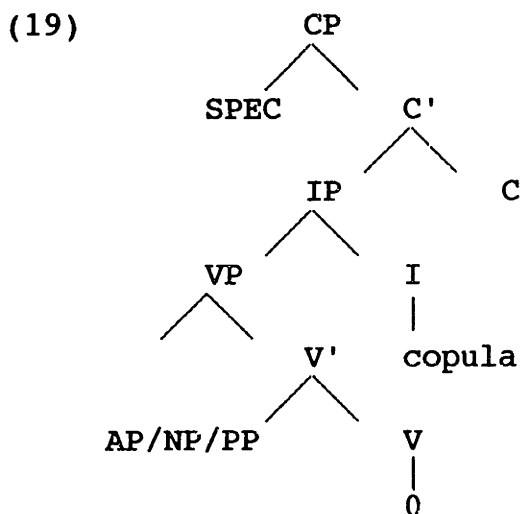
(18a) and (18b) are examples of activity and stative verbs respectively, and both are grammatical with suru. In clear contrast, the sentences in (18c-f) are all ungrammatical.

(18c) is an example with a bound adjective, (18d) with a free adjective, (18e) with a noun, and (18f) with a postposition. If the copulas were under V, there isn't any obvious reason why only these verbs would not allow suru-support, even

⁸ We will come back to the justification for analyzing de following a free adjective or a noun as P in section 5.3.

though all other verbs (activity and stative) allow suru-support. On the other hand, if the two copulars are under I (or higher), this incompatibility with suru-support is easily explained; namely, only verbs base-generated under V can have suru-support.⁹

Secondly, as a generalization, verbs alone cannot impose an exhaustive listing interpretation on a nominative (ga-marked) subject, as we saw in chapters 3 and 4. However, such subjects in AP/NP/PP-centered sentences can have an exhaustive listing reading. To capture this difference between the copulas vs. verbs, I thus analyze both bound and free copulas base-generated under I. Thus the structure of AP/NP/PP-centered sentences is as follows:



Here the obligatoriness of the V being empty in D-structure follows from a generalization I proposed on the basis of my

⁹ In fact, as seen in chapter 4, suru-support involves I features directly, so of course if copulas are alternative realizations of these features, no suru-support is possible.

analysis of Japanese passives in Kubo (1989a).

(20) Single Predicate Head Principle

All theta roles assigned to argument positions within an extended projection XP are assigned by the same x^0

Following Emonds (1985) and Grimshaw (1991), I take IP as an extended projection of VP. By (20), all theta roles assigned to argument positions within IP must be assigned by a single x^0 .

I will call this x^0 the Predicate Head. In the cases where A, N, or P is behaving as a predicate head, the V, which is governed by I to satisfy the universal requirement that I subcategorizes VP, must be something without any theta role to assign, in the cases under discussion empty.

5.2.2. The Free Copula in I and C

As we have seen just above, when predicates are NPs, PPs or free adjectives (i.e., except bound adjectives, which require the bound copula kV(C) to form a sentence), a free copula is necessary to complete a sentence. Although we have seen in section 5.1 only the case where the copula is phonologically realized as da, another phonological form na is also possible. Observe the following pairs:

(21) a. Taro-ga gakusha da.

Taro-nom scholar be

'Exactly Taro is a scholar.'

b. Taro-ga gakusha na-no.¹⁰

Taro-nom scholar be N

'Taro is a scholar.'

(22) a. Taro-ga byooki da.

Taro-nom sick be

'Exactly Taro is sick.'

b. Taro-ga byooki na-no.

Taro-nom sick be N

'Taro is sick.'

(23) a. Kono tegami-ga Hokkaido-kara da.

this letter-nom Hokkaido-from be

'This letter is from Hokkaido.'

b. Kono tegami-ga Hokkaido-kara na-no.

this letter-nom Hokkaido-from be N

'This letter is from Hokkaido.'

(21) contains examples of NP predicates, (22) free adjective predicates, and (23) PP predicates. In the (a) sentences, where the copula is spelled out da, the reading of ga in the subject is exclusively exhaustive listing, as Kuroda (1965, 48) notes. On the other hand, the (b) sentences are usually characterized as female language, and are less discussed in the literature.¹¹ Here, the copula manifests itself as na,

¹⁰ The morpheme after the copula, that is no, will be analyzed as a grammatical noun later in this section and in Chapter 7.

¹¹ It is interesting to note that a synthetic form rather

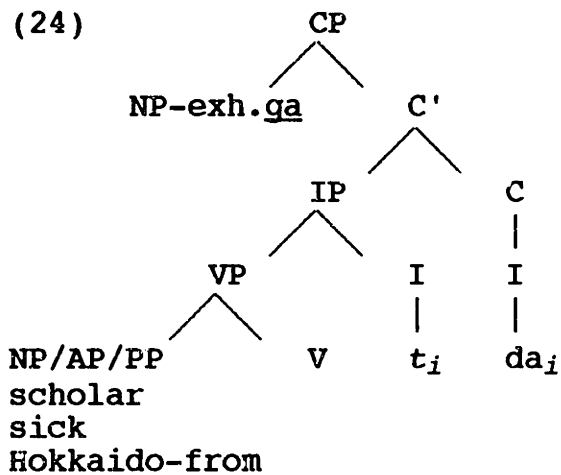
and the nominative marked subject is unambiguously neutral.¹² These sentences, opposed to their counterparts in (a), sound like simply reporting or describing the situation of the subject. In certain contexts, therefore, one or the other is excluded. For example, think about the situation Kuroda (1965, 49) describes. When a doctor arrives, there are three people lying on beds. The doctor asks who is sick. Then, (22a) with the exhaustive interpretation can be used as a suitable answer, while (22b) cannot be used even if the person speaking is a woman.

To capture this one-to-one correlation between the predicate copula form, da or na, and the interpretation of the subject, I propose to analyse da as under C, paired with a SPEC(C) containing the exhaustive ga, while na stays in I as base-generated, paired with SPEC(V), where the neutral ga is. In other words, I propose along the lines of Hasegawa (1987) that there is a case of Infl-movement in Japanese: the

than an analytic one is considered to be more feminine. As we will see in Chapter 8, an analytic form is used to express a speaker's recognition that a property described in the predicate is contained in the subject, which is responsible for the assertive connotation. It is thus not surprising that women are not supposed to use the analytic form, which asserts something about the situation, but are supposed to use a synthetic form which simply connects the subject and predicate in order to describe the situation.

¹² Historically speaking, not only the copula, but every other predicate distinguished two forms, as is still reflected in school grammar by reference to a "final form" and an "attributive form". Although the majority of predicates lost this distinction, from the discussion above we can say that the final form is used when a predicate is individual level, while an attributive form indicates a stage level.

free copula is base-generated in I and optionally moves to C.¹³ When the copula stays in I, then the subject must be realized internal to IP and gets a neutral interpretation, while when it moves up to C, the subject must be realized in the corresponding SPEC(C), by (13) of chapter 4, and has an exhaustive listing interpretation. The structures for the case where the copula is phonologically manifested as da are thus as follows:



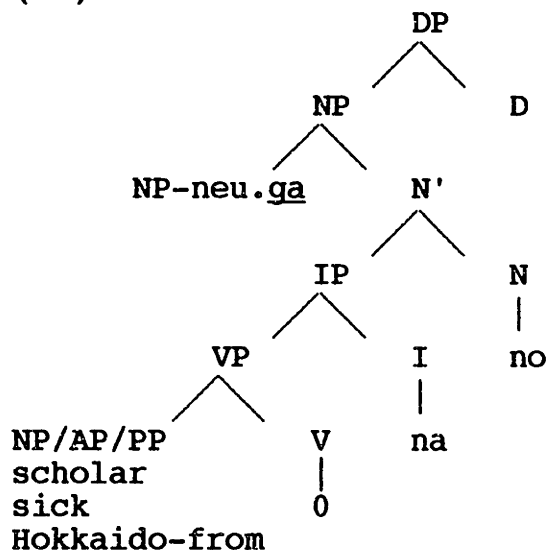
Here, as I proposed in chapter 4, C, when it is filled with I features, can assign nominative to the corresponding SPEC(C) through SPEC-HEAD agreement. Further I itself can assign its

¹³ Hasegawa (1987) argues in her insightful work on polarity sensitive items that Infl, especially a negation, adjoins to C at LF. It seems to me plausible to analyze the negation morpheme (a)na as a bound adjective, due to its conjugation pattern and other properties such as compatibility with sa 'ness' (cf. section 5.1). Then, raising to C isn't a peculiar characteristic of negation, but rather a feature common to adjectives, although there still is a difference as to the level, S-structure or LF, where the raising occurs.

own nominative case even inside of AP, because the intervening VP whose head is not lexically filled is not a case-barrier (cf. (23) of chapter 3). This fact shows that APs are not case-barriers against outside case assigners, as the formulation of (23) in chapter 3 implies.

The structure of the sentences where the free copula is realized as na is as follows. As in the (b) sentences in (21-23), the copula na must be followed by no, which I will now argue is a grammatical noun below. The whole sentence is thus a DP, adopting the DP-hypothesis (Abney 1987).¹⁴

(25)



The whole (b) versions of sentences in (21-23) should be considered nominalized because their distributions are those of NP; for example, they take case-marking:

¹⁴ For applications of the DP-hypothesis to Japanese, see Tateishi (1988), Ueda (1990) and Tonoike (1991).

- (26) a. Anata-wa Taro-ga gakusha na-no-o shit-te i-masu-ka?
 you-top Taro-nom scholar be N-acc know-P be-pol-Q
 'Do you know that Taro is a scholar?'
- b. Taro-ga byooki-na-no-ga tiimu-no haiboku-no geiin-da.
 Taro-nom sick-be-N-nom team-gen defeat-gen cause-be.
 'That T is sick is the source of our team's defeat.'

For example, in (a), the sentence (21b) is used as an object marked as accusative, and in (b) the sentence (22b) is used as a subject marked as nominative.

Although this distribution shows that the morpheme no is an N, it seems to be empty in syntax (i.e., before PF). For neither an adjective nor a genitive can appear with no, as opposed to other lexical noun phrases.

- (27) a.*Hanako-no [Taro-ga gakusha na]-no.
 Hanako-gen [Taro-nom scholar be]-N
 'Hanako's that Taro is a scholar.'
- b.*Kanashi-i [Taro-ga byooki na]-no.
 sad [Taro-nom sick be]-N
 'Sad that Taro is sick.'

I thus conclude that when the copula is under I, the whole IP must be nominalized by a grammatical noun no. The case marking mechanisms for double nominatives in the embedded configuration (25) will be further investigated in chapter 7, though what has been said about the root clauses in (24) will

stand.

5.2.3. Structures of the Bound Adjective-Centered Sentences

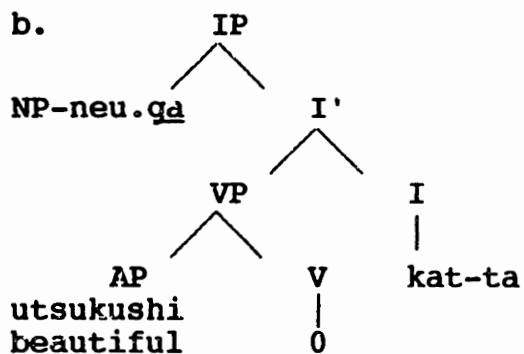
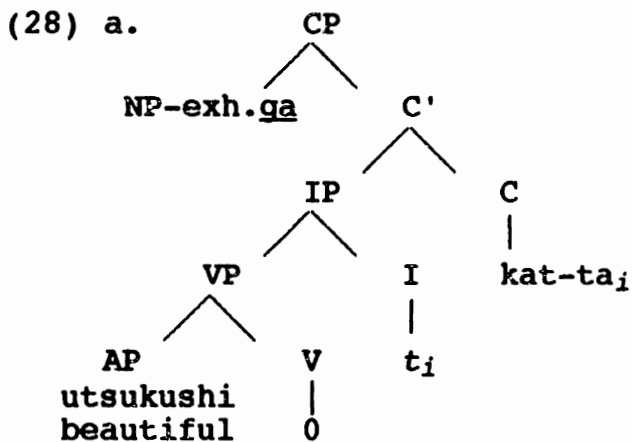
We have seen in the previous section that the copula is base-generated under I and can optionally move up to C. When it moves up to C, it is realized as da, and when it stays in I, it is phonologically realized as na. Consequently, when the copula is under C, the nominative marked subject appears in SPEC(C) and thus gets an exhaustive interpretation, while when the copula is under I, the nominative marked subject is in SPEC(D) and gets a neutral interpretation.¹⁵

In the case of bound adjectives, there isn't any morphological alternation similar to da/na. However, we know from chapter 2 that the bound adjective sentences can have both exhaustive and neutral ga-subjects, and there is no reason to believe that bound adjectives exhibit a deep syntactic difference from na/da, since, as we saw in 5.1., the only difference between bound and free adjectives is morphological. Thus, we can say that for an exhaustive reading of a ga-subject, kV(C) and the adjective bound to it are moved to C, while for a neutral reading of a ga-subject, kV(C) and its bound adjective are under I. For unknown reasons, the IP sentence does not need to be nominalized as

¹⁵ We return later to how NPs in SPEC(D) and SPEC(N) receive case in chapter 7.

in the case with the free copula in the previous section.

The two kinds of structures are thus as follows:



5.2.4. Subject Interpretations in Predicate Attribute Sentences

We have seen in the previous two sections that predicate attribute sentences, either with free predicate heads (i.e., NP/PP/free AP-centered sentences) in section 5.2.2 or with bound predicate heads (i.e., bound AP-centered sentences), can take either IP or CP form, contrary to VP-centered sentences, which, outside of suru-support constructions, can

project up only to IPs.

When a predicate attribute sentence projects up to CP, because the I(nfl) then raises to C, its nominative marked subject gets the by now expected exhaustive interpretation in SPEC(C) position. The sentence is then taking on an "analytic form" and thus denotes that the predicate is analytically included in the subject or that the predicate is an intrinsic feature of a subject. When the I(nfl) is a free or bound copula in its base-generated position, the predicate attribute sentence takes on an IP-structure. Here, the subject is internal to IP and thus gets a neutral interpretation. The relation between a subject and a predicate is in this case "synthetic". That is, a subject is related to a predicate but does not contain it.¹⁶

As we pointed out in section 5.2.2, there is no restriction on whether an AP/NP/PP occurs with either form of the copula, da or na, and so any predicate attribute can be either analytic or synthetic in form. It thus follows that any predicate attribute can have either exhaustive or neutral

16 This line of thought that the position of I(nfl) affects the meaning of the sentence can be seen in earlier literature on English. Chomsky (1972, 107), citing J. Emonds, shows that depending on whether I is raised to C or not (in current terms) the semantic interpretation of the sentence can differ.

- (i) a. I shall go downtown.
 b. Shall I go downtown?
 c. I asked/wonder whether I shall go downtown.

In sentence (b) shall means essentially should, very differently from in sentences (a) and (c), and this can be attributed to the position of shall; namely, given Subject-Aux inversion as I to C movement, I is in C in (b), while I stays in its original position in (a) and (c).

ga subjects. This clearly shows that the semantics approach based on the meaning of predicates sketched in chapter 2 cannot correctly capture the distribution of exhaustive and neutral interpretations of nominative marked subjects (cf. Kuno's generalization (14) of chapter 2).

The case of English is slightly different from the above discussed Japanese case. There is an interesting restriction among adjectives with respect to whether they can be a complement of the verbs get and become, as noticed in Emonds (1992).

- (29) a. John became/*got hard-working/European.
 b. John got/?became sick/tall.¹⁷
 c. The coffee got/*became cold.
 d. The store got/*became busy.

It appears that in English many adjectives are specified in the lexicon for whether they are compatible with these verbs, by means of some feature such as [± inherent property].

5.3. Aru-support

5.3.1. Structure of the aru-support Construction

Sentences which have adjectives and nouns as predicates (AP/NP-sentences) participate in a phenomenon similar to suru-support. When the same set of emphatic elements as

¹⁷ Some native speakers of English do not seem to get a strong contrast.

appear in suru-support is inserted after kV(C) or a free copula, a verb aru 'be' appears to support the tense. The phenomenon can be termed aru-support, analogous to suru-support, as a descriptive name. We will see, however, that the phenomenon should be captured in terms of the verb aru's ordinary usage as a stative verb.

Let us anyway observe the paradigm.

(30) Bound Adjectives:

a. Taro-wa/ga isogashi-kat-ta.

Taro-top/nom busy was

'Taro was busy.'

b. Taro-wa/ga isogashi-ku-{sae/mo/saemo/wa} at-ta.

Taro-top/nom busy-{even/even/even/at least} was

'Taro was even/at least busy.'

c. *Taro-wa/ga isogashi-ku at-ta.¹⁸

(31) Free Adjectives:

a. Taro-wa/ga kenkoo da.

Taro-top/nom healthy be

'Taro is healthy.'

b. Taro-wa/ga kenkoo de-{sae/mo/saemo/wa} aru.

'Taro is {even/at} least healthy.'

¹⁸ When this sentence is used in the imperative mood, it is grammatical for an unknown reason.

(i) Isogashi-ku ar-e. 'Be busy.'

Perhaps analogously in English, one cannot say (ii), but the imperative (iii) is acceptable.

(ii) *John doesn't be busy.

(iii) Don't be busy.

c. Taro-wa/ga kenkoo de aru.

'Taro is being healthy.'

(32) Nouns:

a. Taro-wa/ga funanori da.

Taro-top/nom sailor be

'Taro is a sailor.'

b. Taro-wa/ga funanori de-{sae/mo/saemo/wa} aru.

'Taro is {even/at least} a sailor.'

c. Taro-wa/ga funanori de aru.

'Taro is being a sailor.'

The (a) examples show canonical adjective patterns and the (b) examples are what I propose to term the aru-support construction. As we saw in section 5.1., the emphatic markers cannot directly modify adjectives; thus they appear after the dummy verb, ku, a variant of the bound copula, and a verb ar 'be' is inserted under I to support the leftover tense. The emphatic elements are obligatory for triggering the aru-support construction with bound adjectives, as the ungrammaticality of (30c) indicates, while they are optional with free adjectives and nouns.

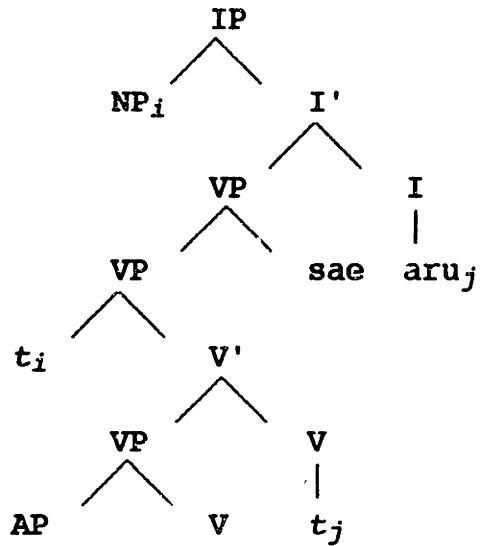
This optionality of emphatic elements makes us wonder about the status of the morpheme de, which appears right after free adjectives and nouns in (31b) and (32b). For if de were a phonological variant of a copula verb, as expected from the parallelism between the suru-support construction for verbs and the aru-support construction for bound

adjectives, in which the emphatic elements uniformly appear directly after main verbs, we would need some ad hoc statement on why de can appear without emphatic elements. A couple of considerations in fact suggest that the morpheme de in question is a P. First, de is homophonous with a postposition which often translates as 'at', and this meaning fits with the overall meaning of sentences such as (31b,c) and (32b,c); namely, the sentences mean that the subjects are "at" the state which is described by the adjectives or nouns. Further, the morpheme in question can also be identified with the so-called gerundive suffix of verbs, such as in tabe-te 'eat-ing' or ton-de 'fly-ing', which I argued in Chapter 3 is a P.¹⁹ I thus conclude that the de in (31-32) is a postposition, P. Now it makes sense that the emphatic elements are optional with de, because PP are never bound by any following morpheme.

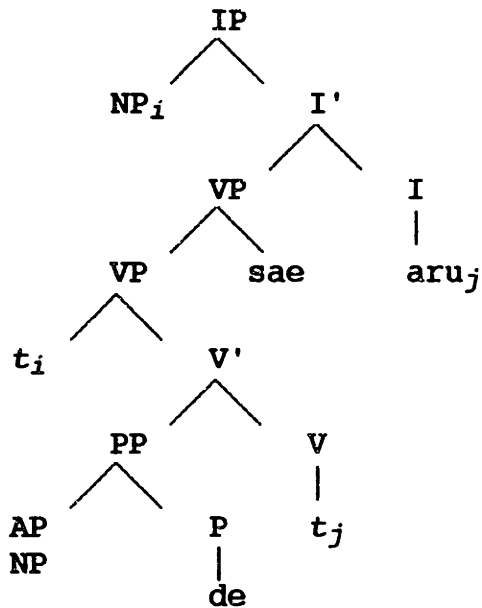
The structures for aru-support in the presense of emphatics are thus as follows:

¹⁹ Although the so-called gerundive suffix, which I analyzed in chapter 3 as P, goes through some assimilation with the final consonant of the preceding verb, the morpheme in question here is not affected by the same phonological rule; it does not change phonological shape. This difference, however, can be attributed to the fact that verbs are bound to the so-called gerund form, while nouns and free adjectives are not.

(33) With bound adjectives



(34) With free predicate attributes



The verb aru necessarily raises to I, because as we have seen in chapter 3 it is a stative verb.²⁰ Since aru, being a

²⁰ In chapter 3, I attribute this obligatory raising of stative verbs to their morphological subcategorization V,

verb, is base-generated under V, it cannot move in two steps up to C in Japanese as we saw in chapter 3; thus the aru-support construction (33-34) is unambiguously synthetic in form. Its nominative marked subject therefore always gets a neutral interpretation, being internal to IP.²¹

5.3.2. Aru-support as a Device to Ensure the Synthetic Form

As pointed out just above, the aru-support construction which obligatorily takes the form of IP more precisely expresses that the subject is "now at the state" described in predicates, adjectives or nouns. For example, (30a) without aru but with a bound adjective is ambiguous between analytic (i.e, I-headed CP) and synthetic (i.e, IP) forms, the subject being exhaustive and neutral, respectively. On the other hand, the sentences (31-32b) and (31-32c) with aru-support mean rather that 'Taro is at the stage of healthiness' or 'Taro is at the stage of being a sailor.'

This difference between CP and IP-structures can be more explicitly observed by investigating the following contrast.

+ I at the S-structure or PF level.

²¹ In comparative terms, the distribution of the Japanese verb ar 'be' is basically the same as that of the stage level copula in Spanish, estar. Estar appears with stage level adjectives and PP complements, while the other Spanish copula verb, ser, shows up with individual level adjectives and NP complements. As can be seen from the fact that the Japanese P, de 'at', is required in the case of free adjectives and nouns with a stage level sense, aru like estar takes stage level adjectives as in (30) or PP as in (31) and (32).

- (35) a. *Taro-ga kenkoo da koto
 Taro-nom healthy be fact
 'The fact that Taro is healthy'
- b. Taro-ga kenkoo-de aru koto
 Taro-nom healthy-P be fact
 'The fact that Taro is healthy'
- (36) a. *Taro-ga funanori da koto
 Taro-nom sailor be fact
 'The fact that Taro is a sailor'
- b. Taro-ga funanori-de aru koto
 Taro-nom sailor-P be fact
 'The fact that Taro is a sailor'

As we will see in Chapter 7, an I-headed CP cannot appear in embedded koto-clauses, while IP-sentences can; thus the contrast in (35) and (36) clearly shows that the aru-support construction is an IP-sentence structure and not a CP.

5.3.3. Differences between aru-support and suru-support

Given the fact that the adjective itself can be used in either analytic or synthetic forms, the aru-support construction can be characterized as a device to enforce a synthetic form. This differentiates it from the suru-support construction, which guarantees rather an analytic form.

There are several other interesting differences between suru-support (I-headed CP) and aru-support (IP) which suggest

that our analysis is on the right track. First, as we saw in chapter 4, a nominative marker ga on the subject is always interpreted as exhaustive in the suru-support construction, but it is always neutral (without contrastive stress) in the aru-support construction. This unavailability of an exhaustive reading with aru can be explained by analyzing aru under I, while suru is under C.

Secondly, although suru-support always occurs with VP-preposing (chapter 4), VP-preposing is not allowed with aru-support.

(37) a.*isogashi-ku sae Taro-ga at-ta.

busy-V even Taro-nom was

'Even busy Taro was.'

b.*Kenkoo-de (sae) Taro-ga aru.

healthy-at even Taro-nom is

'Even healthy Taro is.'

c.*Funanori-de (sae) Taro-ga aru.

sailor-at even Taro-nom is

'Even a sailor Taro is.'

This difference in the availability of VP-preposing between suru-support and aru-support can be explained neatly by our analysis: VP-preposing needs a lexically filled C and thus suru is under C, while aru is under I and SPEC(C) is not available.

5.4. Summary: Three Types of Sentence Form

We have examined in this chapter the structure of predicate attribute sentences. In interesting contrast to VP-centered sentences, predicate attribute sentences need a lexical I(nfl) to complete a sentence. This can be seen in the following way. A root sentence is an extended projection of V. When V is filled and is thus a predicate head, I can be either lexically filled or not. When any other X is a predicate head, either V or I must be lexically filled in D-structure to make a sentence. The V, however, cannot be filled, because of the Single Predicate Head Principle in (20).²² It thus follows that I must be lexically filled, either by a free or a bound copula.

This can also be put in the following way:

- (38) Any filled head X^0 of an extended projection X^E properly contained in a root must be lexically licensed (or selected).

With VP-centered sentences, the highest extended projection IP is not properly contained in a root, but rather itself is a sentence. On the other hand, in AP-centered sentences, AP, itself an extended projection, is properly contained in IP and must be selected by some V or I (i.e. the copulas).

This base-generated I also optionally raises to C. When

²² An aru-support construction such as (34) is a VP-centered sentence.

it raises, the resulting CP sentence is analytic in form. Consequently, a nominative marked subject is in SPEC(C), getting case-marked by the corresponding head C through SPEC-HEAD agreement, and thus obtaining an exhaustive interpretation. When I stays in its base-generated position, the sentence is a bare IP and its form is synthetic. The nominative marked subject is then neutral in its interpretation, being inside of IP. The nominative case is assigned here by a corresponding head I through SPEC-HEAD agreement.

Being able to take on both IP and CP-forms, the predicate attribute sentences have an intrinsically complex relation to the distribution of exhaustive and neutral interpretations of the ga-subject, which in part led to the confusion discussed in Chapter 2. The VP-centered sentences, as we saw in chapters 3 and 4, behave quite the opposite. Since a V cannot move up to C, without the suru-support device, a VP-centered sentence is ordinarily synthetic in its form and thus its subject is unambiguously neutral. We have thus seen in chapters 3 through 5 three sentential types. Two are synthetic and the other is analytic in form.

(i) With action verbs, the verbs stay in their base-generated V position, syntactically separated from I; the predicate head of the whole IP sentence is in VP.²³ The

²³ A slightly different way to look at this is to appeal to the Invisible Category Principle of Emonds (1987). Under this view, the features of I can be morphologically realized on V with activity verbs, so that the whole sentence becomes

constructional meaning of this type of sentence is of course synthetic but specifically activity. The relation between a subject and a predicate is captured as the subject playing a role in an action which is described by a predicate; namely, it is not the case that a predicate is included in a subject, but rather a subject is connected to the predicate. The sentence is thus descriptive of a situation and belongs to the synthetic form. I call this type "synthetic-activity sentences".

(ii) When the sentence takes an IP form, I being filled either by a raised stative verb, or a copula in predicate attribute sentences, the sentence also describes a synthetic relation between the subject and a predicate. The often associated temporary nature of the meaning is a result of this synthetic relation. For the predicate is not denoted here as an intrinsic property of the subject, something which can be found by analysing a subject, but rather is externally connected to the subject. I call this type "synthetic-state sentences". Synthetic forms (or sentences) is a cover term for both synthetic-activity and synthetic-state forms.

(iii) Finally, when C is filled by a lexical element, either by a verb suru in the suru-support construction or by raised copular I(nfl)s da or kV(C), the sentence projects as CP and is analytic in form. The constructional meaning of

basically a VP with I features. As Artiagoitia (1992) observes, the ICP does not have any effect on syntactic properties of the higher head; thus, the case marking mechanism (i.e., I case marks NP in SPEC(I), etc.) developed in chapter 3 remains valid.

this form is that the predicate is internal to the subject. The relation between the subject and predicate is not one of an "external theta-role". The meaning is rather "by examining the subject carefully, the predicate is surely found in it". The intrinsic or permanent state meaning or assertive connotation associated with a certain sentence is an effect of the analytic form. The so-called exhaustive interpretation of the subject should also be considered as a result of this analytic relation. In an analytic form, a speaker's sentence is denoting that a predicate is an intrinsic feature of the subject. Put the opposite way, it is natural that this kind of interpretation associated with the subject is the only one which satisfies the predicate. Thus, the subject is thought to have an "exhaustive interpretation". But such a subject cannot be equated with "only X"; rather this "exhaustivity" should be considered as an analytic relation seen from the point of view of subject interpretation. I call such sentences "analytic sentences"

In the next chapter, we will see two constructions in which the three types of forms, synthetic-activity, synthetic-state, and analytic form, are manifested within each construction. One is a construction with the potential morpheme eru and the other is a construction with the desiderative adjective tai.

Chapter 6

Domains and Effects of Head Movement

The Japanese potential and desiderative constructions have been discussed in the literature particularly because of their case alternations. Here, I will show that following Kubo (1989b) these case alternations mirror the structural positions of heads and their structural relations to argument NPs.

6.1. The Paradigms in Question and Previous Treatments

Among the double nominative constructions discussed in chapter 2, some of them exhibit a case alternation between ga and o in objects, as follows:

- (1) a. Boku-ga koora-ga/o nomi-ta-i.¹
 I-nom coke-nom drink-des-pres
 'I want to drink coke.'
- b. Taro-ga girishago-ga/o hanas-e-ru.²
 Taro-nom Greek-nom speak-pot-pres
 'Taro can speak Greek.'

¹ The desiderative suffix -ta, which we will examine in detail below, has the interesting restriction that it can be used only with a first person singular subject in the present tense. See Kuroda (1971) for detailed discussion.

² The potential re appears in full when it is attached to a verb ending with a vowel (tabe-re 'eat-pot'), while it appears as e after a consonant (hanas-e 'speak-pot').

Kuno (1973, 85, 140) claims that this case alternation between ga and o in objects is available only when bound suffixes like the desiderative tai as in (1a) or the potential re as in (1b), which are both inherently stative, are involved.³

To account for this case alternation, Kuno (1973, 85) states that "if the noun phrase is taken to be the object of the derivatives [tai and re, M.K.] as a whole, which are stative by assumption, ga is used as the object case marker. On the other hand, if the noun phrase is taken to be the object of only the verb stem, which are action verbs, then o is used for marking the object."⁴ More specifically, he claims that the sentences with the derivatives can be associated with two structures. For example, when the sentence is analyzed as having the structure in (2a), o appears with the object, while when the structure is like (2b), ga is marked on the object.

(2) a. [Kono uta utau] -eru

-o

³ Counterexamples to this claim by Kuno are wakaru 'understand' (Chapter 3), suki-da 'like' and kirai-da 'dislike'. They can take both nominative and accusative marked objects.

⁴ Notice it is important for Kuno to make clear that both potential and desiderative morphemes are stative, because then he can appeal to his generalization in (3) in chapter 3, which says that action predicates assign accusative, while stative predicates assign nominative case to their objects.

[this song-acc sing] -can
 b. [kono uta]-[uta-eru]

-ga

[this song]-nom [sing-can]

'I can sing this song.'

(Kuno 1973, 52, (24))

This idea, however, is not directly reflected in the case marking system which he later proposes (Kuno 1973, 327-350).

Following Kuno, Sugioka (1984) makes a proposal utilizing reanalysis. She claims that although both tai and eru subcategorize for a V', they can be reanalyzed as V-suffixes. While she states several restrictions on reanalysis mainly involving the surface word order, it is not apparent why these conditions should prevent reanalysis. Put another way, no principled reason is given for why these conditions form some kind of natural class which prevents reanalysis.

Using the research summarized above, the main purpose of this chapter is to investigate the derivative suffixes along the lines of the head-movement analysis developed in the previous chapters. The case alternation under scrutiny can reveal a good deal about the positions of verbs and their effect on interpretation.

We will start from the potential construction, where both V and I are lexically filled in the base, the latter with the potential suffix -re.

6.2. All Three Syntactic Structures Manifested in the Potential Construction

6.2.1. The Potential Morpheme Base-generated under I

The potential suffix reru induces multiple case marking patterns:

- (3) a. Hanako-ga eigo-ga hanas-e-ru.
 b. Hanako-ni eigo-ga hanas-e-ru.
 c. Hanako-ga eigo-o hanas-e-ru.
 d.*Hanako-ni eigo-o hanas-e-ru.

Hanako-nom/dat English-nom/acc speak-pot-pres

'Hanako can speak English.'

- (4) Hanako-ga eigo-o hanas-u.

Hanako-nom English-acc speak-pres

'Hanako speaks English.'

In the sentence (4), which does not include the potential suffix, only canonical case markings appear: the subject must be marked by a nominative and the object must be marked by an accusative. On the other hand, when the potential suffix is attached to the verb, three ways of case-marking become grammatical. We will soon see that each pattern manifests one of the three different positions (i.e., V, I and C) which can be filled with verbal elements.

I will first examine the status of the potential suffix itself. Although it is treated as a verb which takes a

sentential complement in previous research (Kuno 1973, Tonoike 1979, Sugioka 1984, among others), I argue that the potential suffix is not a V, but rather must be base-generated under I. First, its inflectional pattern tells us that it is not an adjective.

(5)	potential	bound adjective	verb
	present	V-e-ru	A-i
	past	V-e-ta	A-kat-ta
			V-(r)u
			V-ta

The conjugation pattern of the potential morpheme is the same as verbs, rather than like adjectives.

Secondly, unlike verbs, reru can be followed by none of the verbal suffixes such as the causative morpheme sase, the passive morpheme rare, or the temporal aspect morphemes hajimeru 'begin', dasu 'begin', oeru 'finish', owaru 'finish', and tsuzukeru 'continue'.

- (6) a.*John-ga/ni haiku-ga/o yom-e-hajime-ta.
 John-nom/dat haiku-nom/acc read-pot-begin-past
 'John started to be able to read haiku.'
- b.*John-ga/ni haiku-ga/o yom-e-dasi-ta.
 John-nom/dat haiku-nom/acc read-pot-begin-past
 'John started to be able to read haiku.'
- c.*John-ga/ni haiku-ga/o yom-e-oe-ta.
 John-nom/dat haiku-nom/acc read-pot-finish-past
 'John finished being able to read haiku.'

- d.*John-ga/ni haiku-ga/o yom-e-owat-ta.
 John-nom/dat haiku-nom/acc read-pot-finish-past
 'John finished being able to read haiku.'
- e.*John-ga/ni haiku-ga/o yom-e-tsuzuke-ta.
 John-nom/dat haiku-nom/acc read-pot-continue-past
 'John continued being able to read haiku.'

This incompatibility with derivational verbal suffixes can be accounted for straightforwardly if we say that the potential morpheme is base-generated under I; namely, the derivational verbal suffixes of temporal aspect, themselves Vs, can only take V(P), but not I(P).

Third, the potential morpheme cannot be used in the imperative mood. More generally, elements under I (stative verbs and copulas with predicate attributes such as nouns, postpositions and adjectives) cannot be used in the imperative mood.

- (7) a.*Tashizan-ga deki-ro.
 addition-nom be capable of-imp
 '*Be capable of doing addition.'
- b.*Tsuyo-ke-re.⁵
 strong-V-imp

⁵ The following sentence with a verb aru is grammatical, probably in this case because aru stays in a base-generated position under V.

- (i) Tsuyo-ku ar-e.
 strong-V be-imp
 'Be strong.'

'Be strong.'

c.*Shashin-ga/o tor-e-ro.

picture-nom/acc take-pot-imp

'Be able to take pictures.'

(7a) exhibits a stative verb and (7b) an adjective with a bound copula. The potential construction in (7c) is likewise ungrammatical, behaving in the same way as other I-elements.

Fourth, the potential morpheme cannot appear in VP-preposing sentences.

(8) a.*Doitsugo-no uta-o/ga uta-e-sae Taro-ga/ni shi-ta.

German song-acc/nom sing-pot-even T-nom/dat do-past

'Even could sing a German song, Taro did.'

b.*Sinsha-o/ga ka-e-sae Hanako-ga/ni shi-ta.

new car-acc/nom buy-pot-even Hanako-nom/dat do-past

'Even could buy a new car, Hanako did.'

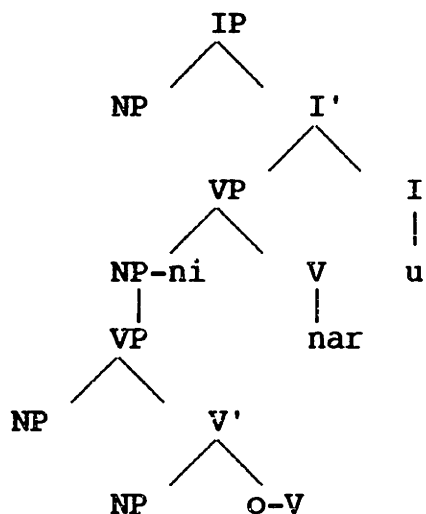
This argument strongly supports the view that the potential morpheme is an I. For, as we have already seen in chapters 3 and 5, only VP but not IP can be preposed to SPEC(C).

Finally, there is an honorific construction o-V-ni naru, which appears discontinuously. This honorific is used to express respect toward a subject of a sentence and means literally that the honorary person is "becoming V-ing". For example, the following is a pair of sentences without and then with the honorification.

- (9) a. Oka-sensei-ga Taro-no sakuhin-o home-ta.
 Oka-master-nom Taro-gen work-acc praise-past
 'The great master Oka praised Taro's work.'
- b. Oka-sensei-ga Taro-no sakuhin-o o-home-ni nat-ta.
 O-M-nom T-gen work-acc hon-praise-dat become-past
 'The great master became praising Taro's work.'

According to Suzuki (1989), this honorific can be analyzed as a verb naru 'become' taking an NP which consists of a VP. Details aside, the structure Suzuki proposes is essentially as follows:

(10)



In this construction, as expected if -re is an I, the potential morpheme cannot appear inside VP; namely, o-V-eru-ni naru is ungrammatical.

(11) *Oka-sensei-ga/ni Arabiako-o/ga o-hanas-e-ni nat-ta.
 Oka-M-nom/dat Arabic-acc/nom hon-speak-pot-dat become-past
 'The great master Oka became able to speak Arabic.'

This paradigm further supports the potential morpheme being an I, for only a VP constituent can be the complement of naru 'become'. (We will see an interaction between the potential morpheme and this honorific construction again later in section 6.2.3.)

To sum up, I have demonstrated in this section that the potential morpheme is not an A nor a V, but is an I. It is further not C, either. For -re can cooccur with the question morpheme ka, which I argue in Chapter 7 is under C.

(12) Yukie-ni chuukaryoori-ga stukur-e-ru-ka?
 Yukie-dat Chinese food-nom make-pot-pres-Q
 'Can Yukie make Chinese food?'

By way of contrast, the C ka cannot cooccur with suru in the suru-support construction, because C is filled with the verb suru.

(13) a.*Charuzu-gawa-o oyogi-sae Taro-ga shi-ta-ka?
 Charles river-acc swim-even Taro-nom do-past-Q
 'Even swim in the Charles river, did Taro do?'
 b.*Taro-ga Charuzu-gawa-o oyogi-sae shi-ta-ka?
 Taro-nom Charles river-acc swim-even do-past-Q

'Did Taro even swim in the Charles river?'

It thus is the case that the potential morpheme is base-generated under I.

6.2.2. The Three Case-marking Patterns Correspond to Three Positions of the Predicate Head

Let us look at the three case marking patterns involving the potential with respect to the interpretation of nominative marked NP in each of them.

- (14) a. Hanako-ga eigo-ga yom-e-ru.
 b. Hanako-ga eigo-o yom-e-ru.
 c. Hanako-ni eigo-ga yom-e-ru.
 d.*Hanako-ni eigo-o yom-e-ru.

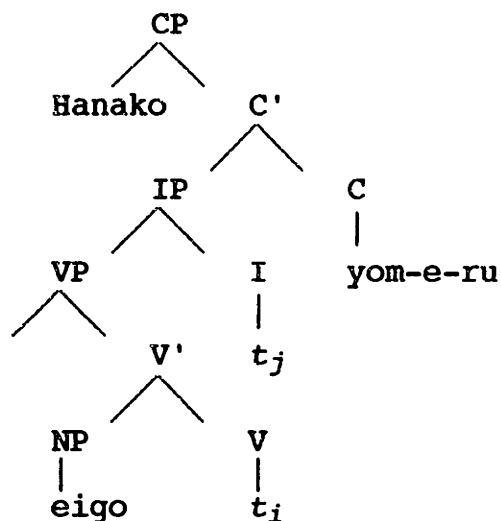
Hanako-nom/dat English-nom/acc read-pot-pres

'Hanako can read English.'

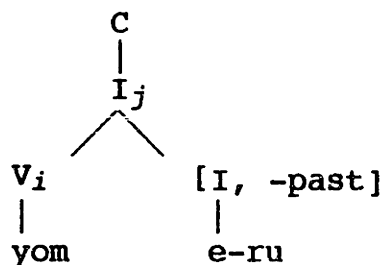
Pattern (14a) is an analytic form, because the nominative marked subject Hanako is interpreted exclusively as exhaustive. The second ga in the pattern (14a) is neutral as we expect, for only one exhaustive ga is available in a single sentence (Chapter 2). According to the previous discussion in Chapters 4 and 5, the exhaustive ga-subject in SPEC(C) requires something under C to case mark it. The probable hypothesis is to assume that the verb incorporates into I and then I further moves up to C, the verb together

with the potential morpheme.

(15) a.



b. Structure of C in (15a):



The C filled with a lexical [+I] item can now case mark the corresponding SPEC(C) in (15). Its case is realized as nominative with the exhaustive interpretation. The second nominative is marked by I under C, because after V raises, the VP without a lexical head is not a case-barrier anymore (cf. (23) in chapter 3), so I can govern and case-mark the NP which is a complement of V.

In the previously discussed paradigms where I is

realized in C (involving the copulas or suru), there are no instance of V moving "two steps" (first incorporating into I, then I moving to C). I claim that this is not accidental, but is due to the following restriction on incorporation or head-to-head movement:

(16) Head Visibility Requirement

X^0 is not visible for Move @ if the only lexical item under an X^0 is some $Y \neq X$.

In the case of stative verbs (chapter 3), although V adjoins to I, the host I is not a lexical item but only carries tense features. Such a non-lexical I with an incorporated lexical V is no longer visible for head movement and thus no further raising of I to C occurs. In the present case, since the potential morpheme re is a lexical item, it thus keeps I visible for further movement. In the case of predicate attribute sentences, since a copula is lexical, I clears the HVR (16) and may substitute for C. Finally, in the suru-support construction, even though I is not lexical, no lower V is incorporated into it and it can thus escape the HVR.

My analysis that the V and I are raised to C in the NP-ga NP-ga pattern with the potential construction gets direct support from the impossibility of questioning the type (14a), since there is no place for [c ka].

(17) *Hanako-ga eigo-ga yom-e-masu-ka?

Hanako-nom English-nom read-pot-polite-Q

'Can Hanako read English?'⁶

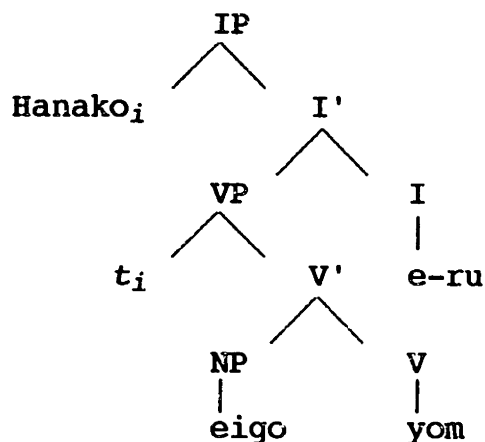
cf. Hanako-ni eigo-ga yom-e-masu-ka?

Hanako-dat English-nom read-pot-polite-Q

'Can Hanako read English?'

Moving next to the pattern (14b), the ga-subject is exclusively neutral; namely, the sentence is synthetic in form. In (14b), both the verb and the potential morpheme stay in their base-generated positions, namely under V and I, respectively.

(18)

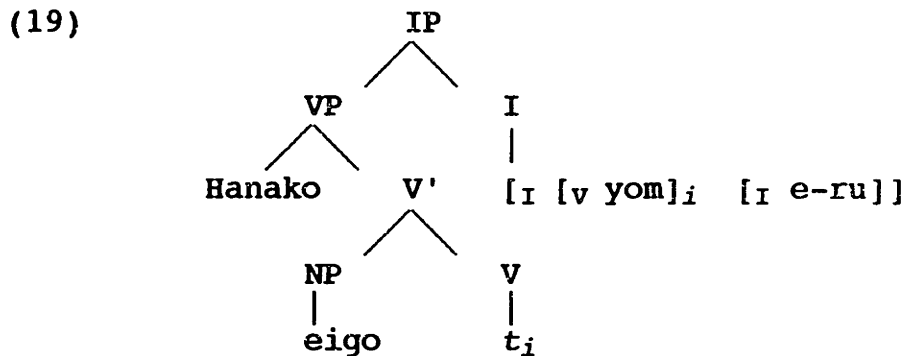


Here the subject gets nominative case through SPEC-HEAD agreement by moving into SPEC(I). The object is case-marked by V under government and its case is realized as accusative. This type of potential sentence is basically the same as the

⁶ Notice that the pattern (14c) can be used to show the compatibility between the potential morpheme and the question morpheme ka. In (14c), the V and I are not raised to C, but rather stay in I, as we soon see.

synthetic-activity sentences discussed at the end of chapter 5.

Lastly in the pattern (14c), where the subject is marked dative, I propose that the verb moves up to I, but not further to C.⁷ Notice that I to C movement is in principle optional, as has been seen in chapter 5 for copulas. When I stays, we get pattern (14c) and when I raises to C, then we get (14a).



The cases here are exactly the same, as far as the case-marking mechanisms are concerned, as with the stative verbs discussed in chapter 3. I can case-mark the internal argument of V nominative, since I can govern it through

⁷ The reader might wonder in the structure (19) why the subject cannot be marked with ga, while the object projects in a PP headed by ni, opposite to the actual case of (14c). This is not possible for the potential construction, because the potential morpheme is not specified to take a PP complement. But the pattern NP-ga NP-ni is of course possible with those predicates which subcategorize PP objects, such as niru 'resemble' or kuwashii 'well-informed'; there the subject is moved up to the SPEC(I) to get a nominative case.

Baker's GTC, after V raises to I. The subject, however, being in the SPEC(V), cannot then be case-marked from anywhere and thus projects in a PP to get dative case from a P, as a last resort.

The analysis proposed here is further supported by the observed interaction between object case marking and verb movement discussed in the next section.

6.2.3. Object Case Alternation and the Position of the Verb

As we saw above, three case marking patterns are available for the potential construction. However, there are some environments where some of the patterns become unavailable. And these environments are key tools for our structural investigation.

The first environment concerns coordinate constructions.

- (24) a. Hanako-ga [eigo-o hanashi doitsugo-o yom]-e-ru.
 b.*Hanako-ga [eigo-o hanashi doitsugo-ga yom]-e-ru.
 c.*Hanako-ga [eigo-ga hanashi doitsugo-o yom]-e-ru.
 d.*Hanako-ga [eigo-ga hanashi doitsugo-ga yom]-e-ru.
 e.*Hanako-ni [eigo-ga hanashi doitsugo-o yom]-e-ru.
 f.*Hanako-ni [eigo-ga hanashi doitsugo-ga yom]-e-ru.

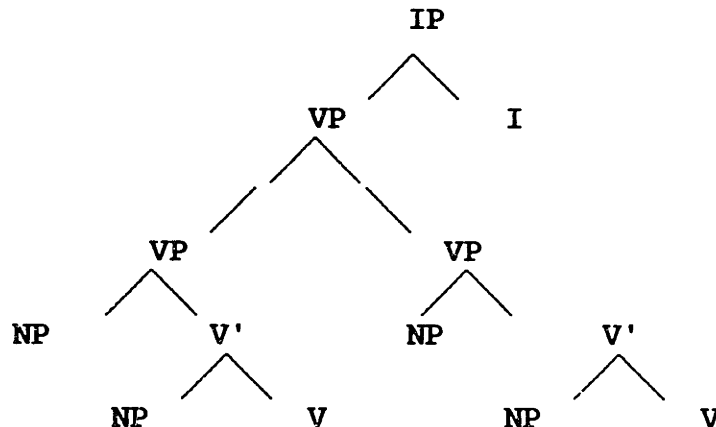
Hanako-nom/dat English-acc/nom speak, German-acc/nom
 read-pot-pres

'Hanako can speak English and read German.'

Notice first that the potential morpheme is not and cannot be included in the conjoined parts; namely, the first part of the coordination ends with a verb stem. When ga-marked objects appear in the first part of the conjunction, the sentences are ungrammatical, no matter what kind of case-marking appears afterwards, as in (24c-f). Moreover, even if o-marking appears in the first part in (24b), the sentence is still ungrammatical.

The above paradigm directly follows from the analysis proposed in section 6.2.2. In (24), VPs are conjoined as in the structure below:

(25)



Since a verb stem cannot move up here to incorporate into the I node because of the Coordinate Structure Constraint (Ross 1967), V stays in its base-generated position in (24). When a verb stem stays in its base-generated position under V, then it assigns accusative to a direct object. The accusative must also be assigned to a direct object in the first part of the conjunction. This explains all the

ungrammatical ga-objects on the left side of the conjunctions in (24c-e). Further, in (24b), where the object is ga-marked in the second conjoined part, the Coordinate Structure Constraint would again be violated if only the verb in the second part of the conjunction moved up to I; thus, the ungrammaticality of (24b) also follows.

My analysis of case-marking in potential constructions is also supported by an interaction between the potential morpheme and the honorification o-V-ni naru. When this honorification is used with the potential morpheme, the ga-alternatives characteristically available with the potential morpheme suddenly become unavailable as in (26b-c).

- (26) a. Oka-sensei-ga arabiago-no hon-o o-yomi-ni nar-e-ru.
 b.*Oka-sensei-ga arabiago-no hon-ga o-yomi-ni nar-e-ru.
 c.*Oka-sensei-ni arabiago-no hon-ga o-yomi-ni nar-e-ru.

Oka-prof-nom arabic-gen book-acc hon-read-dat become-pot-pres

'Prof. Oka can read a book in Arabic (honorific).'

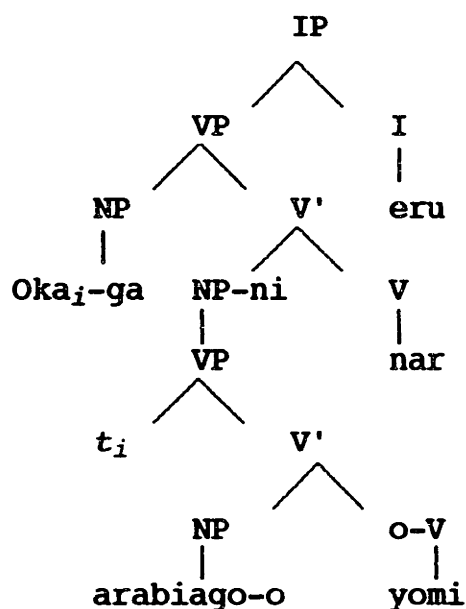
- (27) a. Edward-san-ga paipu-orugan-o o-hiki-ni nar-e-ru.
 b.*Edward-san-ga paipu-orugan-ga o-hiki-ni nar-e-ru.
 c.*Edward-san-ni paipu-orugan-ga o-hiki-ni nar-e-ru.

Edward-Mr.-nom pipe-organ-acc hon-play-dat become-pot-pres

'Mr. Edward can play the pipe organ (honorific).'

Let's put together Suzuki's (1989) structure of the honorific as in (10) and the structure which I propose for the potential morpheme.

(28)



Since a verb stem (i.e., yomi 'read' in the above example) is separated from the I, it cannot move up to incorporate into the potential morpheme. More specifically, because of the intervening head verb (nar 'become' in the above example), such raising would violate the Head Movement Constraint (Travis, 1984). But such raising is a prerequisite for the I to be able to assign ga inside VP. Therefore, the accusative option for the internal argument is the only choice. And again the Head-movement analysis proposed in section 6.2.2 seems to make interesting predictions.

6.2.4. Interpretations of Analytic and Synthetic Forms

Sugioka (1984) observes that object ga-marking is associated with expressing more or less the "nature" of the subject (i.e., Taro in (29)). Thus if Taro cannot speak

since he was born, the object o-marking in (29) is excluded.

- (29) Taro-ga koe-ga/*o das-e-na-i.
 Taro-nom voice-nom/acc come out-pot-neg
 'Taro cannot speak.'

On the other hand, if Taro cannot speak just temporarily, say, because he is so surprised, o-marking should be used.

- (30) Taro-ga koe-o/*ga das-e-na-i.
 Taro-nom voice-acc/*nom come out-pot-neg
 'Taro cannot speak.'

Although this observation seems valid, when we look at the third type, the NP-ni NP-ga type, then it becomes clear that the real contrast is not in the object ga vs. o, but rather is the NP-ga NP-ga pattern vs. the other two. For the NP-ni NP-ga pattern behaves together with the NP-ga NP-o type, rather than the NP-ga NP-ga type. Particularly, in the above mentioned contexts, NP-ni NP-ga is out in the context of (29), while it is grammatical in the context of (30).

- (29) b. *Taro-ni koe-ga das-e-na-i.
 Taro-dat voice-nom come out-pot-neg
 'Taro cannot speak.' (by nature)
- (30) b. Taro-ni koe-ga das-e-na-i.
 Taro-dat voice-nom come out-pot-neg

'Taro cannot speak.' (temporarily)

Even though the object is marked with the nominative in (29b), the sentence cannot be used to mean that the impossibility to speak is in the nature of Taro. Also, even though the object is marked with the nominative in (30b), the sentence can be used to describe the occasion that Taro happens to be in a situation where his voice does not come out. The real contrast is thus the NP-ga NP-ga type vs. the NP-ni NP-ga and NP-ga NP-o types. This contrast is the one between analytic and synthetic forms established in Chapter 5, as is clear from the structures we argued for in (15), (18) and (19) above.

The meaning difference first noted by Sugioka and reformulated above now makes perfect sense. The "nature" interpretation is the constructional meaning of the analytic form; the predicate "cannot speak" is denoted as a property which you can find internal to Taro. On the other hand, "the temporary" interpretation for the NP-ni NP-ga and NP-ga NP-o patterns again comes from their constructional meaning, both being of synthetic form. That is, they denote that Taro is in an external relation to the predicate "cannot speak". Here the predicate is recognized as something which does not belong to Taro or which is not an intrinsic property of Taro. It thus makes sense to conceive of it as a "temporary" description of Taro.

To conclude, the observation made by Sugioka, when it is

appropriately generalized with respect to the ni-ga pattern, confirms my proposal for sentential structures and their interpretations. To avoid confusion, I repeat that the reality around a statement does not need to confirm the statement. Each syntactic form is used to reflect a speaker's recognition of the world. The speaker's recognition of reality does not need to be accurate in a scientific sense. Specifically, when an analytic form is used, it is only that the speaker is claiming he recognizes the predicate as an intrinsic feature of the subject. When a synthetic form is used, it is rather a description by a speaker of a relation between a subject and a predicate such that you cannot find the predicate by only examining the subject, but that the predicate is rather externally related to a subject.

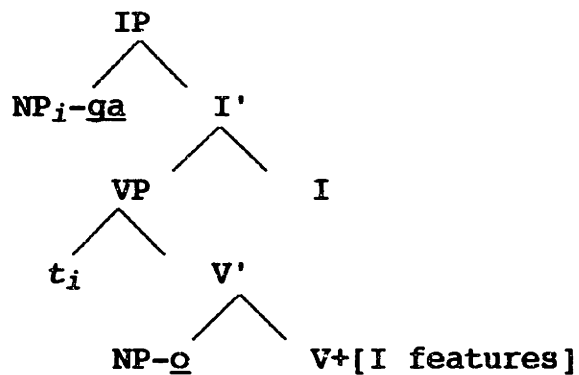
6.2.5. Summary

We have seen in this section that the structural case marking proposed in Chapters 3, 4 and 5 straightforwardly works out for the three case marking patterns observed in the potential construction. The leading concept in this analysis is that head movement changes the structural relations between the head and the arguments, and that these structural relations are directly and regularly reflected in the case realizations. Schematically, the three structures involved in the potential construction are as follows:

(31)

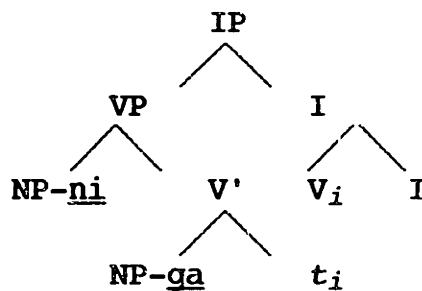
Synthetic forms

(a) Synthetic-activity form



NP-ga NP-o type

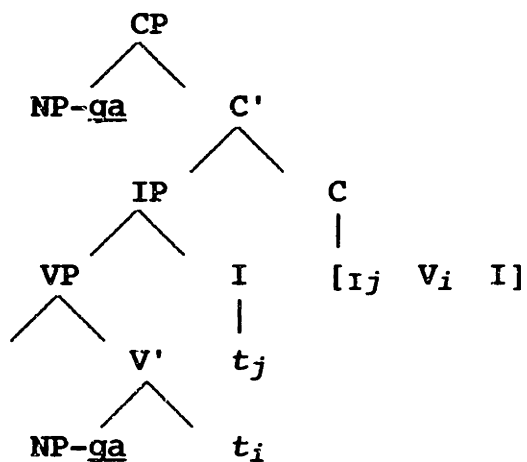
(b) Synthetic-state form



NP-ni NP-ga type

Analytic form

(c)



NP-ga NP-ga type

In (31a), V assigns accusative case to its complement and the I feature case-marks nominative on the corresponding SPEC(I) through SPEC-HEAD agreement. In (31b) and (31c), the VP is not a case-barrier anymore for external case-marking,

and further because of the GTC, I can govern the NP internal to V' and give it nominative case. In (31b), there is nothing left to case mark the subject in SPEC(V) and thus it is realized with a dative-marking P ni, exactly the same way as with stative verbs and predicate attribute sentences in which I doesn't raise. On the other hand, in (31c), the subject in SPEC(C) can get a nominative case from the corresponding head C in the same way as in predicate attribute sentences when I is raised to C.

It thus is because both V and I are lexically filled, the latter with re, that all the three sentential patterns are possible in the potential construction. In the next section, we will see a slightly different configuration where lexically filled V and A are involved.

6.3. The Desiderative Construction

6.3.1. The Status of the Desiderative Morpheme

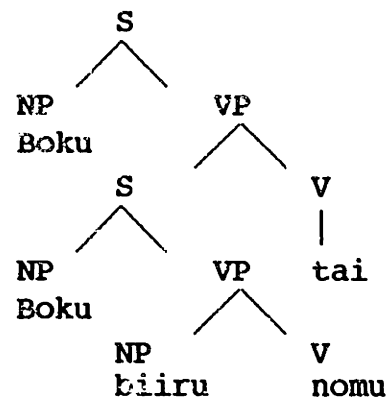
I start with considering the status of tai 'want to'. Throughout previous research, including Kuroda (1965), Kuno (1973) and Sugioka (1984) among others, the desiderative tai is always analyzed as a V taking a sentential complement. For example, the following sentence is considered to have the structure in (33):

(32) Boku-ga biiru-o/ga nomi-ta-i.

I-nom beer-acc/nom drink-des-pres

'I want to drink beer.'

(33)



Contrary to the above mentioned assumption that the desiderative morpheme is a V, I will argue, together with Kitagawa (1986), that tai is not a verb, but rather a bound adjective. There are at least two arguments to support this analysis.

First, the desiderative suffix has exactly the same conjugation pattern as bound adjectives. Second, a verbal suffix garu 'to show a sign of, to look anxious to' can be attached only to bound adjectives.

(34) a. Taro-ga kanashi-gat-ta.

Taro-nom sad-show a sign of-past

'Taro showed a sign of being sad.'

b.*Taro-ga genki-gat-ta.

Taro-nom fine-show a sign of-past

'Taro showed a sign of being fine.'

c.*Taro-ga hashiri-gat-ta.

Taro-nom run-show a sign of-past

'Taro showed a sign of running.'

(34a) is an example with a bound adjective, (34b) with a free adjective, and (34c) with a verb. Turning now to the desiderative tai, it can appear with garu.

(35) a. Taro-ga hashiri-ta-gat-ta.

Taro-nom run-des-show a sign of -past

'Taro showed a sign of wanting to run.'

b. Taro-ga sono hanashi-o kiki-ta-gat-ta.

Taro-nom that-story-acc listen-want-show a sign of-past

'Taro showed a sign of wanting to listen to that story.'

The desiderative tai again behaves the same as bound adjectives, and not like a verb. I thus conclude that the desiderative tai is a bound adjective, not a verb.

6.3.2. Case Alternation with tai and the Position of the Verb

Now let's start to look at case alternation in this construction. As just introduced, when tai is attached to a transitive verb, two kinds of case marking become available, as in (37). (36) shows the basic pattern without tai.

(36) Taro-ga biiru-o nomu.

Taro-nom beer-acc drink

'Taro drinks beer.'

- (37) a. Boku-ga biiru-ga/o nomi-ta-i.
 I-nom beer-nom/acc drink-des-pres
 'I want to drink beer.'
- b. Hanako-ga Taro-ni purezento-ga/o age-ta-kat-ta.
 Hanako-nom Taro-dat present-nom/acc give-des-past
 'Hanako wanted to give Taro a present.'
- c.*Boku-ni biiru-ga nomi-ta-i.
 I-dat beer-nom drink-des-pres
 'I want to drink beer.'
- d.*Boku-ni biiru-o nomi-ta-i.
 I-dat beer-acc drink-des-pres
 'I want to drink beer.'

(37a) is a transitive verb which usually takes an o-marked object and (37b) is a double object taking verb. In either case, ga marking becomes available for the direct object with the addition of tai. In (37c), the case marking pattern which is available in the potential construction, the NP-ni NP-ga type, is not grammatical here in the desiderative construction. Further an NP-ni NP-o pattern, which is ungrammatical in the potential construction, is equally unavailable here. We will come back to the these ungrammaticalities in section 6.4.

Concerning the two types of case marking available in (37a) and (37b), there are various circumstances where one case marking becomes unavailable, again suggesting that head movement is crucially involved.

First of all, when an emphatic element is inserted right after the verb stem, then suru 'do' is inserted to satisfy the bound nature of the desiderative morpheme. This is similar to suru-support, which I discussed in chapter 4, in the sense that a dummy verb is inserted, although the position of suru is different here. Suru is left-adjoined to A (i.e., the desiderative morpheme tai) in this case, while it is under C in suru-support. But the important point is that when these emphatic elements appear, ga-marking is not available.

- (38) a. Taro-wa mizu-o/*ga nomi-sae shi-ta-kat-ta.
 Taro-top water-acc/*nom drink-even do-des-past
 'Taro wanted to even drink water.'
- b. Mizu-o/*ga nomi-sae Taro-ga shi-ta-kat-ta.
 water-acc/*nom drink-even Taro-nom do-des-past
 'Taro wanted to even drink water.'

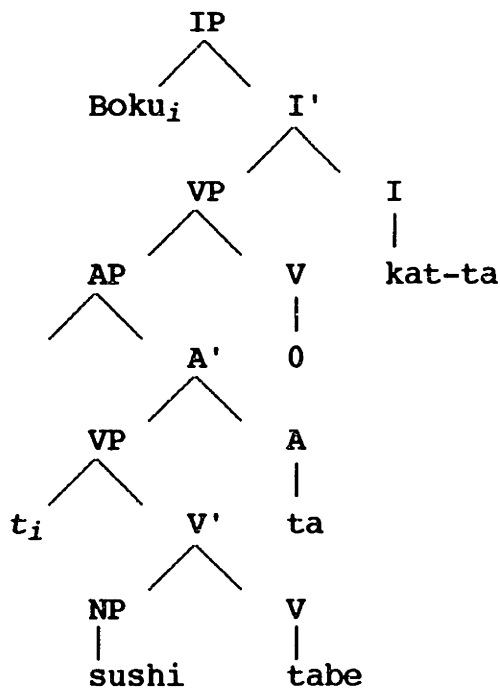
The unavailability of the nominative is the same in the VP-preposing version in (38b).

Informally speaking, it seems that the ga alternative disappears when a verb stem which subcategorizes an object NP is somehow "separated" from the desiderative morpheme. Using an insight from previous studies like Kuno (1973) and Sugioka (1984) and the fact that the desiderative morpheme is an adjective, we can say that an accusative is assigned to an object by a verb and a nominative is assigned to an object by

I, exactly as we have argued earlier for stative verb and predicate attribute sentences, when a verb is raised to incorporate into the desiderative morpheme [_A tai]. I thus propose the following structures for the two possible case-marking patterns.

(39)

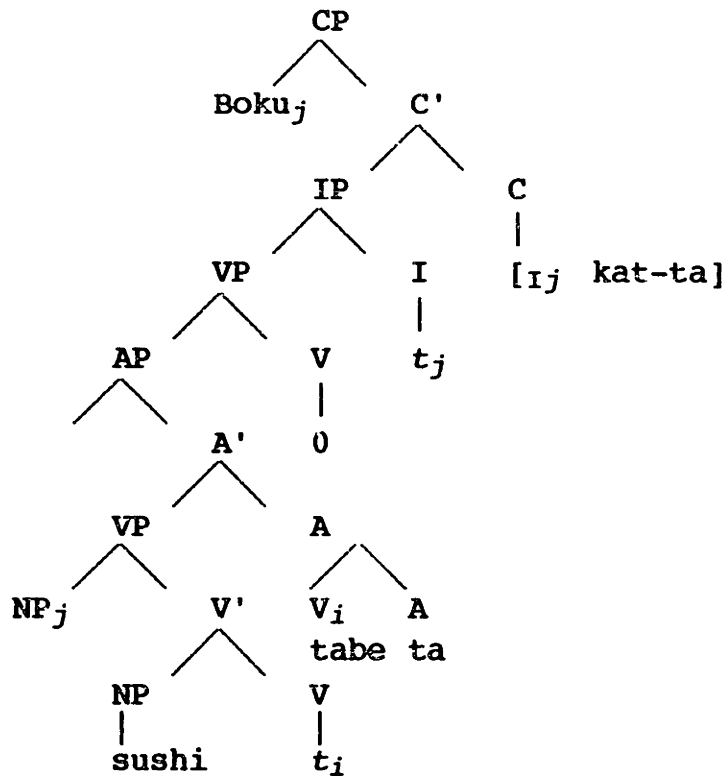
(a) NP-ga NP-o type



'I wanted to eat sushi.'

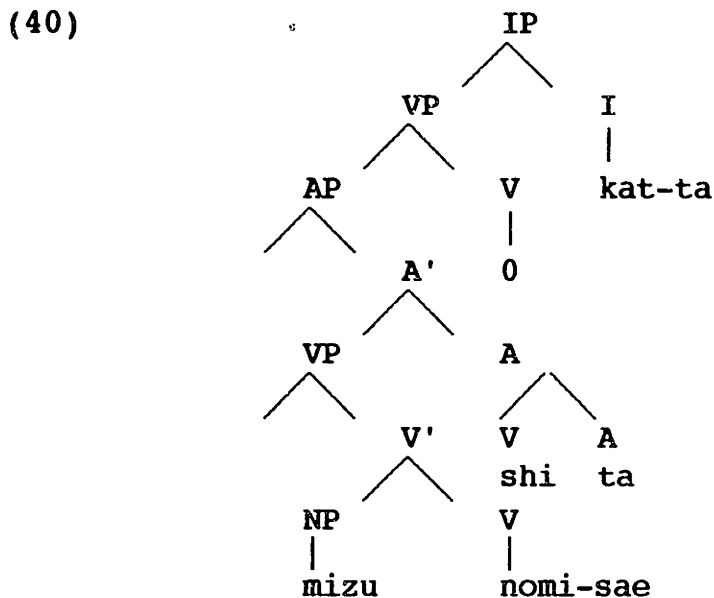
When a verb remains in its base-generated position, it assigns an accusative case to the direct object as in (39a). The subject gets a nominative case from I.

(39) b. NP-ga NP-ga type



On the other hand, when a verb is raised and incorporated into the desiderative morpheme in (39b), it cannot assign an accusative case anymore, since it is no longer a head. It is rather then the I which assigns a nominative case to the direct object. I can successfully govern the object, because neither VP nor AP are case-barriers (cf. (23) in chapter 3): VP is not a barrier because its head is empty, and AP is not in general a barrier to external case-marking, as argued in section 5.2.2. But in this situation, the subject NP must raise to SPEC(C) to get a nominative case from C, since I assigns its case through government to the second NP.

The environment with suru which excludes the ga-alternative (38) can be captured on the basis of the above proposal schematized in (39). Because suru 'do' is present to bear the bound adjective tai, the underlying structure for (38a-b) is basically as follows:



Since sae intervenes between the verb and the desiderative morpheme, the verb cannot move up; thus, only o-marking but not ga-marking is available. When a VP is preposed as in (38b), the situation is basically the same. The emphatic element data (38) are thus successfully integrated into the structures and V-raising analysis I have proposed.

The optional V-raising analysis for the desiderative construction proposed above accounts for a paradigm credited in Sugioka (1984) to Shibatani; when aspectual markers intervene between tai and a verb stem, ga-marking is not

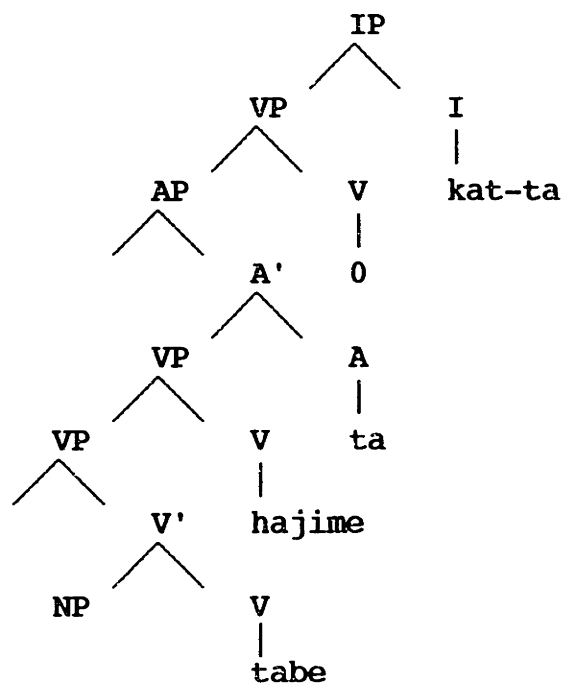
allowed either.

- (41) a. Kondo-wa kono hon-o/*ga yomi-hizime-tai.
 next-top this book-acc/*nom read-begin-des
 'I want to start reading this book next.'
 b. Kimi-ni kono hon-o/*ga yonde yari-tai.
 you-dat this book-acc/*nom read give-des
 'I want to read this book for you.'

(Shibatani, cited in Sugioka 1984)

As argued in Sugioka (1984), if the complex verbs result from VP-suffixes, which are also V, the structure for (41) is as follows:

(42)



The lower verb stem cannot be raised here to incorporate into

A because of an intervening head, as excluded by the Head Movement Constraint (Travis, 1984). But since only such movement gives rise to ga-marking by I, the structure proposed for the desiderative construction (39) straightforwardly accounts for the unavailability of ga-marking in a complex verb followed by the desiderative morpheme, as in (41).

The analysis proposed here for tai also correctly predicates a conjunction paradigm observed by Sugioka, which parallels the paradigm with the potential morpheme presented in the previous section. Sugioka (1984, 168) notes that when VP are conjoined, ga-marking again becomes unacceptable. A more complete paradigm is as follows:

- (43) a. Taro-wa sushi-o tabe sake-o nomi-ta-kat-ta.
 b. *Taro-wa sushi-o tabe sake-ga nomi-ta-kat-ta.
 c. *Taro-wa sushi-ga tabe sake-o nomi-ta-kat-ta.
 d. *Taro-wa sushi-ga tabe sake-ga nomi-ta-kat-ta.

Taro-top sushi eat sake drink-des-V-past

'Taro wanted to eat sushi and drink sake.'

When ga appears in the first part of the conjunction, the sentences are ungrammatical as in (c) and (d), no matter which case marking appears in the second part of the conjunction. In addition, even when o appears in the first part of the conjunction, the same case must appear in the second part; (a) is grammatical, while (b) is not.

Because of the Coordinate Structure Constraint (Ross 1957), the verb in the first part of the coordination (i.e., tabe 'eat' in the above examples) cannot move out from the topmost VP-node to incorporate into the desiderative morpheme; thus, no ga-marking in the direct object of the first part of the conjunction is available. This explains the ungrammaticality of (43c) and (43d). Similarly the movement of the verb stem in only the second part of the conjunction (i.e., nomi 'drink' in the above examples) would also violate the Coordinate Structure Constraint (Ross 1967), so the ungrammaticality of (43b) is also explained. Finally, the sentence (43a) is perfectly grammatical, because both verb stems stay in base-generated positions and both assign accusative to their direct object. The coordination paradigm thus provides solid support for the structure and the incorporation analysis of the desiderative constructions.

To conclude, the proposed incorporation analysis seems to capture the distribution of case marking alternations with tai in a syntactically principled way: the NP-ga NP-o pattern is available when a verb stays in its base-generated position, while the NP-ga NP-ga pattern is available when a verb is incorporated into A.

6.3.3. A Difference in the Predicate Head, A or V

We will now see another difference associated with a case alternation. The difference is very interesting in the sense that it shows that a predicate head changes, depending

on head movement. That is, depending on whether V incorporates into A as in (39b) or stays in its base-position as in (39a), A or V behave respectively as the predicate head of the clause.

Sugioka (1984) observes that the o-marking of the object in the desiderative construction becomes ungrammatical with comparatives. I add that not only with comparatives, but also with any specifier of adjectives (cf. chapter 5) is the o-alternative unavailable, as follows.

(44) a. Boku beeru-ga/*o koohii-yori nomi-ta-i.

I beer-nom/*acc coffee-than drink-des-pres

'I want to drink beer rather than coffee.'

(Sugioka 1984)

b. Watashi kono eiga-ga/*o ichiban mi-ta-i.

I this movie-nom/*acc best see-des-pres

'I want to see this movie the most.'

c. Boku kono-hon-ga/*o totemo kai-ta-i.

I this book-nom/*acc very buy-des-pres

'I want to buy this book very much.'

Since specifiers are selected by their corresponding heads, the above incompatibility of adjective specifiers with o-marking on object NPs shows directly that when the V is in its base-generated position, it acts as a head of the whole predicate phrase. On the other hand, the compatibility of the adjective specifiers with ga-marking shows that when the

verb moves up to A, this A is then the head of the whole predicate.

We can make the same point with the opposite case, using VP-selected modifiers. Observe the following sentences.

(45) a. Boku kuruma-o/*ga koko-ni tome-ta-i.

I car-acc/*nom here park-des-pres

'I want to park the car here.'

b. Watashi sono tsukue-o/*ga Hanako-ni age-ta-i.

I that desk-acc/*nom Hanako-to give-des-pres

'I want to give that desk to Hanako.'

c. Boku TV-o/*ga nekorogat-te mi-ta-i.

I TV-acc/*nom lying down watch-des-pres

'I want to watch TV, lying down.'

The locative in (45a), the indirect object in (45b) and the te-clause in (45c) are intervening between the direct objects and the predicate heads. The locatives are straightforwardly PPs and the indirect object has been argued to be PP in Takezawa (1987). Further, as we saw in chapter 3, the te-clause is also a PP. None of these PPs can easily occur with ordinary adjectives either, while they do freely occur with verbs.

(46) a. *Taro-ga pari-de kenkoo-da.

Taro-nom Paris-at healthy-be

'Taro is healthy in Paris.'

b. *Taro-ga nekorogat-te sawagashi-i.

Taro-nom lying down-P noisy-pres

'Taro is noisy, lying down.'

(47) a. Taro-ga pari-de ehagaki-o kat-ta.

Taro-nom Paris-at picture postcard-acc buy-past

'Taro bought a picture postcard in Paris.'

b. Taro-ga nekorogat-te hon-o yon-de i-ru.

Taro-nom lying down-P book-acc read-P be-pres

'Taro is reading a book, lying down.'

(46) are the examples with adjectives and are ungrammatical, while (47) contain verbs and are perfectly grammatical. The fact that this range of PPs can only occur with an accusative marked object thus suggests that the V is the predicate head when the object is accusative. That is, when V stays in its base-generated position, which is indicated by the o-marking of the object, the V seems to be behaving as a predicate head, that is, the lexical element which assigns all theta roles to argument positions within IP (cf. (20) of chapter 5).

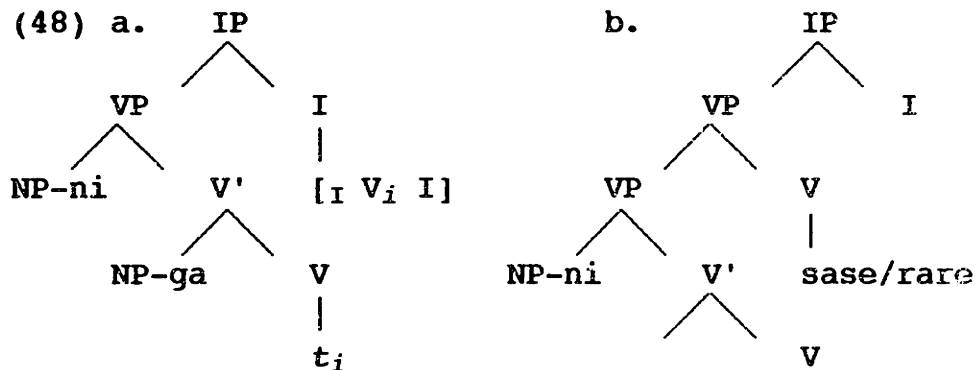
To sum up, this correlation between case-marking and selection of modifiers has again been explained in a principled way by the proposed incorporation analysis.

6.4. A Difference between Potential and Desiderative Constructions

Comparing the potential and desiderative constructions,

we observe that in the potential construction, besides the NP-ga NP-o and NP-ga NP-ga types, the pattern with NP-ni NP-ga is also possible, while the desiderative construction is restricted to only the first two patterns. A question I want to address here is why the latter case marking is not available with the desiderative construction.

Let us first observe more generally when ni-ga-case marking is possible and when not. It is possible with stative verbs, and with potentials, causatives and passives. On the other hand, it is never possible with predicate attribute sentences with adjectives, nouns or postpositions, with desideratives, or with activity verbs. Some schematic structures for the first group of constructions are given below:

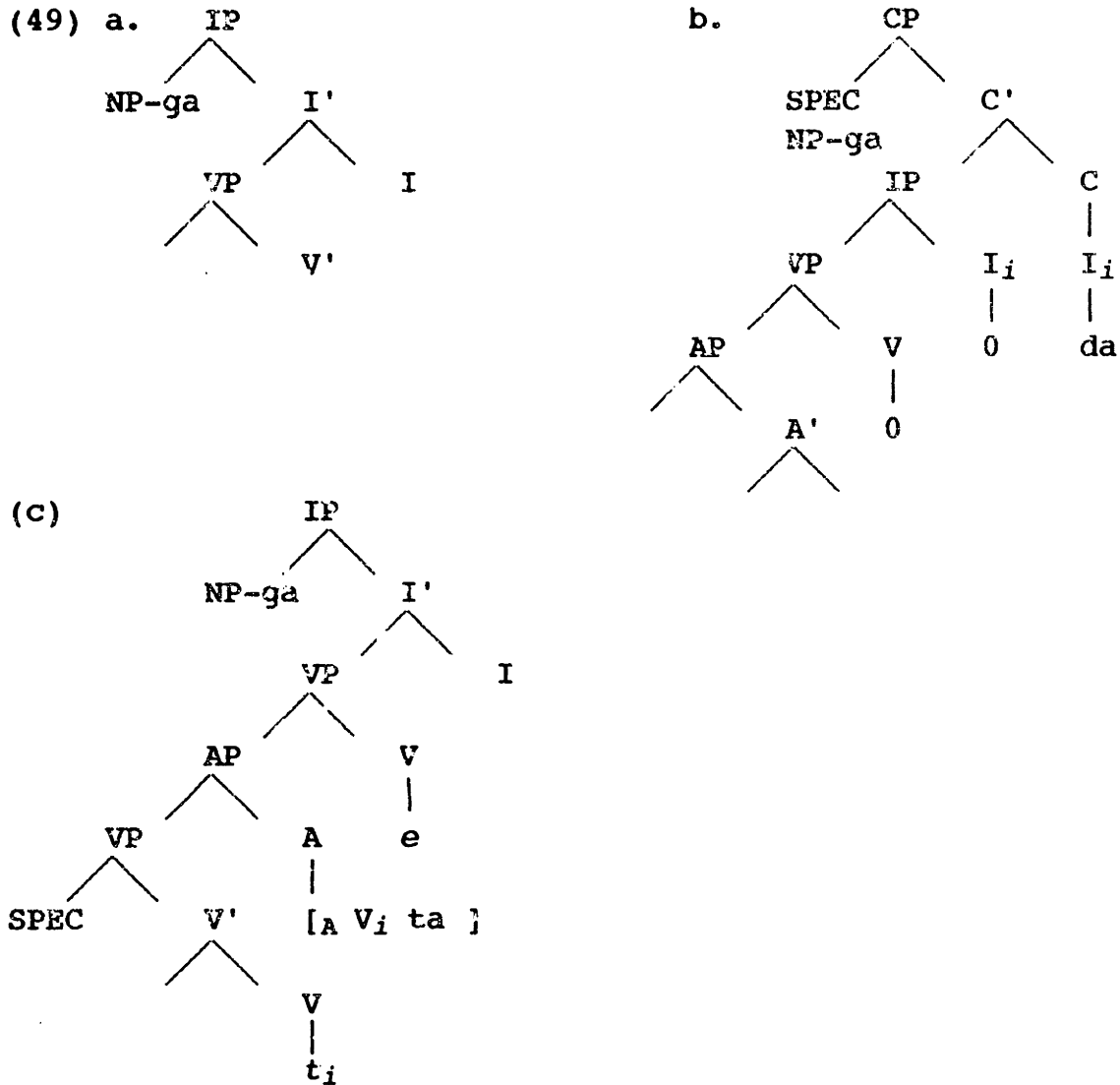


Stative verbs and potentials basically share the structure in (48a), where the main V raises to I; although an object NP is case-marked by I, nothing remains to case-mark the subject NP in SPEC(V). The causatives and passives, specifically

gapless passives, exhibit a structure as in (48b), as far as the issues here are concerned.⁸ In all these constructions, the subject in SPEC(V) cannot get case from anywhere, either because VP with a lexical V is a barrier to case-marking, as we saw in chapters 3 and 5 or because I is assigning case by the GTC to the lower NP. The subject is therefore obliged to project as a PP.

On the other hand, structures for the constructions which do not allow a dative subject are as follows:

⁸ As is argued in Kubo (1989a), the agent *ni*-phrases in *gapped passives* are adjuncts and are irrelevant to the issue here.



Synthetic-activity sentences exemplify the structure in (49a), where a subject in SPEC(I), which is raised from SPEC(V), gets nominative from the agreeing I. (49b) is the basic structure for predicate attribute sentences, taking adjectives as a representative case. Here I assigns *ga* to an argument internal to AP by government, while C assigns *ga* to the subject NP in SPEC(C). The desiderative construction is as in (49c), where the lower V is incorporated into A.

Given the above structures, a possible generalization seems to be that dative marking for the subject, which appears in SPEC(V), is only possible when there is a corresponding head V which is semantically specified, or Emonds' (1985) terms, non-empty in the syntax. In other words, the Vs taking APs in (49b-c) are purely formal null elements in the syntax, and do not have any semantics to contribute; with such V, ni-subjects never occur. The generalization distinguishing (48) from (49) can thus be summarized as follows:

(50) Distribution of Dative Subjects

An external argument NP in SPEC(V) can project to PP = NP+ni only if the corresponding head V is not empty in syntax, and only as a last resort.

With respect to the desiderative construction, there is still one thing to clarify. That is, why cannot the SPEC position in the lowest V, marked SPEC in (49c) above, project up to PP with a dative marker ni? Recall the discussion in the previous section, that when V raises to A, then the A is the predicate head. In this situation, an external argument of V can no longer be manifested in SPEC(V), because specifier selection must be done by A, the predicate head, and hence (50) cannot apply. The dative subject, therefore, cannot occur in SPEC(V) in (49c).

This reasoning explains why the desiderative

construction lacks the NP-ni NP-ga pattern, which is associated with IP-sentences with filled I in the potential construction. But does the lack of the NP-ni NP-ga pattern mean that the desiderative construction cannot take on an IP-form? As we saw in chapter 5, all predicate attribute sentences can be IP or CP, depending on whether I-elements stay in their original position or raise to C. The question rather is: can an I-element stay in the I position in the desiderative construction, too? The answer seems to be yes: there is no reason to believe otherwise, since the desiderative morpheme is itself a regular bound adjective.

6.5. Summary

We have analysed in this chapter some well-known case alternation paradigms involving the potential and desiderative constructions. In both instances, the case alternations are neatly captured by the incorporation analysis developed throughout our research on verbs and predicate attributes. The potential and desiderative constructions are particularly interesting because their three possible case marking patterns manifest the three types of sentences we have proposed in chapters 3 through 5, summarized at the end of chapter 5.

The NP-ga NP-o type has basically the structure of synthetic-activity sentences, the main verb being a predicate head. The NP-ni NP-ga type in the potential construction and the simple NP-ga type in the desiderative construction are

IP-sentences, I being filled by the potential morpheme or a copula in the potential or desiderative constructions, respectively. And the NP-ga NP-ga type is a CP-sentence, C being filled with an I element. The later two cases parallel the predicate attribute sentences researched in chapter 5, where the main V is not the selecting predicate head of the sentence. These three patterns of case marking reflect directly the kinds of structural relations between heads and argument NPs produced by incorporation.

The structural case marking mechanism proposed for Japanese so far can therefore be summarized as follows:

- (51) (i) A case assigner can assign case only once. Case assigners are C, I, V, and P. (In chapter 7, we will add D.)
- (ii) A case can be assigned either by a SPEC-HEAD agreement or government.
- (iii) P assigns dative; V assigns accusative; functional heads (C, I, and D) assign nominative.
- (iv) A dative subject appears as a last resort, using P to case-mark.⁹

⁹ Before concluding this chapter, let us discuss why the NP-ni NP-o patterns as noted in (14d) and (37d) for the potential and desiderative constructions, respectively, are not possible. First of all, one point needing clarification is that the pattern in question is indeed possible in a certain configuration: when VP is subcategorized by V as in causative and gapless passive constructions.

- (i) a. Hanako-ga [vp Taro-ni kusuri-o nom]-ase-ta.
 Hanako-nom Taro-dat medicine-acc drink-casu-past
 'Hanako made Taro drink a medicine.'

This concludes our research on sentence structures, case-marking, and predicate positions in matrix clauses. In the next chapter, we will see how the idea of "sentential sizes" applies to subordinate clauses.

b. Hanako-ga [vp Taro-ni kusuri-o nom]-are-ta.

Hanako-nom Taro-dat medicine-acc drink-pass-past

'Hanako had Taro drink a medicine on her.'

The question is thus why this pattern is not available in a simplex sentence when I is involved. I claim that the pattern is not possible because of the last resort nature of a dative subject. If I(nfl) has not case marked once in IP, some alternative case-marking in a PP of a subject cannot be considered a last resort.

Chapter 7

Japanese Subordinate Clauses

Up to this point our research has centered on matrix sentences. In this chapter, we will investigate how the system proposed so far works in embedded clauses, and in what way the system must be extended. Parallel to the case of matrix sentences, where both IP and CP are possible sentential sizes, we will find at least two kinds of subordinate clauses which can be best identified as a C(omplementizer) taking either IP or CP. I concentrate here on the "internal structure" of subordinate clauses and simply refer to works by Nakau (1973) and Josephs (1976) for their selection by higher predicates and related issues.

To determine the "size" of complements of various types of subordinate conjuncts, we will use the following five characteristic properties of CPs, which we have seen in chapters 3 through 6.

- (1) a. Is thematic wa possible?
- b. Is exhaustive ga possible?
- c. Are double gas possible?
- d. Is the copula with a da form possible?
- e. Is suru-support possible (with and/or without VP-preposing)?

(1a) is obviously related to whether SPEC(C) is present at a certain level or not (chapters 1 and 2), (1b) and (1c) are related to the presence of both SPEC(C) and a head C (chapters 4, 5, and 6), and (1d) and (1e) are related to the presence of an I in a head C (chapter 5 and chapter 4, respectively).

The embedded clauses we examine here with respect to the above mentioned criteria are of the following seven kinds:

- | | | | |
|-----|---------------------|------------------|------------------------|
| (2) | a. <u>to</u> | 'that/if' | (complements/adjuncts) |
| | b. <u>kara</u> | 'because' | (adverbial clauses) |
| | c. <u>ka</u> | 'whether' | (indirect questions) |
| | d. <u>reba/raba</u> | 'if' | (conditionals) |
| | e. <u>koto</u> | 'the fact that' | (noun clauses) |
| | f. <u>no</u> | 'the fact that' | (noun clauses) |
| | g. | relative clauses | |

The results of our empirical investigation, which we will come back to in detail in the following sections, can be summarized as follows:

(3)	<u>wa</u>	Exh. <u>ga</u>	Double <u>ga</u>	Copula <u>da</u>	<u>suru</u> -support
Root.cls	OK	OK	OK	OK	OK
<u>to</u> (comp)	*	OK	OK	OK	OK
(adjt)	*	OK	OK	OK	*
<u>kara</u>	*	OK	OK	OK	OK
<u>ka</u>	*	*	*	*	*
<u>reba/raba</u>	*	*	*	*	*
<u>koto</u>	*	*	OK	*	*
<u>no</u>	*	*	OK	*	*
rel. cls	*	*	OK	*	*

From the results of table (3), it is clear that the thematic wa is a root phenomenon. Given that, there are (at least) two kinds of embedded clauses. The complementizer to and subordinator kara should be straightforwardly analysed to take CPs, allowing all the characteristics of CPs, while the indirect question marker ka and the conditional markers take IPs, forbidding all properties characteristic of CPs. The bolded results for koto, no, and relative clauses, which concern their appearance with double ga, appear however to be irregular or exceptional. One focus of this chapter is to investigate the mechanism behind this seeming irregularity. We will see that it results from a more general property of the case marking system in Japanese, so that the explanation of the irregularity in (3) will turn out to confirm the analysis proposed so far about IP vs. CP sentential structures.

7.1. Subordinate Clauses whose Complements are CPs

In this section, I justify analyzing to 'that/if' and kara 'because' as straightforwardly taking CPs as complements.

The complementizer to can be used in two ways: one is to introduce a complement of a higher matrix verb, exemplified in (4), which roughly corresponds to English that.

(4) Complement usage of to

a. Taro-wa Hanako-ga sono e-o kak-u/kai-ta to omt-ta.

Taro-top Hanako-nom that picture-acc write-pres/write-past comp think-past

'Taro thought that Hanako {would draw/drew} that picture.'

b. Hanako-wa Taro-ga yuushoo su-ru/ta-to iu koto-o

kakushin-shi-te i-ru.

Hanako-top Taro-nom championship do-pres/past-comp say fact-acc sure-do-P be-pres

'Hanako is sure about the fact that Taro wins/won a championship.'

When to introduces a clausal complement of the matrix verb, there is no restriction on the combination of the tense between the embedded clause and matrix clause. (4a) has present and past embedded clauses with a matrix past. (4b) has present and past embedded clauses with a matrix present.

And all the sentences are grammatical.

The other use of to is to introduce an adjunct and form a type of conditional construction. When to is used as a conditional in (5), the verb in the subordinate clause must be present tense.

(5) Adjunct usage of to

a. Taro-ga paatii-ni ku-ru/*ta-to biiru-dai-ga kasan-da.

T-nom party-to come-pres/*past-comp beer-cost-nom
increase-past

'It used to be the case that if Taro comes to a party,
the beer cost increases.'

b. Taro-ga paatii-ni ku-ru/*ta-to biiru-dai-ga kasam-u.

T-nom party-to come-pres/*past-comp beer-cost-nom
increase-pres

'If Taro comes to a party, the beer cost increases.'

Whether the main clause is past or present, as in (a) and (b) respectively, the verb in the conditional clause must be present tense.

The postposition kara means 'because' when it is used with a sentential complement, while, as is familiar, when it is used with an NP complement, it means 'from' as in Sapporo kara 'from Sapporo'. Since we are interested in the sentential size of the complement of subordinating conjunctions, only the former case is relevant here.

Given the above general characteristics for subordinate

complements of to and kara, let us now apply the five tests for clausal size developed in chapters 2 through 6 one by one.

First, is a thematic wa possible with both to and kara?

- (6) *Taro-wa Hanako-wa kinou kaigoo-ni konakite-ta to iu
suisoku-o minna-ni tsuge-ta.¹

T-top H-top yesterday meeting-at come-not-past comp say
guess-acc everybody-to tell-past

'Taro told everybody the fact that Hanako didn't come to
the meeting yesterday.'

- (7) *Taro-wa karaoke-o utaw-u-to minna-ga kaeri-das-u.

Taro-top karaoke-acc sing-pres-com everybody-nom leave-
start-pres

'When Taro starts to sing karaoke, everybody starts to
leave.'

In (6), the to-clause is used as a complement of the matrix verb tsugeru 'tell', and the thematic wa leads to an ungrammatical sentence. Similarly, sentence (7) with a conditional to-clause does not allow thematic wa either. Further, the thematic wa is not allowed in the kara-clause.

¹ As expected from the claim that the contrastive interpretation of the topic wa is a secondary meaning, the sentence is grammatical with contrastive interpretation (chapters 1 and 3).

- (8) *T-wa Bosuton-ni hikkoshi-ta-kara Jiro-wa samishi-kat-ta.
 T-top Boston-to move-past-since Jiro-top sad-past
 'Because Taro moved to Boston, Jiro was sad.'

As the above examples indicate, both of these subordinating conjunctions do not allow a thematic wa to appear in the subordinate clauses they introduce. This observed incompatibility of thematic wa with subordinate clauses is not surprising if we classify thematic wa as a root phenomenon, which is what I propose.

Opposed to the thematic wa, the exhaustive ga appears in both usages of a to-clause, as indicated in table (3).

- (9) T-ga nihonshi-ni kuwashi-i-to iu koto-o J-ga mitome-ta.
 Taro-nom Japanese history-comp acquainted to-comp Jiro-nom recognized
 'Jiro recognized the fact that Taro is well acquainted with Japanese history.'
- (10) Musume-ga kashiko-i to chichioya-wa shiawase-da.
 daughter-nom clever-pres comp father-top happy-be-past
 'If a daughter is clever, a father is happy.'

(9) is an example of a to-clause being a complement of the matrix verb, and (10) is an example of a conditional usage. Both allow the exhaustive ga to appear, suggesting that the complement clause of the subordinating conjunction to is CP. Similarly, a kara-clause can have an exhaustive ga-clause in

it, as shown in (11).

- (11) Mada mizu-ga tsumeta-i kara, umi-de oyogu-no-wa muri-da.
 Still water-nom cold-pres because, sea-at swim-N-top
 impossible-be
 'Since the water is still cold, it is impossible to swim
 in the ocean.'

Differently from thematic wa, exhaustive ga is *not* a root phenomenon, and the availability of the exhaustive ga in the complement clauses of to and kara shows that they both take CP as complements.

Thirdly, the subordinate clauses introduced by to and kara can contain double ga constructions; recall that in chapter 4 we analysed the subject ga as necessarily receiving a nominative case through SPEC-HEAD agreement as hence as being in SPEC(C).

- (12) Yukie-ga atama-ga i-i-to iu uwasa-o Hanako-wa shinji-te
 i-ru.
 Y-nom brain-nom good-pres-comp say gossip H-top believe-
 P be-pres
 'Hanako believes the gossip that Yukie is clever.'
- (13) Taro-ga jooba-ga dekiri-to H-wa sono toki shit-ta.
 Taro-nom horse riding-nom can-comp H-top that time knew
 'H realized at that time that Taro can ride horses.'
- (14) Hahaoya-ga piano-ga uma-i to kodomo-wa sakkyokuka-ni na-

ru.

mother-nom piano-nom good at-pres comp child-top
composer-dat become

'If a mother is good at the piano, a child becomes a
music composer.'

(12) and (13) are examples where the to-clauses are used as complements of a higher verb. (14) is an example of adjunct usage of the to-clause. All of the examples are grammatical and suggest that complement clauses of to are CPs.

A clause with the double ga construction is also allowed in a complement of kara.

(15) Kimi-ga hashiru-no-ga oso-i-kara bokura-no tiimu-ga
maketan-da.

you-nom running-nom slow-pres-because our-gen team-
nom lost

'Because you run slow, our team lost.'

The possibility of double ga patterns thus shows quite clearly that the subordinate clauses introduced by to and kara are CP, rather than IP.

Fourth, the copula da, which indicates the presence of C (chapter 5), can appear in subordinate clauses with both usages of to.

(16) Taro-ga sono ie-no juunin da to iu jijitsu-o H-wa shir-

ana-kat-ta.

T-nom that house-gen inhabitant be comp say fact H-top
know-not-past

'H didn't know that T is an inhabitant of that house.'

(17) Ken-ga shuyaku da to kyaku-ga hai-ru.

Ken-nom main actor be comp, guest-nom come-pres

'If Ken is the main actor, guests come.'

(16) is an example of a to-clause being a complement and (17) of it being a conditional adjunct. As for compatibility with the copula da, a kara-clause again behaves the same way.

(18) Yukie-ga kenkoo-da kara boku-wa anshin da.

'Yukie-nom healthy-be because I-top secure be

'I feel secure because Yukie is healthy.'

The possibility of the free copula da, which clearly shows the existence of filled C, in complements of the subordinating conjunctions under examination further supports the analysis that to and kara take CPs as their complements.

Finally, suru-support, which I showed in some detail in chapter 4 requires C to be available, is compatible with a complement usage of a to-clause and with a kara-clause.

(19) Kabin-o kowashi-sae Taro-ga shi-ta to iu jijitsu-ni H-wa
shokku-o uke-ta.

vase-acc break-even T-nom do-past comp say fact-by H-top

shock-acc get-past

'Hanako was shocked by the fact that Taro even broke the vase.'

- (20) Kabin-o kowashi-sae T-ga shi-ta kara H-wa kanashi-kat-ta.

vase-acc break-even T-nom do-past because H-top sad-past

'Hanako was sad because Taro even broke the vase.'

In (19), suru-support appears inside a to-clause, which is a complement of the higher verb, iu 'say'. Further, as in (20), suru-support is compatible with a kara-clause. These grammatical sentences indicate that the complements of to and kara are CPs. However, in a conditional clause introduced by to, suru-support is not available:

- (21) a.*Sake-o nomi-sae Taro-ga su-ru to, minna-ga kae-ru.

Sake-acc drink-even Taro-nom do-pres comp, everybody-nom leave-pres

'If even drink sake Taro does, everybody leaves.'

- b.*Taro-ga oyogi-sae suru to, tenki-ga yoku na-ru.

Taro-nom swim-even do comp, weather-nom good become

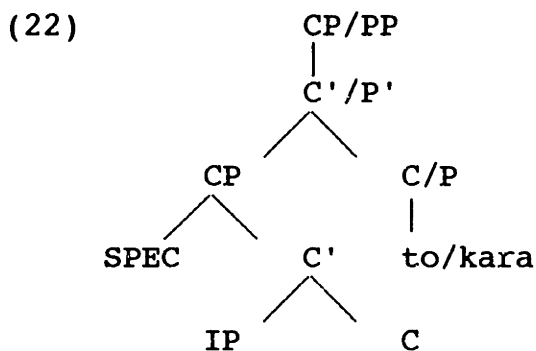
'If Taro even swims, the weather gets better.'

I postulate this incompatibility between suru-support and a conditional usage of a to-clause is caused by a pragmatic mismatch between the "foregrounding" or focus connected with sae 'even', and the "backgrounding" or topicalization of an

if-clause.

Since we have now seen that subordinate clauses with to and kara show all the characteristics of CPs, they are to be straightforwardly analysed as C taking a CP complement.

Their internal structures thus are as follows:²



7.2. Subordinate Clauses whose Complements are IPs

In this section, we will examine the nature of indirect questions with ka (dou ka) 'whether' and conditionals with (moshi) ... reba/raba 'if'. Before we apply the five tests of clausal size in (3) to these constructions, some preliminary discussion of the structures of conditionals is in order, since this hasn't been systematically investigated in the literature. First, we consider ka (dou ka).

Following Lasnik and Saito (1984), Nishigauchi (1986) and Ueda (1990), I assume ka to be a C. The morpheme ka is used

² According to Emonds (1985, ch. 7), subordinating conjunctions of both the kara-type (like a P) and the to-type (like a COMP) can be further identified as two types of P. Actually, Fukui (1986) analyzes that to as a postposition, while Ueda (1990) considers it a complementizer. This discrepancy can be eliminated under Emonds proposal.

not only as a direct question marker in a matrix context, but is also used as a subordinating conjunction to introduce indirect questions. We especially concentrate on its subordinating usage here, because it is our research topic in this chapter to examine the structures of embedded clauses. Although dou ka is impossible in a root, it can occur with ka in an embedded context. In order to clearly distinguish direct questions from indirect questions, which we are rather interested in here, I will use ka douka as a whole in the examples below.

Now, conditionals are a little more complicated. Superficially, the following three variants are possible.

- (23) (Moshi) T-ga ki-ta-ra(ba), subete-ga umaku it-ta-daroo.³
 (if) Taro-nom come-past-C, everything-nom well go-would
 'If Taro had come, everything would have been OK.'
- (24) (Moshi) Taro-ga byooki-na-ra(ba), watashi-ga kare-no
 sewa-o shi-mas-u.
 (if) Taro-nom sick-be-C, I-nom his-gen care-acc do-pol
 'If Taro is sick, I will take care of him.'
- (25) (Moshi) Taro-ga ku-reba, subete-ga umaku iku-daroo.

³ In Kuno (1973), the sequence na+ra in (24), which consists of the free copula in I na (cf. chapter 6) and the conditional ra, and ta+ra in (23), which consists of the past tense ta and the conditional ra, are somehow treated as unanalyzable items. We will see in the discussion that follows, however, that the usage in (25) without na is basically the same usage as in (24); the reason why na precedes ra in (24) is only that the clause inside of the conditional clause is a predicate attribute sentence.

(if) Taro-nom come-if, everything-nom well go-will
 'If Taro comes, everything will be OK.'

In (23) and (24), the particle ba is optional with ra, while in the third case (25) with re, ba is obligatory. I will claim here that the full conditional marker is ra(ba) or reba and that (24) and (25) should be recognized as a single usage, while (23) is another usage.

Let us start from type (23). The past tense in the conditional clause is obligatory, no matter what kind of predicate is involved in the subordinate clause. This type basically corresponds to the counterfactual conditionals with the past tense in English. I thus call this type *counterfactual conditionals*.

Now I argue that (24) and (25) should be treated as a single usage. In (25), only the verb stem can precede reba; when the preceding verb ends with a consonant, the initial r of reba drops, as in kak-eba 'write-if', while when the preceding verb ends with a vowel, the initial r of reba stays, as in tabe-reba 'eat-if', a familiar phonological phenomenon with verbal inflections in Japanese (McCawley 1968, among others). This type of conditional in (25) seems akin to the subjunctives in conditionals in languages such as Spanish or German, where there is a hypothesis of some causal relation between the conditional clause and the main clause. I will thus call this type (25) a subjunctive conditional.

In (24), before the copula na there appears either an

NP, PP or a free adjective, and so this na right before ra(ba) must be the copula in the I (not C) position of predicate attribute sentences, which was investigated in chapter 5.⁴ The interpretation of the (24) type is again akin to the subjunctives in conditionals in Spanish or German. Both (24) and (25) can thus be considered as of the same type of conditionals, a sort of subjunctive which lacks the realization of tense.

Here a clarification is necessary. I have been claiming that tense is the basic feature of I (chapter 5). Further, na is the phonological realization of a free copula under I, as opposed to C; nonetheless, the realization of present vs. past is missing in subjunctive conditionals. Without going into a detailed analysis, I simply point out that this is similar to the Catalan subjunctive, which is analysed as an S lacking tense but containing AGR (Picallo 1984, section 2.3).

The only difference between (24) and (25) is a difference in type of predicate: with predicative NP, PP and

⁴ Some examples of the (24) type with apparently two verbs in one clause (kuru+na) are slightly misleading.

(i) Taro-ga ku-ru na-ra boku-wa kae-ru.
Taro-nom come-pres be-if I-top go-pres
'If Taro comes, I will leave.'

(Kuno 1973, 102)

I propose, however, that there is a nominalizer right before the copula na. For, it can easily be made phonologically overt.

(ii) Taro-ga ku-ru no/n na-ra boku-wa kae-ru.
Taro-nom come-pres N be-if I-top go-pres
'If Taro comes, I will leave.'

Either no or the nasal mora n can appear right before na, and so a case like (i) can be analyzed as an instance of this nominalizer being reduced to zero phonologically.

free AP, the (24)-type, there must be a copula, exactly the same as in matrix clauses, but when there is a verb or bound adjective, the (25)-type, the conditional morpheme follows right away. I thus call both the (24) and (25) types *subjunctive conditionals*.

The difference between the subjunctive conditionals such as (23) and (25) and the conditionals with to in section 7.1. is semantically subtle but syntactically clear. As discussed in the previous section, any to takes a CP; its complement thus includes tense and indicates a general causal relation which includes some relation to an empirical basis. On the other hand, as we will soon verify below, subjunctive type conditionals are only IPs, and can be used to just claim a non-empirical, hypothetical-causal relation.

We can examine these differences in comparing the following sentences:

- (26) a. Taro-ga paatii-ni ku-ru-to sake-ga naku na-ru.
 T-nom party-to come-pres-if alcohol-nom zero become
 'If Taro comes to a party, the alcohol disappears.'
- b. Taro-ga paatii-ni ku-reba sake-ga naku na-ru-da-roo.
 T-nom party-to come-if alcohol-nom zero become will
 'Should Taro come to the party, the alcohol will go.'

(26a) is a conditional with to and expresses a more or less empirical correlation between Taro's behavior and its consequence. On the other hand, (26b) with a subjunctive

conditional means simply a hypothetical causal relation between Taro's behavior and a consequence, without implying any empirical basis to believe so. I thus call the to-conditional the *empirical conditional*.

There are thus three types of conditionals in Japanese, empirical conditionals with to, subjunctive conditionals (24 and 25), and counterfactuals with reba/raba (23). The first type includes a CP with to, and the latter two types are "bare" IPs. As a cover term for the latter two types, I use hypothetical-conditionals.

We will now see that the five tests for clausal size very clearly support the view that reba/raba conditionals and the indirect question in ka douka take only IP and not CP.

First, a thematic wa cannot occur in hypothetical-conditionals.⁵

(27) a. Hanako-ga/*wa nak-eba, Taro-mo nak-u.

Hanako-nom/*top cry-if Taro-also cry-pres

'If Hanako cries, Taro does also.'

b. Hanako-ga/*wa rasuto siin-de nai-te i-ta-ra, sono

shibai-wa seikoo-shi-te i-ta-kama shirenai.

Hanako-nom/*top last scene-at cry-P be-past-if that

⁵ The following sentence should not be confused as constituting a counterexample to this claim.

(i) Taro-wa motto hon-o yom-eba, miryoku-teki-ni narudaroo.
Taro-top more book-acc read-if attractive-to become-will
'If Taro reads more books, he will become attractive.'

The first wa phrase here is in the matrix clause.

play-top success-do-P be-past might

'If Hanako had cried in the last scene, the play
might have been successful.'

(27a) is a subjunctive type and (27b) a counterfactual. For both, a thematic wa is unacceptable. Further, it is not allowed in indirect question clauses, either.

(28) Hasukiizu-wa kat-ta ka douka, Hanako-wa shiri-ta-kat-ta.
Huskies-top win-past whether, Hankao-top know-des-past
'Hanako wanted to know whether the Huskies won or not.'

The unavailability of the thematic wa in conditionals and indirect questions is expected from its status as a root phenomenon.

Moving to the second test in (3), the exhaustive ga is not available in these conditionals, indicating that neither the SPEC(C) nor C is available.

(29) a. Hanako-ga mooshukoshi kashikoke-reba, Taro-wa seikoo
su-ru daroo.

Hanako-nom a little more clever-if Taro-top success
do-pres will

'If Hanako is a little more clever, Taro will
succeed.'

b. Hanako-ga mooshukoshi kashikokat-ta-ra, Taro-wa
seikoo shi-te i-ta-daroo.

H-nom a little more clever-past-if, Taro-top success
do-P would have

'If Hanako were a little more clever, Taro would have
succeeded.'

In both examples, the nominative marked subjects are
unambiguously interpreted as neutral ga. Further, the
exhaustive ga is also unavailable in an indirect question.

(29) c. Sapporo-ga samu-i ka douka, H-wa shir-ana-kat-ta.

Sapporo-nom cold-pres whether, Hanako-top know-not-past
'Hanako didn't know whether Sapporo is cold.'

The subject Sapporo-ga in the indirect question gets a
neutral interpretation. The unavailability of the exhaustive
ga suggests that the subordinate clauses in question lack
SPEC(C) and the head C.

Thirdly, the double ga construction is not allowed in
hypothetical-conditionals (30), nor in the indirect question
(31), either.

(30) a. Boku-ni/*ga okane-ga ar-eba, sono konsaato-ni ik-e-ru
no ni.

I-dat/*nom money-nom have-if that concert-to go-pot-
pres

'If I have more money, I can go to that concert.'

b. Boku-ni/*ga piano-ga hik-e-ta-ra donnani tanoshi-i

daroo.

I-dat/*nom piano-nom play-pot-past-if how fun

'How much fun it would be, if I could play piano.'

(31) Midori-ni/*ga sankaiten-han jyanpu-ga kime-re-ru ka
douka-ga kagi-da.

Midori-dat/*nom three and half jump-nom do-pot-pres
whether-nom key-be

'It is crucial whether Midori can do a three and a half
jump.'

(30a) and (30b) are examples of subjunctive and counterfactual conditional types, respectively, and (31) of an indirect question. The double ga is unacceptable in all three examples, in contrast for example to the possibility of a dative subject in the NP-ni NP-ga pattern, as indicated in the examples. Since a dative subject is internal to IP, while the subject ga in the double ga is outside of IP (chapters 5 and 6), the above contrast neatly shows that clauses subcategorized by the indirect question conjunction ka douka and by the hypothetical conditional conjunctions rebe/rabe are IPs and not CPs.

Fourth, the copula da cannot occur in these conditionals and indirect questions.

(32) Tiro-ga isha-na/*da-ra, watashi-wa sono byooin-ni ik-
ana-i.

Jiro-nom doctor-be-if I-top that hospital-to go-not

'If Jiro is a doctor, I won't go to that hospital.'

(33) *Taro-wa Hanako-ga bengoshi-da ka douka tazume-ta.

Taro-top Hanako-nom lawyer-be whether ask-past

'Taro asked whether Hanako is a lawyer or not.'

(32) is an example of a subjunctive conditional, and (33) is an indirect question. We cannot apply this test using da to counterfactual conditionals, because they obligatorily require the predicate in the subordinate clause to be past tense. Since the past form of da, unlike its present, does not distinguish whether the copula is in C or I, there is no test.

Finally, suru-support, which requires the verb suru to be in C, is not allowed with hypothetical-conditionals.

(34) a.*Jitensha-ni nori-sae T-ga su-reba, H-wa yorokob-u.

bicycle-to ride-even T-nom do-if, H-top happy

'If Taro even rides a bicycle, Hanako gets happy.'

b.*Herumetto-o kabut-te sae T-ga i-ta-ra, T-wa shin-ana-

kat-ta da-roo.

Helmet-acc have-P even T-nom be-past-if Taro-top die-not would

'If Taro even had a helmet on, he wouldn't have died.'

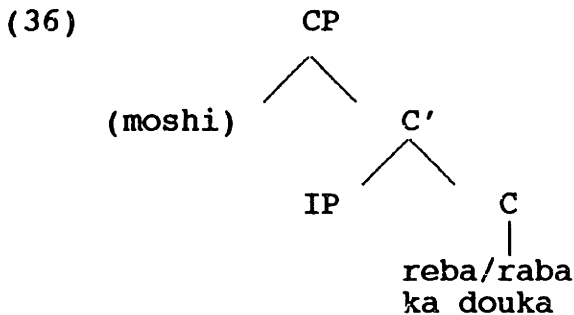
Although we have argued in section 7.1 that conditionals are independently incompatible with suru-support for a pragmatic

reason, the above incompatibility at least does not contradict the analysis in which the complement clauses of reba/rabe are IP. And in any case, suru-support is not possible with indirect questions.

- (35) *Sushi-o tabe-sae H-ga shi-ta ka douka, oshie-te kudasai.
 Sushi-acc eat-even H-nom do-past whether, tell
 'Please tell me whether even eat sushi Hanako did.'

This incompatibility between suru-support and the indirect question is again expected, if the complement of the question conjunction ka douka is IP, rather than CP.

Since all the five characteristics of IP "size" are incompatible with conditionals formed with reba/raba and indirect questions with ka douka, these subordinate conjunctions should be analyzed as taking an IP for their complement, as opposed to the conjunctions we saw in the previous section such as to 'that/if' and kara 'because', which take CP. The structures for the reba/raba conditionals (i.e., subjunctive and counterfactual conditionals) and the indirect questions are as follows, cf. (22):



Moshi 'if', which is optional with hypothetical conditionals, is straightforwardly analysed here as the SPEC(C). Its optionality and position at the left of the structure is in accord with general properties of specifiers.

Summing up, we have thus seen the three types of CP clauses: one is a root and can be called an I-headed CP, where the I raised to C by substitution and the SPEC(C) is occupied by a subject NP-ga with an exhaustive interpretation. The other two are subordinate clauses: one with an I-headed CP complement as in (22) and the other with an IP complement as in (36). Here, the SPEC(C) is not an argument position and thus is not obligatory.

7.3. Subordinate Clauses and Nominative Case inside of NP

7.3.1. Examination of Clausal Size

In this section we come to the properties of noun complements with koto 'fact' and no 'fact', and to relative clauses. Although koto and no are used in a very similar fashion, there is a crucial difference in the sense that koto

makes the complement clause into an abstract property, while no keeps it a concrete event (Kuno 1973, Inoue 1976, Shibatani 1978, Kamio 1983). This difference is clear in the following examples:

(37) a. Watashi-wa Hanako-ga chero-o hiku-koto-o kii-ta.

I-top Hanako-nom cello-acc play-N-acc hear-past

'I heard that Hanako plays cello.'

b. Watashi-wa Hanako-ga chero-o hiku-no-o kii-ta.

I-top Hanako-nom cello-acc play-N-acc hear-past

'I heard Hanako playing the cello.'

(37a) means that I know that Hanako has the ability to play the cello and can be used even if I have never heard Hanako playing it. On the other hand, (37b) means that I have actually heard the music she plays.

Let us now again apply the five tests of clausal size in (1) to the complements of these NPs in turn. Neither the thematic wa nor the exhaustive ga appears in these kinds of NPs.

(38) a. H-ga/*wa igirisu-umare-na koto-o shit-te imasu-ka?

H-nom/*top England-born-be N-acc know-P be-pol-Q

'Do you know that Hanako is England-born?'

b. Hanako-ga/*wa igirisu-umare-na no-o shit-te imasu-ka?

H-nom/*top England-born-be N-acc know-P be-pol-Q

'Do you know of Hanako being England-born?'

c. Hanako-ga/*wa tokui-na supootsu-wa sakkaa-da.

H-nom/*top good-at-be sport-top soccer-be

'The sport Hanako is good at is soccer.'

(38a), (b) and (c) are examples of koto, no, and a relative clause, respectively. In (38a)-(c), a thematic wa is totally ungrammatical and in addition a nominative marked subject must be interpreted as neutral and can never be interpreted as exhaustive.

Although the impossibility of the thematic wa is expected from the fact that it is a root phenomenon, the impossibility of the exhaustive ga suggests that the sentential complement of these two Ns lacks SPEC(C) and the head C altogether. This analysis that complements of koto and no and relative clauses all are IPs, rather than CPs, is further supported by the following two characteristics.

The copula da is not allowed with either koto or no complements or relative clauses.

(39) a.*Taro-ga neko-zuki da koto/no-wa daremo-ga mitome-ru.

T-nom cat-lover be N/N-top everybody-nom admit-pres

'Everybody admits that Taro is a cat-lover.'

b.*Taro-ga byooki da reyu-u-wa akiraka-de nai.

Taro-nom sick be reason-top clear-P not

'The reason why Taro is sick is not clear'

Nor is suru-support, which requires C to be filled

(chapter 4).

- (40) a. *Watashi-wa Taro-ga sono zoo-o kai-sae shi-ta koto/no-
o wasure-te i-ta.
I-top Taro-nom that sculpture-acc buy-even do-past
N/N-acc forget-P be-past
'I forgot that Taro even bought that sculpture.'
- b. *Taro-ga kai-sae shi-ta zoo-wa subarashii-mono da.
T-nom buy-even so-past sculpture-top wonderful-thing
be
'The sculpture that Taro even bought was a wonderful
thing.'

The unavailability of both da and suru-support directly shows that koto-clauses, no-clauses and relative clauses involve only IPs.

However, as indicated in the table (3), the double ga construction can appear in these clauses.

- (41) a. Taro-ga ki-ga tsuyo-i koto-wa yuumei-da.
Taro-nom feeling strong-pres N-top famous-be
'It is famous that Taro has a strong will.'
- b. Boku-wa Taro-ga tenisu-ga heta-na no-ni odoroi-ta.
I-top Taro-nom tennis-nom bad-at-be N-to surprise-
past
'I was surprised at Taro being bad at tennis.'
- c. Hanako-ga sonnani okane-ga i-ru-reyuu-o shiri-ta-i.

H-nom that much money-nom need-pres-reason-acc know-
des-pres

'I want to know the reason why H needs so much money.'

Opposed to our expectation, the double ga construction seems to be available in all three types of clauses inside NPs.

With this clear exception, the results of the five tests are exactly the same as the ones for hypothetical conditionals and indirect questions, which are IPs. But if the subordinate clauses with koto and no and relative clauses are IP, why do they allow the double ga construction, which in the constructions analyzed so far always involves SPEC(C) as the nominative subject site?

A couple of considerations suggest that one of the nominatives in these IP domains, in particular the first one, is due to the fact that the constructions involve NPs. More specifically, the nominative subjects in (41) clearly do not have any interpretation with an exhaustive reading; they are totally neutral. This in itself suggests the possibility that this nominative is not assigned by C, as occurs in all the double ga constructions in matrix contexts seen so far. For the previously considered ga-subjects in SPEC(C) obligatorily receive an exhaustive reading. Further, a comparison between the double gas of this section and the ones in the previous section (with reba/rabe and ka douka) shows that the crucial difference between them is that the former are inside of NP, while the latter are only inside of

PP.

This fact, together with the lack of the exhaustive interpretation, make it plausible to hypothesize that the source of the "extra" nominative on subjects in relative clauses and koto and no clauses comes from within NP. This is not a unnatural hypothesis, since in old Japanese ga as well as no is used as a case-marker internal to NP. Even in Modern Japanese, some authors (Harada 1971/1976, Bedell 1972, and Morikawa 1989) consider that these two case markers still compete in certain structural positions in NPs, a phenomenon known as GA/NO conversion, which we will come back to later. Keeping in mind a possible NP source for the double ga construction, let us examine first the structure of NP complements and relative clauses more in detail.

7.3.2. The Structure of Simple NP

Let us start first from simple possessive structures.

- (42) Taro-no aka-i hon
 Taro-gen red book
 'Taro's red book'

The possessive NP, Taro-no 'Taro's' above, is usually considered to be in SPEC(N) with a genitive case no from the corresponding head (Tateishi 1989, Morikawa 1989, among others; see also Kitagawa and Ross 1982 for an extensive study of no). Opposed to the latter half of this widely

accepted claim, I argue here that the so-called genitive case marker is not a case marker, but actually is a postposition. There are a couple of reasons to believe so.

First, no can follow another P as in (43a), which is not usually allowed for genuine case markers such as o.

(43) a. Hanako-no Yukie-*(e)-no tegami

Hanako-P Yukie-to-P letter

'Hanako's letter to Yukie'

b. *Yukie-ni/kara/e-o

Yukie-to/from/to-acc

In (43a), the postposition e 'to' is obligatory, and the so-called genitive marker follows it. On the other hand, the accusative case o cannot follow postpositions as in (43b).⁶

In addition, as is well-known (Ueda 1986, Takezawa 1987, Miyagawa 1989), a quantifier can float over a case-marker such as an accusative o, while it cannot float over a postposition.

(44) Taro-ga ehagaki-c san-mai kat-ta.

Taro-nom picture postcard-acc three-cl. buy-past

⁶ Only in the subject position does the nominative case ga sometimes seem to be able to follow a PP. See Fukui (1986) and Ueda (1990) for further discussion of this issue.

(i) Tokyo-kara-ga ichi ban chikai.
Tokyo-from-nom most close
'From Tokyo is the closest.'

- 'Taro bought three picture postcards.'
- (45) *Taro-ga daigaku-kara mit-tu shoogakukin-o marat-ta.
 T-nom university-from three-cl fellowship-acc get-past
 'Taro got fellowships from three universities.'

In this respect, the genitive marker no behaves like a postposition, rather than a case-marker.

- (46) a. *Tomodachi-no san-nin hon
 friend-gen three-cl. book
 'Three friends' books'
- b. San-nin-no tomodachi-no hon
 three-cl-gen friend-gen book
 'Three friends' books'

In (46a), a quantifier cannot float over the genitive-marked NP. I thus conclude that NP-no is PP, rather than NP plus a case marker.

That the possessive NP projects in a PP internal to the larger NP is similar to an external argument NP projecting in a PP as a dative subject inside of VP.⁷ This leads us to wonder if there is a case internal to NP which corresponds to the nominative ga in SPEC(I), which is case-marked by the corresponding head I. I propose that exactly the same way as

⁷ There is a difference between them in that the dative subject is definitely a last resort (cf. (50) in chapter 6), while the genitive possessive is rather a common phenomenon.

I assigns nominative to SPEC(I), D can assign nominative ga to SPEC(D).

As mentioned at the end of the previous section, other than the genitive no, the nominative ga was also available inside of NPs in old Japanese. Thus, both the following NPs were grammatical in old Japanese.

- (47) a. Masamune-ga katana
 Masamune-nom sword
 b. Masamune-no katana
 Masamune-gen sword
 'Masamune's sword'

In Modern Standard Japanese, NP-ga internal to a simple noun phrase is ungrammatical; thus, (47a) is not grammatical, nor are the following examples.

- (48) a.*Taro-no/*ga keikaku
 Taro-gen/*nom plan
 'Taro's plan'
 b.*Hanako-no/*ga kuruma
 Hanako-gen/*nom car
 'Hanako's car'

However, with some nouns which can be conceived of as grammatical nouns in Emonds's sense (1985), the nominative alternative becomes available even in Modern Japanese. With

certain time nouns, even though no sentential clause is involved, both nominative ga and genitive no can appear.

(49) a. Watashi-ga/no kodomo-no koro

I-nom/gen child-gen time

'my childhood time'

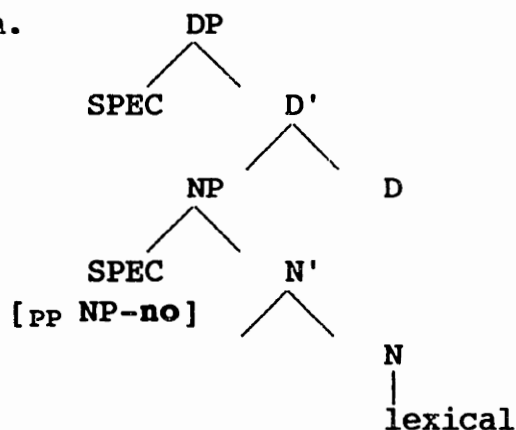
b. Watashi-ga/no gakusei-no jibun

I-nom/gen student-gen period

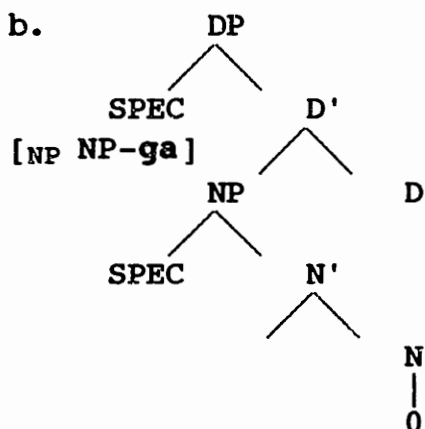
'my student period'

I propose that these time nouns can be grammatical nouns, as well as lexical nouns; by Emonds's treatment, the grammatical nouns are inserted after S-structure, while lexical nouns appear in D-structure. When nouns are inserted under N in D-structure and thus present in the syntax, the genitive marked NP appears in the corresponding SPEC(N). On the other hand, when nouns are grammatical formatives and correspond to empty nodes in the syntax, then a corresponding specifier position SPEC(N) can not be selected (Emonds 1990), and an NP can only appear in SPEC(D), where it is marked with nominative case. The proposed structures of Modern Japanese are thus as follows:

(50) a.



b.



I am claiming here that there is a correlation between the choice of NP-no or NP-ga and whether the head noun is filled in syntax or not. When the head noun is lexical in the syntax, then the standard genitive version with the postposition no is available for a possessive NP, while when the head noun is abstract in the syntax, then SPEC(N) is not available. In this situation, a possessive NP can only be generated in SPEC(D) and get a nominative case marker from the corresponding head D, exactly the same way that NPs in SPEC(C) and SPEC(I) get nominative case ga from the

corresponding heads C and I, through SPEC-HEAD agreement.⁸

This proposed correlation gets support from the following paradigm.

- (51) a. Watashi-no/*ga shiawase-na kodomo-no koro
 I-gen/*nom happy time
 'my happy childhood time'
- b. Taro-no/*ga mijime-na gakusei-no jibun
 Taro-gen/*nom miserable student-gen period
 'Taro's miserable student period'

When an adjective modifying the head noun is added, the nominative possessive becomes impossible. This makes sense in the proposed analysis. In order to select an adjective modifier, the head noun must be lexically meaningful and must be present in the syntax. And if the head noun is lexical, the possessive NP must be realized as NP-no in SPEC(N), as in (50a).

To sum up, the so-called genitive marker has been shown to be best analyzed as a P in SPEC(N), rather than as a case-marker, parallel to the dative ni with a dative subject in the SPEC(V) of a sentence. Exactly parallel to the case of I and SPEC(I) in a sentence, an NP in SPEC(D) can also be case-marked through SPEC-HEAD agreement with a corresponding head

⁸ We need not call ga "nominative"; it is just the mark of case assignment by any functional head.

D. Together with the case marking mechanism by C and I in chapters 3 through 6, all cases assigned by functional heads in Japanese are thus manifested as the nominative case ga. We can alternatively call nominative case *functional case* in Japanese.

The only difference between IP and DP seems to be the conditions on case marking. As we saw in this section, the choice between NP-ga in SPEC(D) and NP-no in SPEC(N) internal to a larger DP depends on whether the head N is syntactically absent or not. On the other hand, the choice between NP-ga and NP-ni in IP does not work exactly this way; rather NP-ni is a last resort. I will leave a deeper explanation of this difference for future research, contenting myself with a partial characterization in the following sections.

7.3.3. The Structure of NPs containing Sentential Complements

Now let us go back to NPs headed by koto and no with sentential complements. The issue is the unexpected availability of the double ga construction (41) in the sentential complements, which seems to contradict all the other results of the five criteria (3) showing that the sentential complements of these nouns are IPs.

Since the head nouns koto and no do not have any intrinsic meaning other than being nominalizers, they also seem to be grammatical formatives in the sense of Emonds

(1985, ch. 4), and therefore may be empty in the syntax.⁹ I contrast them with normal lexical nouns such as kettushin 'decision' or keikaku 'plan', etc. with sentential complements and point out some crucial differences.

With a lexical N, a possessive NP and an adjectival modification are of course possible.

- (52) Taro-no [Hankako-ga hannin da to iu] surudo-i suisoku
 Taro-nom [Hanako-nom criminal be comp say] sharp guess
 'Taro's sharp guess that Hanako is a criminal'

On the other hand, an adjective, which naturally modifies lexical nouns, cannot appear in the constructions with no and koto.

- (53) a.*Subarashii [Yukie-ga aria-o ut-ta] koto/no
 wonderful Yukie-nom aria-acc sing-past N/N
 'The wonderful thing that Yukie sang an aria'
 b.*[Yukie-ga aria-o ut-ta] subarashii koto/no
 Yukie-nom aria-acc sing-past wonderful N/N
 'The wonderful thing that Yukie sang an aria'

Further, a possessive NP cannot cooccur with koto and no

⁹ Recall in chapter 5, we have argued that a morpheme no, which appears after a free copula in I in predicate attribute sentences, is a grammatical N. There is no reason to believe that the noun no here is different from this other grammatical N no.

either:

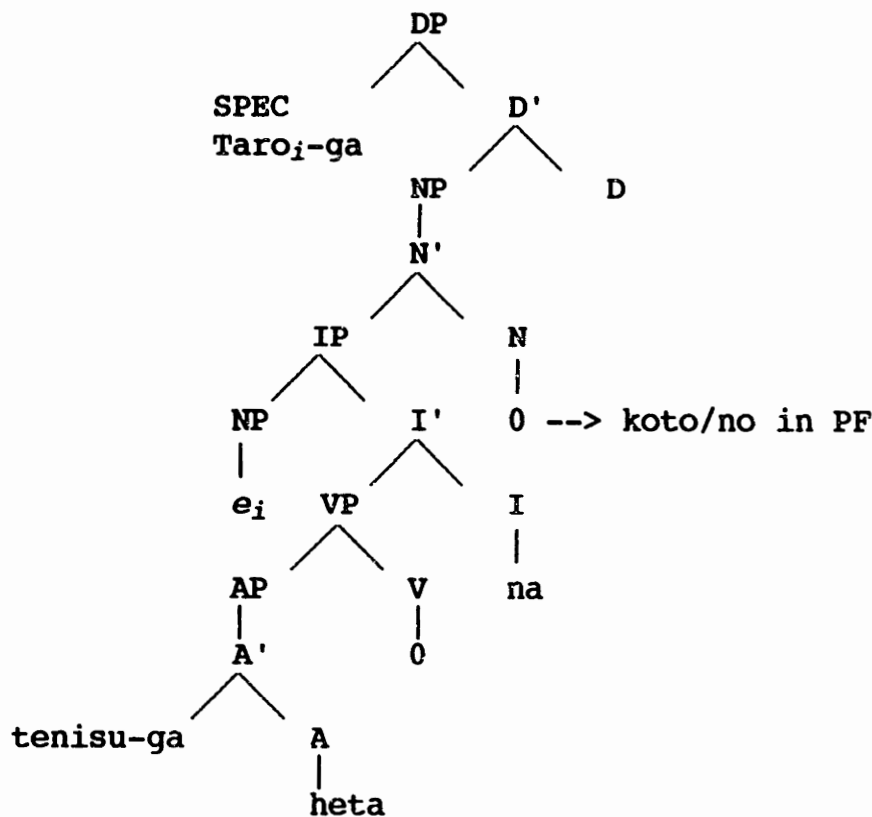
- (54) *NY taimuzu-no [Yukie-ga aria-o ut-ta] koto/no
NY Times-gen [Yukie-nom aria-acc sing-past] N/N
'The NY Times' fact that Yukie sang an aria'

Notice that the situation is quite parallel to simple NPs discussed in section 7.3.2. The unavailability of these typical components of NPs can naturally be attributed to the head N being empty. More specifically, the possessive NP is not available because an empty head does not select its specifier (Emonds 1990), as we saw above for the simple NP. Along the same lines, although Emonds does not say anything about modifiers, it seems to be a natural extension to attribute a lack of adjectival modifiers to the emptiness of the head.¹⁰

Thus, the structure for an NP headed by koto or no must be as follows, given the fact that complement clauses of Ns are IPs, as we established in section 7.3.1.

¹⁰ The situation is also similar to the case of empty V in predicate attribute sentences (chapter 5). The SPEC position corresponding to the empty V is not available for an external argument, nor can such a V select any modifiers.

(55)



Boku-wa Taro-ga tennisu-ga heta-na no/koto-ni odoroi-ta.
 I-top Taro-nom tennis-nom bad-at-be N-to surprise-past
 'I was surprised at Taro being bad at tennis.'

Here the SPEC(N) is not available because the corresponding head koto/no is absent in the syntax. But instead, there is a possible place for an NP-ga, that is, in SPEC(D), analogous to the contrast in (50) with simple NPs in section 7.3.2. I thus am saying that the subject ga of the double ga construction in a noun complement, which has been problematic for the analysis that such a complement is an IP, is in SPEC(D) and gets a nominative case ga from the head D. This is consistent with the fact that the subject ga in the complement clause in (55) completely lacks the exhaustive

interpretation, which is always to be associated with the SPEC(C) case-marked by C (chapters 4 and 5).

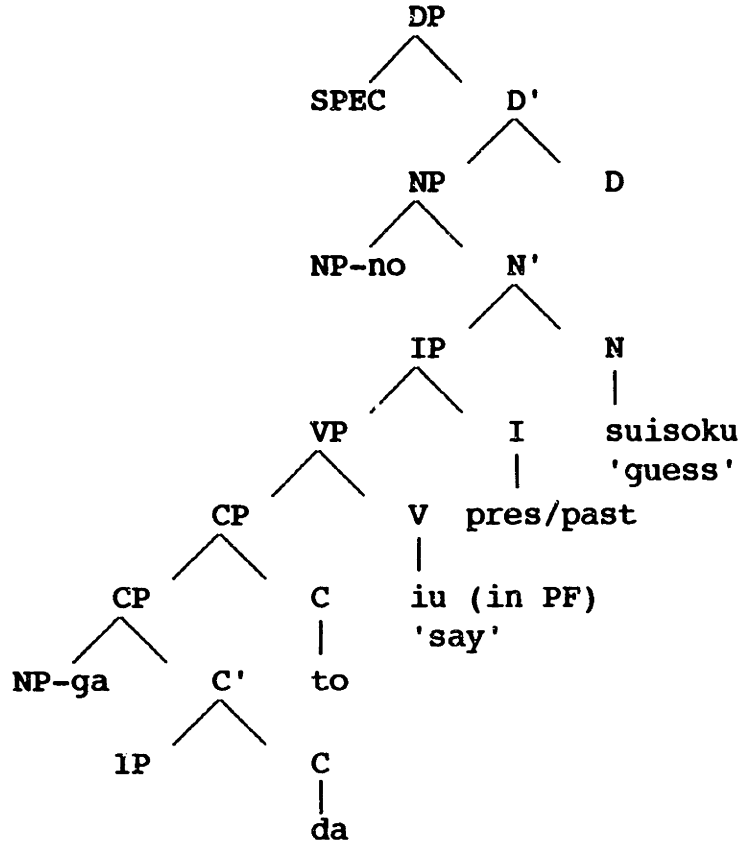
The corresponding structures for lexical nouns taking a sentential complement are quite different. A peculiar thing about these nouns is that the sentential modifier is additionally embedded with the complementizer to (section 7.1), and that this to-clause is always connected to the head noun through an intermediate iu, a verb meaning 'say' which here does not convey any significant meaning. This verb can also take a past tense form it-ta as well as the present tense form i-u, as in the following example:

- (56) Hanako-ga hannin da to i-u/it-ta suisoku
 Hanako-nom criminal be comp say-pres/say-past guess
 'A guess that Hanako is a criminal/ A guess something
 like that Hanako is a criminal'

With the past tense, the verb ittta almost means "something like" as indicated in the translation, and does not have its literal meaning of "said". This observation that the verb iu/ittta is not behaving as an ordinary verb suggests that it is present for a syntactic reason; namely, it is a grammatical verb which is also empty in syntax. More specifically, a clausal sister to a noun must be IP in Japanese for an as yet unknown reason; thus, a grammatical V iu 'say' comes in to adjust the connection between the CP and N.

The structure for lexical N with a sentential complement as in (56) is thus as follows, contrasting sharply with (55).

(57)



Here, the head noun takes an IP sister to satisfy this still mysterious general syntactic requirement, which in turn contains a VP, following the universal requirement that IP is an extended projection of VP; the dummy head V finally takes a CP which is headed by the unmarked complementizer to.

To sum up, we have examined structures inside NPs with sentential complements. Quite parallel to the simple NPs in section 7.3.2, the crucial contrast is drawn from whether the head N is syntactically filled or not. When a head N is

lexically filled in syntax, then every argument of the N must be manifested internal to NP. A possessive NP will appear in SPEC(N) as [pp NP-no]. Consequently, a sentential complement of a lexical N can assume its maximal sentential form only via an I-headed CP as in (57). On the other hand, when the head is a grammatical N and thus is empty in syntax, then SPEC(D) becomes available for a subject NP marked with ga, as is exactly the case with the simple NPs, and thus NP is a subject of the predicates internal to IP. The superficially problematic paradigm with the double ga construction which was the focus of section 7.3.1 is now successfully integrated into a general analysis of NPs which regularizes the distribution of SPEC(D) (i.e., NP-ga) and SPEC(N) (i.e., NP-no).

7.3.4. The Structure of Relative Clauses

Turning to the structure of relative clauses, we will again observe the same contrast between lexical and grammatical Ns as in previous sections. Although the example (41c) of a double ga-construction used in section 7.3.1 involves a head noun riyuu 'reason', which is conceivably a grammatical N, with truly contentful lexical nouns, the double ga construction is not actually available.

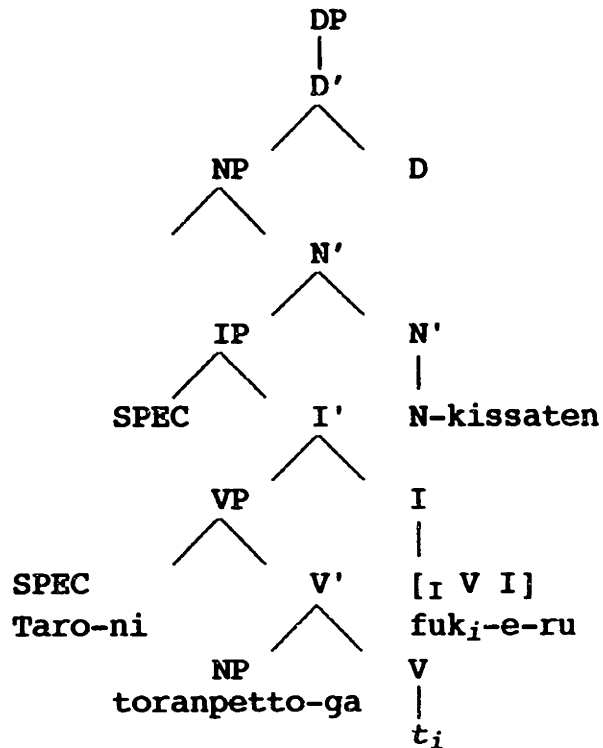
- (58) a. (Sono) [Taro-ni/*ga toranpetto-ga fuk-e-ru] kissaten
 That [T-dat/*nom trumpet-nom play-pot-pres] cafe
 'That coffee shop where Taro can play the trumpet'

- b. (shi-no) [Hanako-ni/*ga hon-ga yom-e-ru] toshokan
 city-gen [H-dat/*nom book-nom read-pot-pres] library
 'A city library where Hanako can read a book'

I include optionally some noun modifiers to ensure that the head N is filled in syntax. With nouns like kissaten 'cafe' or toshokan 'library', the double ga construction is not allowed inside of relative clauses. This contrast between lexical and grammatical Ns with respect to the point of whether an extra NP-ga is allowed or not is by now familiar: with a grammatical N, an extra NP-ga in SPEC(D) is possible, while with a lexical N, it is not.

Since subordinate relative clauses are not complements to N, I treat them here as N' sisters. (See Kameshima 1989, Ishii 1991, and Murasugi 1991 for detailed analyses of relative clauses). The structures for the relative clauses with a lexical or a grammatical head N are thus as follows:

(59) With lexical nouns, as in (58a):

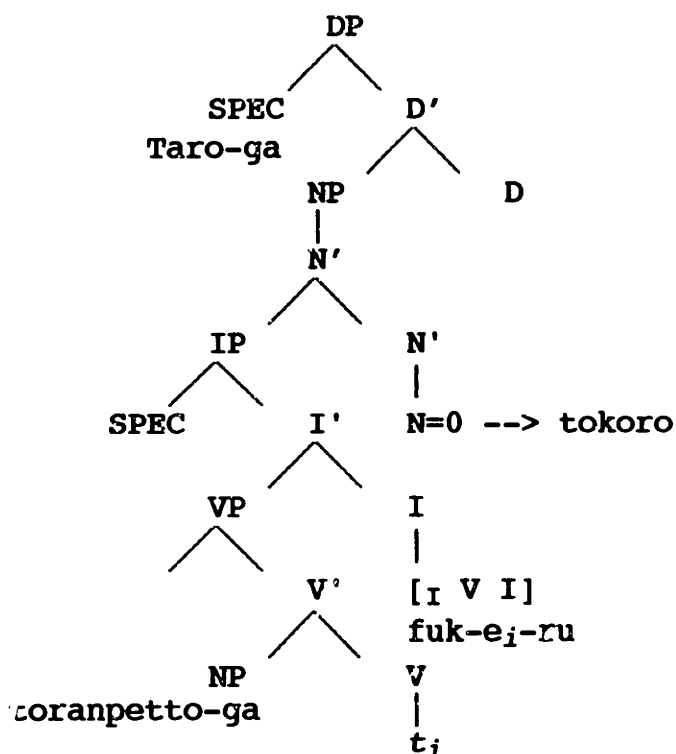


If we replace the lexical nouns kissaten 'cafe' and toshokan 'library' in (58) with a grammatical place noun tokoro 'place', then the nominative version becomes grammatical.

- (60) a. [Taro-ni/ga toranpetto-ga fuk-e-ru] tokoro
 [T-dat/nom trumpet-nom play-pot-pres] place
 'a place where Taro can play the trumpet'
- b. [Hanako-ni/ga hon-ga yom-e-ru] tokoro
 [H-dat/nom book-nom read-pot-pres] place
 'a place where Hanako can read a book'

The structure with a relative clause headed with a grammatical noun is:

(61) With grammatical nouns, as in (60):



With the grammatical Ns, the subject ga in relative clauses often appears interchangeable with the genitive marker no, parallel to the case with time nouns in (49), again suggesting that such nouns of time, place, and reason can be both grammatical and lexical.¹¹

(62) a. Jiroo-ga/no sushi-o tabe-ta riyuu

Jiroo-nom/gen sushi-acc eat-past reason

'A reason why Jiroo ate sushi'

b. Abe-chan-ga/no takkuu-ga uma-i riyuu

¹¹ These nouns have similar status in English (Emonds 1987).

Abe-nom/gen ping-pong-nom good at-pres reason

'A reason why Abe-chan is good at ping-pong'

c. Taro-ga/no piano-ga nonbiri hik-e-ru hi/toki

T-nom/gen piano-nom relaxed play-pot-pres day/toki

'A day/time when Taro can play piano relaxed'

d. Taro-ga/no toranpetto-ga hik-e-ru tokoro/basho

Taro-nom/gen trumpet-nom play-pot-pres place/place

'A place where Taro can play the trumpet'¹²

Exactly the same as with the time nouns, these alternations show that the head nouns in (62) can be both lexical and grammatical. When they are lexical, the genitive version with no in a PP is possible, while they are grammatical, it is not.

The alternation in (62) has been called ga/no conversion (Harada 1971/1976 and Bedell 1972), together with other phenomena in which the nominative case marker and the genitive marker seem to alternate freely. In order for the genitive marker no to appear, however, the NP must always be an argument of a lexical N, having an explicit possessive relation. Observe the following examples:

¹² A noun tokoro seems to have an additional nonliteral meaning, when it is used as a grammatical noun: it can mean that 'the actual fact that...' For example, (62d) with NP-ga can mean that 'the actual fact that Taro can play the trumpet.' This interpretation is not, as expected from our analysis, available if the subject is marked with no.

- (53) a. Taro-ga/*no houkago setsumei-shi-ta eiga
 Taro-nom/gen after school explain-do-past movie
 'The movie that Taro explained after school'
- b. Hanako-ga/*no sakki nagame-te i-ta inu
 Hanako-nom/*gen a bit ago watch-P be-past dog
 'The dog that Hanako was watching a bit ago'
- c. Jiroo-ga/*no Sapporo-de tabe-ta kani
 Jiroo-nom/*gen Sapporo-at eat-past crab
 'The crab that Jiroo ate at Sapporo'

Since all the head nouns in (63) are bona fide lexical nouns, their SPEC(N) should be available for the appearance of NP-no. However, in all these cases, the genitive alternative no is not available. For in all the cases, the thing talked about is not something which can be possessed; e.g., a movie that Taro explained after school is not something which he possessed.

When ga/no conversion is possible with relative clauses, the two forms actually mean slightly different things. For example, (62a) with genitive case means 'Taro's reason why he ate sushi', while (62a) with nominative case means 'the reason why Taro ate sushi'. In the case of a noun modified by a relative clause, a parallel meaning difference is always present between the ga-version and the no-version. But with a common example such as Taro-ga/no kat-ta hon 'the book Taro bought', the difference is often undetectable. For when one buys something it is a natural consequence that the thing

bought belongs to one, so that the meaning difference between the genitive and nominative versions are obscured.

7.3.5. Summary

To conclude, the contrastive analysis between lexical and grammatical N has been further confirmed with respect to relative clauses (section 7.3.4), as well as in simple NPs (section 7.3.2) and in NPs with sentential complements (section 7.3.3). By locating the source of the first NP-ga of two in these embedded clauses in SPEC(D), the analysis that sentential complements internal to NP are IPs now stands without exceptions.

With respect to the structure of NPs, we have seen that the genitive marker no, which is a P, appears with an NP in SPEC(N) when (i) the corresponding head N is lexical and (ii) the NP in SPEC(N) and the head N can have a possessive relation. Additionally, the fact that both N and N' take IP rather than CP sisters suggests that this is a general restriction on projections of Ns in Japanese.

By adding D to the list of nominative case assigners, a general property of functional heads in Japanese emerges: that is, all functional categories in Japanese assign nominative case ga. The Japanese nominative case hence should be renamed *functional case*.

Chapter 8

Sentence Forms and Interpretations

We have seen in this dissertation that there are two types of sentential phrases in Japanese, CP and IP, and that each of them has a different position, SPEC(C) and SPEC(I), reserved for a subject. I will suggest in this chapter that CP and IP represent counterparts *in form* to the analytic and synthetic judgments of the Kantian philosophical tradition. That is, given that central aspects of meaning come from syntactic structure, this chapter is a concrete attempt to specify the relation between the sentential forms and their constructional meanings.

As I indicated in chapter 1, Kuroda (1965, 1969, 1972, 1976, 1990) argues that Japanese grammar expresses explicitly two different types of judgments, categorical andthetic judgments, the two kinds of judgments proposed by Franz Brentano and further elaborated on by Anton Marty. Categorical judgments are basically those recognized in traditional logic, where a subject has a special status to be predicated of by a predicate. On the other hand,thetic judgments are those of formal logic, where a subject is recognized as just one among various arguments of a predicate. Kuroda argues that categorical judgments are realized as sentences with wa subjects, andthetic judgments as sentences where the subject is marked with nominative ga.

My claim about analytic and synthetic forms is intuitively similar to Kuroda's claim about categorical andthetic judgments, and actually my earlier thinking has been influenced by the insightful work of Kuroda. Nonetheless, there are some differences between our approaches, and perhaps ultimately between our claims about these meanings.

For example, although Kuroda focuses on the distinction between wa sentences and ga sentences, I have rather focused on the distinction between exhaustive ga sentences and neutral ga sentences; for the moment, I hold that wa sentences can be of either type, depending on whether C is filled with I features or not, but my position on wa sentences is not yet firm. While I am not sure to what extent my work and Kuroda's are compatible in other respects, I would like to elaborate here on why I feel the difference in sentence forms in Japanese can be best understood in terms which recall Kant's distinction between analytic and synthetic judgments.

As a proviso, I do not pretend here to do justice to or even really enter into the subsequent philosophical literature on analyticity and its relation to the notion of truth. The fact is that I focus here on the "intentions" conveyed by sentence forms, and not at all on their truth conditions. But in any case my proposals below are preliminary and will need to be re-examined in the light of this rich literature.

In his Critique of Pure Reason, Kant (1787) recognizes

two different types of judgments: one is called an analytic judgment and the other a synthetic judgment. In the former, "the predicate B belongs to the subject A, as something which is (covertly) contained in this concept A." (A6/B10) On the other hand, in the latter, "B lies outside the concept A, although it does indeed stand in connection with it."

(A6/B10) Judgments being "the mediate knowledge of an object" (A68/B93), these differences in judgments are imposed on knowledge.

What I propose in this chapter, based on the conclusions arrived at in this study of Japanese syntax, is that this language provides separate *forms* for analytic and synthetic judgments. I say *forms* because I do not claim that any distinction in types of knowledge is coherently mapped to a distinction in sentential forms. That is, there is no meaningful correlation between judgments (i.e., knowledge) and the forms they are represented in; analytic judgments may well be represented in synthetic form and synthetic judgments may well be represented in analytic form. Rather, I claim that an analytic form is one in which a speaker commits him/herself at the time of utterance to the relation between subject and predicate being analytic, in Kant's sense. To use a synthetic form is to commit oneself to the relation between the subject and predicate being synthetic, again in his sense.

To elucidate my claim, I will first tackle a question in section 8.1. in what way and why a natural language can offer

these two forms. In section 8.2., then, a relation between form and meaning will be discussed.

8.1. Formal vs. Natural Systems

A natural question is, what makes it possible that a language can distinguish between synthetic and analytic forms? An illustrative contrast for investigating this question might be between a formal system say used in mathematics and a natural system such as a natural language. A system is formal if there is a relation R between a symbolic notation and an object corresponding to it. A system is natural, otherwise. A parallel distinction in knowledge has also been drawn by Kant. I thus start from his discussion of two disciplines which both employ reason but in a quite contrastive way; that is, mathematics and philosophy.

Mathematics has received special attention in Kant's work as "the most splendid example of the successful extension of pure reason, without the help of experience" (A712/B740). Given this success of mathematics in the employment of reason, Kant questions whether philosophy can take the same route as mathematics by using the same method. During his discussion, several important differences between them are pointed out.

First and most significantly, mathematical knowledge is "the knowledge gained by reason from the *construction* of concepts" (A713/B741), while philosophical knowledge is "the *knowledge gained by reason from concepts.*" (A713/B741)

Mathematical construction of concepts, he means, is "to exhibit *a priori* the intuition which corresponds to the concept". (A713/B741) That is, to mathematically construct a concept, I represent an intuition without any help of an empirical pattern so that an intuition nonetheless exhibits "universal validity for all possible intuitions which fall under the same concept." (A713/B741)¹ Thus, when a concept

¹ To demonstrate a difference between mathematics and philosophy, Kant discusses whether a definition is possible in each discipline. To define being "to present the complete, original concept of a thing within the limits of its concept" (A727/B755), he says that definition is only possible in mathematics, while it is not in philosophy. For, no concept, except one constructed, allows a definition.

Let us go over possible concepts in turn. For empirical concepts, it is impossible to define them because "it is never certain that we are not using the word, in denoting one and the same object, sometimes so as to stand for more, and sometimes so as to stand for fewer characteristics."

(A727/B755) One person for example can think of a property which he/she thinks characteristic of X, while a different person can denote another property as the most intrinsic feature of X. The best we can hope for is thus to make an empirical concept "explicit" (A723/B756)

Even for concepts given *a priori*, we cannot define them. For, "I can never be certain that the clear representation of a given concept, which as given may still be confused, has been completely effected, unless I know that it is adequate to its object." (A728/B756) No matter how much we analyse a concept, there is no guarantee that we have analysed a concept completely. Here this activity of analysing a concept should be called "exposition" (A729/B757), rather than "definition".

Lastly, arbitrarily invented concepts, although deliberately made up, cannot be defined either. "A concept which I have invented I can always define; for since it is not given to me either by the nature of understanding or by experience, but is such as I have myself deliberately made it to be, I must know what I have intended to think in using it. I cannot, however, say that I have thereby defined a true object. For if the concept depends on empirical conditions, as e.g. the concept of a ship's clock, this arbitrary concept of mine does not assure me of the existence or of the possibility of its object. I do not even know from it

is constructed as in mathematics, a definition is possible. Or, a concept is simply given by the definition. When an object, as opposed to a concept, is exhibited a priori in intuition, the corresponding concept can be given by a definition so that it covers neither less nor more than the corresponding object. Kant's claim that "all mathematical judgments, without exception, are synthetic" (B14) thus follows from this fact that mathematics allows definitions.²

Since every concept in mathematics is constructed, the notational system in mathematics is formal. That is, a certain notation is chosen to designate "a single object", an intuition which corresponds to the constructed concept. It is formal because there is a relation R which maps a notation (symbol) to a single object.

In contrast to mathematics stands philosophy. Here analytic judgments are possible precisely because the definition is impossible. As discussed in note 1, in

whether it has an object at all,..." (A729/B757) Given this uncertainty about the object which is defined, this act should rather be called the "declaration" (A729/B757) of a project, rather than a "definition" of a concept.

It thus follows that in philosophy, where knowledge is gained by reason from concepts, the best one can do is a detailed analysis of a concept, but one never is certain whether an analysis is complete, neither covering too little nor too much, but just fitting a thing one is defining.

² When an object is successfully defined, since it is a single object, it cannot be further looked into or analysed. The only possible analytic judgments in mathematics are, as Kant notes, exactly those of tautology, for precisely there an object does not need to be looked into for verifying a judgment. Meaningful (non-tautological) analytic judgments are thus impossible in mathematics. Mathematical judgments are thus synthetic.

philosophy, the "definition" is not possible, rather only "exposition" or "declaration" is. And this exposition or declaration is an analytical judgment because one is trying to denote an object by analysing and selecting the most prominent feature(s) of an object.

In philosophy, any notation system is thus "natural". I say natural, opposed to "formal", since there are no "single objects" which certain notations in philosophy can designate. There is no relation R here to map notational symbols to single objects. And thus, *meaningful* analytic judgments, which are not tautologies, are possible. They are possible because a concept, not being "a single object", can be looked into to find a property (covertly) included in it. Although a concept cannot be defined, and precisely because a definition of a concept is not possible, meaningful analytic judgments are possible.

A natural language is itself a natural system, not a formal system, in the sense that there is no relation R between any segments (notational symbols) of natural language and "single objects". What a natural language offers is a an inventory of forms.

For sentential categories, there are two different forms: one is an analytic form and the other is a synthetic form. An analytic form is used to declare that the relation between a subject and predicate is one such that the predicate is included in the subject; that is, the predicate is declared to be an intrinsic feature of the subject. A

speaker is committed to a relation where the predicate is thought of as part of the subject; in other words, a subject is perceived as something which is not a single object and thus can be looked into or "analyzed". A speaker is saying essentially that the predicated property is extractable from the subject.

On the other hand, with a synthetic form, a speaker is committed to the claim that the subject is in a synthetic relation to the predicate. In a synthetic form, a subject is perceived as a single object. It thus cannot be divided up into characteristic features, but rather is presented as connected to other concept as a matter of fact. The speaker is seeing the relation between the subject and predicate as something where the predicate lies outside of the subject, but is nonetheless related to the subject as it is to other of its arguments.

8.2. Constructional Meanings

I discussed in the previous section how a natural language might have two forms to reflect a speaker's recognition of differing relations between a subject and a predicate. Implicit in the above discussion is the idea that meaning is not independent from form. If syntactic form constructs (at least some central aspects of) sentence meaning and thus meaning is in a significant degree simply form, sentence meaning is *not* representable independently from syntactic form. Concentrating particularly on

sentential forms and their constructional meaning, let us return to the results of Japanese syntax.

The copula construction in Japanese, which has been discussed at length in chapter 5, is illustrative of the point. The analytic and synthetic forms are overtly phonologically reflected in the present tense copula forms. In the analytic form, the copula is realized as da, while in the synthetic form, the copula is realized as na.

(1) a. Hanako-ga ronri-teki-da.

Hanako-nom logical-be

'Hanako (exhaustive) is logical'

b. Hanako-ga ronri-teki-na-no.

Hanako-nom logical-be

'Hanako (neutral) is logical.'

(1a) means that an aspect of Hanako's character is being logical and the property "logical" is considered inside of Hanako. On the other hand, in (1b), "logical" is not considered as an intrinsic feature of Hanako, but is rather considered to be connected to Hanako. Although I have used other authors' "exhaustive" to characterize the interpretation of a subject in an analytic form, this "exhaustivity" should be thought of as an *effect* of the analytic form where a relation between a subject and a predicate is thought of as analytic. When a predicate is thought of as included and internal to a subject, it is

natural to have an interpretation that is often associated with an "exhaustive" subject such as "it is X that has such and such property". The exhaustive interpretation thus by no means means "only".

This alleged difference between the two different forms can be made clearer by showing that the two sentences are not free variants. For example, as an answer to a question such as "Who is logical in this class?", (1a) is perfect, while (1b) isn't. On the other hand, when somebody who didn't know about Hanako is surprised to find out how logical Hanako is, the person can say (1b) but not (1a) in a moment of surprise. Further, the following sentence can be uttered right after (1a), but not after (1b).

- (2) Kanojuo-ni kono purojekuto-o makase-yoo.
 her-to this project-acc assign-will
 'I shall assign this project to her.'

That is, (3a) can be naturally uttered by a single person, while (3b) cannot.

- (3) a. Hanako-ga ronri-teki-da. Kanojuo-ni kono purojekuto-o
 makase-yoo.
 H-nom logical-be. her-to this project-acc assign-will
 'Hanako (exhaustive) is logical. I shall assign this
 project to her.'
- b. #H-ga ronri-teki-na-no. Kanojuo-ni kono purojekuto-o

makase-yoo.

H-nom logical-be. her-to this project-acc assign-will
 'Hanako (neutral) is logical. I shall assign this
 project to her.'

This contrast makes sense if we take into account the hypothesized meaning difference between analytic and synthetic readings. In (3a), a speaker is attributing "logical" to Hanako's intrinsic properties or permanent features, and thus can make a judgment of whether Hanako is a suitable person to assign a task to. On the other hand, in (3b), the first sentence is just a mere observation that Hanako as a single object is closely connected to "logical", but crucially, the "logicalness" does not come from Hanako. (1b) is claiming that no matter how hard one looks at Hanako, "logicalness" is not to be found inside of Hanako, even though Hanako is connected to "logicalness". Since the speaker is only making an observation, the observation alone is not enough to justify selecting Hanako from among others.

It is thus clear that the two forms in (1) are not mere free variants, but have different meanings. A question that should now be asked is where this difference in interpretation comes from. Since the predicates and subjects involved in both (1a) and (1b) are the same, the difference must come from differing structures, namely the CP structure of (1a) and the IP structure for (1b) that I have been arguing for throughout this dissertation.

We have thus seen, with respect to the examples in this section and more extensively throughout the preceding chapters, novel answers as to how the syntactic structure bears central aspects of semantics. An increasing knowledge of syntactic structure, it seems to me, is the most secure way to elucidate discoveries about meaning.

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