

SENTENTIAL COMPLEMENTATION IN JAPANESE

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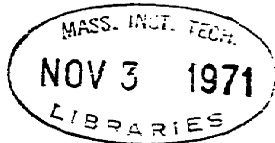
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## ABSTRACT

This work presents a reasonably complete description of the types of sentential complements to Nouns and Predicates in Japanese within the general framework of transformational generative grammar. It is the intent of the present study to place the Japanese sentential complement system within a broad perspective of Japanese syntax. Toward this goal, it first identifies certain fundamental syntactic units, phrase structures and transformational processes with the hope that they significantly participate in the characterization of certain types of sentence embedding and complementation, then justifies the existence of Noun and Predicate sentential complement types, and examines the Complementizer status of the three syntactic units to-yu-u, to and yoo-ni. The determination of deep structure for certain different classes of higher Predicates on the basis of the preceding discussion predicts the existence of three fundamental transformational processes in the Japanese sentential complement system, namely, Complement Subject Raising, Complement Subject Deletion and Complement Predicate Raising. Then this prediction is shown to be amply justified on independent syntactic grounds.

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## INTRODUCTION

The principal purposes of this research are to explicate the sentential complement system in Japanese within the general framework of transformational generative grammar, and to clarify some of the implications which this system suggests for general linguistic theory.

One of the more intensively explored areas of Japanese syntax in previous work within the transformational framework is the system of sentence embedding types, particularly, the system of types of sentential complements to Nouns and Predicates. A general survey of past work,<sup>1</sup> however, brings to light the fact that it has failed to provide an adequate description or explanation of the Japanese sentential complement system.

The initial transformational cornerstone for Japanese syntax is undoubtedly Kazuko Inoue's monograph A Study of Japanese Syntax (1969), which originated as her Michigan Ph.D. thesis in 1964. This work presents the most extensive study of Japanese syntax, covering an amazingly wide range of syntactic phenomena, and naturally including the field of sentential complementation as its central part. Her main interest is in providing an explicit account of the relations holding between Predicates and what Inoue calls primary Particles, i.e., the subject ga, the direct object o, and the indirect object or agent ni.

Insofar as I can understand, it was in Sige-Yuki Kuroda's unpublished M.I.T. Ph.D. project entitled Generative Grammatical Studies in the Japanese Language (1965) that Japanese syntax made a significant departure from the general framework of traditional and conventional grammar.



Kuroda treats certain specific problems in Japanese syntax and phonology, including the problem of certain sentential complements to Predicates. His concern also centers primarily around an adequate description and explanation of the distributional properties of the Particles ga, o and ni in certain complement constructions.

Osusumu Kuno, in his unpublished paper "Case Marking in Japanese" (1966), which provided a great deal of inspiration to me two years ago when I embarked on the study of Japanese syntax, first criticizes Kuroda's analysis of sentential complementation in explicit terms, and then proposes his own analysis, inheriting part of it from Kuroda's, with many additional data and insightful observations.

One salient respect in which all of these three works are common is their deeper interest in the explication of Particle change in certain sentential complement constructions than in the discovery of the correct deep structure of such constructions. While I believe that the solution of the latter problem is a logical prerequisite for the solution of the former, the works in question seem to me to assume, with little substantial justification, the existence of sentence embedding and complementation in Japanese deep structure. In other words, they have provided no ample evidence for the decision among the alternative analyses of sentential complementation which undoubtedly arise at many different levels of discussion--thus, justification is not given for the decision between Noun and Predicate sentential complement types, the decision between sentential complement types in subject and pre-Predicate position, the decision between auxiliary Predicate and higher Predicate analyses for such dependent Predicates as the passive rare-ru, the causative

sase-ru and the potential re-ru, the decision between the existence and the non-existence of certain Noun Phrases like the indirect object or agentive ni-phrase in causatives and passives in deep structure, and so forth.

It is quite conceivable that the correct postulation of deep structure will reveal the discrepancy in Particle distribution between deep and surface structure and then naturally predict the existence of transformational processes of Particle change required for the derivation of the associated well-formed surface structure. Such Particle change phenomena are of peripheral interest to me in this research.

Another crucial character of the previous research is its failure to reveal the existence of certain fundamental transformational rules in the sentential complement system, particularly, the rules of Complement Subject Raising and Complement Predicate Raising. It will become apparent in what follows that the correctness of these rules will automatically follow from the discovery of the correct deep structures of certain complement constructions. The failure of the previous work to capture such linguistically significant generalizations seems to depend partly upon the fact that its major interest has been in the description of Particle change phenomena, but not in the determination of deep structure, and partly upon the paucity of adequate linguistic data and universal definitions available.

Although it may not be strictly appropriate to make broad critical observations, like those above, without checking specific proposals case by case, it is not the intent of the present work to make critical comment on past work on Japanese syntax. Thus, I will go into this matter very little, except for where I feel it to be necessary. I am more

interested here in bringing to light a reasonably complete picture of the Japanese sentential complement system within a broad perspective of Japanese syntax.

The types of sentential complements in Japanese proposed in the present investigation involve two kinds of complementation in deep structure: Noun and Predicate complementation. Noun complementation involves the introduction of an embedded sentence as a complement to the head Noun under the immediate domination of a Noun Phrase, whereas Predicate complementation involves the introduction of an embedded sentence as a complement to the head Predicate under the immediate domination of a Predicate Phrase. They can thus be represented basically by the labelled bracketings  $\left[ X S N \right]_{NP}$  and  $\left[ X S Pred \right]_{PredP}$ , respectively. Noun complements are typically marked by the Noun Complementizer to-yu-u, while Predicate complements by the Predicate Complementizer to or yoo-ni. In both types of complementation, however, there are salient instances where no Complementizer is permitted.

Predicates are subcategorized for the types of Noun and Predicate sentential complements, their internal structure, and the types of Complementizers. The abstract sentential nominalizers koto, no and tokoro, and a certain limited number of lexical items will also participate in Predicate subcategorization, where they act as the head Nouns of Noun sentential complements.

There are three basic transformational rules required for the derivation of certain sentential complement constructions, in particular, the rules of Complement Subject Raising, Complement Subject Deletion, and Complement Predicate Raising. Predicates will also be lexically marked

for the application or non-application of these rules, provided that there is no syntactic basis for this distinction available.

This represents an outline of what I propose as the Japanese sentential complement system. A great number of implicit assumptions are made under this system. The present study will focus chiefly on a full justification of these claims. The main and basic questions involved in this problem of justification will thus be taken up in the following fashion:

Chapter I is concerned with the identification of the fundamental syntactic units and phrase structures involved in the derivation of simplex sentences. Chapter II treats certain transformational processes associated with simplex and complex sentences, thereby providing criteria for the isolation of two major phrase categories, Noun Phrases and Predicate Phrases. The results of these two chapters are intended as serving the dual purpose of characterizing certain types of sentential complementation and of placing them in proper perspective. They will, in effect, lay the foundations of sentence embedding and complementation.

Chapter III deals with the definition of Noun and Predicate complementation. In particular, I will argue for the existence of Noun and Predicate complement types on the basis of the clear and crucial cases of complement constructions with the Noun Complementizer to-yu-u and the Predicate Complementizers to and yoo-ni, and for the claim that abstract sentential nominalizations with koto, no and tokoro as the head Nouns of the associated complement sentences are clear instances of Noun Phrases which are directly derived by the phrase structure rules.

Chapter IV examines the sources for the Noun and Predicate Comple-

mentizers, thereby proposing that they are deep structure elements. In particular, I will reconsider the Complementizer status of to-yu-u and yoo-ni in relation to the sentential complement system.

Chapters V and VI argue for the existence of two transformational rules which are mutually exclusive in the Japanese sentential complement system. They are the rules of Complement Subject Raising and Complement Subject Deletion. It will be shown that Complement Subject Raising applies to a class of Predicates which are subjectless and require Predicate sentential complements in deep structure, and that Complement Subject Deletion applies to certain subclasses of Predicates which require animate or human subjects and Predicate or Noun sentential complements in pre-Predicate position. It will further become apparent that these rules are operative on complement sentences which are tensed as well as non-tensed, and that there exist two koto and no-sentential complements, namely, factive and non-factive complements.

Chapter VII discusses certain de-sentential complement constructions with complex Predicates, proposing a rule of Complement Predicate Raising which is only applicable to higher dependent Predicates like the causative sase-ru and the desiderative ta-i. Toward this goal, it will be first shown that certain dependent Predicates are higher Predicates which require Predicate sentential complements, and then it will be proved that the rule of Complement Predicate Raising is a necessary device for the derivation of well-formed surface structure. It will also become apparent that the foregoing two rules are independently motivated by sentential complement constructions with such dependent Predicates as those discussed in this chapter.

Finally, Summary will present a list of subcategorizations of Japanese higher Predicates with respect to the complement types, the Complementizer types, and certain other restrictions.

There are two interrelated areas of study which are missing, but not defective, in the present work; the first of these is a contrastive study of Japanese and English syntactic structure, and the second is the pursuit of the validity of universal constraints proposed in previous transformational literature. I will not go into these problems as far as it might be expected, partly because my present interest is much more in the discovery of the underlying system of Japanese sentential complement constructions, and partly because this discovery must precede serious work on the problems in question. In fact, however, numerous claims are implicit in this study which are immediately relevant to the exploration of these specific problems.

Some familiarity with the general framework of transformational generative grammar and the monographs enumerated in the bibliography is presupposed. My framework of investigation is difficult to pinpoint, but seems to be rather conservative in many instances, particularly where little data is available. Consistency in the analysis of syntactic phenomena will be adhered to in the hope that it may disclose discrepancies in the theoretical framework. Under such circumstances, there can be no conclusive formulation of even a single aspect of Japanese syntax, and hence the present investigation is also still highly tentative and fragmentary. One cannot do more than hope that it may provide a groundwork for future research into Japanese syntax.

The present study is jointly influenced by (1) my (accidental)

complete ignorance of Japanese traditional grammar, (ii) my intuitive perceptions as a native speaker of Japanese, (iii) my relatively extensive knowledge of both traditional and transformational English syntax, and (iv) my reasonably extensive understanding of transformational generative theory. I mention this explicitly, because I think that the present work, to the extent that it is successful, provides evidence for the potential universality of the transformational framework.

Excessive reliance on English translations should, of course, be avoided, although an attempt is made here to find as exact English counterparts of Japanese examples as possible to bring out relevant points of discussion clearly. Word-for-word glossary will hopefully bridge the gaps between English and Japanese pairs. Segmentation of Japanese morphemes will be marked by hyphens, but not with rigor and consistency; compound Nouns, for example, are one case of exceptions, because their hyphenation is irrelevant to the discussion. Such devices as these should be taken as purely expository.

## NOTE

1. In addition to the three transformational treatments of Japanese sentential complementation which I single out in the following discussion, I should mention the following papers as well: Seiichi Makino's Ph.D. project in 1968 at the University of Illinois, entitled Some Aspects of Japanese Nominalizations, handles the less intensively explored field of sentence embedding including relative clauses and Noun sentential complements, preceded by a critical survey of traditional theory as contrasted with transformational theory. Hideo Teramura's "The syntax of Noun modification in Japanese" (1968) and "Emotive sentences in Japanese" (1969) are full of insightful observations in his treatment of certain phenomena unique to the Japanese language.



## CHAPTER I: SYNTACTIC CATEGORIES

I.0. Introduction The purpose of this chapter is to establish certain basic assumptions about the syntactic categories and phrase structures involved in the derivation of simplex sentences. The validity of setting up such assumptions lies in the prospect that they will play a significant role in the characterization of some types of sentential complementation and in the placement of the sentential complement system in proper perspective. Particularly, they will provide ample justification for sentence embedding and a strong suggestion for the existence of Noun and Predicate complement types in Japanese syntax.

Various considerations which derive from linguistic phenomena of simplex sentences lead to the conclusion that a basic description of the deep structure of simplex sentences contains the following Phrase Structure Rules:

(1) The Phrase Structure Rules:<sup>1</sup>

- a.  $S \longrightarrow NP' \text{ PredP Aux}$
- b.  $\text{PredP} \longrightarrow \left\{ \begin{array}{l} NP \text{ Copula} \\ (NP') (NP') \text{ Pred} \end{array} \right\} (\text{Perf}) (\text{Dur}) (\text{Pol}) (\text{Neg})$
- c.  $NP' \longrightarrow NP \text{ Prt}$
- d.  $NP \longrightarrow \left( \left\{ \begin{array}{l} NP' \\ \text{Det} \end{array} \right\} \right) N$
- e.  $\text{Aux} \longrightarrow \text{Tns} (\text{Mood})$

Four major types of assumptions are involved in the proposed Phrase Structure Rules: (i) the existence of constituents like a Sentence, a

Noun Phrase, etc., (ii) the optionality of constituents, like a Mood in (1e), (iii) the ordering of constituents, like that of a Tense and a Mood, and (iv) the hierarchy of constituents, like the immediate and exhaustive domination of a Tense and a Mood by an Auxiliary. The discussion to follow will be centered primarily around the validation of these assumptions.

The first specific claim involved in the proposed Phrase Structure Rules is the Sentence expansion rule (1a), namely, that the deep structure of a simplex sentence consists of three major constituents, a Noun Phrase, a Predicate Phrase and an Auxiliary, in the order given. Syntactic arguments for the existence of Noun Phrases are the most compelling. Observation of the effects of transformations of Noun Phrase movement such as Topicalization, Cleft Formation, Noun Phrase Deletion and so forth provides the basis for the isolation of Noun Phrases.

Less determinative is evidence which suggests the existence of Predicate Phrases and Auxiliaries. One sensible, but not compelling, procedure for the separation of Predicate Phrases from the rest of the sentences is the application of Soo Su ("do so") Predicate Phrase Pro-formation, which operates only on sentences with action Predicates. Such arguments for the existence of constituents which involve the employment of transformations will be presented in Chapter II.

The existence of many other syntactic categories such as a Predicate, a Tense and a Mood is claimed in the Phrase Structure Rules. They are all non-phrasal categories. A number of good cases will be made in Chapter I for the identification of such categories and their subclasses and members. For expository purposes, the following form of discussion



while evidence for the second claim derives from those properties which distinguish among the three subclasses.

I.1.1. Properties of the Predicate Category      The first syntactic property which leads me to classify Verbs, Adjectives, and Nominal-Adjectives as variants of one single lexical category Predicate is the fact that they may invariably occur immediately followed by Tenses. While all subclasses of Predicates take the same morphological form ta for the Past Tense, they take different Present Tense forms; in particular, Verbs take the form ru, although r drops after Verbs whose stems end in consonants.<sup>2</sup> Adjectives take the form i, and Nominal-Adjectives take the form da. The following paradigm of examples of Predicate subclasses exemplifies this point:

(3) a. Verbs:	tabe- <u>ru</u> 'eat' Pres hanas- <u>u</u> 'speak' Pres	tabe- <u>ta</u> 'eat' Pst hanas-i- <u>ta</u> 'speak' Pst
b. Adjectives:	samu- <u>i</u> 'cold' Pres omosiro- <u>i</u> 'interesting' Pres	samu-kat- <u>ta</u> 'cold' Pst omosiro-kat- <u>ta</u> 'interesting' Pst
c. Nominal- Adjectives:	genki- <u>da</u> 'well' Pres husigi- <u>da</u> 'strange' Pres	genki-dat- <u>ta</u> 'well' Pst husigi-dat- <u>ta</u> 'strange' Pst

Whatever morphological forms Tenses may take, Predicates of all subclasses are always followed by Tenses. This fact provides a piece of evidence for the existence of the lexical category Predicate in which all subclasses converge.

The second syntactic property common to the three subclasses of

Predicates is the fact that they may be immediately followed by the Negative Predicate na-i "not", which apparently takes the same Tense forms as Adjectives. Thus observe the following paradigm:

(4) a. Verbs:	tabe- <u>na-i</u>	tabe- <u>nak-kat-ta</u>
	'eat' 'not' Pres	'eat' 'not' Pst
b. Adjectives:	hanas-a- <u>na-i</u>	hanas-a- <u>nak-kat-ta</u>
	'speak' 'not' Pres	'speak' 'not' Pst
c. Nominal- Adjectives:	samu-ku- <u>na-i</u>	samu-ku- <u>nak-kat-ta</u>
	'cold' not Pres	'cold' 'not' Pst
	omosiro-ku- <u>na-i</u>	omosiro-ku- <u>nak-kat-ta</u>
	'interesting' 'not' Pres	'interesting' 'not' Pst
c. Nominal- Adjectives:	genki-de- <u>na-i</u>	genk-de- <u>nak-kat-ta</u>
	'well' 'not' Pres	'well' 'not' Pst
	husigi-de- <u>na-i</u>	husigi-de- <u>nak-kat-ta</u>
	'strange' 'not' Pres	'strange' 'not' Pst

Hence, this fact also provides a piece of evidence for the isolation of a single lexical category Predicate.

Thirdly, all subclasses of Predicates can be followed immediately by Auxiliaries, in fact, by sequences of Tenses and certain Moods including Question, Presumptive and Confirmative, as in:

(5) a. Verbs:	tabe- <u>ta-ka?</u>	"Did (you) eat?"
	'eat' Pst Q	
	tabe- <u>ru-daroo</u>	"(he) will eat"
b. Adjectives:	'eat' Pres Presum	
	tabe- <u>ta-ne</u>	"(You) ate, didn't (you)?"
	'eat' Pst Conf	
b. Adjectives:	samu- <u>i-ka?</u>	"Is it/Are you cold?"
	'cold' Pres Q	
	samu-kat- <u>ta-daroo</u>	"It was cold, I suppose"
	'cold' Pst Presum	
c. Nominal- Adjectives:	samu- <u>i-ne</u>	"It is cold, isn't it?"
	'cold' Pres Conf	
	husigi-dat- <u>ta-ka?</u>	"Was it strange?"
	'strange' Pst Q	

husigi-dat-ta-daroo "It was strange, I  
'strange' Pst Presum suppose"  
husigi-da-ne "It is strange,  
'strange' Pres Conf isn't it?"

Hence, this property common to all subclasses of Predicates provides evidence for the postulation of a single lexical category Predicate.

Fourthly, observe the phrase tari su-ru, which involves the concept of iteration of an action or a state designated by a Predicate, can follow all subclasses of Predicates.

- (6) a. (i) Taroo-wa, swat-tari tat-tari si-ta  
Top(Sub) 'sit' 'stand' AuxVb Pst  
"Taro sat down and stood up by turns/repeatedly"
- (ii) Sono oto-wa, kikoe-tari kikoe-nak-kat-tari si-ta  
'that' 'sound' Top(Sub) 'hear' 'hear' 'not' AuxVb Pst  
"I sometimes heard the sound and sometimes didn't"
- b. (i) Kyoo-wa, samu-kat-tari si-ta  
'today' Top 'cold' AuxVb Pst  
"It was sometimes cold today"
- (ii) Sono geki-wa, omosi-ro-ku-nak-kat-tari si-ta  
'that' 'play' Top(Sub) 'interesting' 'not' AuxVb Pst  
"That play was not interesting sometimes"
- c. (i) Boku-wa, eego-ga suki-dat-tari kirai-dat-tari  
'I-male' Top(Sub) 'English' Obj 'like' 'dislike'  
su-ru  
AuxVb Pres  
"I sometimes like English and sometimes dislike it"
- (ii) Kare-wa, toki-doki genki-dat-tari si-ta  
'he' Top(Sub) 'sometimes' 'well' AuxVb Pst  
"He was sometimes well"

Note first that the phrase tari su-ru cooccurs not only with action Predicates like swar-u "sit" and tat-u "stand" in (6a-i), but also with state Predicates, as in all the other examples. Note further that the auxiliary morpheme su(-ru) functions syntactically as a Verb, because it allows

the cooccurrence of Tenses (taking the Tense forms for Verbs). Notice, however, that it is semantically empty and it does not designate an action in general, the semantic equivalent of the English "do". If this morpheme were a meaning-bearing Verb, then it would be associated with only action Predicates. But it is factually incompatible with all examples of (6) except for (6a-i). Thus the fact that the phrase tari su-ru appears with all subclasses of Predicates, whether they are action or state Predicates, gives further plausibility to the postulation of a single lexical category, Predicate, which comprises all three subclasses.

Fifthly, it is observed that just as there exist transitive Verbs, there exist transitive Adjectives and Nominal-Adjectives. In particular, Verbs of this type require direct or indirect objects marked by the Particles o or ni, respectively, whereas Adjectives and Nominal-Adjectives require object marked by the Particle ga.

- (7) a. (i) Taroo-wa, gohan-o tabe-ta  
 Top(Sub) 'rice'Obj 'eat' Pst  
 "Taro ate rice/Taro had a meal"
- (ii) Ziroo-wa, kyuu-yuu-ni at-ta  
 Top(Sub) 'old'friend'IO 'meet' Pst  
 "Jiro met an old friend (of his)"
- (iii) Boku-wa, Taroo-ni Ziroo-o syookai-si-ta  
 'I-male'Top(Sub) IO DO 'introduce'Pst  
 "I introduced Jiro to Taro"
- b. (i) Boku-wa, okane-ga hosi-i  
 'I-male'Top(Sub) 'money'Obj 'want'Pres  
 "I want money"
- (ii) Boku-wa, oni-ga kowa-i  
 'I-male'Top(Sub) 'devil'Obj 'afraid'Pres  
 "I am afraid of devils"
- c. (i) Taroo-wa, anzan-ga tokui-da  
 Top(Sub) 'mental calculation'Obj 'strong'Pres

"Taro is strong at mental calculation"

- (ii) Boku-wa, ano sippai-ga zannen-da  
 'I-male' Top(Sub) 'that' 'failure' Obj 'regret' Pres  
 "I regret that failure (of mine)"

Evidence that the italicized Noun Phrases in the sentences in (7a) with Verbs as Predicates occupy the pre-Predicate position of a Predicate Phrase can be provided by the use of Soo Su Predicate Phrase Pro-formation. (cf. Section II.1). Our claim that the Adjectives and Nominal-Adjectives in the sentences in (7b) and (7c) are also transitive can be confirmed by observing that the italicized ga-phrases occupy the same position as the o-phrases in (7a). Provided that these observations are correct, certain Verbs, Adjectives and Nominal-Adjectives share the property of transitivity. Herein lies another reason why these three subclasses of Predicates converge in a single lexical category Predicate.

It is further observed that just as there exist intransitive Verbs, there exist intransitive Adjectives and Nominal-Adjectives.

- (8) a. (i) Doroboo-ga nige-ta  
 'thief' Sub 'escape' Pst  
 "The thief ran away"
- (ii) Taroo-wa, yoku nemut-ta  
 Top(Sub) 'well' 'sleep' Pst  
 "Taro slept well"
- b. (i) Kono nimotu-wa, omo-i  
 'this' 'baggage' Top(Sub) 'heavy' Pres  
 "This baggage is heavy"
- (ii) Asoko-wa, suzusi-i  
 'that place' Top(Sub) 'cool' Pres  
 "That place is cool/It is cool there"
- c. (i) Taroo-wa, hen-da  
 Top(Sub) 'crazy' Pres  
 "Taro is crazy/strange"



- (ii) Sora-ga kirei-da  
 'sky'Sub 'beautiful' Pres  
 "The sky is clear"

Thus it is concluded that there are structural parallelisms in transitivity and intransitivity among the three subclasses of Predicates. This leads to the justification of our claim that there is a single lexical category, Predicate, which covers all three subclasses.

Sixthly, just as the greatest majority of transitive Verbs require animate, and very often human, subjects, all Adjectives and Nominal-Adjectives which are transitive require animate, and very often human, subjects. To enumerate only a few of them, this class of Predicates includes Verbs like those in (9a), Adjectives like those in (9b), and Nominal-Adjectives like those in (9c).

- (9) a. hanas-u "speak", yom-u "read", utaw-u "sing", sir-u "know",  
wasure-ru "forget", etc.
- b. arigata-i "grateful for", uresi-i "glad of", mazu-i "poor at",  
kowa-i "afraid of", hosi-i "want", uma-i "good at", etc.
- c. heta-da "bad at", nigate-da "poor at", tokui-da "strong at",  
suki-da "fond of", zannen-da "regret", etc.

The same observation applies to some intransitive Predicates of all subclasses. Thus, as in (10).

- (10) a. nige-ru "escape", sin-u "die", nak-u "weep/cry", nemur-u  
 "sleep", etc.
- b. nemu-i "sleepy", nemuta-i "sleepy", kasiko-i "wise", etc.
- c. baka-da "foolish", genki-da "well", byooki-da "ill", etc.

Therefore, these observations also support the idea of the postulation of a single lexical category, Predicate, into which all three subclasses

fall together.

I have thus far presented six arguments which suggest the existence of the major lexical category Predicate, which comprises Verbs, Adjectives and Nominal-Adjectives. Certain other arguments which lead to the same conclusion will come to light in the course of the discussion to follow. It will become apparent, among other things, that certain Adjectives and Nominal-Adjectives as well as Verbs require Noun or Predicate sentential complements.

I.1.2. Properties Distinguishing Among Three Subclasses of Predicates

Now I will turn to another problem, namely, why there must be three subclasses of Predicates: Verbs, Adjectives and Nominal-Adjectives. The answer to this question can be provided by the observation of those properties which distinguish among the three subclasses. Syntactic properties of one type which distinguish Verbs from the other subclasses have to do with the fact that only Verbs can occur immediately preceding the Polite Predicate mas-u, the Polite Negative mas-en, the Perfective Predicate simaw-u, the causative Predicate sase-ru, etc. Thus observe the following paradigms:

- (11) a. tabe-mas-u  
           'eat' Pol Pres  
           wakar-i-mas-u  
           'understand' Pol Pres
- b. \*omosiro-mas-u  
           'interesting' Pol Pres  
           \*utukusi-mas-u  
           'beautiful' Pol Pres
- c. \*genki(-de)-mas-u  
           'well' Pol Pres  
           \*husigi(-de)-mas-u  
           'strange' Pol Pres

- (12) a. tabe-mas-en<sup>3</sup>  
'eat' Pol 'not'+Pres  
wakar-i-mas-en  
'understand' Pol 'not'+Pres
- b. \*omosi-ro-mas-en Cf. omosi-ro-ku(-wa)-ar-i-mas-en  
'interesting' Pol 'not'+Pres Contr 'be'  
"it is not interesting--Pol"  
\*utukusi-mas-en  
'beautiful' Pol 'not'+Pres utukusi-ku(-wa)-ar-i-mas-en  
"it is not beautiful--Pol"
- c. \*genki(-de)-mas-en genki-de-wa-ar-i-mas-en  
'well' Pol 'not'+Pres "I am not well--Pol"  
\*husigi(-de)-mas-en husigi-de-wa-ar-i-mas-en  
'strange' Pol 'not'+Pres "it is not strange-Pol"
- (13) a. tabe-te-simaw-u  
'eat' Perf Pres  
"has eaten"
- b. omosi-ro(-ku-te)-simaw-u Cf. omosi-ro-ku-nat-te-simaw-u  
'interesting' Perf Pres 'become'  
"has become interesting"
- c. \*genki(-de)-simaw-u genki-ni-nat-te-simaw-u  
'well' Perf Pres "has become well"
- (14) a. wakar-ase-ru  
'understand' Caus Pres  
"make someone understand"
- b. \*utukusi-sase-ru Cf. utukusi-ku-s-ase-ru  
'beautiful' Caus Pres 'do'  
"make something/someone  
beautiful"
- utukusi-ku-nar-ase-ru  
"make someone/something  
become beautiful"
- c. \*husigi-sase-ru husigi-gar-ase-ru  
'strange' Caus Pres 'show signs of'  
"make someone show signs  
of feeling strange"

Although one might propose that the property of action would differentiate Verbs from Adjectives and Nominal-Adjectives, this proposal

is not at all correct, when we notice that both action Verbs like tabe-ru "eat" and state Verbs like wakar-u "understand", kikoe-ru "hear" (as in wakar-ase-ru "make someone understand", kikoe-sase-ru "make someone hear") participate in the same paradigms of phenomena (11) through (14). Therefore, we can conclude that such special Predicates as mas-u, mas-en, simaw-u, sase-ru and so on separate Verbs from the other subclasses of Predicates. In this connection, it should be noted that once Predicates other than Verbs, namely, Adjectives and Nominal-Adjectives, have been verbalized in certain ways, as in the contrastive examples, by being followed by such Verbs as ar-u "be", nar-u "become", su-ru "do", and gar-u "show signs of"; they work like Verbs in the same paradigms where pure Verbs work. This observation also substantiates our claim of sub-classification.

Secondly, one example of another type of syntactic phenomena which differentiates Verbs from Adjectives and Nominal-Adjectives is related to the inchoative Predicate nar-u "come to/become" (cf. Section V.4 for discussion of a higher Predicate analysis for this Predicate).

- |         |     |   |      |   |
|---------|-----|---|------|---|
| (15) a. | (i) | * <u>tabe-ru/te-nar-u</u><br>'eat'Pres 'become'Pres                               | (ii) | <u>tabe-ru yoo-ni nar-u</u><br>'eat'Pres Comp 'become'Pres<br>"come to eat" |
|         |     | * <u>wakar-u/te-nar-u</u><br>'understand'   |      | <u>wakar-u yoo-ni nar-u</u><br>"come to understand"                         |
|         | b.  | (i) <u>omosiro-ku-nar-u</u><br>'interesting' 'become'Pres<br>"become interesting" | (ii) | * <u>omosiro-i yoo-ni nar-u</u>   |
|         |     | <u>utukusi-ku-nar-u</u><br>"become beautiful"                                     |      | * <u>utukusi-i yoo-ni nar-u</u>   |
|         | c.  | (i) <u>genki-ni-nar-u</u><br>'well' 'become'Pres<br>"become well"                 | (ii) | * <u>genki-na yoo-ni nar-u</u>  |

(i) husigi-ni-nar-u  
"become strange"

(ii) \*husigi-na yoo-ni nar-u

It is observed that the presence or absence of the Complementizer yoo-ni (cf. Section IV.3) is correlated with whether Predicates immediately preceding nar-u "become" are Verbs or the other classes. Thus this observation provides another piece of evidence for the separation of Verbs from Adjectives and Nominal-Adjectives.

Thirdly, a syntactic phenomenon of a similar type which differentiates Adjectives and Nominal-Adjectives from Verbs has to do with the cooccurrence restrictions on the higher Predicate gar-u "show signs of" (cf. Chapter VII, for a higher Predicate analysis of this Predicate).

- (16) a. \*tabe-gar-u "show signs of eating"  
\*kikoe-gar-u "show signs of hearing"
- b. omosiro-gar-u "show signs of being interested"  
hazukasi-gar-u "show signs of being ashamed"
- c. genki-gar-u "show signs of being well"  
husigi-gar-u "show signs of feeling strange"

It might be conceived that gar-u would require only stative Predicates, but this possibility is excluded by the ill-formedness of kikoe-gar-u in (16a), where kikoe-ru "hear" is stative. Thus it turns out that gar-u is sensitive to the distinction between Verbs and the other subclasses with respect to the immediately preceding Predicates. This observation supplies us with one more argument for the separation of Verbs from Adjectives and Nominal-Adjectives.

Fourthly, another higher Predicate ta-i "wish" (cf. Chapter VII) presents a differentiating property which leads to the same conclusion.

Namely, the complex Predicate ta-gar-u "show signs of wishing" is only permissible when preceded by Verbs, as in:

- |         |   |  |
|---------|---|--|
| (17) a. | <u>tabe-ta-gar-u</u><br><u>sun-de-i-ta-gar-u</u><br>'reside' Dur<br>Cf. *kikoe- <u>ta-gar-u</u> 4 | "show signs of wishing to eat"<br>"show signs of wishing to live<br>(there)"<br>"show signs of wishing to hear/<br>*show signs of wishing to be audible" |
| b.      | *omosiro- <u>ta-gar-u</u><br>*hazukasi- <u>ta-gar-u</u><br>'ashamed'                              | "show signs of wishing to be interested"<br>"show signs of wishing to be ashamed"  |
| c.      | *genki- <u>ta-gar-u</u><br>*husigi- <u>ta-gar-u</u>   | "show signs of wishing to be well"<br>"show signs of wishing to feel strange"  |

The apparent possibility that the difference in acceptability between (a) on the one hand and (b) and (c) on the other might depend upon whether the immediately preceding Predicates are stative or not is excluded by the fact that in (17a), the first example contains an action Verb tabe "eat", while the second one contains a stative Verb (sun-de) i(-ru) "be living". It can be concluded, therefore, that what distinguishes (a) from (b) and (c) in acceptability is a cooccurrence restriction on Predicates immediately preceding ta-gar; namely, only Verbs are allowed to precede ta-gar. The necessity of separating out Verbs from Adjectives and Nominal-Adjectives has thus been supported on another independent basis.

Fifthly, the effects of attachment of such contrastive Particles as mo "also", sae "even", and wa to three subclasses of Predicates lead to the same conclusion. Thus, in particular, the auxiliary Verb su-ru "do" shows up when such contrastive Particles are attached to Verbs, while the auxiliary Verb ar-u "be" shows up when they are attached to Adjectives

and Nominal-Adjectives.

- (18) a. tabe-sae-si-ta " (he) even ate"  
 'eat' 'even' 'do' Pst  
 kikoe-mo-si-ta "(it) was audible, too"  
 'hear' 'also' 'do' Pst  
 home-wa-si-na-kat-ta "(he) did not praise (her)"  
 'praise' Contr 'do' 'not' Pst
- b. omosiro-ku-sae-nak-kat-ta "it was not even interesting/  
 'interesting' 'even' 'not' Pst I was not even interested"  
 samu-ku-mo-at-ta "It was also cold/I was also  
 'cold' 'also' 'be' Pst cold"  
 hazukasi-ku-wa-na-i "I am not ashamed"  
 'ashamed' Contr 'not' Pres
- c. genki-de-sae-at-ta "(he) was even well"  
 'well' 'even' 'be' Pst  
 husigi-de-mo-at-ta "(it) was strange, too/ I felt  
 'strange' 'also' 'be' Pst strange it also"  
 byooki-de-wa-nak-kat-ta "(he) was not ill"  
 'ill' Contr 'not' Pst

The contrastive Particle wa characteristically occurs together with the Negative Predicate na-i "not". Another difference which derives from the presence of this element is that while the auxiliary Verb ar-u "be" never appears with the Negative na-i, (cf. \*byooki-de-wa-a-nak-kat-ta, as contrastive with the last example of (18c)), the auxiliary Verb su-ru appears with the Negative na-i, as in the last example of (18a). Hence, such contrastive elements serve to provide a basis for the distinction of Verbs from Adjectives and Nominal-Adjectives.

Sixthly, only Adjectives and Nominal-Adjectives can typically be modified by the Exclamatory marker naa. Thus compare the following paradigms, particularly, the first examples in each paradigm of (19), where the morphologically associated Verb and Adjective/Nominal-Adjective of emotion are chosen.

- (19) a. \*Boku-wa, Hanako-o { nikum-u naa!  
 'I-male'Top(Sub) Obj 'hate'Pres Excl  
kiraw-u naa!  
 'dislike'Pres Excl  
 "How I hate/dislike Hanako!"
- \*Taroo-wa, oyoi-da naa!  
 Top(Sub) 'swim'Pst Excl  
 "\*How Taro swam!"
- b. Boku-wa, Hanako-ga niku-i naa!  
 'I-male'Top(Sub) Obj 'hate' Pres Excl  
 "How I hate Hanako!"
- Kyoo-wa, samu-kat-ta naa!  
 'today'Top 'cold' Pst Excl  
 "How cold it was today!"
- c. Boku-wa, Hanako-ga kirai-da naa!  
 'I-male'Top(Sub) Obj 'dislike'Pres Excl  
 "How I dislike Hanako!"
- Ano hanasi-wa, husigi-dat-ta naa!  
 'that''story'Top(Sub) 'strange' Pst Excl  
 "How strange that story was!"

Finally, there is a group of morphological arguments which requires the subclassification of Predicates into Verbs, Adjectives and Nominal-Adjectives. I will discuss only a few representative phenomena of this sort. First of all, as was mentioned in Section 1.1, the three subclasses take different morphological realizations for the Present Tense; Verbs take the form ru, Adjectives the form i, and Nominal-Adjectives the form da.

Secondly, for Noun Phrases with relative clauses, when the Predicate in the relative clause is a Nominal-Adjective, the Present Tense marker da must be turned into the form na. But this does not apply to Verbs or Adjectives. The reason is simply that while the output of Relative Clause Formation (cf. Section II.3) is acceptable in cases of Verbs and Adjectives, it is not in cases of Nominal-Adjectives.



- (20) a.  $\left[ \left[ \begin{array}{l} \text{aruk-u} \\ \text{'walk'Pres} \end{array} \right]_S \text{ sakana} \right]_{NP}$   
 "fish which walks"
- $\left[ \left[ \begin{array}{l} \text{sora-o} \quad \text{tob-u} \\ \text{'sky'Obj} \quad \text{'fly'Pres} \end{array} \right]_S \text{ enban} \right]_{NP}$   
 "a saucer which flies through the sky/a flying saucer"
- b.  $\left[ \left[ \begin{array}{l} \text{samu-i} \\ \text{'cold'Pres} \end{array} \right]_S \text{ asa} \right]_{NP}$   
 "cold morning"
- $\left[ \left[ \begin{array}{l} \text{siken-de} \quad \text{isogasi-i} \\ \text{'exam' 'with'} \quad \text{'busy' Pres} \end{array} \right]_S \text{ gakusee} \right]_{NP}$   
 "students who are busy with the exams"
- c.  $\left[ \left[ \begin{array}{l} \text{husigi-} \\ \text{'strange'} \end{array} \right]_S \left\{ \begin{array}{l} \text{*da} \\ \text{na} \\ \text{Pres} \end{array} \right\} \right]_{NP} \text{ uwasa}$   
 "a strange rumor"
- $\left[ \left[ \begin{array}{l} \text{sukii-ga} \quad \text{tokui-} \\ \text{'skiing'Obj} \quad \text{'strong'} \end{array} \right]_S \left\{ \begin{array}{l} \text{*da} \\ \text{na} \\ \text{Pres} \end{array} \right\} \right]_{NP} \text{ Taroo}$   
 "Taro, who is strong at skiing"

Thus this observation suggests the isolation of Nominal-Adjectives from other Predicates. Exactly the same thing can be said about Noun Phrases with complement sentences. Thus this corroborates the same conclusion.

Thirdly, a nominalizing morpheme -sa "-ness" is attachable only to Adjectives and Nominal-Adjectives, as in (21).

- (21) a. \*tabe-sa  
 'eat' '-ness'  
\*wakar(-i/a)-sa  
 'understand' '-ness'
- b. omosiro-sa  
 'interesting' '-ness'  
kurusi-sa  
 'painful' '-ness'  
samu-sa  
 'cold' '-ness'
- c. genki-sa  
 'healthy' '-ness'

sizuka-sa  
 'quiet''-ness'  
 kokkee-sa  
 'funny''-ness'

I have thus presented ample evidence, syntactic and morphological, which makes it necessary to subclassify Predicates into Verbs, Adjectives, and Nominal-Adjectives.

I.2. The Aspectual, Polite and Negative Predicates There are at least four Predicates which have a special status in the Phrase Structure Rules. They are two aspectual Predicates--the Perfective simaw-u "finish/complete" and the Durative i-ru "be", the Polite Predicate mas-u and the Negative Predicate na-i "not". They may be legitimately called Predicates, because they share some common syntactic properties with ordinary Predicates illustrated in the preceding section; among others, they can be immediately followed by Tenses, as is apparent in the forms presented above.

These four Predicates, at least, however, have different syntactic properties which require their special treatment in the Phrase Structure Rules. First, they always appear preceded by ordinary Predicates; thus they cannot appear by themselves in the sense that ordinary Predicates can.

- (22) a. Taroo-wa,           sono   hon-o           yon-de-simat-ta  
                           Top(Sub) 'that' 'book'Obj 'read' Perf Pst  
                           "Taroo has finished reading that book"
- b. Ziroo-wa,           nemut-te-i-ru  
                           Top(Sub) 'sleep' Dur Pres  
                           "Jiro is sleeping"
- c. Anata-wa,           eega-ni           yuk-i-mas-u-ka?  
                           'you-pol'Top(Sub) 'movie''to' 'go' Pol Pres Q

"Are you going to the movies?"

- d. Sakana-wa, tob-a-na-i  
 'fish' Top(Sub) 'fly' 'not' Pres  
 "Fish do not fly"

Secondly, there is a unique ordering relation among these four dependent Predicates, that is, Perfective-Durative-Polite-Negative. Furthermore, they are all optional. These two points are illustrated by the following paradigm:

- |         |                                  |                           |
|---------|----------------------------------|---------------------------|
| (23) a. | <u>tabe-te-simat-te-i-mas-en</u> | "has not eaten up-Polite" |
| b.      | <u>tabe-te-simat-te-i-mas-u</u>  | "has eaten up-Polite"     |
| c.      | <u>tabe-te-simat-te-i-na-i</u>   | "has not eaten up-Plain"  |
| d.      | <u>tabe-te-simat-te-i-ru</u>     | "has eaten up-Plain"      |
| e.      | <u>tabe-te-sima-i-mas-en</u>     | "will not eat up-Polite"  |
| f.      | <u>tabe-te-sima-i-mas-u</u>      | "will eat up-Polite"      |
| g.      | <u>tabe-te-simaw-a-na-i</u>      | "will not eat up-Plain"   |
| h.      | <u>tabe-te-simaw-u</u>           | "will eat up-Plain"       |
| i.      | <u>tabe-te-i-mas-en</u>          | "is not eating-Polite"    |
| j.      | <u>tabe-te-i-mas-u</u>           | "is eating-Polite"        |
| k.      | <u>tabe-te-i-na-i</u>            | "is not eating-Plain"     |
| l.      | <u>tabe-te-i-ru</u>              | "is eating-Plain"         |
| m.      | <u>tabe-mas-en</u>               | "will not eat-Polite"     |
| n.      | <u>tabe-mas-u</u>                | "will eat-Polite"         |
| o.      | <u>tabe-na-i</u>                 | "will not eat-Plain"      |
| p.      | <u>tabe-ru</u>                   | "will eat-Plain"          |

No other orders are permissible. Thus one cannot find such scrambled orders as the following, which involve the interchange of any two dependent Predicates.

- |         |                                     |                    |
|---------|-------------------------------------|--------------------|
| (24) a. | * <u>tabe-te-i-te-sima-i-mas-en</u> | (Dur-Perf-Pol-Neg) |
| b.      | * <u>tabe-mas-i-te-i-na-i</u>       | (Pol-Dur-Neg)      |
| c.      | * <u>tabe-mas-i-te-simaw-u</u>      | (Pol-Perf)         |
| d.      | * <u>tabe-na-ku-te-simaw-u</u>      | (Neg-Perf)         |
| e.      | * <u>tabe-na-ku-te-i-ru</u>         | (Neg-Dur)          |
| f.      | * <u>tabe-na-ku-te-mas-u</u>        | (Neg-Pol)          |

This unique ordering relation is expressible in terms of phrase

structure rules. Our specific claim, the Phrase Structure Rule (1b), correctly predicts all well-formed strings in (23) and exclude all ill-formed strings including those of (24). One alternative analysis which introduces those dependent Predicates as higher Predicates will be reviewed in much broader perspective in Section VII.4, where the plausibility of a higher Predicate analysis of aspectual Predicates is pursued in greater detail. By the preceding two observations, I tentatively assume the correctness of the Predicate Phrase expansion rule (1b), where the four Predicates in question are introduced.

I.3. The Tense and Mood Auxiliaries Auxiliaries, I assume, are separated from subject Noun Phrases and Predicate Phrases, as in (1a). The rule of Soo Su Predicate Phrase Pro-formation (cf. Section II.1), which replaces an action Predicate Phrase with the pro-form soo su "do so", provides confirming evidence for this parsing. It is further assumed, as in (1e), that Auxiliaries consist of Tenses and Moods, where Tenses are obligatory and Moods are optional. The correctness of this assumption will be argued in this section.

I.3.1. The Present and Past Tenses The Tenses include two sub-categories, Past and Present. The Past Tense refers semantically to past time, whereas the Present Tense refers to present and future time. The following sentences exemplify these points:

(25) a. Taroo-wa,  $\left\{ \begin{array}{l} \text{kinoo} \\ \text{'yesterday'} \end{array} \right\}$  siken-o uke-ta  
           Top(Sub)  $\left\{ \begin{array}{l} *asu \\ \text{'tomorrow'} \end{array} \right\}$  'exam'Obj 'take'Pst  
           "Taro took the examination yesterday/\*tomorrow"

- b. Taroo-wa, Top(Sub)  $\left\{ \begin{array}{l} \text{*kinoo} \\ \text{'yesterday'} \\ \text{asu} \\ \text{'tomorrow'} \end{array} \right\}$  siken-o uke-ru  
 'exam'Obj 'take'Pres  
 "Taro will take/takes the examination \*yesterday/tomorrow"
- c. Taroo-wa, Top(Sub)  $\left\{ \begin{array}{l} \text{*kinoo} \\ \text{'yesterday'} \\ \text{*asu} \\ \text{'tomorrow'} \\ \text{ima} \\ \text{'now'} \end{array} \right\}$  siken-o uke-te-i-ru  
 'exam'Obj 'take'Dur Pres  
 "Taro is taking the examination \*yesterday/\*tomorrow/now"

The Moods are classified into two groups with respect to the co-occurrence of Tenses in deep structure: Moods like those in (26a) which allow both Past and Present Tenses, and Moods like those in (26b) which allow only the Present Tense.

- (26) a. Polite Presumptive: desyoo  
 Plain Presumptive: daroo  
 Question: ka, ka-doo-ka  
 Confirmative: ne  
 Exclamatory: naa  
 Assertive: yo
- b. Abrupt Imperative: ro/e  
 Abrupt Prohibitive: na  
 Polite Imperative: nasai  
 Friendly Request: kure  
 Polite Request: kudasai  
 Volitional: yoo/oo  
 Hortative: yoo/oo

The Moods illustrated here have certain properties in common. Syntactically, they appear at the end of sentences. Semantically, they are all speaker-oriented, in the sense that they express a speaker's mental or emotional attitude towards the proposition of the associated declarative sentence. I will discuss certain basic facts about each of these Moods merely for illustrative purposes.

### I.3.2. Moods Which Allow Both Tenses in Deep Structure

I.3.2.1. The Plain and Polite Presumptive Moods daroo and desyoo<sup>5</sup> invariably reflect the speaker's present state of mind, in particular, his presumption of what is expressed by the sentence, whether the main Predicates is associated with the Past Tense or the Present Tense. Thus observe the sentences in (27).

- (27) a. Asu-wa, ame-ga hur-u { daroo  
'tomorrow' Top(Sub) 'rain' Sub 'fall' Pres { desyoo  
"It will probably rain tomorrow" Presum
- b. Soto-wa, samu-kat-ta { daroo  
'outside' Top 'cold' Pst { desyoo  
"I suppose it was cold outside" Presum
- c. Tabun Taroo-wa, yuk-a-na-i { daroo  
'perhaps' Top(Sub) 'go' 'not' Pres { desyoo  
"Perhaps Taro will not go" Presum

As is apparent from the English counterparts, daroo and desyoo cannot express the speaker's past presumptive attitude. For this purpose, we must resort to syntactically different presumptive Predicates like rasi-i "likely", yoo-da "seem", soo-da "be said to", which take Tenses. I will turn back to these higher Predicates in Chapter V.

There is an apparently exceptional phenomenon where the Present Tense marker does not show up in surface structure when the main Predicate is a: Nominal-Adjective, as in:

- (28) a. Tosyokan-wa, sizuka-dat-ta { daroo  
'library' Top(Sub) 'quiet' Pst { desyoo  
"The library, I suppose, was quiet" Presum
- b. \*Tosyokan-wa, sizuka-da { daroo  
Pres { desyoo
- c. Tosyokan-wa, sizuka ∅ { daroo  
Pres { desyoo  
"The library, I suppose, is quiet"

It is observed in (26a) that the Pst Tense marker appears when the main Predicate is a Nominal-Adjective. It is further observed that the Present Tense marker appears when the main Predicate is a Verb, as in (27a), or an Adjective, as in (27c). These observations suggest that the Present Tense is present in deep structure when the main Predicate is a Nominal-Adjective. Hence it is necessary to have a morphological rule which deletes the Present Tense da before daroo and desyoo, so that the gap (28b) can be filled by (28c).<sup>6</sup>

I.3.2.2. There are yes-no questions and wh-questions in Japanese, as in English. Yes-no questions can be formed by merely putting the Question marker ka at the end of the declarative sentence, as in:

- (29) a. Anata-wa, Hamuretto-o yon-de-sima-i-mas-i-ta-ka?  
 'you'Top(Sub) 'Hamlet' Obj 'read'Perf Pol Pst Q  
 "Did you read up Hamlet?"
- b. Siken-wa, muzukasi-kat-ta-des-u-ka? ?  
 'exam'Top(Sub) 'difficult' Pst 'be-Pol'Pres Q  
 "Was the examination difficult?"
- c. Hosi-wa, kiree- des-u ka?  
 'star'Top(Sub) 'beautiful' 'be-Pol'Pres Q  
 "Are the stars beautiful?"

Wh-questions contain the Question marker ka in sentence-final position and an interrogative Pronoun in the same position which the associated Noun Phrase occupies in their answers. There is no wh-question transformation in Japanese. Thus observe (30).

- (30) a. Anata-wa, konya nani-o tabe-mas-i-ta-ka?  
 'you-polite'Top(Sub) 'tonight' 'what'Obj 'eat'Pol Pst Q  
 "What did you eat this evening?"
- b. (Watasi-wa,) (konya) bihuteki-o tabe-mas-i-ta  
 'I-pol'Top(Sub) 'tonight' 'beefsteak'Obj 'eat' Pol Pst  
 "I ate beafsteak this evening"

More than one phrase can be questioned in a single sentence, which is not a rare phenomenon in Japanese.

- (31) a. Dare-ga doko-de nani-o hanas-i-mas-i-ta-ka?  
 'who' Sub 'where' 'what' Obj 'speak' Pol Pst Q  
 "Who talked about what and where?"
- b. Dare-to dare-ga kekkon-si-mas-i-ta-ka?  
 'who' 'and' 'who' Sub 'marry' Pol Pst Q  
 "Who and who got married?"

There is another question marker, ka-doo-ka "whether or not", which forms embedded yes-no questions. Thus it is not applicable to independent clauses.

- (32) a. Kodomo-demo  $\int$  tikyuu-ga maru-i ka-doo-ka  $\int$  S -o  
 'child' 'even' 'earth' Sub 'round' Pres 'whether' Obj  
 sit-te-i-ru  
 'know' Dur Pres  
 "Even children know whether the earth is round or not"
- b. \*Tikyuu-ga/wa, maru-i ka-doo-ka?  
 'earth' Sub Top 'round' Pres 'whether'  
 "\*Whether the earth is round or not?"

The sentence tikyuu-ga maru-i "the earth is round" can appear as an independent clause, but the attachment of ka-doo-ka "whether or not" makes it unacceptable, unless it is embedded in a higher sentence. The contrast between (32a) and (32b) indicates this difference. Thus the Question marker ka-doo-ka provides one criterion for the identification of embedded sentences. There are a great number of interesting observations about embedded questions in Japanese, but I will not go into further detail at the moment, because this matter goes far beyond the immediate purpose of the identification of simplex sentences.

I.3.2.3. What is essentially equivalent to the English tag-question



is formed by merely placing the Confirmative marker ne at the end of the declarative sentence.

- (33) a. Kimi-wa, sakuya  
 'you-male, friendly' Top(Sub) 'last night'  
 ku-zikan-mo nemut-ta ne  
 'nine' 'hour' 'as long as' 'sleep' Pst Conf  
 "You slept as long as nine hours last night, didn't you?"
- b. Kono heya-wa, reeboo-tuki des-u ne  
 'this' 'room' Top(Sub) 'air-conditioned' 'be-Pol' Pres Conf  
 "This room is air-conditioned; is it right?"

Typically, the Exclamatory marker naa is attached only to the sentences with Adjectives and Nominal-Adjectives as their Predicates. This point was illustrated in (19) in Section 1.2.

The Assertive marker yo is also attached to the end of the sentence, thus making the speaker's assertion of its proposition more explicit.

- (34) a. Ano kuruma-wa, haya-i yo  
 'that' 'car' Top(Sub) 'fast' Pres Assertive  
 "That car is really fast"
- b. Boku-wa, kinoo Bosuton-de nihon-no eega-o  
 'I-male' Top(Sub) 'yesterday' 'Boston' 'in' 'Japan' Pos 'movie' Obj  
 mi-ta yo  
 'see' Pst Assertive  
 "I saw Japanese films in Boston yesterday"

### I.3.3. Moods Which Allow Only the Present Tense in Deep Structure

I.3.3.1. The sentence-final Particle na is used to construct abrupt prohibitive sentences, the negative counterparts of abrupt imperatives. The Present Tense marker, and only the Present Tense marker, invariably appears before this Prohibitive marker.<sup>8</sup>

- (35) a. Ni-ge-ru-na  
 'escape' Pres Proh  
 "Don't run away"

b. Gakkoo-o yasum-u- na  
 'school'Obj 'absent oneself'Pres Proh  
 "Don't absent yourself from school"

c. Sore-o sinzi-ru- na  
 'it' Obj 'believe'Pres Proh  
 "Don't believe it"

Abrupt imperatives take the sentence-final Particles ro and e, respectively, after Verbs with vowel-final and consonant-final stems. They, unlike abrupt prohibitives, do not allow the Present Tense marker to appear in surface structure.

- (36) a. Nige(\*-ru)-ro  
 'escape'Pres Imp  
 "Run away"
- b. Gakkoo-o yasum(\*-u)-e  
 'school'Obj 'absent oneself'Pres Imp  
 "Absent yourself from school"
- c. Sore-o sinzi(\*-ru)-ro  
 'it' Obj 'believe' Pres Imp  
 "Believe it"

To give a polite order or instruction, the Polite Imperative marker nasai is attached to the end of the declarative sentence. No Tense morpheme is allowed in surface structure, as is the case in abrupt imperatives.

- (37) a. Zisyo-o sirabe(\*-ru) -nasai  
 'dictionary'Obj 'consult' Pres PolImp  
 "Consult the dictionary"
- b. Sukosi asob-i(\*-ru) -nasai  
 'a little' 'play' Pres PolImp  
 "Amuse yourself a little bit"

We have the polite counterpart, nasar-u, of the plain action Verb su-ru "do". Although there is good reason to believe that the Polite Imperative

marker nasai is derivative from the Verb nasar-u, I will take it as an isolated form for merely expository purposes, simply because it is extremely frozen.<sup>9</sup>

Requests, which represent another kind of imperatives, involve the morphemes kure and kudasai, which may be called Friendly and Polite Request markers, respectively. The actual effect of using these markers is to induce the hearer to take some action which is to the benefit or advantage of the speaker. No Tense morpheme can appear in surface structure.

- (38) a. Denki-o      tuke-te- - { kure  
           'light'Obj 'turn on'    { kudasai  
    Req  
           "(Please) Turn on the light for me"
- b. Zisyo-o            sirabe-te- { kure  
           'dictionary'Obj 'consult'    { kudasai  
    Req  
           "(Please) Consult the dictionary for me"

While there is good reason to believe that these Request forms are derivative from the Verbs kure-ru "do me the favor of" and kudasar-u "do me the favor of--Polite", I will take them as separate items for expository purposes--for the same reason as the Polite Imperative morpheme nasai, that is, because they are extremely frozen.<sup>10</sup>

Negative Requests can be constructed by adding the Negative Predicate na-i "not" to the main Predicate of their affirmative counterparts, as in (39). Note that the Present Tense marker actually occurs with the Negative stem.

- (39) a. Denki-o            tuke-na-i-de- { kure  
           'light' Obj 'turn on''not'Pres { kudasai  
    Req  
           "(Please) Don't turn on the light for me"

- b. Gakkoo-ni okure-na-i-de { kure  
'school''for' 'be late''not'Pres kudasai  
" (Please) Don't be late for school for me" Req

Finally, the morphemes yoo and oo, which follow vowel-final and consonant-final Verbs respectively, can be used in both Hortative and Volitional senses. If the Polite Predicate mas-u, which invariably occurs immediately after a Verb, is followed by the morpheme yoo, then the resulting form mas-yoo constitutes the polite version in either sense. They have the hortative sense, only when they are associated with independent clauses or direct quotes which have the plural first person subject, although they typically do not appear overtly.

- (40) a. Sore-de-wa, (?wareware-wa,) hazime- { yoo  
'then' Top 'we' Top(Sub) 'begin' mas-yoo  
"Now let's get started" Hor
- b. "Sore-de-wa, hazime- { yoo  
'then' Top 'begin' mas-yoo } " to, Taroo-wa,  
it-ta Comp Top(Sub)  
'say' Pst  
"Taro said, "Now let's get started""

In all other permissible cases, the morphemes yoo and oo have the volitional sense. First, when they are used with independent clauses or direct quotes, they are only associated with the singular first person subject, namely, the speaker.

- (41) a. Sore-wa, { boku 'I-male'  
'it' Top(Obj) \*kimi 'you-friendly'  
\*Taroo } -ga  
Sub  
{ hanas-oo 'speak' Vol  
hanas-i-mas-yoo 'speak' Pol Vol
- "I/\*You/\*Taro will speak about it (will in its volitional sense)"

- b. Ziroo-wa, "Sore-wa, { boku 'I-male'  
 Top(Sub) 'it' Top(Obj) { \*kimi 'you-friendly'  
 \*Taroo }  
 -ga { hanas-oo 'speak-Vol'  
 Sub { hanas-i-mas-yoo 'speak'Pol Vol } to, it-ta  
 Comp 'say'Pst  
 "Jiro said, "I will speak about it""

Second, they are associated with the same subject as that of those higher Predicates which require them to appear in the associated embedded sentences.

- (42) a. Taroo-wa, [ kanozyo-ni himitu-o utiake-yoo ]<sub>S</sub>  
 Top(Sub) 'her' IO 'secret'DO 'confide'Vol  
 to kessinsi-ta  
 Comp 'determine'Pst  
 "Taro determined to confide the secret to her"
- b. Ziroo-wa, [ yopparai-to kenkasi-yoo ]<sub>S</sub> to  
 Top(Sub) 'drunkard''with' 'quarrel'Vol Comp  
 si-ta  
 'try' Pst  
 "Jiro tried to quarrel with the drunkard"

1.3.3.2. In the preceding subsection, we have seen that such Moods as Abrupt and Polite Imperatives, Friendly and Polite Requests, Hortative and Volitional do not allow any Tense morpheme to appear in surface structure. In this subsection, I will present two reasons which suggest the existence of the Present Tense in deep structure even in such cases.

One reason why the sentences with such Moods are related only to non-past time (i.e., present and future time) can be seen by observing the fact that only Adverbs of present and future time can occur in such sentences.

- (43) a. { Ima 'now'  
Asu 'tomorrow'  
 \*Kinoo 'yesterday' } denwa-o kake-te- { kure Req  
 'phone'Obj 'call' { kudasai PolReq  
 "(Please) call him now/tomorrow/\*yesterday for me"

- b. Sore-wa,  $\left\{ \begin{array}{l} \underline{\text{ima}} \quad \text{'now'} \\ \underline{\text{asu}} \quad \text{'tomorrow'} \\ * \underline{\text{kinoo}} \quad \text{'yesterday'} \end{array} \right\}$  boku-ga  
 'it' Top(Obj)  $\left\{ \begin{array}{l} \text{'speak'Vol} \\ \text{'speak'Pol Vol} \end{array} \right\}$  'I-male' Sub  
 $\left\{ \begin{array}{l} \underline{\text{hanas-oo}} \\ \underline{\text{hanas-i-mas-yoo}} \end{array} \right.$   
 "I will talk about it now/tomorrow/\*yesterday"

Another reason has to do with the fact that prohibitive and negative request sentences require the Present Tense, but not the Past Tense, to appear in surface structure, as was noted in (35) and (39). There is no sense, therefore, in which prohibitives and negative requests involve non-past time and hence the Present Tense marker, while their affirmative counterparts do not.

These two reasons, then, suggest the presence of the Present Tense in deep structure in the sentences with the Moods in question. Since its presence in surface structure makes the sentence ill-formed, there must be a syntactic rule which deletes a Present Tense marker before these Moods.

I.4. The Particle In the proposed Phrase Structure Rules, it is assumed that case Particles are introduced by the NP' expansion rule (1c): NP'  $\longrightarrow$  NP Prt. In other words, it is assumed that the Particles are present in deep structure. Since I find no convincing argument for this deep structure analysis of Particles, I assume its correctness without justification. I will consider some consequences of this assumption in the present section.

A first relevant argument is concerned with the observation that various Particles are attached to those Noun Phrases which occupy the pre-Predicate position of a Predicate Phrase. Thus observe the following sentences:

- (44) a. Taroo-ga ronbun-o kai-ta  
 Sub 'thesis' Obj 'write' Pst  
 "Taro wrote a thesis"
- b. Taroo-ga kyuu-yuu-ni deat-ta  
 Sub 'old' 'friend' IO 'meet with' Pst  
 "Taro met with an old friend (of his)"
- c. Taroo-ga Hanako-to kekkonsi-ta  
 Sub 'with' 'marry' Pst  
 "Taro married Hanako/Taro got married to Hanako"
- d. Taroo-ga Tookyoo-e it-ta  
 Sub 'Tokyo' 'to' 'go' Pst  
 "Taro went to Tokyo"
- e. Taroo-ga Bosuton-ni sun-de-i-ru  
 Sub 'Boston' 'in' 'live' Dur Pres  
 "Taro lives in Boston"

There is good reason to believe that the Noun Phrases in question occupy one and the same pre-Predicate position in deep structure. One reason is that in all sentences, the pro-form soo su "do so", which substitutes for a Predicate Phrase (cf. Section II.1), cannot substitute for any phrase which do not contain the Noun Phrases in question. If the proposed deep structure analysis is assumed, therefore, it follows that each Predicate is lexically marked for a particular choice of Particle; thus, kak-u "write" in (44a), for instance, will be so lexically specified as to require the Particle o for its object Noun Phrase.

A second consideration arises from the fact that there are many cases where Particle choice affects the semantic interpretation of the sentence. The clearest cases of this sort can be provided by those sets of sentences which differ only in the choice of Particles. One example is concerned with the contrast of the Particles o and ni. There are some Verbs of motion which can take both Particles as their object markers.<sup>11</sup>

Thus observe the following pair of sentences with the Verb nobor-u "climb":

- (45) a. Boku-wa, Huzi-san-o nobot-ta  
 'I-male'Top(Sub) 'Mt. Fuji' Obj 'climb' Pst  
 "I climbed up Mt. Fuji"
- b. Boku-wa, Huzi-san-ni nobot-ta  
 'I-male'Top(Sub) 'Mt. Fuji' IO 'climb' Pst  
 "I climbed (up) to the top of/a certain point of Mt. Fuji"

A basic generalization about these Particles with respect to motion Verbs is that the Particle o signifies that the associated Noun Phrase is the dimension along which the movement denoted by the Verb takes place, while the Particle ni signifies that the associated Noun Phrase is the goal which is reached by the movement denoted by the Verb. This difference can be illustrated by the difference in grammaticality between the following two sentences with the Predicate tuzuke-ru "continue" suffixed to the Predicate nobor-u "climb" in each sentence of (45):

- (46) a. Boku-wa, Huzi-san-o nobor-i-tuzuke-ta  
 "I continued to climb up Mt. Fuji"
- b. \*Boku-wa, Huzi-san-ni nobor-i-tuzuke-ta

The Particle o, which implies the dimension of the movement, is compatible with the action denoted by tuzuke-ru "continue", but not the Particle ni, which implies the goal of the movement.

Therefore, if we assume the deep structure analysis of Particles, it follows that such a meaning difference as that between (44a) and (44b), which is directly attributable to the choice of Particles, can be explained in terms of deep structure.



Finally, the distinction between the nodes NP and NP', which is claimed in the NP' expansion rule (1c), will be supported by a consideration of the fact that there are some transformational rules which are sensitive to this distinction. Thus, for instance, Topicalization (cf. Section II.2), Cleft Formation (cf. Section II.4), Complement Subject Raising (cf. Section V.3), and so forth require that Noun Phrases be moved together with the attached Particles. On the other hand, Relative Clause Formation (cf. Section II.3) and Complement Subject Deletion (cf. Section VI.1) require that Noun Phrases be deleted, although the left-behind Particles must be deleted by a later rule. Similarly, Complement Sentence Preposing (cf. Sections IV.1.3, IV.2.1 and IV.3.2) requires that complement sentences be preposed together with the attached Complementizers, and Soo and Sono Sentential Pro-formation also belong to this class, because they require that the pro-forms soo "so" and sono "that" substitute for complement sentences plus the attached Complementizers (cf. Sections IV.1.3, IV.2.2 and IV.3.2).

## NOTES

1. The symbols used in (1) stand for the following: S=Sentence, NP=Noun Phrase, PredP=Predicate Phrase, Aux=Auxiliary, Perf=Perfective, Dur=Durative, Pol=Polite, Neg=Negative, Prt=Particle, N=Noun, Tns=Tense, Det=Determiner.
2. It should be noted that just as there exists a phonological rule which drops r only after Verbs whose stems end in consonants, but not in vowels, there exist numerous other phonological rules of this sort in Japanese; thus, for example, there must be rules, as will be apparent from certain examples in (3), which insert i between hanas "speak" and ta (Pst Tns), kat between samu "cold" and ta (Pst Tns), dat between genki "well" and ta (Pst Tns), because the phonological strings \*hanas-ta, \*samu-ta and \*genki-ta are all ill-formed. I will not mention such phonological rules as these explicitly in the present work, but hopefully, careful readers will be able to identify such phonologically inserted, deleted and alternated elements by hyphenation and glossary.
3. Note that mas-en (Pol-'not'+Pres) fills the gap \*mas-na-i (Pol-'not'-Pres). Note further that the form mas-a-nak-kat-ta (Pol-'not'-Pst) is also ill-formed; instead, we must use the form mas-en-des-i-ta (Pol-'not'+Pres+Pol'be'-Pst).
4. The reason why the contrastive example kikoe-ta-gar-u "show signs of wishing to hear/cf. \*show signs of wishing to be audible" is not permissible, despite the fact that sun-de-i-ta-gar-u "show signs of wishing

to live (there)", and analogously, wakar-i-ta-gar-u "show signs of wishing to understand" are permissible, is attributable to the violation of another restriction, namely, that the higher Predicates ta-i "wish" as well as gar-u "show signs of" require human subjects.

This observation will in turn provide evidence suggesting that the ni-phrase which cooccurs with kikoe-ru "audible/hear" and which always is human is not the deep subject. Thus observe (i).

- (i) Taroo-  $\left\{ \begin{array}{l} *ga \\ \underline{ni} \\ (\underline{ni}-) \text{ wa,} \\ \text{IO} \quad \text{Top} \end{array} \right\} \quad \begin{array}{ll} \text{kiteki-ga} & \text{kikoe-ta} \\ \text{'whistle' Sub} & \text{'audible/hear' Pst} \end{array}$
- "A whistle was audible to Taro / Taro heard a whistle"

This observation is supported by the fact that the ni-phrase in question cannot be replaced by the same phrase with the Particle ga, as in (i).

Thus I will assume that the ni-phrase in (i) is preposed from pre-Predicate position. This rule of Preposing is quite general, as in (ii).

- (ii) Tuki-ni                 seebutu-ga                 sun-de-i-ru  
'earth' 'in' 'creature' Sub     'live' Dur Pres  
"A creature lives on the moon"

Nippon-ni                 zisin-ga                 oo-i  
'Japan' 'in' 'earthquake' Sub     'many' Pres  
"(Literally) Earthquakes are many in Japan /  
There are many earthquakes in Japan"

Boku-ni                 hakike-ga                 su-ru  
'I-male' IO     'nausea' Sub     'do' Pres  
"I feel nausea"

Although there are numerous peculiar phenomena involved in such sentences as (i), I will not touch on them here. On the basis of the preceding subtle observation (since I know of no convincing evidence for the status of the ni-phrase in (i) as deep subject), I will rather assume that the

ni-phrase of such ni-ga constructions as (i) is an indirect object Noun Phrase, i.e., appears in pre-Predicate position in deep structure. Under this assumption, the first sentence of (iii) is ambiguous in two ways, namely, between the second and third sentences, where the third one involves the operation of NP-ni preposing in its derivation.

- (iii) Taroo-wa,      ongaku-ga      wakar-u  
                   Top      'music'
- Taroo-ni      ongaku-ga      wakar-u  
                   IO      'music' Sub      'understandable' Pres  
 "Music is understandable to Taro"
- Taroo-ga      ongaku-ga      wakar-u  
                   Sub      'music' Obj      'understand' Pres  
 "Taro understands music"

Such phrases as wakar-i-ta-gar-u "show signs of wishing to understand" will then be taken as associated with wakar-u "understand" of the same type as in the third example, but not in the second one.

5. It is quite conceivable that daroo and desyoo consist of two syntactically significant elements, namely, dear-u (> dar-u; Copula 'be') plus oo, and des-u (Polite Copula 'be') plus yoo, respectively, because the existence of the proposed component elements are independently justified, as is seen above. Under this analysis, the morphemes oo and yoo, the same morphemes in their volitional and hortative sense, have a presumptive sense only when they are attached to the higher Verbs dear-u and des-u. Although this analysis is quite plausible, I will treat daroo and desyoo, only for expository purposes, as if they were syntactically unanalyzable.

6. The Copula da also does not actually occur when it precedes daroo

and desyoo, as in:

(iv) Taroo-wa,           gakusee    dat-ta    daroo/desyoo  
           Top(Sub) 'student' Cop Pst Presum  
 "Taro, I suppose, was a student"

\*Taroo-wa,   gakusee   da            daroo/desyoo  
   Cop+Pres

Taroo-wa,   gakusee    $\emptyset$             daroo/desyoo  
 "Taro, I suppose, is a student"

This parallelism between these examples and (28) appears to argue against my analysis in which the morpheme da is a Copula when it is immediately preceded by a Noun Phrase without a Particle, whereas it is a Present Tense marker when it is immediately preceded by a Nominal-Adjective. But I will continue to assume that my analysis is correct. In the course of the discussion which follows, it will become apparent that these two occurrences of the morpheme da do not display the same distributional paradigm and that my analysis has confirmatory consequences which make it possible to capture linguistically significant generalizations.

7. Note that des-u is a higher Verb in (29b) and (29c), as is evidenced by the fact that the Tense morpheme is attached to the preceding Predicate, as in muzukasi-kat-ta. Even without this higher Verb, the sentences in question are acceptable, but they imply very blunt questions.

8. Presumably, the Prohibitive marker na is associated with the Negative Predicate na-i "not". One difference is that the former requires the occurrence of the Present Tense in the immediately preceding position, while the latter does not allow its occurrence. A second difference is

that the latter, but not the former, is followed by the Tense marker.

9. See note 10.

10. Note that exactly the same morphemes kure and kudasai as those in (38) appear in Predicate position, as in (v).

(v) Denki-o      take-te-      { kure }      -mas-en-ka?  
       'light'Obj 'turn on'    { kudasai }      Pol 'not'+Pres Q  
       "Won't you turn on the light?/Would you turn on the light?"

This observation supports the idea that kure and kudasai are derivative from the Predicates kure-ru and kudasar-u.

11. Cf. Kuno "Notes on Japanese grammar (3)" (1969) for discussion of Verbs of motion.

## CHAPTER II: TRANSFORMATIONAL PROCESSES

II.0. Introduction There are three major phrase categories in the Phrase Structure Rules proposed in Chapter I: Noun Phrases, Predicate Phrases, and Auxiliaries. The separation of Predicate Phrases from subject Noun Phrases and Auxiliaries is motivated by the rule of Soo Su Predicate Phrase Pro-formation, which I will discuss in the immediately following section. Observation of the effects of transformations of Noun Phrase movement or deletion, such as Topicalization, Relative Clause Formation, and Cleft Formation provides criteria for the identification of Noun Phrases. These processes will be elaborated in Sections 2, 3, and 4, respectively. In Section 5, I will present certain basic arguments for the distinction between the comitative construction and the construction with phrasal conjuncts in subject position, which leads to the conclusion that there is no rule like Conjunct Movement in Japanese. In the final section, I will clarify certain similarities and differences among Conjunction Reduction, Noun Phrase Deletion, and Gapping.

The main purpose of this Chapter is to identify certain phrase categories in terms of transformational rules associated with simplex and complex sentences. None of the sections is thus intended to be an exhaustive description of the topic in question.

II.1. Soo Su Predicate Phrase Pro-formation<sup>1</sup> A basic generalization involved in this process is the substitution of the pro-form soo su, the Japanese counterpart of the English expression "do so", for a Predicate Phrase containing an action Verb. Thus observe the following sentences:

- (1) a. Taroo-wa, terebi-o mi-ta;  
 Contr(Sub) 'television' Obj 'see' Pst  
 Zi-roo-mo, terebi-o mi-ta  
 'also' (Sub) 'television' Obj 'see' Pst  
 "Taro watched television, and Jiro watched television, too"
- b. Taroo-wa, terebi-o mi-ta; Zi-roo-mo soo si-ta  
 'so' 'do'  
 "Taro watched television, and Jiro did so, too"
- c. \*Taroo-wa, terebi-o mi-ta; Zi-roo-mo terebi-o soo si-ta  
 " \*Taro watched television, and Jiro did so television, too"

The contrast between (1a) and (1b) shows that the pro-form soo su in (1b) substitutes for a Predicate Phrase consisting of an object Noun Phrase and the immediately following Predicate, in particular, terebi-o mi "watch television". It should be noted that the Past Tense Auxiliary ta is excluded from what is replaced by the pro-form. Furthermore, the contrast between (1b) and (1c) in grammaticality suggests that the pro-form may not substitute for any part of a Predicate Phrase.

Such Verbs as sum-u "reside" and sir-u "(get to)know" may or may not be subject to Soo Su Pro-formation, depending on the idiosyncratic properties of the immediately following Predicates. Thus contrast the following two sets of sentences which contain the Durative Predicate i-ru and the inceptive Predicate hazime-ru "begin", respectively.

- (2) a. Taroo-wa, nagai-aida Amerika-ni sun-de-i-ta;  
 Contr(Sub) 'long' 'period' 'America' 'in' 'live' Dur Pst  
 Zi-roo-mo, nagai-aida Amerika-ni sun-de-i-ta  
 'also' (Sub) 'long' 'period' 'America' 'in' 'live' Dur Pst  
 "Taro lived in America for a long time, and Jiro also lived  
 in America for a long time"
- b. \*Taroo-wa, nagai-aida Amerika-ni sun-de-i-ta;  
 Zi-roo-mo, (nagai-aida) soo si-ta  
 " \*Taro lived in America for a long time, and Jiro also did so  
 (for a long time)"



- c. ?\*Taroo-wa, nagai-aida Amerika-ni sun-de-i-ta;  
 Zi-roo-mo, (nagai-aida) soo si-te-i-ta  
 "(Literally) \*Taro was living in America for a long time,  
 and Jiro was also doing so (for a long time)"

- (3) a. Taroo-wa, Amerika-ni sum-i-hazime-ta;  
           Contr(Sub) 'America''in' 'live''begin'Pst  
 Zi-roo-mo, Amerika-ni sum-i-hazime-ta  
           'also'(Sub) 'America''in' 'live''begin'Pst  
 "Taro began to live in America, and Jiro also began to live  
 in America"
- b. Taroo-wa, Amerika-ni sum-i-hazime-ta;  
 Zi-roo-mo, soo si-ta  
 "Taro began to live in America, and Jiro did so, too"
- c. Taroo-wa, Amerika-ni sum-i-hazime-ta;  
 Zi-roo-mo, soo si-hazime-ta  
 "Taro began to live in America, and Jiro also began to do so"

The ungrammaticality of (2b) shows that the pro-form soo su cannot substitute for the phrase Amerika-ni sun-de-i "be living in America", because the Predicate sun-de-i "be living" is a non-action Predicate. On the other hand, the grammaticality of (3b) shows that the pro-form can substitute for the phrase Amerika-ni sum-i-hazime "begin to live in America", because sum-i-hazime "begin to live" as a whole is an action Predicate. Furthermore, the difference in grammaticality between (2c) and (3c) shows that the phrase Amerika-ni sum "live in America" may be replaced by the pro-form, only when the immediately following Predicate is an action Verb. This observation then suggests that such Verbs as sum-u "reside" and sir-u "know" may be viewed as either action or state Verbs, according to whether the immediately following Predicate is an action or a state Verb.

It is not immediately clear that the use of Soo Su Predicate Phrase Pro-formation provides evidence for the postulation of higher Predicates. Observation of (3b) and (3c) suggests that Amerika-ni sum-i-hazime

"begin to live in America" as well as Amerika-ni sum "live in America" must be analyzed as Predicate Phrases. One solution is to have a Phrase Structure Rule in which a Predicate Phrase immediately dominates itself, as in  $\left[ \left[ \text{Amerika-ni sum} \right]_{\text{PredP}} \text{hazime} \right]_{\text{PredP}}$ , although our Phrase Structure Rules do not contain it. Another solution is to specify Predicates like hazime-ru "begin" as Predicates which require sentential complements. Since certain other factors must be taken into consideration for a choice between these two alternatives, I will leave it unsettled until the principle of higher Predicate analysis has been discussed in detail in Section VII.4.1.

Ross proposes in the manuscript of his paper entitled "Act" that an action Verb in English must be analyzed as being embedded in the object sentential complement of the general Verb do whose subject is identical to the subject of the action Verb; thus, sentences like John swam will be derived from deep structures like  $\left[ \text{John}_i \text{ did} \left[ \left[ \text{John}_i \text{ swim} \right]_{\text{S}} \right]_{\text{NP}} \right]_{\text{S}}$ . Analogously, one might propose that an action Verb in Japanese must be analyzed in such a way as to derive sentences like Zyon-ga oyoi-da "John swam" from deep structures like  $\left[ \text{Zyon}_i\text{-ga} \left[ \left[ \text{Zyon}_i\text{-ga} \text{ oyog-ru} \right]_{\text{S}} \text{ koto-o} \right]_{\text{NP}} \text{ su-ta} \right]_{\text{S}}$  by a rule which deletes the non-constituent ru koto-o su. Under this analysis, soo su "do so" constructions could derive from such underlying structures by merely substituting the pro-form soo for a Noun Phrase consisting of a complement sentence and the head Noun koto; thus, in the above example, for Zyon-ga oyog-u koto-o "John's swimming". This substitution analysis can be found untenable, however, because it is incompatible with the independently necessary pro-form soo, which substitutes for a complement sentence which

is not immediately dominated by a Noun Phrase. Particularly noteworthy is the fact that independently motivated koto sentential complements in grammatical sentences like (4a) can never be replaced by the sentential pro-form soo, as in (4b). Cf. Sections IV.2.2, and IV.3.2, for discussion of the rule of Soo Sentential Pro-formation.

- (4) a. Sono kodomo-wa,  $\left[ \left[ \text{uso-o} \quad \text{tuk-u} \right]_S \text{ koto-o} \right]_{NP}$   
 'that' 'child' Top(Sub) 'lie' Obj 'tell' Pres Nom Obj  
 oboe-ta  
 'learn' Pst  
 "The child learned to tell a lie"
- b. \*Sono kodomo-wa, soo oboe-ta  
 'so'  
 "\*The child learned so"

I conclude, therefore, that there must be a rule referred to as Soo Su Predicate Phrase Pro-formation in Japanese.

II.2. Topicalization<sup>2</sup> A general property characteristic of this rule is that only Noun Phrases may be topicalized and that the topicalized element is marked with the Particle wa attached to it, as in:

- (5) a. Siizaa-wa, Buruutasu-ga koros-i-ta  
 'Caesar' Top(Sub) 'Brutus' Sub 'kill' Pst  
 "(Literally) \*As for Caesar, Brutus killed  $\emptyset$  /  
 As for Caesar, Brutus killed him"
- b. Nihon-ni-wa, onsen-ga oo-i  
 'Japan' 'in' Top 'hot spring' Sub 'many' Pres  
 "(Literally) \*As for 'in Japan', hot springs are many /  
 There are many hot springs in Japan"

There are the same selectional restrictions between topical sentences and the associated non-topical sentences. One piece of evidence is the fact that any Noun Phrase must retain the same Particle, if there is one at all, in the topical sentence as that in the corresponding

non-topical sentence. Thus compare the members of the following pairs:

- (6) a. (i) Taroo-ni-wa, boku-ga Ziroo-o syookaisi-ta  
 IO Top 'I-male' Sub DO 'introduce' Pst  
 "As for Taro ((Literally) \*As for 'to Taro'), I  
 introduced Jiro to him"
- (ii) Boku-ga Taroo-ni Ziroo-o syookaisi-ta  
 'I-male' Sub IO DO 'introduce' Pst  
 "I introduced Jiro to Taro"
- b. (i) Amerika-kara-wa, ookuno gakusee-ga sankasi-ta  
 'America' 'from' Top 'many' 'student' Sub 'participate' Pst  
 "(Literally) \*As for 'from America', many students took  
 part (in it)"
- (ii) Ookuno gakusee-ga Amerika-kara sankasi-ta  
 'many' 'student' Sub 'America' 'from' 'participate' Pst  
 "Many students took part (in it) from America"

This fact suggests that topical sentences must be derived from the underlying structures containing the associated non-topical sentences, because no explanation is otherwise available for why a particular case Particle is present in the topicalized element.

The Particles ga and o never occur followed by the topical Particle wa, while the other Particles must remain in most cases as they are in the corresponding non-topicalized element.

- (7) a. (i) { Bruutasu-wa  
 \*Bruutasu-ga-wa, } Siizaa-o korosi-ta  
 Sub Top Obj 'kill' Pst  
 "As for Brutus, he killed Caesar"
- (ii) { Siizaa-wa,  
 \*Siizaa-o-wa, } Bruutasu-ga korosi-ta  
 Obj Top Sub 'kill' Pst  
 "As for Caesar, Brutus killed him"
- b. { Nitiyoobi-wa,  
Nitiyoobi-ni-wa, } gakkoo-ga yasumi-da  
 'on' Top 'school' Sub 'closed' Pres  
 "As for Sundays, school is closed (on Sundays)"

- c. { \*Taroo-wa,  
Taroo-to-wa, } Hanako-ga konyakusi-ta  
                   'with' Top                   Sub    'be engaged' Pst  
                   "As for Taro, Hanako was engaged to him"

It is not immediately clear which Particles can delete and under what conditions they can delete. I will not go into it further, since it is irrelevant for my present purpose.

In connection with the optionality of case Particles in the topicalized Noun Phrases, another piece of evidence comes up which suggests that the same selectional restrictions exist between topical sentences and non-topical sentences. It is concerned with the fact that an ambiguous topical sentence corresponds to as many non-topical sentences as it has readings. Thus the topical sentence (8a) seems to be ambiguous in three ways; it may involve three different interpretations (8b), (8c) and (8d), although its most natural reading is (8c).

- (8) a. Huzi-san-wa, wareware-ga nobot-ta  
           'Mt. Fuji' Top 'we'           Sub 'climb' Pst  
           "As for Mt. Fuji, we climbed"
- b. Wareware-ga Huzi-san-o nobot-ta  
                                   Dimension  
           "We climbed up Mt. Fuji"
- c. Wareware-ga Huzi-san-ni nobot-ta  
                                   Goal  
           "We climbed Mt. Fuji to a certain point/to the top"
- d. Wareware-ga Huzi-san-e nobot-ta  
                                   Direction  
           "We climbed up to Mt. Fuji"

As may be apparent from the English counterparts, Particle selection affects meaning. The Particle o marks a dimension along which the action of climbing takes place; the Particle ni marks a goal of the action; and the Particle e marks a direction in which the action goes rather than its

goal. Note further that we have topical versions which lead uniquely to the interpretation of (8c) and (8d), although we have no other topical version than (8a) which involves the interpretation of (8b). Thus Huzi-san-ni-wa / Huzi-san-e-wa / \*Huzi-san-o-wa, wareware-ga nobot-ta.

Observation of such ambiguous topical sentences as (8a) also suggests that topical constructions must be derived from the underlying forms of the associated non-topical constructions, so that the ambiguity involved can be accounted for. In particular, it is necessary to topicalize a Noun Phrase together with the Particle. This, then, suggests the existence of a rule which deletes the Particles ga and o before wa obligatorily, as in (7a), and other Particles optionally under some conditions yet to be discovered, as in (7b).

More than one Noun Phrase can be topicalized in a single sentence, and there is no necessary ordering restriction among the topicalized elements. Any order of them seems to preserve meaning.

- (9) a. Kinoo-wa, gakkoo-de-wa, boku-wa, isogasi-kat-ta  
 'yesterday' Top 'school' 'in' Top 'I' Top 'busy' Pst  
 "As for yesterday, and as for school, and as for me, I was busy"
- b. Boku-wa, kinoo-wa, gakkoo-de-wa, isogasi-kat-ta  
 "As for me, and as for yesterday, and as for school, I was busy"
- c. Gakkoo-de-wa, boku-wa, kinoo-wa, isogasi-kat-ta  
 "As for school, and as for me, and as for yesterday, I was busy"

There is a certain type of topical sentences where the topical elements are not so obviously recoverable in the underlying forms as the cases noted above. Thus observe the following sentences:

- (10) a. Sakana-wa, tai-ga i-i  
 'fish' Top 'red snapper' Sub 'good' Pres  
 "As for fish, red snappers are good"

- b. Saru-wa, tinpanzii-ga kasiko-i  
 'ape' Top 'chimpanzee' Sub 'clever' Pres  
 "As for apes, chimpanzees are clever"

It can be perceived that the semantic relation holding between the topical elements and the subject Noun Phrases is that of inclusion. Contrast (10) with the non-topical sentences in (11), which most likely correspond to (10).

- (11) a. Sakana-no tai-ga i-i  
 Variant of the Copula da  
 "Red snappers, which are fish, are good"

- b. Saru-no tinpanzii-ga kasiko-i  
 Variant of the Copula da  
 "Chimpanzees, which are apes, are clever"

These sentences sound strange, because they are more likely to be taken as involving restrictive relative clauses, although there exists no such thing as that which is a red snapper but which is not fish. But these sentences are acceptable to me in the senses of the English counterparts, which contain non-restrictive relative clauses. What is relevant, therefore, is that the semantic relation involved in Noun Phrases like sakana-no tai-ga in (11a) is not that of possession, but that of inclusion, exactly the same relation involved in topical sentences like (10a). Thus (11) can be the underlying forms of (10). The sentences in (11) themselves will be derived from the underlying structures containing relative clauses in (12), by Relative Clause Formation and a very general rule which morphologically alternates the Copula da to no in the context immediately followed by a Noun Phrase.<sup>3</sup>

- (12) a.  $\left[ \left[ \text{Tai}_i\text{-ga sakana da} \right]_S \text{ tai}_i\text{-ga} \right]_{NP} \text{ i-i}$   
 b.  $\left[ \left[ \text{Tinpanzii}_i\text{-ga saru da} \right]_S \text{ tinpanzii}_i\text{-ga} \right]_{NP} \text{ kasiko-i}$

It is observed that the Copula da in the relative clauses of (12) involves an inclusion relation which holds between the two Noun Phrases. This analysis thus seems to provide the most natural explanation for the source of the topical Particle wa in (10) and an inclusion relation implicit in it.

It might be alternatively proposed that the underlying forms of (10) would be something like the following:

- (13) a. Sakana-no-naka-de, tai-ga i-i  
 'fish'Pos 'inside''in' 'red snapper'Sub 'good' Pres  
 "Red snappers are good among fish"
- b. Saru-no -naka-de tinpanzii-ga kasiko-i  
 'ape'Pos 'inside''in' 'chimpanzee'Sub 'clever' Pres  
 "Chimpanzees are clever among apes"

Corresponding to these sentences, we have the following topical sentences as well:

- (14) a. (i) Sakana-no-naka-de-wa, tai-ga i-i  
 "As for fish, red snappers are good"
- (ii) Sakana-de-wa, tai-ga i-i  
 "As for fish, red snappers are good"
- b. (i) Saru-no-naka-de-wa, tinpanzii-ga kasiko-i  
 "As for apes, chimpanzees are clever"
- (ii) Saru-de-wa, tinpanzii-ga kasiko-i  
 "As for apes, chimpanzees are clever"

(10) could thus be transformationally related to (13) and (14). It should be noted that under this analysis, an ad hoc rule must be employed which deletes a particular Noun naka "inside".

There are certain cases where only the head Noun of a Noun Phrase can be topicalized, leaving a copy behind. Thus contrast the members of each of the following pairs:



- (15) a. (i) Hana-wa, zoo-no sore-ga naga-i  
 'nose' Top 'elephant' Pos 'it' Sub 'long' Pres  
 "As for noses, those of elephants are long"
- (ii) Hana-wa, zoo-no-ga naga-i  
 'nose' Top 'elephant' Pos Sub 'long' Pres
- (iii) Zoo-no hana-ga naga-i  
 'elephant' Pos 'nose' Sub 'long' Pres  
 "An elephant's nose/trunk is long"
- b. (i) Suutu-keesu-wa, sikaku-i no-ga yo-i  
 'suitcase' Top 'square' Pres 'one' Sub 'good' Pres  
 "As for a suitcase, a square one is good/better"
- (ii) Sikaku-i suutu-keesu-ga yo-i  
 'square' Pres 'suitcase' Sub 'good' Pres  
 "A square suitcase is good/better"

Contrasting (bi) and (bii) shows that the topicalization of the head Noun which is modified by an Adjective (and analogously, by an Nominal-Adjective) leaves behind the indefinite Pronoun no "one" in the original position. On the other hand, it is observed in (a) that the topicalization of the head Noun which is modified by a possessive Noun Phrase leaves behind the indefinite Pronoun sore "that", as in (ai), or nothing, as in (aii). There seems to be no compelling reason, however, to believe that in (aii) the morpheme no is a possessive Particle and hence no copy is left behind, although it is quite conceivable, and I personally think it is correct, that (aii) is derived from (aiii) through the intermediate stage of derivation \*Hana-wa, zoo-no-no-ga naga-i by deleting the indefinite Pronoun no, rather than the possessive Particle no, for a purely phonological reason.

One thing must be made clear, especially to those readers who know about phenomena of Topicalization in English. Although the rule which I refer to as Topicalization in Japanese involves basically the same operation in crucial cases as that in English, the semantic effect of

the former is entirely different from that of the latter. While the topical element in English functions as the focus of the sentence, that in Japanese constitutes the major portion of the presupposition. Observe the following examples, which bring out this point clearly.

- (16) a. Zoo-wa,                    hana-wa                    naga-i                    ga,  
           'elephant' Top    'nose' Contr    'long' Pres    'but'  
           me-wa                    tiisa-i  
           'eye' Contr    'small' Pres  
           "As for an elephant, the nose is long, but the eyes are small"
- b. Taroo-wa                    tennis-ga                    uma-i                    ga,  
           Contr    'tennis' Obj    'good' Pres    'but'  
           Ziroo-wa                    uma-ku-na-i  
           Contr    'good' 'not' Pres  
           "Taro is good at tennis, but Jiro is not (good at it)"

These are contrastive sentences. Observe first (16a). What is relevant is the fact that two different types of the Particle wa are involved in (16a). The Particle wa attached to hana "nose" and me "eye" is contrastive, because those Noun Phrases are in contrastive position. The Particle wa attached to zoo "elephant" offers a framework within which the contrast takes place, and thus is the topic. Given that the contrastive elements are the focus of the sentence, the Noun Phrases hana-wa and me-wa constitute the focus of (16a). Then the topic can never be the focus, and hence it constitutes part of the presupposition of the sentence. This seems to me a quite natural conclusion, since the topic is a frame of reference within which the comment is going on. Along these lines, consider (16b). Since they are clearly in contrast with each other, the wa-phrases Taroo-wa and Ziroo-wa are the focus. Hence, the other elements, which constitute a contrastive framework, are part of the presupposition of the sentence. The fact

that the Noun Phrase tenisu-ga is not (necessarily) repeated in the second conjunct provides supporting evidence for this conclusion, because the presupposition by its nature need not be explicitly mentioned. Now observe the following sentence, which contains tenisu-ga as the topic:

- (17) Tenisu-wa, Taroo-wa uma-i ga,  
 'tennis' Top(Obj) Contr 'good' Pres 'but'  
Ziroo-wa uma-ku-na-i  
 Contr 'good' 'not' Pres  
 "As for tennis, Taro is good (at it), but Jiro is not (good at it)"

Note that this sentence preserves the focus as it was in (16b), and hence the presupposition also remains the same. Therefore, the topic is in the presupposition. The only difference between (16b) and (17) lies in the absence or presence of the topic.

The interrelation between two correlative notions "topic-comment" and "focus-presupposition" in Japanese can thus be defined in the following manner: the topic always constitutes part of the presupposition of the sentence, and the comment always contains the focus of the sentence. It is of course an independent problem how the focus and presupposition can be specified in Japanese. In the preceding paragraph, I discussed the problem of focus and presupposition in exclusive connection with the clearest case of contrastive sentences.<sup>4</sup>

II.3. Relative Clause Formation In Japanese, relative clauses precede their modifying head Nouns, while the reverse is true of English relative clauses.

- (18) a. Taroo-wa, [ (kare-ga) ozi-kara kari-ta ]<sub>S</sub>  
 Top 'he' Sub 'uncle' 'from' 'borrow' Pst

kuruma-o untensi-ta  
 'car' Obj 'drive' Pst  
 "Taro drove the car which he borrowed from his uncle"

- b. [ Amari omosiro-ku-na-i ]<sub>S</sub> hanasi-ga  
 'very' 'interesting' 'not' Pres 'story' Sub  
 hiromat-ta  
 'spread' Pst  
 "The news which is not very interesting has spread"

There are no relative Pronouns in Japanese which correspond to English relative Pronouns like who, whom, that and where. However, there is an element, tokoro-no, literally meaning "of the place", which I will refer to as the relativizer for purely expository purposes. This element intervenes between the relative clause and the modifying head Noun Phrase, and thus functions as a sort of relative Pronoun, but it is only used in formal speech and writing, and especially when the relative clause is so long that it makes it hard to associate it with the head Noun Phrase.

- (19) a. Taroo-wa, [ (kare-ga) ozi-kara kari-ta ]<sub>S</sub>  
 Top 'he' Sub 'uncle' 'from' 'borrow' Pst  
 b. tokoro-no kuruma-o untensi-ta  
 Rel 'car' Obj 'drive' Pst  
 "Taro drove the car which he borrowed from his uncle"
- b. [ Amari omosiro-ku-na-i ]<sub>S</sub> tokoro-no hanasi-ga  
 'very' 'interesting' 'not' Pres Rel 'story' Sub  
 hiromat-ta  
 'spread' Pst  
 "The news which is not very interesting has spread"

No formal distinction between restrictive and non-restrictive relative clauses is made in Japanese, though they can be identified on semantic grounds.

- (20) a. [ Taiyoo-no mawari-o mawar-u ]<sub>S</sub>  
 'sun' Pos 'around' Obj 'move around' Pres

- tikyuu-wa, maru-i  
 'earth' Top(Sub) 'round' Pres  
 "The earth which moves around the sun is round /  
 The earth, which moves around the sun, is round"
- b. Boku-wa,  $\left[ \begin{array}{l} \text{yoku} \\ \text{nemut-te-i-ta} \end{array} \right]_S$  Taroo-o  
 'I-male' Top(Sub) 'well' 'sleep' Dur Pst Obj  
 okosi-ta  
 'awake' Pst  
 "I awoke Taro who had been sleeping well /  
 I awoke Taro, who had been sleeping well"
- c. Taroo-wa,  $\left[ \begin{array}{l} \text{see-ga} \\ \text{taka-i} \end{array} \right]_S$  gakusee-ni  
 Top(Sub) 'height' Sub 'tall' Pres 'student' 'by'  
 nagur-are-ta  
 'beat' Pass Pst  
 "#Taro was beaten by a student, who was tall<sup>5</sup>/  
 Taro was beaten by a student who was tall"

The rule of Relative Clause Formation in Japanese involves the deletion of a Noun Phrase of the relative clause under identity with the head Noun Phrase. There is no evidence which suggests that this rule involves the operation of movement, as in English. First, no trace of movement can be found in Japanese relative clauses like the movement indicated in English relative Pronouns with case and animate-inanimate distinctions. More important, perhaps, is the fact that such strings as (21), where Relative Clause Formation has applied, are well-formed.

- (21) a.  $\left[ \left[ \left[ \left[ \emptyset_i \text{atume-ta} \right]_S \frac{\text{kitte-ga}}{\text{'stamps' Sub}} \right]_{NP} \text{na-ku-nat-ta} \right]_S$   
 'collect' Pst 'not exist' 'become' Pst  
 kodomo<sub>i</sub>  $\left]_{NP}$   
 'child'  
 "the child who the postage stamps which (he) had collected  
 turned up missing"
- b.  $\left[ \left[ \text{Taroo-ga} \left[ \left[ \emptyset_i \frac{\text{kessite} \text{ sizum-a-na-i}}{\text{'at all' 'sink' 'not' Pres}} \right]_S \frac{\text{to-yu-u}}{\text{Comp}} \right]_{NP} \right]_{NP}$   
 'belief' Obj 'have' Dur Pres yotto<sub>i</sub>  $\left]_{NP}$   
 "the yacht which Taro has the belief that (it) never sinks"

It is observed that Relative Clause Formation has applied to a Noun

Phrase (indicated by  $\emptyset$ ) in a complex Noun Phrase (italicized here) containing a relative clause (as in (21a)) and an appositional construction (as in (21b)). This observation suggests that, if a process of movement is assumed for the formation of Relative Clause Formation in Japanese, then this assumption will be incompatible with the complex Noun Phrase constraint, which prohibits any element from being moved out of a complex Noun Phrase, because the subject Noun Phrases indicated by  $\emptyset$  have been moved out of the italicized complex Noun Phrases in (21). If, alternatively, a process of deletion is assumed for Japanese relative clause formation, then they will not be counterexamples to the complex Noun Phrase constraint, because deletion transformations in general are not subject to this constraint.<sup>6</sup>

II.4. Cleft Formation<sup>7</sup> There is one type of construction, called the cleft construction, which brings out the focus clearly by locating the associated Noun Phrase in the pre-Copular position, as is exemplified by the following sentences:

- (22) a. Bruutasu-ga koros-i-ta no-wa, Siizaa da  
 'Brutus' Sub 'kill' Pst Nom Top(Sub) 'Caesar' Cop+Pres  
 "It was Caesar that Brutus killed /  
 The one who Brutus killed was Caesar"
- b. Siizaa-o koros-i-ta no-wa, Bruutasu da  
 'Caesar' Obj 'kill' Pst Nom Top(Sub) 'Brutus' Cop+Pres  
 "It was Brutus that killed Caesar /  
 The one who killed Caesar was Brutus"

The grammatical relations involved in the non-cleft construction are all involved in the corresponding cleft construction, but not vice versa. Thus compare the cleft sentences in (22) with the corresponding non-cleft sentence in (23).

- (23) Bruutasu-ga Siizaa-o koros-i-ta  
 'Brutus' Sub 'Caesar' Obj 'kill' Pst  
 "Brutus killed Caesar"

The subject and object relations in (23) are shared by the same lexical items in (22a) and (22b). But the grammatical relation (if there is one) involved in the Copula da in (22) is not shared by the corresponding non-cleft sentence in (23). This suggests that if they are to be transformationally related, then the cleft construction must be derived from the underlying structure containing the corresponding non-cleft construction.

Evidence for such agreement in grammatical relations is provided by the fact that only the same Particle as that of the non-cleft sentence can appear with the cleft Noun Phrase, as in:

- (24) a. Bruutasu-ga koros-i-ta no-wa, Siizaa-  $\left\{ \begin{array}{l} \underline{o} \\ *ga \\ *ni \end{array} \right\}$  da  
 Sub 'kill' Pst Nom Top(Sub) Cop+Pres  
 "It was Caesar that Brutus killed"
- b. Siizaa-o koros-i-ta no-wa, Bruutasu-  $\left\{ \begin{array}{l} ga \\ *o \\ *ni \end{array} \right\}$  da  
 Obj 'kill' Pst Nom Top(Sub) Cop+Pres  
 "It was Brutus who killed Caesar"
- c. Siizaa-ga koros-are-ta no-wa,  
 Sub 'kill' Pass Pst Nom Top(Sub)  
 Bruutasu-  $\left\{ \begin{array}{l} ni(yotte) \text{ 'by' } \\ *ga \\ *o \end{array} \right\}$  da  
 Cop+Pres  
 "It was by Brutus that Caesar was killed"

There is no selectional restriction on animacy imposed on the clefted Noun Phrase in Japanese. This fact parallels that involved in the English cleft construction, but not in the English pseudo-cleft construction.

- (25) a. Taroo-ga terebi-de mi-ta no-wa,  
 Sub 'television' 'on' 'see' Pst Nom Top(Sub)  
kigeki da  
 'comedy' Cop+Pres  
 "It was a comedy that Taro watched on television /

What Taro watched on television was a comedy"

- b. Sono sirase-de odoro-i-ta no-wa,  
 'that' 'news' 'at' 'be surprised' Pst Nom Top(Sub)  
Ziroo da  
 Cop+Pres  
 "It was Jiro that was surprised at the news /  
 \*What was surprised at the news was Jiro /  
 Cf. (The one) who was surprised at the news was Jiro"

It is observed that animate as well as inanimate Noun Phrases can be clefted in Japanese, as in the English cleft construction.

Various adverbial Noun Phrases can also be clefted in Japanese. This phenomenon is parallel to the English cleft, and reduced pseudo-cleft, constructions, as is apparent from the English counterparts.

- (26) a. Boku-ga guuzen tomodati-ni at-ta no-wa,  
 'I-male' Sub 'by chance' 'friend' IO 'meet' Pst Nom Top(Sub)  
Nyuu Yooku-de da  
 'New York' 'in' Cop+Pres

"It was in New York that I met with a friend (of mine) /  
 Where I met with a friend (of mine) was in New York / Cf.  
 \*The place where I met with a friend (of mine) was in New York"

- b. Taroo-ga ko-nak-kat-ta no-wa, (kare-ga)  
 Sub 'come' 'not' Pst Nom Top(Sub) 'he' Sub  
byooki-dat-ta kara da  
 'ill' Pst 'because' Cop+Pres

"It was because he was ill that Taro did not come /  
 ?Why Taro did not come was because he was ill / Cf.  
 ?\*The reason why Taro did not come was because he was ill"

- c. Ano hune-ga sizun-da no-wa, (sore-ga)  
 'that' 'boat' Sub 'sink' Pst Nom Top(Sub) 'it' Sub  
oonami-o kabut-ta toki da  
 'big wave' Obj 'wear' Pst 'time' Cop+Pres

"It was when it got caught by big waves that the boat sank /  
 ?When the boat sank was when it got caught by big waves / Cf.  
 ?\*The time when the boat sank was when it got caught by big waves"

Prepositions in English normally cannot appear with the pseudo-cleft



Noun Phrase, while they must go with the cleft Noun Phrase. The Japanese cleft construction is analogous to the English cleft construction. The pied piping of Particles is obligatory in Japanese. <sup>8</sup>

- (27) a. \*Bruutasu-ga o koros-i-ta no-wa, Siizaa da  
                   Sub Obj 'kill' Pst Nom Top(Sub) Cop+Pres  
                   "It was Caesar that Brutus killed"
- b. \*Ca Siizaa-o koros-i-ta no-wa, Bruutasu da  
           Sub Obj 'kill' Pst Nom Top(Sub) Cop+Pres  
           "It was Brutus that killed Caesar"
- c. \*Siizaa-ga ni(yotte) koros-are-ta no-wa,  
                   Sub 'by' 'kill' Pass Pst Nom Top(Sub)  
           Bruutasu da  
                   Cop+Pres  
           "It was by Brutus that Caesar was killed /  
           \*It was Brutus that Caesar was killed by"

The comparison of (27) with (22) and (24) suggests that Particles must go with cleft Noun Phrases, although they can optionally delete after the clefting.

Possessive Noun Phrases can also be clefted in Japanese and the copying Pronoun can stay in the original position. More interesting is that the possessive Particle no "of", unlike the other Particles, cannot appear with the clefted Noun Phrase.

- (28) a. (Sono) hana-ga naga-i no-wa,  
           'its' 'nose' Sub 'long' Pres Nom Top(Sub)  
           zoo (\*-no) da  
           'elephant' Pos Cop+Pres  
           "It is an elephant whose nose/trunk is long /  
           \*It is an elephant that (her) nose is long"
- b. Taroo-ga (sono) atama-o nagut-ta no-wa,  
           Sub 'its' 'head' Obj 'beat' Pst Nom Top(Sub)  
           Zi-roo (\*-no) da  
                   Pos Cop+Pres  
           "It is Jiro that Taro beat on the head /  
           \*It is Jiro that Taro beat (his) head"

It is not immediately certain whether there is an overall generality about the deletability of the Particles of the cleft Noun Phrases, but yet there are certain interesting observations which seem correct. First of all, when cleft Noun Phrases are originally the subjects of Predicates, or various kinds of objects of Predicates immediately dominated by Predicate Phrases, the attached Particles are deletable and are preferably deleted. The reason is, presumably, that subject and object Noun Phrases play a role in Predicate subcategorization, and hence the attached Particles are uniquely determinable and recoverable.

- (29) a. Siizaa-o koros-i-ta no-wa, Bruutasu (-ga) da  
 'Caesar' Obj 'kill' Pst Nom Top(Sub) 'Brutus' Sub Cop+Pres  
 "It was Brutus that killed Caesar"
- b. Bruutasu-ga koros-i-ta no-wa, Siizaa (-o) da  
 "It was Caesar that Brutus killed"
- c. Boku-ga hazukasi-i no-wa,  
 'I-male' Sub 'feel shamed' Pres Nom Top(Sub)  
sono zizitu (-ga) da  
 'that' 'fact' Obj Cop+Pres  
 "It is that fact that I am ashamed of"
- d. Taroo-ga at-ta no-wa, Ziroo (-ni) da  
 Sub 'meet' Pst Nom Top(Sub) IO  
 "It was Jiro that Taro met"
- e. Taroo-ga Ziroo-o syookaisi-ta no-wa,  
 Sub Obj 'introduce' Pst Nom Top(Sub)  
kare-no oba (-ni) da  
 'he' Pos 'aunt' IO Cop+Pres  
 "It was to his aunt that Taro introduced Jiro"
- f. Boku-ga sanposi-ta no-wa, kooen (-o) da  
 'I-male' Sub 'stroll' Pst Nom Top(Sub) 'park' Obj-Dimension  
 "It was in the park that I took a walk"
- g. Kanozyo-ga sun-de-i-ru no-wa, Tookyoo (-ni) da  
 'she' Sub 'live' Dur Pres Nom Top(Sub) 'in'
- "It is in Tokyo that she lives"

Second, the comitative Particle to "with" is deletable and is

preferably deleted, as in the above examples, when the associated cleft Noun Phrase is originally the object of the Predicate, whereas it cannot be deleted when the associated cleft Noun Phrase is originally outside the Predicate Phrase.

- (30) a. Hanako-ga kekkonsi-ta no-wa, Taroo (-to) da  
 Sub 'marry' Pst Nom Top(Sub) Com 'with' Cop+Pres  
 "It was Taro that Hanako married /  
 It was to Taro that Hanako got married"
- b. Karera-ga kenkasi-ta no-wa, keikan (-to) da  
 'they' Sub 'quarrel' Pst Nom Top(Sub) 'police' Com Cop+Pres  
 "It was with the police that they quarreled"
- c. Taroo-ga nige-ta no-wa, { \*Zi-roo } da  
 Sub 'escape' Pst Nom Top(Sub) { Zi-roo-to }  
 Com  
 "It was with Jiro that Taro ran away"
- d. Taroo-ga Zi-roo-ni dooisi-ta no-wa,  
 Sub IO 'agree' Pst Nom Top(Sub)  
 { \*Hanako } da  
 { Hanako-to }  
 Com  
 "It was with Hanako that Taro agreed to Jiro"

The first two examples (30a) and (30b) represent the type of sentences where the comitative Noun Phrase is part of a Predicate Phrase, while the others in (30) represent the type of sentences where it is outside a Predicate Phrase. Most interesting is the fact that (30d) has the unique interpretation of "Taro, together with Hanako, agreed to Jiro", but not of "Taro agreed to Jiro and Hanako". This fact provides independent motivation for our claim that Hanako-to in (30d) must retain the Particle because it is outside a Predicate Phrase. Namely, if Hanako-to were part of a Predicate Phrase, then it could appear without the comitative Particle and have the latter sense.

Thirdly, other Particles attached to a Noun Phrase that is outside

a Predicate Phrase can freely delete from the cleft Noun Phrases, as in:

- (31) a. Boku-ga tomodati-ni at-ta no-wa,  
 'I-male' Sub 'friend' IO 'meet' Pst Nom Top(Sub)  
Nyuu Yooku (-de) da  
 'New York' 'in' Cop+Pres  
 "It was in New York that I met with a friend (of mine)"
- b. Hitobito-ga kyookai-ni yuk-u no-wa,  
 'people' Sub 'church' IO 'to' 'go' Pres Nom Top(Sub)  
nitiyoobi (-ni) da  
 'Sunday' 'on' Cop+Pres  
 "It is on Sundays that people go to church"

The reason why such place and time Particles as de and ni can be deleted, and in fact preferably are deleted, seems to be concerned with the fact that such Particles often do not appear in non-cleft sentences, and that the associated Noun Phrases involve the notion of place and time in themselves. If this observation is correct, then it will be inferred that the Particles made "until/up to" and kara "from", which are outside of a Predicate Phrase, are not deletable, presumably because they are not recoverable, and this inference is factually correct, as in (32).

- (32) a. Boku-ga sono hon-o yon-da no-wa,  
 'I-male' Sub 'that' 'book' Obj 'read' Pst Nom Top(Sub)  
 { san-syoo-made }  
 { #san-syoo } da  
 'three' 'chapter' 'up to'  
 "(Literally) \*It was up to Chapter Three that I read that book"
- b. Kare-ga yat-te-ki-ta no-wa,  
 'he' Sub 'come' Pst Nom Top(Sub)  
 { Amerika-kara }  
 { #Amerika } da  
 'America' 'from'  
 "It was from America that he came"

Note that the deletion of made "up to" and kara "from" changes the meaning of the sentences; thus the sentences in (32) with san-syoo "Chapter



Taroo-no teean (-ni) da  
 Pos 'proposal' IO  
 "It was Taro's proposal that Hanako approved of"

- (ii) Hanako-ga sanseesi-ta mono-wa,  
 'thing'  
Taroo-no teean (\*-ni) da  
 "The thing which Hanako approved of was Taro's  
 proposal"

c. (i) Boku-ga sit-te-i-ru no-wa, sono uwasa (-o)  
 'I-male' Sub 'know' Dur Pres Nom 'that' 'rumor' Obj  
 da  
 "It is that rumor that I know of"

- (ii) Boku-ga sit-te-i-ru koto-wa, sono uwasa (\*-o) da  
 'thing'  
 "The thing which I know of is that rumor"

d. (i) Kare-ga ima sun-de-i-ru no-wa, Sendai (-ni) da  
 'he' Sub 'now' 'live' Dur Pres Nom Obj 'in'  
 "It is in Sendai that he is living now"

- (ii) Kare-ga ima sun-de-i-ru tokoro-wa, Sendai (\*-ni) da  
 'place'  
 "The place where he is living now is Sendai"

The comparison of the two sentences in each pair suggests that the nominalizer no in the cleft construction is distinct in nature from other abstract Nouns like koto "abstract thing", mono "concrete thing", hito "person", tokoro "place", and so forth; these Nouns can be taken as the head Noun to the relative clauses, in view of the fact that the Particles cannot occur with what apparently are the cleft Noun Phrases. It can thus be concluded that the topical Noun Phrase with the abstract Noun no as head does not contain a relative clause, but is a sentential nominalization.

II.5. Phrasal Conjunction I assumed in Section I.4, without justification, that certain Predicates like kekonsu-ru "marry", konyakusu-ru "engage", kenkasu-ru "quarrel" and onazi-da "the same/equal" require

comitative Noun Phrases in object position. Three arguments which confirm this assumption are presented in this section by demonstrating that this comitative construction must be differentiated from the construction which involves phrasal conjunction in subject position. This demonstration, in effect, reveals that there exists no rule like Conjunct Movement which moves one of the phrasal conjuncts in subject position into pre-Predicate object position.<sup>9</sup> Thus consider the sentences in (34), which exemplify the two constructions.

- (34) a. Taroo-ga Ziroo-to kenkasi-ta  
           Sub          Com 'quarrel' Pst  
           "Taro quarreled with Jiro"
- b. Taroo-to Ziroo(-to)-ga kenkasi-ta  
           Com          Com Sub 'quarrel' Pst  
           "Taro and Jiro quarreled"

In the first place, the two constructions differ in meaning with respect to the agents of the action denoted by the Predicate. Thus Taroo is the agent in (34a), while both Taroo and Ziroo are the agents in (34b).

A second argument which distinguishes between the two constructions comes from the observation of sentences like (35) with tukamae-ru "catch" as higher Predicate, which contain sentences like (34) as embedded sentences.

- (35) a. Keikan-ga [ Taroo-ga Ziroo-to kenkasi-te-i-ru ]<sub>S</sub>  
           'police' Sub          Sub          Com 'quarrel' Dur Pres  
           tokoro-o tukamae-ta  
           Nom Obj 'catch' Pst  
           "A policeman caught Taro quarreling with Jiro"
- b. Keikan-ga [ Taroo-to Ziroo(-to)-ga kenkasi-te-i-ru ]<sub>S</sub>  
           'police' Sub          Com          Com Sub 'quarrel' Dur Pres  
           tokoro-o tukamae-ta  
           Nom Obj 'catch' Pst  
           "A policeman caught Taro and Jiro quarreling"





(yoo to) su-ru "try to" as higher Predicate:

- (37) a. Taroo-ga Ziroo-to kenkasi-yoo to si-ta  
           Sub          Com 'quarrel' Vol Comp 'try' Pst  
 "Taro tried to quarrel with Jiro"
- b. Taroo-to Ziroo(-to)-ga kenkasi-yoo to si-ta  
           Com          Com Sub 'quarrel' Vol Comp 'try' Pst  
 "Taro and Jiro tried to quarrel (with each other)"

The higher Predicate su-ru "try", which takes a sentential complement, requires the presence of the Volitional Mood yoo in the complement. As will become apparent in Chapter VI, a rule of Complement Subject Deletion which deletes the embedded subject under identity with the higher subject is obligatory for the derivation of sentences like (37). Now assume that there exists a rule of Conjunct Movement which derives (34a) from the underlying form of (34b). I will attempt to show that this assumption is incorrect in that it yields unwanted consequences in all possible cases except one. The sentences in (37) are thus assumed to have the following underlying structures, respectively.

- (38) a. Taroo-ga  $\int$  Taroo-to Ziroo(-to)-ga kenkasi-yoo  $\int$ <sub>S</sub>  
           Sub          Com          Com Sub 'quarrel' Vol  
 to si-ta  
 Comp 'try' Pst
- b. Taroo-to Ziroo(-to)-ga  $\int$  Taroo-to Ziroo(-to)-ga  
           Com          Com Sub          Com          Com Sub  
 kenkasi-yoo  $\int$ <sub>S</sub> to si-ta  
 'quarrel' Vol Comp 'try' Pst

Consider first the derivation of (37a). Since Conjunct Movement must be an optional rule, there are two possible derivations from (38a), which differ in the application or non-application of Conjunct Movement. If it applies, then Complement Subject Deletion correctly applies, thus yielding the well-formed sentence (37a). In fact, however, (37a) has a

different meaning from what is predicted by (38a); while the volition marked by the Mood yoo is associated with Taro and Jiro in (38a), it is associated with Taro only in (37a). This is a function of Conjunct Movement, a first undesired consequence of the initial assumption. If, alternatively, Conjunct Movement does not apply, then it follows that since Complement Subject Deletion cannot apply, although it should apply, the expected sentence (37a) cannot be derived, and also (38a) itself comes out as an ill-formed surface structure, a second unpleasant consequence of the Conjunct Movement assumption.

Consider next the derivation of (37b). Since both Conjunct Movement and Complement Subject Deletion are cyclical rules, and since the latter, but not the former, cannot apply until the second cycle has been reached, Conjunct Movement applies on the first cycle without any relevance to Complement Subject Deletion. Therefore, if Conjunct Movement applies to (38b) on the first cycle, then Complement Subject Deletion cannot apply on the second cycle; thus an ill-formed surface structure results, a third unexpected consequence of our initial assumption. If, alternatively, Conjunct Movement does not apply to (38b) on the first cycle, then Complement Subject Deletion applies on the second cycle, thereby producing the expected sentence (37b). Since the actual meaning of (37b) exactly parallels what is predicted by (38b), this alternative is the only correct derivation which can follow from the assumption that there exists a rule of Conjunct Movement which derives (34a) from the underlying form of (34b). It should be noted, however, that this particular consequence is an accidental one, in view of the fact that three undesired consequences are concurrent. I conclude, therefore, that there exists no rule of Conjunct Movement of the sort outlined above in Japanese.

Thus the sentences in (37) must be derived from the following underlying forms:

- (39) a.  $\frac{\text{Taroo-ga}}{\text{Sub}} \left[ \frac{\text{Taroo-ga}}{\text{Sub}} \quad \text{Ziroo-to} \quad \frac{\text{kenkasi-yoo}}{\text{Com 'quarrel' Vol}} \right]_S \quad \text{to si-ta} \quad \text{Comp 'try'Pst}$
- b.  $\frac{\text{Taroo-to}}{\text{Com}} \quad \frac{\text{Ziroo(-to)-ga}}{\text{Com Sub}} \quad \left[ \frac{\text{Taroo-to}}{\text{Com}} \quad \frac{\text{Ziroo(-to)-ga}}{\text{Com Sub}} \right]_S \quad \text{kenkasi-yoo} \quad \text{to si-ta}$   
 'quarrel' Vol Comp 'try'Pst

Since there is no rule of Conjunct Movement, Complement Subject Deletion can correctly apply in both sentences, and the results preserve the meaning which is predicted in (39).

The discussion presented thus far has been concerned with the contrast between the comitative construction and the construction with phrasal conjuncts in subject position. Since something different seems to be going on with respect to phrasal conjunction in object position, I will not commit myself to the conclusion reached in the preceding discussion beyond what was actually treated above.

The following is an interesting phenomenon: most Predicates which can take comitative Noun Phrases as their objects can also take goal Noun Phrases. I will present two basic arguments for the distinction between these two constructions. Thus observe the sentences in (40).

- (40) a.  $\frac{\text{Taroo-ga}}{\text{Sub}} \quad \frac{\text{Hanako-to}}{\text{Com}} \quad \text{kekkon-o} \quad \text{yokusokusi-ta}$   
 Sub Com 'marriage' Obj 'promise' Pst  
 "(Roughly) Taro and Hanako promised marriage (to each other)"
- b.  $\frac{\text{Taroo-ga}}{\text{Sub}} \quad \frac{\text{Hanako-ni}}{\text{IO-Goal}} \quad \text{kekkon-o} \quad \text{yokusokusi-ta}$   
 Sub IO-Goal 'marriage' Obj 'promise' Pst  
 "Taro promised marriage to Hanako"
- Cf. c.  $\frac{\text{Taroo-to}}{\text{Com}} \quad \frac{\text{Hanako(-to)-ga}}{\text{Com Sub}} \quad \text{kekkon-o} \quad \text{yokusokusi-ta}$   
 Com Com Sub 'marriage' Obj 'promise' Pst  
 "Taro and Hanako promised marriage"





"Taro agreed with Jiro / with Jiro's proposal"

b. Taroo-ga { Zi-roo-ni  
Zi-roo-no teean-ni } dooisi-ta  
IO-Goal

"Taro agreed to Jiro / to Jiro's proposal"

Cf. c. Taroo-to { Zi-roo(-to)-ga  
\*Zi-roo-no teean(-to)-ga } dooisi-ta  
"Taro and Jiro agreed /  
\*Taro and Jiro's proposal agreed"

It is observed that while both human and abstract Noun Phrases are allowed in pre-Predicate position in the goal construction, as in (43b), only a human Noun Phrase is allowed in the comitative construction, as in (43a). (Notice also that the sentence with subject conjuncts, (43c), shares the same restriction with the comitative construction.) Such differences in selectional restrictions thus provide evidence for distinguishing between the comitative and goal constructions.

## II.6. Conjunction Reduction, Noun Phrase Deletion, and Gapping

There are three different constructions which are relevant to clarify similarities and differences among these three transformational rules in Japanese. I will refer to them, for purely expository purposes, as parallel, correlative, and contrastive constructions. The following examples illustrate these three constructions in the order mentioned:

- (44) a. Taroo-wa terebi-o mi-ta; Zi-roo-wa terebi-o mi-ta  
Top 'television'Obj 'see'Pst Top  
"Taro watched television; Jiro watched television"
- b. Taroo-wa terebi-o mi-ta; Zi-roo-mo terebi-o mi-ta  
Contr 'also'  
"Taro watched television; Jiro also watched television"
- c. Taroo-wa terebi-o mi-ta; Zi-roo-wa eiga-o mi-ta  
Contr Contr 'movie'  
"Taro watched television; Jiro saw a movie"

Parallel sentences have the property that two independent and hence non-correlative sentences are contained in it which are distinct only in the choice of one pair of elements, in particular, between Taroo and Ziroo in (44a). Correlative sentences typically involve a correlative relation between two component sentences which is marked by the contrast between the Particles wa and mo "also"; thus, in particular, between Taroo-wa and Ziroo-mo in (44b). Finally, contrastive sentences represent a purely contrastive relation which holds between the elements in two pairs of contrastive elements, in particular, between Taroo-wa and Ziroo-wa and between terebi-o and eiga-o in (44c).

The parallel construction can be subject to the rule of Conjunction Reduction only. Thus contrast the results of the application of Conjunction Reduction, Noun Phrase Deletion, and Gapping to (44a).

- (45) a.  $\left[ \begin{array}{l} \text{Taroo-to Ziroo-wa} \\ \text{"Taro and Jiro watched television"} \end{array} \right] \text{ terebi-o mi-ta } \emptyset \emptyset \emptyset^{10}$   
            $\left[ \begin{array}{l} \text{terebi-o mi-ta} \\ \text{"Taro watched television"} \end{array} \right] \emptyset \emptyset \emptyset$
- b. \*Taroo-wa terebi-o mi-ta; Ziroo-wa  $\emptyset$  mi-ta  
    \*\*Taro watched television; Jiro watched  $\emptyset$
- c. \*Taroo-wa terebi-o  $\emptyset$  , Ziroo-wa terebi-o mi-ta  
    \*\*Taro watched television, and Jiro  $\emptyset$  television"

It is observed that just as (44a) does not imply the simultaneous action of watching television by the two actors Taro and Jiro, (45a) does not, either. This semantic parallelism does not preclude the assumption that (45a) is related transformationally to (44a).<sup>11</sup> The reasons why (45b) and (45c) are ungrammatical will become obvious when we turn to the other constructions.

Any type of parallel construction can undergo Conjunction Reduction. Thus I will illustrate several other cases of this construction.

- (46) a. (i) Taroo-ga terebi-o mi-ta; Taroo-ga eiga-o mi-ta  
 "Taro watched television; Taro saw a movie"
- (ii) Taroo-ga [terebi-to eiga-o] mi-ta  $\emptyset$   $\emptyset$   $\emptyset$   
 "Taro watched television and a movie"
- b. (i) Taroo-ga oyo-da; Ziroo-ga oyo-da  
 Sub 'swim' Pst  
 "Taro swam; Jiro swam"
- (ii) [Taroo-to Ziroo-ga] oyo-da  $\emptyset$   $\emptyset$   
 "Taro and Jiro swam"
- c. (i) Taroo-ga ne-ta; Taroo-ga oki-ta  
 Sub 'sleep' Pst Sub 'get up' Pst  
 "Taro slept; Taro woke up"
- (ii) Taroo-ga [ne-te oki] -ta  $\emptyset$   $\emptyset$   $\emptyset$   
 "Taro slept and woke up"

Particularly noteworthy is sentence (cii), which might be derived from (ci) by Conjunction Reduction operating on Predicates. In fact, however, it seems incorrect to relate (ci) and (cii) transformationally, since they mean different things; in particular, (cii) implies a continuous temporal relation between the two events, but not (ci). The reason is that the parallel construction, like (ci), by its nature, requires no correlative relation between the component conjuncts.

The correlative construction is also susceptible of Conjunction Reduction in all possible cases, of Noun Phrase Deletion under certain conditions, and never of Gapping. Thus contrast the effects in (47) of the application of these transformations to (44b).

- (47) a. [Taroo-mo Ziroo-mo] terebi-o mi-ta  $\emptyset$   $\emptyset$   $\emptyset$ <sup>12</sup>  
 "Both Taro and Jiro watched television"
- b. Taroo-wa terebi-o mi-ta; Ziroo-mo  $\emptyset$  mi-ta  
 "\*Taro watched television; Jiro also watched  $\emptyset$ "
- c. \*Taroo-wa terebi-o  $\emptyset$ , Ziroo-mo terebi-o mi-ta  
 "\*Taro watched television, and Jiro also  $\emptyset$  television"



The reason why (45b) is ungrammatical, and (47b) grammatical lies in the difference between the absence and presence of the mo-phrase in the second conjunct. The presence of the mo-phrase makes it possible to recover the deleted Noun Phrase, because it presupposes the existence of the same environment in the second conjunct as in the first conjunct. However, the parallel construction, as I mentioned before, contains two independent sentences which lack the correlative relation holding between two conjuncts contained in the correlative construction. Thus (45b) simply takes the same property over from (44a). (45b) is ungrammatical because this makes it impossible to recover the deleted Noun Phrase.

There is a certain context of correlative construction where Conjunction Reduction is possible, but Noun Phrase Deletion is not possible. Thus such correlative sentences as (48a) allow the application of Conjunction Reduction, as in (48b), but the application of Noun Phrase Deletion to (48a) is simply inconceivable.

- (48) a. Taroo-wa oyo-i-da; Ziroo-mo oyo-i-da  
           Contr 'swim' Pst           'also'  
           "Taro swam; Jiro also swam"
- b. [ Taroo-mo Ziroo-mo ] oyo-i-da   ∅   ∅  
       "Both Taro and Jiro swam"

The context involved in such sentences as (48a) reveals the difference of the two transformations. Noun Phrase Deletion thus requires the existence of at least one pair of identical Noun Phrases as well as a pair of correlative Noun Phrases (namely, wa- and mo-phrases) in the conjuncts. The existence of correlative Noun Phrases is a sufficient condition for Conjunction Reduction, however.

Finally, turning to the contrastive construction, it is most eligible

for Gapping and is conditionally susceptible of Noun Phrase Deletion. Conjunction Reduction is entirely inapplicable to this construction. Thus, for example, the contrastive sentence (44c) can be subject only to Gapping, as in (49a), and if Conjunction Reduction is forced to apply, then the result might well be (49b), but the relevant point is that (49b) has a completely different interpretation which is expressed by the English counterpart. Therefore, (49b) cannot be taken as a function of Conjunction Reduction.

- (49) a. Taroo-wa terebi-o  $\emptyset$  , Ziroo-wa eiga-o mi-ta  
 "Taro watched television, and Jiro  $\emptyset$  a movie"
- b.  $\left[ \text{Taroo-to Ziroo-wa} \right] \left[ \text{terebi-to eiga-o} \right] \text{mi-ta}$   
 "Taro and Jiro watched television and a movie"

On the other hand, Noun Phrase Deletion cannot apply to (44c) as such, but it can apply to such contrastive sentences as (50a) to yield results like (50b).

- (50) a. Taroo-wa gakkoo-de terebi-o mi-ta;  
 Contr 'school''in' 'television'Obj 'see' Pst  
 Ziroo-wa gakkoo-de eiga-o mi-ta  
 Contr 'school''in' 'movie'Obj 'see' Pst  
 "Taro watched television at school; Jiro saw movies at school"
- b. Taroo-wa gakkoo-de terebi-o mi-ta; Ziroo-wa  $\emptyset$  eiga-o mi-ta  
 "Taro watched television  $\emptyset$  and Jiro saw movies at school"

Thus Noun Phrase Deletion is conditional on the presence of at least one pair of identical Noun Phrases in the conjuncts of a contrastive sentence.

Any contrastive construction which contains more than two pairs of contrastive Noun Phrases can be a candidate for the application of Gapping. Thus observe (51a), which contains three pairs of contrastive elements and also the output (51b) of applying Gapping to it.

- (51) a. Taroo-wa gakkoo-de terebi-o mi-ta;  
 Contr 'school''in' 'television' Obj 'see' Pst  
Ziroo-wa kyookai-de eiga-o mi-ta  
 Contr 'church''in' 'movie' Obj 'see' Pst  
 "Taro watched television at school; Jiro saw movies in church"
- b. Taroo-wa gakkoo-de terebi-o  $\emptyset$  , Ziroo-wa kyookai-de eiga-o mi-ta  
 "Taro watched television at school, and Jiro  $\emptyset$  movies in church"

All the examples illustrated above involve the deletion of a Predicate and an Auxiliary in the first conjunct of the contrastive construction, but in fact, many other deletions are possible. Thus observe the results of the application of Gapping to (50a).

- (52) a. Taroo-wa gakkoo-de terebi-o mi- $\emptyset$  , Ziroo-wa gakkoo-de eiga-o mi-ta  
 "(Literally) \*Taro did watch television at school, and Jiro  $\emptyset$  see movies at school / Taro watched television at school, and Jiro saw movies at school"
- b. Taroo-wa gakkoo-de terebi-o  $\emptyset$   $\emptyset$  , Ziroo-wa gakkoo-de eiga-o mi-ta  
 "Taro watched television at school, and Jiro  $\emptyset$   $\emptyset$  movies at school"
- c. Taroo-wa  $\emptyset$  terebi-o  $\emptyset$   $\emptyset$  , Ziroo-wa  
 { ?\*gakkoo-de eiga-o } mi-ta  
 { eiga-o gakkoo-de }  
 "Taro watched television at school, and Jiro  $\emptyset$   $\emptyset$  movies  $\emptyset$  "

Thus (50a) is gapped in three ways, as in (52a) through (52c). All examples show that Gapping takes place backward in Japanese, while it takes place forward in English, as is evidenced by the contrast between the Japanese and English examples in each pair. (52a) and (52b), which contain the repeated element gakkoo-de "at school" in the second conjunct, particularly show that not all identical elements of the first conjunct must be deleted. Furthermore, (52c) suggests particularly that the gapped elements must appear in continuity.

In contrastive sentences like (53a), which contain identical complex Predicates, no part of such complex Predicates can be deleted by Gapping.

- (53) a. Taroo-wa Hanako-o oyog-ase-ta-gat-ta;  
 Contr Obj 'swim' Caus 'wish' 'show signs of' Pst  
 Ziroo-wa Tomoko-o oyog-ase-ta-gat-ta  
 Contr Obj 'swim' Caus 'wish' 'show signs of' Pst  
 "Taro showed signs of wishing to make Hanako swim; Jiro showed signs of wishing to make Tomoko swim"
- b. Taroo-wa Hanako-o oyog-ase-ta-gar-i  $\emptyset$  , Ziroo-wa Tomoko-o  
 oyog-ase-ta-gat-ta
- c. Taroo-wa Hanako-o oyog-ase-ta-ku  $\emptyset \emptyset$  , Ziroo-wa Tomoko-o  
 oyog-ase-ta-gat-ta
- d. \*Taroo-wa Hanako-o oyog-ase  $\emptyset \emptyset \emptyset$  , Ziroo-wa Tomoko-o  
 oyog-ase-ta-gat-ta
- e. \*Taroo-wa Hanako-o oyog-i  $\emptyset \emptyset \emptyset \emptyset$  , Ziroo-wa Tomoko-o  
 oyog-ase-ta-gat-ta
- f. Taroo-wa Hanako-o  $\emptyset \emptyset \emptyset \emptyset \emptyset$  , Ziroo-wa Tomoko-o  
 oyog-ase-ta-gat-ta  
 "Taro showed signs of wishing to make Hanako swim, and  
 Jiro Tomoko"

Only the Tense marker, as in (53b), or the complex Predicate plus the Tense marker, as in (53f), is deletable by Gapping in (53a). Sentence (53d) is acceptable only as the result of application of Gapping to the sentence Taroo-wa Hanako-o oyog-ase-ta; Ziroo-wa Tomoko-o oyog-ase-ta-gat-ta "Taro made Hanako swim, and Jiro showed signs of wishing to make Tomoko swim", thus deleting the Past Tense ta from the first conjunct. This observation shows that a complex Predicate, which consists of a main Predicate and more than one auxiliary Predicate, like oyog plus sase, ta, and gar in the above examples, must function as a syntactically single element with Gapping, which in turn provides evidence for the existence of Predicate Raising in Japanese, as will be seen in Chapter VII, Section 3.

## NOTES

1. For discussion of English phenomena involving do so, cf. Lakoff and Ross (1966).
2. Some people refer to the process under consideration as Thematization, and others as Topicalization. Both terms are used in several different senses in transformational literature. Cf. Gruber (1965) and Jackendoff (1969) for one notion of theme.
3. The comparison of (12) with (20c) reveals one difference between the morpheme da after a Noun Phrase without a Particle and the morpheme da after a Nominal-Adjective. This supports my analysis which distinguishes between the Copula da and the Present Tense da.
4. For a discussion of the determination of the focus and presupposition of sentences with special reference to the Particles wa and ga, see Nakau (1969a).
5. The symbol # will be used henceforth to indicate that the attached sentence is not a paraphrase of the sentence in question, although it is grammatical.
6. Cf. Ross (1967b, 4.1), for a detailed discussion of the Complex Noun Phrase constraint.
7. Cf. Bach and Peters (1968), and Akmajian (1970), for discussion of English Pseudo-Cleft sentences.

8. For a detailed discussion of Pied Piping phenomena in English and other languages, cf. Ross (1967b, 4.3).
9. For discussion of English phenomena involving Conjunct Movement, see Lakoff and Peters (1966), Postal (1968a), Perlmutter (1968), and Emonds (1970).
10. The Particle to, which means "and" but not "with", must be introduced transformationally, i.e., probably by Conjunction Reduction.
11. Note, incidentally, that Taroo-wa Ziroo-to terebi-o mi-ta "Taro, together with Jiro, watched television", which implies a simultaneous action by Taro and Jiro, will not be transformationally related to (44a), since they are different in meaning. This observation provides another piece of supporting evidence for the non-existence of Conjunct Movement in Japanese.
12. As is seen in (47a), unlike (45a), Conjunction Reduction will also involve the operation of copying the correlative Particle mo "also" of the second conjunct into the first conjunct.

## CHAPTER III: NOUN AND PREDICATE COMPLEMENTATION

III.0. Introduction In Chapters I and II, we have seen that there are certain syntactic categories, phrase structures, and transformational processes involved in the derivation of simplex sentences, and I have shown, where necessary, that they are involved in the derivation of complex sentences as well. Such syntactic phenomena can now serve the purpose of identifying embedded sentences, the logical first step towards the explication of phenomena of sentential complementation. Ample justification for sentence embedding, therefore, derives from various demonstrations that certain phrases contain the internal structure common to simplex sentences and that they function syntactically the same way as simplex sentences.

The purpose of this chapter is to substantiate the proposal that the Japanese sentential complement system includes two types of sentential complements: Noun and Predicate complement types. Noun complementation involves the embedding of a sentence as a complement to a Noun under the immediate domination of a Noun Phrase, whereas Predicate complementation involves the embedding of a sentence as a complement to a Predicate under the immediate domination of a Predicate Phrase. Thus they can be represented basically by the labelled bracketings  $\left[ X S N \right]_{NP}$  and  $\left[ X S Pred \right]_{PredP}$ , respectively.

III.1. Sentence Embedding One operational procedure for identifying embedded sentences, which is never secure and thus needs to be confirmed by some other more secure procedure, is to find whether certain phrases can occur as independent clauses (that is, as highest sentences)

or not. If they can, then they might be regarded as embedded sentences in the sentences which contain them. Thus, for example, the italicized fragments in the following sentences may be labelled as sentences, since they can come out well as independent clauses:

- (1) a. Tuki-ni-wa seebutu-ga sun-de-i-na-i to-yu-u  
 'moon' 'on' Contr 'creature' Sub 'live' Dur 'not' Pres Comp  
 zizitu-ga hanmeesi-ta  
 'fact' Sub 'become apparent' Pst  
 "The fact that no creature lives on the moon has come to light"
- b. Taroo-wa, Ziroo-ga boku-ni himitu-o utiake-ta  
 Top(Sub) Sub 'I-male' IO 'secret' DO 'confide' Pst  
 koto-o sir-a-nak-kat-ta  
 Nom Obj 'know' 'not' Pst  
 "Taro didn't know that Jiro confided a secret to me"
- c. Boku-wa, kyoo ame-ga hur-u daroo to  
 'I-male' Top(Sub) 'today' 'rain' Sub 'fall' Pres Presum Comp  
 omot-ta  
 'think' Pst  
 "I thought that it would rain today"

The correctness of this operational procedure must be confirmed in formal terms. First, it can be demonstrated that the italicized parts contain the internal structure of simplex sentences by the joint function of the selectional restrictions which the Predicates in those italicized parts impose particularly on their subject and object, and the presence of Auxiliaries which signals the end of sentences. Second, it can be demonstrated that the italicized fragments can and do undergo certain transformations which apply in simplex sentences. Thus, for example, Soo Su Predicate Phrase Pro-formation (cf. Section II.1) can apply in the italicized part of (1b) under the appropriate conditions, thus yielding Taroo-wa, Ziroo-ga soo si-ta koto-o sir-a-nak-kat-ta "Taro didn't know that Jiro did so". To take another example, a rule of Noun Phrase



Preposing has applied in the italicized phrase of (1a) to move the place Noun Phrase tuki-ni "on the moon", which is the object of the Predicate sum-u "live", out of the pre-Predicate position to the beginning of that italicized phrase.

There are two types of embedded sentences: direct quotes and embedded sentences other than direct quotes. There are certain syntactic criteria which signal the distinction between these two types of sentence embedding. First, those embedded sentences which contain any of the following syntactic elements are direct quotes, but not all direct quotes contain such syntactic elements:

- (2) a. The Polite Predicates: mas-u (after Verbs), des-u (after Adjectives, Nominal-Adjectives, and the Copula)
- b. Various kinds of Imperative Moods: ro/e, na, nasai, kudasai, kure
- c. The Hortative Mood: yoo/oo
- d. The Polite Presumptive Mood: desyoo
- e. The Confirmative Mood: ne
- f. The Exclamatory Mood: naa
- g. The Assertive Mood: yo

Thus observe sentences like (3), which contain direct quotes as embedded sentences.

- (3) a. Taroo-wa, boku-ga yuk-i-mas-u to it-ta  
           Top(Sub) 'I-male' Sub 'go' Pol Pres Comp 'say' Pst  
       "Taro said, "I will go""
- b. Sono syookoo-wa, buka-ni atumar-e to  
       'that' 'officer' Top(Sub) 'men' IO 'gather' Abrupt Imp Comp  
       meezi-ta  
       'order' Pst  
       "That officer ordered his men, "Fall in!""
- c. Anaunsaa-wa, kyoo-wa gogo ame-ga hur-u  
       'anouncer' Top(Sub) 'today' Top 'afternoon' 'rain' Sub 'fall' Pres  
       desyoo to hoodoosi-ta  
       PolPresum Comp 'report' Pst

"The announcer reported, "As for today, it will rain in the afternoon""

- d. Ziroo-wa, (ano kaibutu-wa) sugo-i naa  
 Top(Sub) 'that' 'monster' Top(Sub) 'great' Pres Excl  
 to saken-da  
 Comp 'cry' Pst  
 "Jiro cried, "How great that monster is!""

The italicized phrases are possible as independent clauses, and they reveal their status as direct quotes by containing the Polite Predicate mas-u in (3a), the Abrupt Imperative e in (3b), the Polite Presumptive desyoo in (3c), and the Exclamatory naa in (3d). The Predicates which permit direct quotes as embedded sentences are limited to Verbs of saying like yu-u "say", meezu-ru "order", hoodoosu-ru "report" and sakeb-u "cry". When such Verbs of saying take direct quotes, they always require the Complementizer to (cf. Section III.2).

Secondly, an embedded sentence is a direct quote, when first person Pronouns like wata(ku)si "I-Polite and Formal", boku "I-Male and Friendly" and ore "I-Male and Vulgar" refer to the subject Noun Phrase of the matrix sentence with a Verb of saying, while it is an indirect quote, when such first person Pronouns refer to the speaker. Thus contrast (3a) with (4).

- (4) Taroo-wa, boku-ni it-te-hosi-i to it-ta  
 Top(Sub) 'I-male' IO 'go' 'wish' Pres Comp 'say' Pst  
 "Taro said that he would like me to go"

In (3a), boku(-ga) has Taro as its referent, whereas in (4), boku(-ni) has the speaker as its referent. Taroo in (3a) is the subject of the matrix sentence, and hence (3a) is a direct quote, but not (4).

Thirdly, those embedded sentences which contain the yes-no Question

marker ka-doo-ka "whether or not" at their end are non-direct quotes, but not vice versa.

- (5) a. Kodomo-demo tikyuu-ga maru-i ka-doo-ka-o  
 'child''even' 'earth'Sub 'round'Pres 'whether' Obj  
 sit-te-i-ru  
 'know' Dur Pres  
 "Even children know whether the earth is round or not"
- b. Kyoo yuki-ga hur-u ka-doo-ka-wa,  
 'today' 'snow'Sub 'fall'Pres 'whether' Top(Sub)  
 saddaka-de-na-i  
 'certain''not'Pres  
 "It is not certain whether it will snow today"

The italicized fragments cannot occur as independent clauses without replacing ka-doo-ka by ka. Thus observe the following strings:

- (6) a. Tikyuu-ga/wa maru-i { \*ka-doo-ka?  
 'earth'Sub Top(Sub) 'round'Pres { 'whether'  
 { ka?  
 { Q  
 "Is the earth round?"
- b. Kyoo yuki-ga hur-u { \*ka-doo-ka?  
 'today' 'snow'Sub 'fall'Pres { 'whether'  
 { ka?  
 { Q  
 "Will it snow today?"

Furthermore, in sentences like (5), where yes-no Questions are embedded, ka-doo-ka cannot be replaced by the general Question marker ka, as in (7).

- (7) a. \*Kodomo-demo tikyuu-ga maru-i ka-o sit-te-i-ru  
 'child''even' 'earth'Sub 'round'Pres Q Obj 'know'Dur Pres  
 "Even children know whether the earth is round or not"
- b. \*Kyoo yuki-ga hur-u ka-wa, sadaka-de-na-i  
 'today' 'snow'Sub 'fall'Pres Q Top(Sub) 'certain''not'Pres  
 "It is not certain whether it will snow today"

Therefore, the Question markers ka and ka-doo-ka are in complementary distribution between yes-no highest and embedded Questions. Since ka-doo-ka

has turned out to be the yes-no indirect Question marker, those embedded sentences which contain it are indirect Questions and hence non-direct quotes.

### III.2. Complementizers as Markers of Sentential Complementation

As a first piece of evidence for the correctness of our proposal, namely, that the Japanese sentential complement system includes two types of sentential complements: Noun and Predicate complement types, I will present arguments for the existence of certain syntactic markers of sentential complementation in Japanese, which may be referred to as Complementizers. First, these Complementizers invariably occur attached to embedded sentences, and they cannot occur attached to highest sentences. Thus contrast (8) and (9), which differ in whether the Complementizers to-yu-u, to and yoo-ni are attached to embedded or highest sentences.

- (8) a.  $\left[ \begin{array}{l} \text{Tuki-ni-wa} \quad \text{seebutu-ga} \quad \text{sun-de-i-na-i} \\ \text{'moon' 'on' Contr 'creature' Sub 'live' Dur 'not' Pres} \\ \text{to-yu-u} \quad \text{zizitu-ga} \quad \text{hanmeesi-ta} \\ \text{Comp 'fact' Sub 'become apparent' Pst} \end{array} \right]_{S}$   
 "The fact that no living thing lives on the moon has come to light"
- b.  $\left[ \begin{array}{l} \text{Boku-wa,} \quad \left[ \begin{array}{l} \text{kyoo} \quad \text{ame-ga} \quad \text{hur-u} \\ \text{'today' 'rain' Sub 'fall' Pres} \end{array} \right]_{S} \quad \text{to} \\ \text{'I-male' Top(Sub)} \\ \text{omot-ta} \\ \text{'think' Pst} \end{array} \right]_{S} \text{Comp}$   
 "I thought that it would rain today"
- c.  $\left[ \begin{array}{l} \text{Isya-ga} \quad \text{Ziroo-ni} \quad \left[ \begin{array}{l} \text{hayaku} \quad \text{ne-ru} \\ \text{'early' 'sleep' Pres} \end{array} \right]_{S} \quad \text{yoo-ni} \\ \text{'doctor' Sub} \quad \text{IO} \\ \text{susume-ta} \\ \text{'advise' Pst} \end{array} \right]_{S} \text{Comp}$   
 "The doctor advised Jiro to go to bed early"
- (9) a. \*Tuki-ni-wa seebutu-ga sun-de-i-na-i to-yu-u  
 b. \*Kyoo ame-ga hur-u to  
 c. \*Ziroo/Kare-ga hayaku ne-ru yoo-ni  
 'he'

This contrast between (8) and (9) shows that the Complementizers function as syntactic markers of sentential complementation.

Secondly, sentential complements to Nouns are marked by the Complementizer to-yu-u, whereas sentential complements to Predicates are marked by the Complementizers to and yoo-ni. Thus it is observed that in (8a), the Complementizer to-yu-u intervenes an embedded sentence and a Noun zizitu "fact", while in (8b) and (8c), the Complementizers to and yoo-ni intervenes between embedded sentences and Predicates, omow-u "think" and susume-ru "advise", respectively. The fact that to-yu-u is a Noun Complementizer and that to and yoo-ni are Predicate Complementizers can further be confirmed by observing that they each cannot occur in the other contexts. Note also that to and yoo-ni are not interchangeable.

- (10) a. Tuki-ni-wa seebutu-ga sun-de-i-na-i  $\left\{ \begin{array}{l} \underline{\text{to-yu-u}} \\ * \underline{\text{to}} \\ * \underline{\text{yoo-ni}} \end{array} \right\}$  zizitu-ga  
hanmeesi-ta
- b. Boku-wa, kyoo ame-ga hur-u  $\left\{ \begin{array}{l} * \underline{\text{to-yu-u}} \\ \underline{\text{to}} \\ * \underline{\text{yoo-ni}} \end{array} \right\}$  omot-ta
- c. Isya-ga Ziroo-ni hayaku ne-ru  $\left\{ \begin{array}{l} * \underline{\text{to-yu-u}} \\ * \underline{\text{to}} \\ \underline{\text{yoo-ni}} \end{array} \right\}$  susume-ta

Thus these observations reveal the existence of two major types of Complementizers, Noun and Predicate Complementizers, in Japanese. This in turn provides partial justification for Noun and Predicate sentential complementation. I will turn back in Chapter IV to discuss their status as Complementizers and sources in greater detail.

III.3. Noun Complementation In this section, I will present evidence for Noun sentential complementation, partial justification for the initial claim that there exist Noun and Predicate sentential complement types in Japanese. For this purpose, I will demonstrate that an embedded

sentence, the Complementizer to-yu-u and the head Noun as a whole function as, and hence constitute, an inseparable syntactic unit, in particular, a Noun Phrase.

III.3.1. The Topicalization Argument      The first three arguments for Noun complementation are concerned with three transformational rules which involve the movement or deletion of a Noun Phrase, namely, Topicalization, Cleft Formation, and Noun Phrase Deletion. As was seen in Section II.2, Topicalization preposes a Noun Phrase, attaching the topic marker wa to it. Thus observe the behavior of the italicized fragments in the following sentences:

- (11) a. Boku-wa,                      tiisai-koro      tanuki-ga kitune-o  
           'I-male'Top(Sub) 'small''time' 'raccoon'Sub 'fox' Obj  
           bakas-u                      to-yu-u hanasi-o      kii-ta  
           'bewitch'Pres Comp            'story'Obj 'hear' Pst  
           "I heard, in my childhood, \*the story that a raccoon bewitched a fox" / the story about a raccoon's bewitching a fox"
- b. \*Tanuki-ga kitune-o bakas-u-wa, boku-ga tiisai-koro to-yu-u  
           hanasi-o kii-ta
- c. \*To-yu-u-wa, boku-ga tiisai-koro tanuki-ga kitune-o bakas-u  
           hanasi-o kii-ta
- d. \*Hanasi-wa, boku-ga tiisai-koro tanuki-ga kitune-o bakas-u  
           to-yu-u kii-ta
- e. \*Tanuki-ga kitune-o bakas-u to-yu-u-wa, boku-ga tiisai-koro  
           hanasi-o kii-ta
- f. Tanuki-ga kitune-o bakas-u to-yu-u hanasi-wa, boku-ga tiisai-  
           koro kii-ta  
           "\*As for the story that a raccoon bewitched a fox, I heard it  
           in my childhood / As for the story about a raccoon's bewitching  
           a fox, I heard it in my childhood"

The ungrammaticality of (11b), (11c) and (11d) shows that none of the embedded sentence, the Noun Complementizer, and the head Noun can be topicalized, and hence suggests that they separately cannot be Noun

Phrases. The grammaticality of (11f) shows that the embedded sentence, the Complementizer and the head Noun as a single unit may be topicalized, and then suggests that they as an inseparable unit must be a Noun Phrase. Furthermore, the contrast between (11e) and (11f) suggests that the embedded sentence is a complement to the head Noun. This conclusion is compatible with the behavior of the embedded sentence in (11a).

III.3.2. The Cleft Formation Argument As a second piece of evidence for Noun complementation, observe the effects of applying to (11a) the rule of Cleft Formation, which involves the movement of a Noun Phrase (cf. Section II.4). The discussion to follow takes the same form as in Section 3.1.

- (12) a. \*Boku-ga tiisai-koro to-yu-u hanasi-o kii-ta no-wa,  
tanuki-ga kitune-o bakas-u da
- b. \*Boku-ga tiisai-koro tanuki-ga kitune-o bakas-u hanasi-o  
kii-ta no-wa, to-yu-u da
- c. \*Boku-ga tiisai-koro tanuki-ga kitune-o bakas-u to-yu-u  
kii-ta no-wa, hanasi da
- d. Boku-ga tiisai-koro kii-ta-no-wa, tanuki-ga kitune-o bakas-u  
to-yu-u hanasi da  
"It was the story that a racoon bewitched a fox that I heard  
in my childhood / It was the story about a racoon's bewitching  
a fox that I heard in my childhood"

The ungrammaticality of (12a), (12b) and (12c) shows that neither of the embedded sentence, the Complementizer and the head Noun may be clefted, and then suggests that neither of them can be a Noun Phrase. The grammaticality of (12d) shows that those three components must function as an inseparable unit, in particular, as a Noun Phrase, for Cleft Formation. Furthermore, the inseparability of the embedded sentence from the head Noun as in (12c) suggests that the embedded sentence is a complement to

the head Noun.

III.3.3. The Noun Phrase Deletion Argument A third piece of evidence for Noun complementation comes from a consideration of Noun Phrase Deletion. What is involved in this process, as was illustrated in Section II.6, is that repeated Noun Phrases may be deleted in the correlative construction, as I called it, where the conjuncts contain a pair of correlative Noun Phrases (namely, wa- and mo-phrases) and at least a pair of identical Noun Phrases. Thus observe the following paradigm of sentences:

(13) a. Taroo-wa, konya taihoo-ga ku-ru daroo  
           Contr(Sub) 'tonight' 'typhoon' Sub 'come' Pres Presum  
 to-yu-u yohoo-o wasure-te-i-ta; Ziroo-mo  
 Comp 'forecast' Obj 'forget' Dur Pst 'also' (Sub)  
konya taihoo-ga ku-ru daroo to-yu-u yohoo-o wasure-te-i-ta

"Taro forgot the forecast ?that/according to which a typhoon would visit us tonight, and Jiro also forgot the forecast ?that/according to which a typhoon would visit us tonight"

b. \*Taroo-wa, konya taihoo-ga ku-ru daroo to-yu-u yohoo-o  
 wasure-te-i-ta; Ziroo-mo  $\emptyset$  to-yu-u yohoo-o  
 wasure-te-i-ta

c. \*Taroo-wa, konya taihoo-ga ku-ru daroo to-yuu yohoo-o  
 wasure-te-i-ta; Ziroo-mo konya taihoo-ga ku-ru daroo  $\emptyset$   
yohoo-o wasure-te-i-ta

d. \*Taroo-wa, konya taihoo-ga ku-ru daroo to-yu-u yohoo-o  
 wasure-te-i-ta; Ziroo-mo konya taihoo-ga ku-ru daroo to-yu-u  
 $\emptyset$  wasure-te-i-ta

e. Taroo-wa, konya taihoo-ga ku-ru daroo to-yu-u yohoo-o  
 wasure-te-i-ta; Ziroo-mo  $\emptyset \emptyset \emptyset$  wasure-te-i-ta

"Taro forgot the forecast ?that/according to which a typhoon would visit us tonight, and Jiro also forgot (it)"

The ungrammaticality of (13b), (13c) and (13d) shows that neither of the embedded sentence, the Complementizer and the head Noun can function as



a Noun Phrase. The grammaticality of (13e) shows that these three elements as a whole constitute a Noun Phrase, since Noun Phrase Deletion is only applicable to a Noun Phrase.

III.3.4. The Pronominalization Argument A fourth piece of evidence for Noun complementation follows from another observation of the correlative construction illustrated in the preceding subsection, namely, that a rule of Pronominalization which converts a Noun Phrase into an anaphoric Pronoun sore "it" applies to the whole sequence of the embedded sentence, the Complementizer and the head Noun. Thus observe (14), the output of the application of this rule to (13a).

(14) Taroo-wa, konva taihuu-ga ku-ru daroo  
           Top(Sub) 'tonight' 'typhoon' Sub 'come' Pres Presum  
to-yu-u yohoo-o wasure-te-i-ta; Ziroo-mo  
 Comp 'forecast' Obj 'forget' Dur Pst 'also' (Sub)  
sore-o wasure-te-i-ta  
 'it' Obj 'forget' Dur Pst

"Taro forgot the forecast ?that/according to which a typhoon would visit us tonight, and Jiro also forgot it"

III.3.5. The Subject-Object Inversion Argument There are two surface phenomena where subject-object inversion holds between two constructions. One is a phenomenon of active and passive sentences, and the other is that of causatives and non-causatives with Verbs of feeling. Such phenomena of subject-object inversion as these will serve as another piece of evidence for Noun Complementation, because it is a Noun Phrase that constitutes the subject or object of a sentence. Thus observe first such simple sentences as (15) and (16), which involve the inversion of subject and object Noun Phrases as a surface phenomenon.

(15) a. Keekan-ga           gakusee-o       nagut-ta  
           'policeman' Sub 'student' Obj 'beat' Pst

"The policeman beat the student"

- b. Gakusee-ga keekan-ni nagr-are-ta  
 'student' Sub 'policeman' 'by' 'beat' Pass Pst  
 "The student was beaten by the policeman"

- (16) a. Hitobito-wa, ongaku-o tanasim-u  
 'people' Top(Sub) 'music' Obj 'amuse' Pres  
 "People get amused at music"
- b. Ongaku-wa, hitobito-o tanosim-ase-ru  
 'music' Top(Sub) 'people' Obj 'amuse' Caus Pres  
 "Music amuses people / Music makes people get amused"

It is observed in (15) that the subject Noun Phrase keekan "policeman" in the active (a) appears as the agentive Noun Phrase in the corresponding passive (b), and that the object Noun Phrase in (a), gakusee "student", appears as the subject Noun Phrase in (b). Such correspondences as these hold also between the non-causative (16a) and the corresponding causative (16b).

Now observe the following sentences with sentential complements:

- (17) a. Hitobito-wa, tanuki-ga kitune-o bakas-u  
 'people' Top(Sub) 'raccoon' Sub 'fox' Obj 'bewitch' Pres  
to-yu-u densetu-o ii-tutae-ta  
 Comp 'legend' Obj 'say' 'convey' Pst  
 "People handed down the legend ?that/in which a racoon bewitched a fox"

- b. Tanuki-ga kitune-o bakas-u to-yu-u densetu-wa,  
 Top(Sub)  
 hitobito-niyotte ii-tutae-rare-ta  
 'people' 'by' Pass  
 "The legend ?that/in which a racoon bewitched a fox was handed down by people"

- (18) a. Haha-oya-wa, Taroo-ga siken-ni oti-ta to-yu-u  
 'mother' 'parent' Top(Sub) Sub 'exam' 'in' 'fail' Pst Comp  
sirase-o kanasin-da  
 'news' Obj 'grieve' Pst  
 "His mother felt sorrowful at the news that Taro failed in the examination"

- b. Taroo-ga siken-ni oti-ta to-yu-u sirase-wa,     Top(Sub)  
 haha-oya-o kanasim-ase-ta  
                   Obj                     Caus  
 "The news that Taro failed in the examination made his  
 mother feel sorrowful"

Phenomena parallel to (15) and (16) can be observed in (17) and (18), where the italicized sequence of the embedded sentence, the Complementizer and the head Noun functions as a Noun Phrase. These phenomena of subject-object inversion thus strengthen the idea of Noun Complementation further.

I have thus far presented five arguments, for the existence of Noun sentential complements in Japanese, which follow from considerations of Topicalization, Cleft Formation, Noun Phrase Deletion, Sore Pronominalization, and subject-object inversion phenomena which all involve the movement, deletion, or substitution of Noun Phrases. The fact that these five arguments illustrate that a sequence of strings which consists of an embedded sentence, the Noun Complementizer to-yu-u and a Noun functions as a single syntactic unit, in particular, as a Noun Phrase, substantiates the principle of Noun complementation. Therefore, only if the Phrase Structure Rules are extended in such a way as to introduce a sentence within a Noun Phrase, then the transformational phenomena involved in complex sentences noted above can be explained in exactly the same way in which the parallel phenomena involved in simplex sentences are explained, and hence in the most general way. Herein lies the necessity of allowing the Phrase Structure Rules to be recursive, in having the property of being able to introduce new occurrences of a Sentence within Noun Phrases. Since a precise formulation of the Noun Phrase expansion

rule requires research into certain other factors, it will be left pending until Section IV.1, where the status of the Noun Complementizer is discussed.

III.4. Abstract Sentential Nominalizations There are three syntactic elements, referred to as abstract sentential nominalizers, which have the function of nominalizing embedded sentences. They are thus illustrated in the following three sentences:

- (19) a. Kodomo-demo                    [ kuzira-ga honyuu-doobutu dear-u ]<sub>S</sub>  
       'child''even'(Sub)            'whale'Sub 'mammal'            'be' Pres  
       (to-yu-u) no-o            sit-te-i-ru  
       Comp            Nom Obj 'know' Dur Pres  
       "Even children know that the whale is a mammal"
- b. Taroo-wa,                    [ himitu-ga more-ta ]<sub>S</sub> (to-yu-u) koto-o  
       Top(Sub)            'secret'Sub 'leak'Pst            Comp            Nom Obj  
       kokuhakusi-ta  
       'confess' Pst  
       "Taroo confessed (the fact) that the secret had leaked out"
- c. Keekan-wa,                    [ yaroo-ga kuruma-o nusum-u ]<sub>S</sub>  
       'policeman'Top(Sub)            'bastard'Sub 'car' Obj 'steal'Pres  
       tokoro-o            torae-ta  
       Nom            Obj 'catch' Pst  
       "The policeman caught a bastard stealing a car"

The nominalizers no, koto, and tokoro, as is apparent in (19), occur preceded by an embedded sentence obligatorily in deep structure and by the Noun Complementizer in certain limited cases, and followed by a case Particle like the subject marker ga and the object marker o. In this section, I will first show that they must be present in deep structure rather than being introduced into phrase structure by transformations.

III.4.1. Sentential Nominalizers as Nouns I will prove that the sentential nominalizers are Nouns by demonstrating that an embedded

sentence and the associated nominalizer constitute a Noun Phrase. This demonstration will in turn be made by the observation that there exist transformational phenomena concerning the sequence in question which are parallel to those concerning the already established instances of Noun complementation. Thus observe the following paradigms, where the nominalizers no, koto and tokoro are involved in transformational phenomena of Topicalization, Cleft Formation, Noun Phrase Deletion, Sore Pronominalization, and subject-object inversion:

- (20) a. Kuzira-ga honyuu-doobutu dear-u (to-yu-u) no-wa, kodomo-demo  
sit-te-i-ru Top(Obj)  
"As for the thing that the whale is a mammal, even children know it"
- b. \*Kodomo-demo sit-te-i-ru no-wa, kuzira-ga honyuu-doobutu dear-u (to-yu-u) no da Top(Sub)  
"What even children know is that the whale is a mammal"
- c. Otona-wa, motiron kuzira-ga honyuu-doobutu dear-u (to-yu-u) no-o sit-te-i-ru ga, kodomo-demo  $\emptyset$  sit-te-i-ru  
'adult' Contr(Sub) 'of course' 'but'  
"Grown-ups know that the whale is a mammal, but even children know  $\emptyset$ "
- d. Otona-wa, motiron kuzira-ga honyuu-doobutu dear-u (to-yu-u) no-o sit-te-i-ru ga, kodomo-demo sore-o sit-te-i-ru  
"Grown-ups know that the whale is a mammal, but even children know it"
- e. Kuzira-ga honyuu-doobutu dear-u (to-yu-u) no-wa, kodomo-ni-demo Top(Sub) 'by'  
sir-are-te-i-ru Pass  
"That the whale is a mammal is known even by children"
- (21) a. Himitu-ga more-ta (to-yu-u) koto-wa, Taroo-ga kokuhakusi-ta Top(Obj)  
"As for the fact that the secret had leaked out, Taro confessed it"
- b. Taroo-ga kokuhakusi-ta no-wa, himitu-ga more-ta (to-yu-u) koto da

"What Taro confessed was (the fact) that the secret had leaked out"

- c. Ziroo-wa, himitu-ga more-ta (to-yu-u) koto-o  
 Contr(Sub)  $\emptyset$  kokuhakusi-ta  
 kokuhakusi-ta; Taroo-mo 'also'(Sub)  
 "Jiro confessed (the fact) that the secret had leaked out;  
 Taro also confessed it(\* $\emptyset$ )"
- d. Ziroo-wa, himitu-ga more-ta (to-yu-u) koto-o kokuhakusi-ta;  
 Taroo-mo sore-o kokuhakusi-ta  
 'it'  
 "Jiro confessed (the fact) that the secret had leaked out;  
 Taro also confessed it"
- e. Himitu-ga more-ta (to-yu-u) koto-wa, Taroo-niyotte  
 Top(Sub) 'by'  
 kokuhakus-are-ta  
 Pass  
 "(The fact) That the secret had leaked out was confessed by  
 Taro"
- (22) a. Yaroo-ga kuruma-o nusum-u tokoro-wa, keekan-ga torae-ta  
 Top(Obj)  
 "As for the spot where a bastard was stealing a car, the  
 policeman caught him"
- b. Keekan-ga torae-ta no-wa, yaroo-ga kuruma-o nusum-u  
 Top(Sub)  
tokoro da  
 Cop+Pres  
 "\*What the policeman caught was a bastard stealing a car"
- c. Gakusee-wa, yaroo-ga kuruma-o nusum-u tokoro-o  
 'student' Contr(Top)  
 torae-ta; keekan-mo  $\emptyset$  torae-ta  
 "The student caught a bastard stealing a car; the policeman  
 also caught him"
- d. Gakusee-wa, yaroo-ga kuruma-o nusum-u tokoro-o torae-ta;  
 keekan-mo soko-o torae-ta  
 'that place'  
 "The student caught a bastard stealing a car; the policeman  
 also caught \*the spot"
- e. ?Yaroo-ga kuruma-o nusum-u tokoro-wa, keekan-ni(yotte)  
 torae-rare-ta 'by'  
 Pass  
 "\*A bastard stealing a car ( $\neq$ a bastard who was stealing a  
 car) was caught by the policeman"

The data adduced in (20), (21) and (22), except for (20b) and (22e), provides ample justification for the claim that the sentential nominalizers are Nouns, because the sequence of an embedded sentence and the associated nominalizer functions as a Noun Phrase.

String (19b) is unacceptable for some reason which is unknown to me, but perhaps because the nominalizer no appears in the same phonological context (namely, before da) which is occupied by an independently motivated Predicate (Nominal-Adjective) no of no-da "It is the case that". This speculation applies also to (22b), which sounds a little bizarre, because the nominalizer tokoro occupies the same phonological context which is occupied an independently motivated Predicate tokoro of tokoro-da "be about to". For discussion of these Predicates and similar others, cf. Chapter V. No analogous speculation holds of (21b), which contains the nominalizer koto, for we seem to have no such Predicate as koto-da. The reason why (20b) is much less acceptable than (22b) seems to depend upon the fact that no is most abstract and semantically almost empty, while tokoro retains a flavor of its literal meaning "place/spot". This is confirmed by (22d), where the tokoro-complement is replaced by the anaphoric Pronoun of place soko "that place".

III.4.2.      Sentential Nominalizers as Deep Structure Elements      Now we proceed to present crucial evidence which argues that the sentential nominalizers are deep structure elements. Since it has turned out that the nominalizers are Nouns and that they occupy the same position which is independently necessary for such well-established Nouns as zizitu "fact", hanasi "story", uwasa "rumor", and mondai "problem", which can take sentential complements, no ad hoc mechanism is needed in the Phrase

Structure Rules for the introduction of the sentential nominalizers.

Hence this provides evidence for the existence in deep structure of the Noun node which is capable of immediately dominating the nominalizers.

Evidence which is crucial to the argument that the nominalizers are deep structure elements stems from the fact that some Predicates allow the occurrence of both nominalizers and independently occurring lexical items in the position of the head Nouns of their sentential complements. Thus observe (23), in which this point is illustrated.

- (23) a. Taroo-wa,  $\left[ \text{Hanako-ga hasit-te-ku-ru} \right]_S$   
                   Top(Sub)                 Sub 'run'     'come' Pres
- |  |     |           |
|--|-----|-----------|
| $\left\{ \begin{array}{l} \underline{\text{no}} \\ \text{Nom} \\ \underline{\text{tokoro}} \\ \text{Nom} \\ \underline{\text{sugata}} \\ \text{'figure'} \end{array} \right\}$ | -o  | mi-ta     |
|  | Obj | 'see' Pst |
- "Taro saw Hanako running towards him /  
 (Literally) \*Taro saw the figure of Hanako running towards him"
- b. Boku-wa,  $\left[ \text{tikyuu-ga maru-i} \right]_S$  (to-yu-u)  
                   'I' Top(Sub)                 'earth' Sub     'round' Pres     Comp
- |  |     |                 |
|--|-----|-----------------|
| $\left\{ \begin{array}{l} \underline{\text{no}} \\ \text{Nom} \\ \underline{\text{koto}} \\ \text{Nom} \\ \underline{\text{zizitu}} \\ \text{'fact'} \end{array} \right\}$ | -o  | sit-te-i-ru     |
|  | Obj | 'know' Dur Pres |
- "I know (the fact) that the earth is round"
- c. Taroo-wa, mada  $\left[ \text{tetuya-si-ta} \right]_S$   
                   Top     'yet'                 'sit up all night' Pst
- |  |     |                  |
|--|-----|------------------|
| $\left\{ \begin{array}{l} \underline{\text{koto}} \\ \text{Nom} \\ \underline{\text{keeken}} \\ \text{'experience'} \\ \underline{\text{zizitu}} \\ \text{'fact'} \\ \underline{\text{tamesi}} \\ \text{'attempt'} \end{array} \right\}$ | -ga | na-i             |
|  | Sub | 'not exist' Pres |
- "Taro has not sat up all night yet / (Literally) \*There exists nothing / no experience/fact/attempt that he sat up all night in Taro"



Since there is no reason why only independently occurring lexical items appear in deep structure, but not the nominalizers, this observation provides evidence for the status of the nominalizers as deep structure elements.

Another piece of evidence stems from the fact that the nominalizers participate in Predicate subcategorization. Thus observe first that independently occurring Nouns which can take sentential complements subcategorize Predicates.

- (24) a. Boku-ni-wa,  $\left[ \begin{array}{l} \text{kyoo} \\ \text{'today'} \end{array} \right]$  yuki-ga hur-i-soo-na  $\left. \right]_S$  Variant of da(Pres)
- 'I-male''to'Top 'snow'Sub 'fall''likely'
- $\left\{ \begin{array}{l} \underline{\text{ki}} / \underline{\text{kehai}} / \underline{\text{kimoti}} \\ \text{'hunch'} / \text{'sign'} / \text{'feeling'} \\ \underline{*yosoku} / \underline{*yoosu} / \underline{*zizitu} \\ \text{'prediction'} / \text{'appearance'} / \text{'fact'} \end{array} \right\} \begin{array}{l} \text{-ga} \quad \text{si-ta} \\ \text{Sub} \quad \text{'do'} \quad \text{Pst} \end{array}$

"I had a hunch/an indication/a feeling that it seemed to snow today"

- b.  $\left[ \begin{array}{l} \text{Taiheeyoo-de} \\ \text{'Pacific''in'} \end{array} \right]$  hikooki-ga tuirakusu-ru  $\left. \right]_S$  to-yu-u Comp
- 'airplane'Sub 'crash' Pres
- $\left\{ \begin{array}{l} \underline{\text{ziken}} / \underline{\text{dekigoto}} \\ \text{'event'} / \text{'happening'} \\ \underline{*hanasi} / \underline{*nyuusuu} \\ \text{'story'} / \text{'news'} \end{array} \right\} \begin{array}{l} \text{-ga} \quad \text{okot-ta} \\ \text{Sub} \quad \text{'arise/occur'} \quad \text{Pst} \end{array}$

"The accident/happening that an airplane crashed in the Pacific took place"

Analogously, it is observed that Predicates are subcategorized for the three sentential nominalizers; in other words, a selection among the nominalizers is dependent upon the idiosyncratic properties of Predicates. First of all, some Predicates which can take Noun sentential complements allow no nominalizer except no as their head Nouns. For example, tune-da "habitual" and probably kikoe-ru "audible" allow only no as the head Noun in the subject sentential complement, and kik-u "hear" and kanzu-ru "feel"

in the object sentential complement. To illustrate just one example, observe the following sentence:

- (25) Boku-wa,  $\left[ \begin{array}{l} \text{kiteki-ga} \\ \text{'whistle' Sub} \end{array} \right]$  tookude nat-te-i-ru  $\left. \vphantom{\left[ \begin{array}{l} \text{kiteki-ga} \\ \text{'whistle' Sub} \end{array} \right]} \right\} \text{S}$   
 'I' Top(Sub) 'far away' 'sound' Dur Pres  
 $\left\{ \begin{array}{l} \text{no} \\ \text{*koto} \\ \text{*tokoro} \\ \text{Nom} \end{array} \right\}$  -o kii-ta  
 Obj 'hear' Pst  
 "I heard a whistle sounding a long way off"

Secondly, some Predicates which can take Noun sentential complements do not permit any other nominalizer than koto as their head Nouns. Thus, for example, ar-u "exist", which denotes past experience and occasional habit, hanmeesu-ru "become apparent", and probably deki-ru "possible" take subject sentential complements with only koto as their head Nouns. Predicates like kokoromi-ru "attempt", hazime-ru "begin", kime-ru "decide" and su-ru "decide" take object sentential complements with only koto as their head Nouns. Observe the following sentences, which involve some of them as representative examples:

- (26) a. Boku(-ni)-wa,  $\left[ \begin{array}{l} \text{Huzi-san-ni} \\ \text{'Mt. Fuji' 'to'} \end{array} \right]$  nobot-ta  $\left. \vphantom{\left[ \begin{array}{l} \text{Huzi-san-ni} \\ \text{'Mt. Fuji' 'to'} \end{array} \right]} \right\} \text{S} \left\{ \begin{array}{l} \text{*no} \\ \text{koto} \\ \text{*tokoro} \end{array} \right\}$   
 'I' Place Top 'climb' Pst  
 -ga ar-u  
 Sub 'exist' Pres  
 "I have climbed Mt. Fuji (before)"  
 b. Taroo-wa,  $\left[ \begin{array}{l} \text{daigakuin-ni} \\ \text{'graduate school' 'to'} \end{array} \right]$  susum-u  $\left. \vphantom{\left[ \begin{array}{l} \text{daigakuin-ni} \\ \text{'graduate school' 'to'} \end{array} \right]} \right\} \text{S}$   
 Top(Sub) 'proceed' Pres  
 $\left\{ \begin{array}{l} \text{*no} \\ \text{koto} \\ \text{*tokoro} \end{array} \right\}$  -ni  $\left\{ \begin{array}{l} \text{kime-ta} \\ \text{si-ta} \\ \text{'decide' Pst} \end{array} \right\}$   
 IO  
 "Taro decided to go on to graduate school"

Thirdly, many Predicates permit the occurrence of the nominalizers no and koto as the head Nouns of their Noun sentential complements.

They include such Predicates as nozomasi-i "desirable", akiraka-da "obvious", hituyoo-da "necessary" and probably wakar-u "understandable", which take Noun sentential complements in subject position, and such Predicates as sir-u "know", wasure-ru "forget", omoidasu-u "remember", kowa-i "be afraid of", uresi-i "be glad of", zannen-da "regret" and husigi-da "feel strange about", which take Noun sentential complements in pre-Predicate object position. The following sentences illustrate this type of Predicates:

- (27) a.  $\left[ \begin{array}{l} \text{Sono} \quad \text{kaihoo-ga} \quad \text{matigat-te-i-ru} \\ \text{'that' 'solution' Sub 'wrong' Dur Pres} \end{array} \right]_S \left\{ \begin{array}{l} \text{no} \\ \text{koto} \\ \text{*tokoro} \\ \text{Nom} \end{array} \right\}$   
           -wa,                    akiraka-da  
           Top(Sub)            'obvious' Pres  
           "It is obvious that the solution is incorrect"
- b. Hanako-wa,                     $\left[ \begin{array}{l} \text{sensee-ni} \quad \text{denwa-o} \quad \text{su-ru} \\ \text{'teacher' IO 'phone' DO 'do' Pres} \end{array} \right]_S$   
           Top(Sub)                    Obj    'forget' Dur Pst  
            $\left\{ \begin{array}{l} \text{no} \\ \text{koto} \\ \text{*tokoro} \\ \text{Nom} \end{array} \right\}$                     -wa    wasure-te-i-ta  
           "Hanako forgot to call her teacher"

Finally, there are some Predicates which allow no and tokoro as the head Nouns of their Noun sentential complements. They are limited to Predicates like mi-ru "see", torae-ru "catch", mituke-ru "find", tukamae-ru "capture", and mie-ru "visible". Observe, for instance, the following sentences:

- (28) a. Boku-ni-wa,                     $\left[ \begin{array}{l} \text{doroboo-ga} \quad \text{nige-te-yuk-u} \\ \text{'thief' Sub 'escape' 'go' Pres} \end{array} \right]_S$   
           'I-male' to Top                    Sub    'visible' Pst  
            $\left\{ \begin{array}{l} \text{no} \\ \text{*koto} \\ \text{tokoro} \\ \text{Nom} \end{array} \right\}$                     -ga    mie-ta  
           "I saw the thief running away"
- b. Boku-wa,                     $\left[ \begin{array}{l} \text{doroboo-ga} \quad \text{nige-te-yuk-u} \\ \text{'thief' Sub 'escape' 'go' Pres} \end{array} \right]_S$   
           'I-male' Top(Sub)

$$\left\{ \begin{array}{l} \underline{no} \\ *koto \\ \underline{tokoro} \\ \text{Nom} \end{array} \right\} \begin{array}{l} -o \\ \text{Obj} \end{array} \begin{array}{l} \text{mituke-ta} \\ \text{'find' Pst} \end{array}$$

"I found the thief running away"

I can think of no Predicate which can take all three nominalizers as the head Nouns of their Noun sentential complements. As should have been clear from the preceding discussion, there is no syntactic basis for distinguishing among the three sentential nominalizers with respect to their cooccurrence relations with Predicates, because all nominalizers can occur as the head Nouns of the Noun sentential complements in both subject and pre-Predicate position. Thus, in particular, no, koto and tokoro appear in the subject of Predicates like kikoe-ru "audible", deki-ru "possible", and mie-ru "visible", respectively, and they appear in the object of Predicates like kanzu-ru "feel", kokoromi-ru "attempt" and wasure-ru "forget", respectively. Nor is there any semantic basis for distinguishing among the three nominalizers, because no semantic restrictions can be found which are common to the Predicates which require a particular nominalizer. If, therefore, a transformational analysis is assumed for the placement of the nominalizers, only one possibility remains which is forced to employ ad hoc markers which enable Predicates to select appropriate nominalizers. In fact, however, this analysis is none other than an immediate reflection of the way in which each Predicate is lexically specified for a particular choice of nominalizer. Hence it will be plausibly assumed that the nominalizers are present in deep structure.

### III.5. Predicate Complementation

In this section, I will present

evidence for Predicate sentential complementation, justification for the second half of our initial proposal that there exist Noun and Predicate sentential complement types in Japanese. It will be shown first of all that sentential complements immediately followed by the Complementizers to and yoo-ni are not instances of Noun Phrases by observing the effects of transformations which involve the movement, deletion or substitution of Noun Phrases and by semantic considerations which clarify the distinction between these sentential complements and koto sentential complements. Second, it will be demonstrated that these sentential complements are immediately dominated by Predicate Phrases by observing the effects of Soo Su Predicate Phrase Pro-formation. All these considerations provide ample evidence for the existence of Predicate sentential complementation in Japanese, and then require that the Predicate Phrase expansion rule be extended in such a way as to generate a sentence as one of its components.

### III.5.1. To and Yoo-ni Complements as Instances of Sentences

There is an apparent possibility that to and yoo-ni sentential complements might be headless Noun Phrases. The purpose of this section is to rule out this possibility by showing that they do not function as Noun Phrases with respect to such transformational processes as Topicalization, Cleft Formation, Noun Phrase Deletion, Sore Pronominalization, and subject-object inversion phenomena. Furthermore, this possibility will be ruled out by the consideration of such new rules as Sentence Deletion, Sentence Preposing and Soo Sentential Pro-formation, which distinguish between to and yoo-ni sentential complements and Noun sentential complements.

First, observe (29a-ii) and (29b-ii), the outputs of application of

Topicalization to to and yoo-ni sentential complements (29a-i) and (29b-i).

- (29) a. (i) Boku-wa,  $\left[ \begin{array}{l} \text{moo} \\ \text{'I-male'} \end{array} \right]_{\text{Top(Sub)}} \left[ \begin{array}{l} \text{haru-ga} \\ \text{'spring'} \end{array} \right]_{\text{Sub}} \left[ \begin{array}{l} \text{ki-ta} \\ \text{'come'} \end{array} \right]_{\text{Pst}} \left. \vphantom{\left[ \begin{array}{l} \text{moo} \\ \text{'I-male'} \end{array} \right]_{\text{Top(Sub)}}} \right]_{\text{S}}$   
to omot-ta  
 Comp 'think' Pst  
 "I thought that spring had come already"
- (ii) \* $\left[ \begin{array}{l} \text{Moo haru-ga ki-ta} \\ \text{Top} \end{array} \right]_{\text{S}} \left. \vphantom{\left[ \begin{array}{l} \text{Moo haru-ga ki-ta} \\ \text{Top} \end{array} \right]_{\text{S}}} \right]_{\text{S}} \text{to-wa, boku-ga/wa omot-ta}$   
 "(Literally) \*As for that spring had come already, I thought (it)"
- Cf. (iii)  $\left[ \begin{array}{l} \text{Moo haru-ga ki-ta} \\ \text{omot-ta} \end{array} \right]_{\text{S}} \left. \vphantom{\left[ \begin{array}{l} \text{Moo haru-ga ki-ta} \\ \text{omot-ta} \end{array} \right]_{\text{S}}} \right]_{\text{S}} \text{to, boku-ga/wa}$   
 "That spring had come already, I thought"
- b. (i) Isya-ga Ziroo-ni  $\left[ \begin{array}{l} \text{hayaku ne-ru} \\ \text{'early'} \text{'sleep'} \end{array} \right]_{\text{Pres}} \left. \vphantom{\left[ \begin{array}{l} \text{hayaku ne-ru} \\ \text{'early'} \text{'sleep'} \end{array} \right]_{\text{Pres}}} \right]_{\text{S}}$   
 'doctor' Sub IO  
yoo-ni susume-ta  
 Comp 'advise' Pst  
 "The doctor advised Jiro to go to bed early"
- (ii) \* $\left[ \begin{array}{l} \text{Hayaku ne-ru} \\ \text{Top} \end{array} \right]_{\text{S}} \left. \vphantom{\left[ \begin{array}{l} \text{Hayaku ne-ru} \\ \text{Top} \end{array} \right]_{\text{S}}} \right]_{\text{S}} \text{yoo-ni-wa, isya-ga Ziroo-ni}$   
 susume-ta  
 "(Literally) \*As for that he<sub>i</sub> should go to bed early, the doctor advised Jiro<sub>i</sub>"
- Cf. (iii)  $\left[ \begin{array}{l} \text{Hayaku ne-ru} \\ \text{Ziroo-ni susume-ta} \end{array} \right]_{\text{S}} \left. \vphantom{\left[ \begin{array}{l} \text{Hayaku ne-ru} \\ \text{Ziroo-ni susume-ta} \end{array} \right]_{\text{S}}} \right]_{\text{S}} \text{yoo-ni, isya-ga/wa}$   
 "\*To go to bed early, the doctor advised Jiro"

The ungrammaticality of (29a-ii) and (29b-ii) shows that to and yoo-ni sentential complements are not instances of Noun Phrases. Note, however, that they can be preposed to the beginning of the sentence, as in (29a-iii) and (29b-iii), just as Noun sentential complements can be preposed to the beginning of the immediately dominating Noun Phrase. (For discussion of Sentence Preposing within a Sentence and a Noun Phrase, cf. Sections IV.2.1 and IV.1.3, respectively.) Since these examples clearly involve a process of Sentence Preposing, distinct from Topicalization,

they show that to and yoo-ni sentential complements are instances of sentences.

To exclude an apparent possibility, consider the following sentences:

- (30) a. Boku-wa,  $\left[ \frac{\text{haru-ga} \quad \text{tika-i}}{\text{'spring' Sub 'close' Pres}} \right]_S$  to-wa,  
 'I-male' Top(Sub) 'spring' Sub 'close' Pres Comp Contr  
 it-ta ga,  $\left[ \frac{\text{haru-ga} \quad \text{yat-te-ki-ta}}{\text{'spring' Sub 'come' Pst}} \right]_S$  to-wa,  
 'say' Pst 'but' 'spring' Sub 'come' Pst Comp Contr  
 iw-a-nak-kat-ta  
 'say' 'not' Pst  
 "I said that spring was close, but didn't say that spring had come"
- b. Isya-wa, Ziroo-ni  $\left[ \frac{\text{hayaku} \quad \text{ne-ru}}{\text{'early' 'sleep' Pres}} \right]_S$   
 'doctor' Top(Sub) IO 'early' 'sleep' Pres  
 yoo-ni-wa, susume-nak-kat-ta  
 Comp Contr 'advise' 'not' Pst  
 "The doctor did not advise Jiro to go to bed early"

It is observed here that the Particle wa is attached to the sentential complements, but it is not the topical marker, but the contrastive one, as is clear from the syntactic contrastive contexts. Characteristically, the contrastive wa is attached to any syntactic element such as a Noun Phrase, a Predicate Phrase, a Predicate and a complement sentence (cf. Section VII.3.2), the sentences in (30) do not provide evidence for the treatment of to and yoo-ni sentential complements as instances of Noun Phrases.

Secondly, observe (31a) and (31b), the effects of applying Cleft Formation to (29a-i) and (29b-i).

- (31) a. \*Boku-ga omot-ta no-wa,  $\left[ \frac{\text{moo} \quad \text{haru-ga}}{\text{'already' 'spring' Sub}} \right]$   
 'I-male' Sub 'think' Pst Nom Top(Sub) 'already' 'spring' Sub  
 $\left[ \frac{\text{ki-ta}}{\text{'come' Pst}} \right]_S$  to da  
 Comp Cop+Pres  
 "What I thought was that spring had come already"
- b. ?\*Isya-ga Ziroo-ni susume-ta no-wa,  
 'doctor' Sub IO 'advise' Pst Nom Top(Sub)  
 $\left[ \frac{\text{hayaku} \quad \text{ne-ru}}{\text{'early' 'sleep' Pres}} \right]_S$  yoo-ni da  
 Comp Cop+Pres

"\*What the doctor advised Jiro was to go to bed"

The ungrammaticality of (31a) shows that to complements are not Noun Phrases, and the dubious status of (31b) does not provide crucial evidence for or against the analysis of yoo-ni complements as Noun Phrases.

As apparently related to (31a) and (31b), observe the following grammatical cleft sentences:

- (32) a. Boku-ga omot-ta no-wa,  $\left[ \begin{array}{c} \text{moo} \\ \text{haru-ga} \end{array} \right]$   
 'I-male' Sub 'think' Pst Nom Top(Sub) 'already' 'spring' Sub  
 $\left[ \begin{array}{c} \text{ki-ta} \\ \text{to-yu-u koto da} \end{array} \right]_S$   
 'come' Pst Comp Nom Cop+Pres  
 "What I thought of was the fact that spring had already come"
- b. Isya-ga Ziroo-ni susume-ta no-wa,  $\left[ \left[ \begin{array}{c} \text{hayaku} \\ \text{to-yu-u koto da} \end{array} \right] \right]_S$   
 'doctor' Sub IO 'advise' Pst Nom Top(Sub) 'early'  
 $\left[ \begin{array}{c} \text{ne-ru} \\ \text{yoo-ni (su-ru)} \end{array} \right]_S$   
 'sleep' Pres Comp 'endeavor' Pres Comp Nom Cop+Pres  
 "\*What the doctor advised Jiro was to endeavor to go to bed  
 early"

One might propose that (31a) would be related to (32a) transformationally, or specifically, by a rule which deletes the non-constituents yu-u koto, and that (31b) would be related to (32b) by a rule which deletes the non-constituents su-ru to-yu-u koto. In fact, however, this proposal seems untenable, because the processes involved do not preserve meaning; thus, (32a), but not (31a), involves the presupposition of factivity in the complement sentence, and (31b) lacks the meaning of (yoo-ni) su-ru "endeavor", which is involved in (32b).

Thirdly, there is a process of Soo Sentential Pro-formation which is applicable to to and yoo-ni sentential complements, but not to Noun sentential complements with to-yu-u. Observe the (b) sentences in (44) and (45), the effects of Soo Sentential Pro-formation, as contrastive



with Sentence Deletion and Sore Pronominalization.

- (33) a. Taroo-wa  $\left[ \begin{array}{l} \text{anata-ga} \\ \text{Contr(Sub)} \end{array} \right]$  ko-na-i-daroo  $\left. \right]_S$   
 to it-te-i-ta! Hanako-mo  $\left[ \begin{array}{l} \text{anata-ga} \\ \text{Comp 'say' Dur Pst} \end{array} \right]$  ko-na-i-  
 daroo  $\left. \right]_S$  to it-te-i-ta 'also'(Sub)

"Taro had said that you would not come, and Hanako also had said that you would not come"

- b. Taroo-wa  $\left[ \begin{array}{l} \text{anata-ga} \\ \text{Comp 'say' Dur Pst} \end{array} \right]$  ko-na-i-daroo  $\left. \right]_S$  to it-te-i-ta;  
 Hanako-mo  $\left\{ \begin{array}{l} \text{(i) } \underline{\text{soo}} \text{ 'so'} \\ \text{(ii) } \underline{*sore-o} \text{ 'it'} \\ \text{(iii) } ?* \emptyset \end{array} \right\}$  it-te-i-ta

"Taro had said that you would not come, and Hanako also had said so/it/\* $\emptyset$ "

- (34) a. Ryoosin-wa Taroo-ni  $\left[ \begin{array}{l} \text{gakkoo-o} \\ \text{IO} \end{array} \right]$  yasum-a-na-i  $\left. \right]_S$   
 'parents'Contr(Sub) 'school'Obj 'absent oneself'  
 'not' Pres  
 yoo-ni settokusi-ta; sensee-mo Taroo-ni  
 Comp 'persuade'Pst 'teacher''also'(Sub)  
 $\left[ \begin{array}{l} \text{gakkoo-o} \\ \text{Comp 'persuade' Pst} \end{array} \right]$  yasum-a-na-i  $\left. \right]_S$  yoo-ni settokusi-ta

"His parents persuaded Taro not to be absent from school, and his teacher also persuaded him not to be absent from school"

- b. Ryoosin-wa Taroo-ni  $\left[ \begin{array}{l} \text{gakkoo-o} \\ \text{IO} \end{array} \right]$  yasum-a-na-i  $\left. \right]_S$  yoo-ni  
 settokusi-ta; sensee-mo (Taroo-ni)  
 $\left\{ \begin{array}{l} \text{(i) } \underline{\text{soo}} \text{ 'so'} \\ \text{(ii) } \underline{*sore-o} \text{ 'it'} \\ \text{(iii) } ?* \emptyset \end{array} \right\}$  settokusi-ta  
 'persuade' Pst

"\*His parents persuaded Taro not to be absent from school, and his teacher also persuaded him so/of it/ $\emptyset$ "

Consider first (33b-iii) and (34b-iii), where the sentential complements are deleted in the second conjuncts. It is not immediately certain whether Noun Phrase Deletion (cf. Section II.6) is involved in the derivation of these examples. In fact, however, the ungrammaticality of (33b-ii) and (34b-ii), which involves Sore Pronominalization, shows that to and yoo-ni sentential complements are not instances of Noun Phrases.

This conclusion, then, suggests that (33b-iii) and (34b-iii) do not involve the process of Noun Phrase Deletion, but rather a process of Sentence Deletion.

Further supporting evidence for this conclusion is provided by (33b-i) and (34b-i), where the pro-form soo appears in the second conjuncts. Since there is evidence which indicates that this pro-form cannot substitute for a Noun Phrase containing a sentence, the to and yoo-ni sentential complements in (33b-i) and (34b-i) cannot be instances of Noun Phrases. This point can be exemplified by the contrast between (33b) and (34b) on the one hand and on the other, (35b), the effects of the application of Soo Sentential Pro-formation, Sore Pronominalization and Noun Phrase Deletion to (35a).

- (35) a. Taroo-wa,            [ tikyuu-ga maru-i            ]<sub>S</sub> koto-o  
           Contr(Sub)        'earth'Sub 'round'Pres            Nom Obj  
           sit-te-i-ru;      Ziroo-mo            [ tikyuu-ga maru-i            ]<sub>S</sub>  
           'know'Dur Pres        'also'(Sub)        'earth'Sub 'round'Pres  
           koto-o        sit-te-i-ru  
           Nom Obj    'know' Dur Pres

"Taro knows that the earth is round, and Jiro also knows that the earth is round"

- b. Taroo-wa, [ tikyuu-ga maru-i ]<sub>S</sub> koto-o sit-te-i-ru; Ziroo-mo  
           { \*soo 'so' }  
           { sore-o 'it' } sit-te-i-ru  
           { ∅ }  
           "Taro knows that the earth is round, and Jiro also knows  $\emptyset$ /it/  
           \*so"

Since, therefore, the only remaining candidate for Soo substitution is a Sentence, to and yoo-ni sentential complements prove to be instances of Sentences.

Finally, as a typical phenomenon of subject-object inversion, observe the passive sentences in (36), the passive counterparts of the active

sentences (29a) and (29b).

- (36) a. \* $\left[ \begin{array}{l} \text{Moo} \quad \text{haru-ga} \quad \text{ki-ta} \\ \text{'already' 'spring' Sub 'come' Pst} \end{array} \right]_S \text{ to } \text{-ga/wa,}$   
 (boku-ni / hitobito-ni ) omow-are-ta  
 'I' 'by' 'people' 'by' 'think' Pass Pst  
 kanzi-rare-ta  
 'feel' Pass Pst  
 "It was thought/felt (by me/by people) that spring had come  
 already"
- b. \* $\left[ \begin{array}{l} \text{Hayaku} \quad \text{ne-ru} \\ \text{'early' 'sleep' Pres} \end{array} \right]_S \text{ yoo-ni -ga/wa,}$   
 isya-ni(yotte) Ziroo-ni susume-rare-ta  
 'doctor' 'by' IO 'advise' Pass Pst  
 "\*That he should go to bed early was advised Jiro by the  
 doctor"

The ungrammaticality of (36a) and (36b) depends mainly upon the fact that the to and yoo-ni sentential complements cannot take the subject Particle ga or the topical marker wa.

I have thus far presented two arguments about the processes of Sentence Preposing and Soo Sentential Pro-formation, which directly support the idea that to and yoo-ni sentential complements are instances of Sentences, and five arguments, involving the Noun Phrase-related transformational phenomena of Topicalization, Cleft Formation, Noun Phrase Deletion, Sore Pronominalization, and subject-object inversion, which indicate that to and yoo-ni sentential complements are not instances of Noun Phrases. However, these seven arguments mean exactly that to and yoo-ni complements are instances of Sentences rather than of Noun Phrases at the stage of application of the transformations involved. Hence, they do not rule out another possibility, namely, that these two types of sentential complements are instances of Noun Phrases in deep structure. In the following section, this apparent possibility will be pursued in relation to

certain other syntactic and semantic considerations, ultimately being to be refuted.

### III.5.2. Koto Complements as Possible Sources for To Complements

One might propose that to sentential complements would be derived from Noun sentential complements, in particular, from koto sentential complements. This proposal would initially be motivated by the fact that there are many Predicates which can take both to and koto sentential complements. However, this motivation can be invalidated by demonstrations that these two types of sentential complements are not parallel in their selectional restrictions, and that they differ in the presupposition of factivity. The aim of this section, therefore, is to present specific arguments to this effect, thereby establishing that to sentential complements are instances of Sentences rather than Noun Phrases in deep structure. The validity of the analogous proposal that yoo-ni complements will derive from koto complements will be examined in the following section.

First, consider the following set of sentences:

- (37) a. Bruutasu-wa,  $\left[ \begin{array}{l} \text{Siizaa-o} \\ \text{'Caesar'Obj} \end{array} \right] \begin{array}{l} \text{koros-oo} \\ \text{'kill'Vol} \end{array} \right]_S \begin{array}{l} \text{to} \\ \text{Comp} \end{array}$   
 kuwadate-ta  
 'undertake' Pst  
 "Brutus undertook to kill Caesar"
- b. Bruutasu-wa,  $\left[ \begin{array}{l} \text{Siizaa-o} \\ \text{'Caesar'Obj} \end{array} \right] \begin{array}{l} \text{koros-u} \\ \text{'kill'Vol} \end{array} \right]_S \begin{array}{l} (*\text{to-yu-u}) \\ \text{Comp} \end{array} \begin{array}{l} \text{koto-o} \\ \text{Nom Obj} \end{array}$   
 kuwadate-ta  
 "Brutus undertook to kill Caesar"
- c. \*Bruutasu-wa,  $\left[ \begin{array}{l} \text{Siizaa-o} \\ \text{'Caesar'Obj} \end{array} \right] \begin{array}{l} \text{koros-oo} \\ \text{'kill'Vol} \end{array} \right]_S \begin{array}{l} (\text{to-yu-u}) \\ \text{Comp} \end{array} \begin{array}{l} \text{koto-o} \\ \text{Nom Obj} \end{array}$   
 kuwadate-ta

Sentences (37a) and (37b) mean the same thing, except that they differ in

the explicit or implicit reference to the agent's volition of performing the action expressed by the complement Predicate koros-u "kill". Specifically, the volition of the agent Brutus is explicitly represented by the Volitional Mood yoo in (37a), but in (37b), there is no such element, and the volition is implicitly represented by the whole context, or more specifically, by the idiosyncratic properties of the higher Predicate kuwadate-ru "undertake". In short, the to complement represents a direct description of the proposition, while the koto complement represents an indirect or a neutral description of the proposition. This distinction is generally true.

Now suppose that to complements are derived from underlying koto complements. Then, since (37c) itself is ungrammatical, (37a) will have to be derived from the underlying structure of (37b). In fact, however, there exist two discrepancies between these two sentences and they must be filled by certain transformational devices. The first gap in the choice between the Present Tense ru and the Volitional Mood yoo must be supplied by a rule which deletes the former and introduces the latter. The second gap in the choice between the sentential nominalizer koto and the Complementizer to must be filled by a transformational rule which deletes the former and introduces the latter.

It is hard to determine, at the present immature stage of discussion of Japanese syntax, whether these rules are independently motivated or not. One thing is clear, however, which emerges as a crucial disadvantage of the proposed transformational analysis. That has to do with the immediate consequence of this analysis that the Volitional Mood yoo must be introduced in two different ways. On the one hand, it is present in



Sentences (38a) and (38b) differ in meaning with respect to the involvement of the agent Taro in the action expressed by the complement Predicate nagur-u "beat". In particular, (38b) entails that Taro beat Jiro, while (38a) does not. This difference is illustrated by the English counterparts. It can also be confirmed by a test for the identification of logical compatibility, as in (39).

- (39) a. Taroo-wa,  $\left[ \begin{array}{c} \text{Ziroo-o} \\ \text{Top(Sub)} \end{array} \right] \text{ nagur-oo } \left[ \begin{array}{c} \text{to} \\ \text{Obj 'beat' Vol} \end{array} \right]_S \text{ si-ta ga, zissai-wa,}$   
           nagur-a-nak-kat-ta  
           'beat' 'not' Pst  
           "Taro tried to beat Jiro, but in fact he did not"
- b. \*Taroo-wa,  $\left[ \begin{array}{c} \text{Ziroo-o} \\ \text{Top(Sub)} \end{array} \right] \text{ nagur-u } \left[ \begin{array}{c} \text{koto-o} \\ \text{Obj 'beat' Vol} \end{array} \right]_S \text{ si-ta ga,}$   
           zissai-wa, nagur-a-nak-kat-ta  
           "\*Taro did beat Jiro, but in fact he did not"

It is observed in (39a) that (38a), with a to complement, is compatible with an expression like zissai-wa nagur-a-nak-kat-ta "in fact (he) did not beat", which asserts the non-involvement in the action denoted by the complement Predicate nagur-u "beat", whereas it is observed in (39b) that (38b), with a koto complement, is incompatible with such an expression. On the basis of this discussion, therefore, the koto complement in (38b) cannot be the source structure for the to complement in (38a). This line of argument, then, leads me to preclude any transformational analysis which relates to and koto sentential complements.

Thirdly, the following sentences in (52) provide another piece of evidence against a transformational analysis by exemplifying a different sort of selectional restriction, in particular, the dependency relation between sentential complement types and complement Predicate types.

- (40) a. Hanako-wa, Taroo-ni  $\left[ \text{rakudaisi-na-i-de-hosi-i} \right]_S$   
           Top(Sub)          IO      'flunk' 'not'Pres 'want'Pres  
           { (i) to Comp                  } negat-ta  
           (ii) \*koto-o Nom Obj          } 'wish' Pst

"Hanako wished Taro not to flunk out"

- b. Hanako-wa, Taroo-ni  $\left[ \text{rakudaisi-na-i} \right]_S$   
           { (i) \*to Comp                  } negat-ta  
           (ii) koto-o Nom Obj          } 'wish' Pst

"Hanako wished Taro not to flunk out"

Observation of this data reveals two dependency relations. First, whenever the higher Predicate negaw-u "wish" takes a to sentential complement, it requires the occurrence of the Predicate hosi-i "want" in the complement. Second, whenever the Predicate hosi-i "want" does not occur in the complement, the higher Predicate negaw-u "want" requires a koto sentential complement. In short, they are in complementary distribution with respect to the occurrence of hosi-i "want" as the complement Predicate.

Assume a transformational analysis which derives to complements from koto complements. Since the deep structure status of hosi-i "want" is independently motivated (e.g., sentences like rakudaisi-na-i-de-hosi-i "(I) want (him) not to flunk out" appears as an independent clause), it is most plausible to assume further that (40a-ii), with hosi-i in the complement, would be the source for (40a-i) and (40b-ii). Then it follows that since (40a-ii) itself is ungrammatical, a rule which deletes koto and introduces to would be obligatory for the derivation of (40a-i), and a rule which deletes hosi-i would be obligatory for the derivation of (40b-ii). Whatever transformational analysis might be adopted, rules of this sort would be necessary. Since such rules immediately reflect the



idiosyncratic properties of an extremely limited number of Predicates including negaw-u "wish", tanom-u "ask for", and inor-u "pray", they can be dispensed with by merely specifying the pertinent Predicates lexically for the requirement of the dependency between the to Complementizer and the complement Predicate hosi-i. Thus I assume that to complements are not transformationally related in any way to koto complements. This assumption provides the basis for explaining the semantic difference of the same sort as that between (37a) and (37b) in terms of deep structure.

Finally, turning to the semantic aspect of factive presupposition, contrast the following sentences:

- (41) a. Kare-wa,  $\left[ \begin{array}{l} \text{tikyuu-ga maru-i} \\ \text{'earth' Sub 'round' Pres} \end{array} \right] \int_S \frac{\text{koto-o}}{\text{Nom Obj}}$   
 setumeesi-ta  
 'explain' Pst  
 "He explained the fact that the earth is round"
- b. Kare-wa,  $\left[ \text{tikyuu-ga maru-i} \right] \int_S \text{to setumeesi-ta}$   
 "He explained that the earth was round"

Sentence (41a), with a koto complement, entails that he said something else to explain the fact that the earth is round, whereas (41b), with a to complement, entails that he said that the earth is round to explain something else. This semantic difference stands out most prominently when the koto and to complements are negated, as in (42).

- (42) a. Kare-wa,  $\left[ \text{tikyuu-ga maru-i} \right] \int_S \frac{\text{koto-wa}}{\text{Nom Contr(Obj)}}$   
 setumeesi-nak-kat-ta  
 'explain' 'not' Pst  
 "He did not explain the fact that the earth is round"
- b. Kare-wa,  $\left[ \text{tikyuu-ga maru-i} \right] \int_S \frac{\text{to-wa}}{\text{Comp Contr}} \text{setumeesi-nak-kat-ta}$   
 'not'  
 "He did not explain that the earth was round"

It is thus perceived that in (42a), he did not say anything at all to explain the fact that the earth is round, while in (42b), he did not say that the earth is round to explain something unspecified. Thus the contrast of the koto and to complements in both (41) and (42) indicates that the proposition of the to complement is negated, but not the proposition of the koto complement. This difference, then, suggests that the koto complement involves the presupposition of factivity, but not the to complement.

To illustrate this difference in factive presupposition, consider the following pair of sentences:

- (43) a. Ano binboo-gakusee-wa, keesatu-ni  
 'that' 'poor' 'student' Top(Sub) 'police' IO  
 [ zibun-ga taikin-o nusum-are-ta ]<sub>S</sub>  
 'self' Sub 'a large amount of money' Obj 'rob' Pass Pst  
koto-o uttae-ta  
 Nom Obj 'complain' Pst

"That poor student complained to the police about the fact that he was robbed of his large amount of money"

- b. Ano binboo-gakusee-wa, keesatu-ni [ zibun-ga taikin-o nusum-are-ta ]<sub>S</sub> to uttae-ta  
 "That poor student complained to the police that he was robbed of his large amount of money"

All the semantic observations made above about the sentences with setumeesu-ru "explain" as their higher Predicate apply also to the sentences in (43), with uttae-ru "complain" as their higher Predicate. What is important further is that in (43a), a factive presupposition is clearly involved in the koto complement, whereas in (43b), it is not involved in the to complement. This difference can be brought out prominently by observing whether logical incompatibility arises or not when the

expression, like zissai-wa nusum-are-nak-kat-ta "in fact (he) was not robbed (of his large amount of money)", which negates the factivity of the sentential complement zibun-ga taikin-o nusum-are-ta "he was robbed of his large amount of money". Thus observe (44).

- (44) a. \*Ano binboo-gakusee-wa, zissai-wa taikin-o nusum-are-nak-kat-ta no-da ga, keesatu-ni / zibun-ga taikin-o  
           'the case'Pres 'but'  
           nusum-are-ta /<sub>S</sub> koto-o uttae-ta

"\*That poor student, although it is not the case that he was robbed of his large amount of money, complained to the police about the fact that he was robbed of his large amount of money"

- b. Ano binboo-gakusee-wa, zissai-wa taikin-o nusum-are-nak-kat-ta no-da ga, keesatu-ni / zibun-ga taikin-o nusum-are-ta /<sub>S</sub>  
           to uttae-ta

"That poor student, although it is not the case that he was robbed of his large amount of money, complained to the police that he was robbed of his large amount of money"

It is observed that in (44a), the koto complement is incompatible with such an expression which negates its factivity, whereas in (44b), the to complement is compatible with such an expression.

These semantic facts clearly suggest that there must be two distinct sets of lexical specifications for such Predicates as setumeesu-ru "explain", uttae-ru "complain", nagek-u "deplore", tutae-ru "tell/convey" and sinzi-ru "believe"; one which takes a to complement and another which takes a koto complement. I conclude, therefore, that to complements must not be derived from koto complements.

### III.5.3. Koto Complements as Possible Sources for Yoo-ni Complements

In this section, I will examine the validity of the analogous proposal that yoo-ni sentential complements will derive from koto complements.

This proposal seems to be initially motivated by the fact that there are some Predicates which can take both koto sentential complements and yoo-ni sentential complements. In this subclass of Predicates are included susume-ru "advise", meezu-ru "order", kitaisu-ru "expect", tanom-u "ask for", negaw-u "wish", yookyuusu-ru "request", teeansu-ru "propose", yakusokusu-ru "promise", and tikaw-u "vow". The initial motivation for the proposal in question will be validated by observing that these Predicates require the same set of selectional restrictions of both types of sentential complements.

In the first place, these Predicates require indirect object Noun Phrases which are human, or loosely, animate, of both koto and yoo-ni complement constructions, as in:

- (45) a. Taroo-wa,  $\frac{\text{kodomo-ni}_i}{\text{'child' IO}} \left[ \emptyset_i \right]$  saka-o korogar-i-  
           Top(Sub)  $\left. \begin{array}{l} \text{oti-ru} \\ \text{'drop' Pres} \end{array} \right\} \left. \begin{array}{l} \text{koto-o Nom DO} \\ \text{yoo-ni Comp} \end{array} \right\} \begin{array}{l} \text{meezi-ta} \\ \text{'order' Pst} \end{array}$
- b. \*Taroo-wa,  $\frac{\text{iwa-ni}_i}{\text{'rock' IO}} \left[ \emptyset_i \right]$  saka-o korogar-i-  
            $\left. \begin{array}{l} \text{oti-ru} \\ \text{'drop' Pres} \end{array} \right\} \left. \begin{array}{l} \text{koto-o Nom DO} \\ \text{yoo-ni Comp} \end{array} \right\} \begin{array}{l} \text{meezi-ta} \\ \text{'order' Pst} \end{array}$

"Taro ordered the child/\*the rock to roll down the slope"

Second, these Predicates require the application of Complement Subject Deletion of both types of sentential complement constructions. This is apparent in the preceding examples, and a detailed discussion will be given in Chapter VI.

Third, both koto and yoo-ni sentential complements of the Predicates in question require only the Present Tense which has reference to non-past (i.e., present and future) time. For a detailed discussion of

Tense and time in sentential complements, cf. Section VI.2.

Finally, both koto and yoo-ni sentential complements of the sort under consideration do not involve a factive presupposition. For some discussion of the problem of factive presupposition in sentential complements of this type, see Section VI.3.

While these observations seem to support the position that yoo-ni sentential complements will be transformationally related to koto sentential complements, I will refrain from taking this position at the moment, partly because this position entails that a rule must be postulated anew which deletes either one of yoo-ni and koto and introduces the other, and partly because yoo-ni and koto sentential complements function as different syntactic units with respect to many transformational rules which involve an operation of a Noun Phrase and a Sentence; namely, yoo-ni complements function as Sentences, while koto complements function as Noun Phrases. These reasons are, of course, not at all compelling.

III.5.4. To and Yoo-ni Complements as Immediately Dominated by Predicate Phrases Particularly in Section 5.1, I have shown that to and yoo-ni sentential complements are not instances of Noun Phrases, but of Sentences. In this section, I will show that such sentential complements are under the immediate domination of Predicate Phrases. The only available evidence of which I know in Japanese is provided by an observation of the effects of Soo Su Predicate Phrase Pro-formation. Thus, for instance, observe the following sentences in (46) and (47):

(46) a. Kare-wa,  $\left[ \begin{array}{cc} \text{himitu-ga} & \text{more-ta} \\ \text{'secret' Sub} & \text{'leak' Pst} \end{array} \right]_S \text{ to } \text{kokuhakusi-ta;} \\ \text{'he' Contr(Sub)} \quad \text{Comp 'confes' Pst}$



in Japanese, and then require that the Predicate Phrase expansion rule be extended in such a way as to generate a Sentence as a component of the Predicate Phrase. This modification will be left open, until the status of the Predicate Complementizers to and yoo-ni has been discussed in Sections IV.2 and 3.

## CHAPTER IV: THE STATUS OF THE COMPLEMENTIZERS

IV.0. Introduction We have seen in Section III.3 that, if certain transformational phenomena involved in complex sentences are to be explained by the same principle which explains the corresponding phenomena involved in simplex sentences, then it follows necessarily that the Noun Phrase expansion rule must be extended in such a way as to generate a Sentence as a complement to a Noun. It now remains to consider the status of the Noun Complementizer to-yu-u in the syntactic component, the only remaining factor relevant to the specification of the Noun Phrase expansion rule. Similarly, we have seen in Section III.5 that the Predicate Phrase expansion rule should be extended in such a way as to generate a Sentence as a complement to a Predicate Phrase. Thus, as the final relevant factor in the modification of the Predicate Phrase expansion rule, it remains to consider the status of the Predicate Complementizers to and yoo-ni.

In this Chapter, I will simply assume that the Noun and Predicate Complementizers are present in deep structure, because I know of no compelling arguments which decide on a choice between an analysis in which they appear in deep structure and one in which they are introduced transformationally. However, in the course of the discussion to follow, I will attempt to discover differences which lie between these alternative analyses, and then to propose a formulation of the revised versions of the Noun Phrase and Predicate Phrase expansion rules. In the final section, I will particularly re-examine the status of to-yu-u as Complementizer in terms of the entire sentential complement system.



IV.1.        The Noun Complementizer To-yu-u        In this section, I will propose that to-yu-u is a deep structure element rather than a transformationally introduced element. This proposal will be made plausible when we observe that to-yu-u subcategorizes Predicates in such a way as to make a transformational analysis possible only in an ad hoc way, and, perhaps more importantly, that the presence or absence of the Complementizer affects the semantic interpretation of the sentence.

IV.1.1.        The Predicate-Subcategorizing Property        As a first argument which lends plausibility to the proposal that to-yu-u is a deep structure element, consider the cooccurrence restrictions which hold between this element and certain Predicates. Although in the greatest majority of instances of Noun complementation, the Noun Complementizer occurs optionally without relevance to Predicates, there are certain cases where Predicates determine the choice of this Complementizer. First, such Predicates as uso-da "false", matigai-da "incorrect" and utagawasi-i "doubtful" require the occurrence of to-yu-u when the nominalizers koto and no occur as the head Nouns of the subject sentential complements. This point can be brought out clearly by the following example:

- (1)  $\left[ \begin{array}{l} \text{Tikyuu-ga} \quad \text{maru-i} \\ \text{'earth'Sub} \quad \text{'round'Pres} \end{array} \right]_S \left\{ \begin{array}{l} \frac{\text{to-yu-u}}{\text{Comp}} \\ * \emptyset \end{array} \right\} \begin{array}{l} \text{koto/no-wa,} \\ \text{Nom} \quad \text{Nom Top(Sub)} \end{array}$
- $\left\{ \begin{array}{l} \text{matigai-da} \quad \text{'incorrect'Pres} \\ \text{utagawasi-i} \quad \text{'doubtful'Pres} \\ \text{uso-da} \quad \text{'false'Pres} \\ \text{mondai-da} \quad \text{'problematical'Pres} \end{array} \right.$

"It is incorrect/doubtful/false/problematical that the earth is round"

The fact that (1) is unacceptable without to-yu-u depends upon its logical contradiction, because it involves what corresponds closely to the

English string "\*The fact that the earth is round is incorrect/doubtful/false/problematical", where the subject, which is factive, is logically incompatible with the Predicates, which require non-factive subjects. On the other hand, (1), with to-yu-u, which corresponds to something like "The statement/claim that the earth is round is incorrect/doubtful/false/problematical", is grammatical, particularly because the sentential subject, which is non-factive, is logically compatible with the associated Predicates.

Confirming evidence that the factivity of the subject Noun Phrases with the nominalizers no and koto as their head Nouns is due precisely to the presence or absence of the Noun Complementizer is provided by observing that the same conclusion is reached also when the embedded sentence is factually incorrect, as in (2).

- (2)  $\left[ \begin{array}{l} \text{Tikyuu-ga} \quad \text{sikaku-i} \\ \text{'earth'Sub} \quad \text{'square'Pres} \end{array} \right]_S \left\{ \begin{array}{l} \text{to-yu-u} \\ \text{Comp} \\ * \emptyset \end{array} \right\} \begin{array}{l} \text{koto/no-wa,} \\ \text{Nom} \quad \text{Nom Top(Sub)} \end{array}$
- $\left\{ \begin{array}{l} \text{matigai-da} \quad \text{'incorrect'Pres} \\ \text{utagawasi-i} \quad \text{'doubtful'Pres} \\ \text{uso-da} \quad \text{'false'Pres} \\ \text{mondai-da} \quad \text{'problematical'Pres} \end{array} \right.$

"The statement/claim/\*fact that the earth is square is incorrect/doubtful/false/problematical"

This observation shows, therefore, that there are cases of Noun complementation where Predicates require the occurrence of the Noun Complementizer in the subject sentential complement, and then suggests that Predicates are subcategorized for the obligatory as well as optional occurrence of the Noun Complementizer.

As another type of the cooccurrence restrictions which obtain between the Noun Complementizer and Predicates, note the fact that some Predicates

require the non-occurrence of the Complementizer when the nominalizers no, koto and tokoro, among other things, occur as the head Nouns of subject or object sentential complements. Included in this class are deki-ru "possible" (koto subject complements), mie-ru "visible" (no and tokoro subject complements), mi-ru "see", mituke-ru "find" and kik-u "hear" (no and tokoro object complements), su-ru which takes a subject sentential complement with nioi "smell", ki "hunch" or kanzi "feeling" as its head Noun. This point is thus exemplified in the following sentences:

- (3) a. Taroo(-ni)-wa,  $\left[ \begin{array}{l} \text{eigo-o} \\ \text{IO Top} \end{array} \right]$  hanas-u  $\left. \right]_S$   $\left\{ \begin{array}{l} \text{*to-yu-u} \\ \text{Comp} \\ \emptyset \end{array} \right\}$   
 koto-ga deki-ru  
 Nom Sub 'possible'Pres  
 "Taro can speak English / It is possible for Taro to speak English"
- b. Boku-wa,  $\left[ \begin{array}{l} \text{doroboo-ga} \\ \text{'I-male' Top(Sub)} \end{array} \right]$  kakure-te-i-ru  $\left. \right]_S$   
 'thief' Sub 'hide oneself'Dur Pres  
 $\left\{ \begin{array}{l} \text{*to-yu-u} \\ \text{Comp} \\ \emptyset \end{array} \right\}$  no/tokoro-o mituke-ta  
 Nom Nom Obj 'find' Pst  
 "I found the thief hiding himself"
- c. Boku-ni-wa,  $\left[ \begin{array}{l} \text{dareka-ga} \\ \text{'I-male' IO Top} \end{array} \right]$  sanma-o yak-u  $\left. \right]_S$   
 'someone' Sub 'mackerel pike'Obj 'broil'Pres  
 $\left\{ \begin{array}{l} \text{*to-yu-u} \\ \text{Comp} \\ \emptyset \end{array} \right\}$  nioi-ga si-ta  
 'smell' Sub 'do' Pst  
 "I smelled someone broiling mackerel pikes"

This observation, then, suggests that Predicates are subcategorized for the obligatory non-occurrence of the Noun Complementizer. Thus we have seen that there are three cases for which Predicates are subcategorized: the optional occurrence of the Noun Complementizer, its obligatory occurrence, and its obligatory non-occurrence.

Assume a transformational analysis for the placement of the Noun Complementizer. Then it is most plausible to assume further that, since the great majority of Noun complements allow the Noun Complementizer to occur optionally without any relevance to Predicates, a transformational rule which introduces this Complementizer is only sensitive to the Noun Phrase environment consisting of a Sentence and the head Noun, and it is optional. Given this transformational hypothesis, the immediately relevant consequence is that the transformation proposed cannot describe instances of Noun complementation where the Complementizer must occur, as in (1), and where it must not occur, as in (3), for the following two reasons: (i) because they are sensitive not only to the Noun Phrase environment, but also to the types of sentential nominalizers occurring as the head Nouns and to the types of Predicates. This goes far beyond the descriptive power of the proposed transformational rule; and (ii) because those instances of Noun complementation involve the obligatory occurrence or non-occurrence of the Complementizer, which is incompatible with the optional property of the proposed rule.

One apparent way out of this situation is to assume the existence of another Noun Complementizer placement transformation, namely, one which applies obligatorily to those instances of Noun complementation where the Complementizer must occur. Consider the consequence of this assumption for those instances of Noun complementation where the Complementizer must not occur. Since this transformation is conditional on the presence of the complement in subject position (cf. (1)), such Predicates as deki-ru "possible", mie-ru "visible" and kikoe-ru "audible" must be lexically marked as exceptions--i.e., for the non-application

of this transformation--because, despite their capability of meeting its structural condition, they must not undergo this transformation. (cf. (3a)).

The crucial difficulty is that such phenomena of non-occurrence of the Noun Complementizer as in (3b) and (3c) can never be explained within the proposed transformational framework, because the ungrammatical cases of (3b) and (3c), which are derivable by the first Complementizer placement rule, can never be treated as exceptions to the second Complementizer placement rule (as in (3a)), nor can they be blocked out by the second rule. No explanatory device is thus available for such cases as these. One possibility remains in which they will be ruled out by the output condition which specifies that the Noun Complementizer cannot occur in the tokoro subject complement of mie-ru "visible", in the no and tokoro object complement of such Predicates as mi-ru "see", mituke-ru "find" (as in (3b)), and in the nioi ("smell") subject complement of su-ru (as in (3c)).

In summary, the proposed transformational analysis assumes that there exist two different transformational rules of Noun Complementizer placement: one which applies optionally to Noun complements, and another which applies obligatorily to a certain limited class of Noun complements sensitive to the types of nominalizers and Predicates. The obligatory rule is ordered before the optional one, because otherwise there arise cases where the former must but cannot apply to the output of the latter, unless an ad hoc device is utilized. This analysis further assumes that there exists an output condition, applicable only to another limited class of Noun complements which is sensitive to the types of nominalizers and Predicates, to the effect that the Complementizer cannot occur in

surface structure.

The whole situation, therefore, illustrate that there is no transformationally expressible generalization behind the phenomena of Noun Complementizer occurrence in Noun sentential complements, except for the great majority of instances of Noun complementation where the Complementizer is optional. This depends precisely upon the fact that some distributional phenomena of the Noun Complementizer directly reflect the idiosyncratic properties of Predicates. Since obviously we do not want such ad hoc branches of Noun Complementizer placement as those forced by the proposed transformational analysis, it seems plausible to conclude that the Phrase Structure Rules contain a node which can dominate the Noun Complementizer so that Predicates can be subcategorized for the obligatory occurrence or non-occurrence of this Complementizer under certain cooccurrence conditions. Under this hypothesis, there will be a transformational rule which deletes the Noun Complementizer from those instances of Noun sentential complementation where it occurs optionally without relevance to Predicates.

IV.1.2.      The Meaning-Affecting Property      As a second consideration of the assumption that the Noun Complementizer to-yu-u is a deep structure element, it can be observed that the presence or absence of the Complementizer affects the semantic interpretation of the sentence. As a preliminary, the distinction between relative clauses and Noun sentential complements must be made clear. One distinguishing criterion is that tokoro-no, literally translatable as "of the place", follows relative clauses, while to-yu-u follows Noun complements. Thus compare the following two sentences:

- 4) a.  $\left[ \begin{array}{l} \text{Hikooki-ga} \quad \text{tuirakusi-ta} \\ \text{'plane' Sub} \quad \text{'crash' Pst} \end{array} \right]_S \left\{ \begin{array}{l} \text{tokoro-no} \\ \text{*to-yu-u} \end{array} \right\} \text{riyuu-wa,}$   
 mada hanmeesi-te-i-na-i 'reason' Top  
 'yet' 'become apparent' Dur 'not' Pres (Sub)

"The reason why/for which the airplane crashed has not become clear yet"

- b.  $\left[ \begin{array}{l} \text{Hikooki-ga} \quad \text{tuirakusi-ta} \\ \text{'plane' Sub} \quad \text{'crash' Pst} \end{array} \right]_S \left\{ \begin{array}{l} \text{*tokoro-no} \\ \text{to-yu-u} \end{array} \right\} \text{riyuu-de,}$   
 sono kaisya-wa, toosansi-ta 'reason' 'for'  
 'that' 'company' Top(Sub) 'go bankrupt' Pst

"For the reason that (=why, for which) the airplane crashed, the company went bankrupt"

If (4a) allowed the occurrence of to-yu-u after the embedded sentence, then it would constitute an example of logical contradiction, because the reason that the airplane crashed has not become apparent yet, although the reason itself is explicitly mentioned. Tokoro-no in (4a) and to-yu-u in (4b) are deletable and the semantic interpretation is uniquely determinable because of the syntactic and semantic contexts in which the embedded sentences are involved. Observe further the following sentence:

- (5) Karera-wa,  $\left[ \begin{array}{l} \text{hikooki-ga} \quad \text{tuirakusi-ta} \\ \text{'plane' Sub} \quad \text{'crash' Pst} \end{array} \right]_S \text{riyuu-o}$   
 'they' Top(Sub) 'reason' Obj  
 kyuumeesi-ta  
 'explore' Pst

"(i) They explored the reason why/for which the airplane crashed /  
 (ii) They explored the reason that (=why, for which) the airplane crashed"

This sentence is ambiguous between a relative clause and a Noun sentential complement, although the preferred reading seems to be that of a relative clause. Thus, in the relative clause interpretation, the reason itself is unknown, although it is known in the Noun complement interpretation. This ambiguity can be dissolved by inserting tokoro-no or to-yu-u after

the embedded sentence.

A second criterion for distinguishing between the two constructions is to find whether the same lexical item as the head Noun can or cannot occur as a legitimate element of the embedded sentence. Even if it can, it will not necessarily show that Relative Clause Formation (cf. Section II. 3) has applied under the condition of identity of the two Noun Phrases, because, for instance, Sono riyuu-de hikooki-ga tuirakusi-ta "For that reason, the airplane crashed" would be valid not only for the relative clause of (4a), but also for the Noun sentential complement of (4b); however, if the semantic relation which holds between the embedded sentence and the head Noun is the same as that between the embedded sentence and the same lexical item as the head Noun in the embedded sentence, then it will show that a relative clause is involved. Thus observe the following two sentences:

- (6) a.  $\int$  Kare-ga nusumi-o hatarai-ta  $\int_S$  utagai-ga  
           'he' Sub 'robbery' Obj 'undertake' Pst 'doubt' Sub  
           ar-u  
           'exist' Pres  
           "There is a doubt that he committed robbery"
- b. ?Sono utagai-de kare-ga nusumi-o hatarai-ta  
       'that' 'doubt' 'with' 'he' Sub 'robbery' Obj 'undertake' Pst  
       "With that doubt, he committed robbery"

If (6b) is at all acceptable, then it involves a different semantic relation from (6a) with respect to the relation which obtains between the two lexical items hatarak-u "undertake" and utagai "doubt". This observation, then, suggests that (6a) contains a Noun sentential complement, rather than a relative clause. Confirming evidence is provided by the fact that to-yu-u is insertable much more naturally than tokoro-no.



Sentences like (7), which contain both a relative clause and a Noun sentential complement in a row, not only indicate that they have different constructions, but also seem to provide evidence for our implicit assumption that a relative clause has a Noun Phrase as its head, whereas a Noun sentential complement has a Noun as its head.

- (7) a. Karera-wa,  $\left[ \left[ \text{kaisya-ga toosansi-ta} \right]_{S_1} \right]$   
 'they' Top(Sub) 'company' Sub 'go bankrupt' Pst  
 tokoro-no  $\left[ \left[ \text{hikooki-ga tuirakusi-ta} \right]_{S_2} \right]$  to-yu-u  
 Relativizer 'plane' Sub 'crash' Pst Comp  
 riyuu-o  $\left[ \right]_{NP_1}$   $\left[ \right]_{NP_2}$  akiraka-ni-si-ta  
 'reason' Obj 'make clear' Pst  
 $\left[ \right]_{S_1} \left[ \right]_{S_2} N \left[ \right]_{NP_1} \left[ \right]_{NP_2}$

"They made clear the reason that the airplane crashed for which their company went bankrupt"

- b. Karera-wa,  $\left[ \left[ \text{hikooki-ga tuirakusi-ta} \right]_{S_2} \right]$  to-yu-u,  
 $\left[ \left[ \text{kaisya-ga toosansi-ta} \right]_{S_1} \right]$  (tokoro-no)  $\left[ \right]_{NP_1}$   
 $\left[ \right]_{NP_2}$  akiraka-ni-si-ta  
 $\left[ \right]_{S_2} \cdot S_1 \left[ \right]_{\emptyset} N \left[ \right]_{NP_1} \left[ \right]_{NP_2}$

"?\*They made clear the reason(,) for which their company went bankrupt(,) that the airplane(,) crashed"

It is observed, in (7a), that the relative clause  $S_1$  modifies the Noun Phrase  $NP_1$  which consists of a Noun sentential complement  $S_2$  and the head Noun; on the other hand, it is observed in (7b) that the sentential complement  $S_2$  is preposed out of  $NP_1$  within the domain of the bigger Noun Phrase  $NP_2$ . Thus such sentences as (7) also provide evidence which suggests that transformations apply to the domain of a Noun Phrase.<sup>1</sup>

After this long digression, let us turn back to our main theme of giving a crucial example which shows that the presence or absence of the Noun Complementizer to-yu-u affects the semantic interpretation of the

sentence. Thus observe the following sentence:

- (8)  $\left[ \begin{array}{l} \text{Kare-ga sin-da} \\ \text{'he' Sub 'die'Pst} \end{array} \right]_S \left\{ \begin{array}{l} \text{a. } \underline{\text{to-yu-u}} \\ \text{b. } \emptyset \end{array} \right\} \begin{array}{l} \text{syooko-ga} \\ \text{'evidence' Sub} \end{array}$   
 agat-ta  
 'come to light' Pst

- "a. The evidence of his death has come to light /  
 b. Evidence for his death has come to light"

The apparent possibility that the embedded sentence might be a relative clause in (8b) can be ruled out by the fact that (9a), which is the most likely sentence with the same lexical item as the head Noun, is unacceptable, although (9b), with tokoro-no, does not provide crucial evidence for or against the inclusion of a relative clause in (8b) because of its dubious status of acceptability.

- (9) a. \*Sono syooko-de kare-ga sin-da  
 'that' 'evidence' 'with/for' 'he' Sub 'die'Pst  
 "\*\*With/For that evidence, he died"  
 b. ?\*Kare-ga sin-da tokoro-no syooko-ga agat-ta  
 "\*\*Evidence for which he died has come to light"

Thus this observation shows that (8b) does not contain a relative clause. Therefore, the following difference in meaning between (8a) and (8b) clearly depends upon the presence or absence of the Noun Complementizer to-yu-u. Thus (10) is a paraphrase of (8a), but not of (8b), where the evidence which has become known is not explicitly mentioned.

- (10) Agat-ta (tokoro-no) syooko-wa,  
 'become apparent'Pst Relativizer 'evidence'Top(Sub)  
 $\left[ \begin{array}{l} \text{kare-ga sin-da} \\ \text{'he' Sub 'die'Pst} \end{array} \right]_S \begin{array}{l} \text{to-yu-u} \text{ koto/mono} \text{ da} \\ \text{Comp Nom 'thing' Cop+Pres} \end{array}$

"The evidence which has come to light is that he died"

This paraphrasability shows that to-yu-u functions to put the embedded sentence in an identical relation to the head Noun, because the copular sentence (10) involves an identical relation between the two phrases in question.

If, therefore, we assume that the Noun Complementizer to-yu-u is present in deep structure, then it follows naturally that the ambiguity of such sentences as (8) with respect to this Complementizer can be explained in terms of deep structure.

IV.1.3. The Revised Noun Phrase Expansion Rule      On the basis of the preceding discussion of Noun sentential complementation (cf. Section III.3) and the Noun Complementizer status (cf. Section IV.1), two possible ways of revising the Noun Phrase expansion rule proposed for simplex sentences (11a) suggest themselves, as in (11b) and (11c).

- (11) a. NP       $\longrightarrow$        $\left( \left\{ \begin{array}{c} \text{NP}' \\ \text{Det} \end{array} \right\} \right) \text{ N}$
- b. NP       $\longrightarrow$        $\left( \left\{ \begin{array}{c} \text{NP}' \\ \text{Det} \end{array} \right\} \right) (\text{ S } ) (\text{ Comp } ) \text{ N}$
- c. (i) NP       $\longrightarrow$        $\left( \left\{ \begin{array}{c} \text{NP}' \\ \text{Det} \end{array} \right\} \right) (\text{ S}' ) \text{ N}$
- (ii) S'       $\longrightarrow$       S Comp

The rules in (11c) would be found more appropriate for the following two reasons: first, the Noun Complementizer occurs just in case the Noun sentential complement occurs (cf. Section III.2); and second, the Complementizer can never be separated from the sentential complement, just as the Particle can never be separated from the Noun Phrase.

The second point can be illustrated by the following examples, which involve the preposing of a sentential complement within the domain of a

## Noun Phrase:

- (12) a.  $\left[ \begin{array}{l} \text{Taroo-no} \\ \text{hanasi} \\ \text{'story'} \end{array} \right]_{\text{NP}} \left[ \begin{array}{l} \text{yuuree-ga de-te-ki-ta} \\ \text{'ghost' Sub 'come out' Pst} \end{array} \right]_{\text{S}} \left[ \begin{array}{l} \text{to-yu-u} \\ \text{Comp} \end{array} \right]$   
 "Taro's story that a ghost appeared"
- b.  $\left[ \left[ \text{Yuuree-ga de-te-ki-ta} \right]_{\text{S}} \left[ \text{to-yu-u} \right]_{\text{Comp}}, \text{Taroo-no hanasi} \right]_{\text{NP}}$
- c.  $* \left[ \left[ \text{Yuuree-ga de-te-ki-ta} \right]_{\text{S}}, \text{Taroo-no} \left[ \text{to-yu-u} \right]_{\text{Comp}} \text{hanasi} \right]_{\text{NP}}$
- (13) a.  $\left[ \begin{array}{l} \text{Minna-no} \\ \text{kimoti} \\ \text{'feeling'} \end{array} \right]_{\text{NP}} \left[ \begin{array}{l} \text{sore-ga hayaku owat-te-hosi-i} \\ \text{'it' Sub 'early' 'end' 'want' Pres} \end{array} \right]_{\text{S}}$   
 "Everybody's wish that it will come to an end (as) early (as possible)"
- b.  $\left[ \left[ \text{Sore-ga hayaku owat-te-hosi-i} \right]_{\text{S}}, \text{minna-no kimoti} \right]_{\text{NP}}$

The contrast between (12b) and (12c) shows that the Complementizer to-yu-u must be preposed along with the sentential complement. The contrast between (12b) and (13b) shows that a sentential complement with the Complementizer works in exactly the same way as a sentential complement without it. These observations, then, suggest that the rule of Complement Sentence Preposing requires the existence of a node like S' which consists of a Sentence and a Complementizer.

As another example of a transformation which exemplifies the inseparability of the Noun Complementizer from the associated sentential complement, observe the following sentences, where a process of Sono Sentential Pro-formation is involved in the derivation of the second conjuncts:

- (14) a.  $\text{Taroo-ni-wa} \left[ \begin{array}{l} \text{kuruma-o ka-u} \\ \text{'car' Obj 'buy' Pres} \end{array} \right]_{\text{S}} \left[ \begin{array}{l} \text{voyuu-ga na-i;} \\ \text{'room' Sub 'not exist' Pres} \end{array} \right]$   
 IO Contr

Ziroo-ni-mo      { sono yoyuu-ga }      na-i  
 IO 'also'      { 'that' 'room' Sub }      'not exist' Pres  
                  Cf. \*  $\emptyset$  yoyuu-ga

"Taro cannot afford to buy a car, and Jiro cannot, either"

b. [ Nihongo-o hanas-u ]<sub>S</sub> koto-wa,      Zyon-ni-wa  
      'Japanese' Obj 'speak' Pres      Nom Top(Sub) 'John' IO Contr  
 deki-ru;  
 'possible' Pres      { sono koto-wa, }      Tomu-ni-mo  
    'that' Nom      Cf. \*  $\emptyset$  koto-wa, }      'Tom' IO 'also'  
 deki-ru  
 'possible' Pres

"To speak Japanese is possible for John, and that thing is possible for Tom, too / Cf. To speak Japanese is possible for John, and \*  $\emptyset$  thing is possible for Tom, too"

c. Anata-wa,      [ Tiri-de ooki-na zisin-ga ]  
      'you' Top(Sub)      'Chile' 'in' 'big' 'earthquake' Sub  
 at-ta ]<sub>S</sub> to-yu-u nyuusu-o      kik-i-mas-i-ta ka?  
      'exist' Pst      Comp      'news' Obj 'hear' Pol Pst Q  
 Iie, watasi-wa,      { sono nyuusu-o }  
      'no' 'I'      Top(Sub)      { 'that' 'news' Obj }  
    Cf. \* sono to-yu-u nyuusu-o  
    \*  $\emptyset$        $\emptyset$       nyuusu-o }  
 kik-i-mas-en-des-i-ta  
 'hear' Pol 'not' 'be-Pol' Pst

"Did you hear that there was a big earthquake in Chile?--  
 No, I didn't hear that news / Cf. I didn't hear \*  $\emptyset$  news"

It is evident from (14c) that the anaphoric sentential pro-form sono refers back to the complement sentence together with the Complementizer to-yu-u, because there is no reason to believe that sono "that" refers back to the complement sentence only, and that to-yu-u is obligatorily deleted later. What is involved in the derivation of all examples in (14), therefore, is the substitution of the pro-form sono "that" for a Noun sentential complement with or without the Complementizer to-yu-u. This line of argument thus provides another piece of evidence for the existence of the node S' which consists of a Sentence and a Complementizer, in the Phrase Structure Rules, so that the rule of Sono Senten-

tial Pro-formation can refer only to this single node. I conclude, therefore, that the rules in (11c) are more adequate than the rule in (11b).

IV.2. The Predicate Complementizer to I will first present two considerations which have to do with the underlying distributional parallelisms which hold between the Noun Complementizer to-yu-u and the Predicate Complementizer to. These two considerations, although not compelling, will give much more plausibility to an analysis in which to is a deep structure element than to one in which it is a transformationally introduced element, provided that the Noun Complementizer to-yu-u is present in deep structure. Then, I will propose a formulation of the revised Predicate Phrase expansion rule, confirming the validity of the Complementizer introduction rule (11c-ii):  $S' \longrightarrow S \text{ Comp}$  for the Predicate Complementizer to.

IV.2.1. Underlying Distributional Parallelisms In Section IV.1, we observed that it was more plausible to assume that the Noun Complementizer to-yu-u is present in deep structure. Although I can think of no independent syntactic argument which supports the view that the Predicate Complementizer to is present in deep structure, I believe that this view will more plausibly be supported by observations that these two Complementizers are exactly parallel in their underlying distributional properties. As a first example of this sort, consider the following paradigm of sentences:

(15) a.  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \right] \left[ \begin{array}{l} \text{ame-ga} \\ \text{'rain' Sub} \end{array} \right] \left\{ \begin{array}{l} \text{yam-u} \\ \text{'stop' Pres} \\ \text{*yan-de-hosi-i} \\ \text{'stop' 'want' Pres} \end{array} \right\} \int_S \left[ \begin{array}{l} \text{koto-c} \\ \text{Nom Obj} \end{array} \right]$   
 $\left[ \begin{array}{l} \text{negat-ta} \\ \text{'wish' Pst} \end{array} \right] \int_S$

- "Taro wished it to stop raining"
- b.  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \right] \left[ \begin{array}{l} \text{ame-ga} \\ \text{'rain' Sub} \end{array} \right] \left\{ \begin{array}{l} *yam-u \\ \text{'stop' Pres} \\ \text{yan-de-hosi-i} \\ \text{'stop' 'want' Pres} \end{array} \right\} \int_S \text{to} \\ \text{Comp}$
- negat-ta  $\int_S$   
'wish' Pst  
"Taro wished it to stop raining"
- c.  $\left[ \begin{array}{l} \text{Taroo-no} \\ \text{Pos} \end{array} \right] \left[ \begin{array}{l} \text{ame-ga} \\ \text{'rain' Sub} \end{array} \right] \left\{ \begin{array}{l} *yam-u \\ \text{'stop' Pres} \\ \text{yan-de-hosi-i} \\ \text{'stop' 'want' Pres} \end{array} \right\} \int_S \text{to-yu-u} \\ \text{Comp}$
- negai  $\int_{NP}$   
'wish'  
"Taro's wish that it will stop raining"

What I intend by citing this paradigm of sentences is to demonstrate that there exist exact parallelisms between a sentence with a to sentential complement like (15b) and a Noun Phrase with a to-yu-u sentential complement like (15c). The contrast between (15b) and (15c) shows that they are exact counterparts of each other; thus, in particular, the subject Noun Phrase, the to complement, and the Predicate of (15b) correspond exactly to the Possessive Noun Phrase, the to-yu-u complement, and the Noun of (15c), respectively. It is further perceived that the same grammatical relations hold between the members of each of the corresponding pairs; thus, for instance, Taroo, despite the difference in Particles, bears a subject relation<sup>2</sup> to the head Predicate or Noun; and, as an example of selectional restriction, both heads. Predicate and Noun, require that their to and to-yu-u sentential complements take hosi-i "want" as their Predicates. All these deep structure parallelisms suggest that the Predicate Complementizer to is present in deep structure, provided that the Noun Complementizer to-yu-u is present in deep structure.

The only apparent possibility that a sentence with a koto sentential

complement like (15a) might correspond to a Noun Phrase with a to-yu-u sentential complement like (15c) will be easily excluded by the contrast between (15a) and (15c) themselves; thus, it is clear that a koto complement construction has no corresponding Noun Phrase with a to-yu-u complement, because (15a), unlike (15c) as well as (15b), does not allow the morpheme hosi-i "want" to appear as its complement Predicate.

Secondly, it should be noted that exact parallelisms can also be observed in transformational phenomena which involve the Noun and Predicate Complementizers. To mention just one clear case of this, contrast (16b) and (17b), the effects of the application of Complement Sentence Preposing within a Sentence and a Noun Phrase to (16a) and (17a).

- (16) a.  $\left[ \begin{array}{l} \text{Utyuu-hikoosi-ga} \\ \text{'astronaut' Sub} \\ \text{i-na-i} \\ \text{'exist' 'not' Pres} \end{array} \right]_S \left[ \begin{array}{l} \text{tuki-ni-wa} \\ \text{'moon' 'on' Contr} \\ \text{hookokusi-ta} \\ \text{'report' Pst} \end{array} \right]_S \text{ seebutu-ga}$

"The astronaut reported that no creature existed on the moon"

- b.  $\left[ \left[ \begin{array}{l} \text{Tuki-ni-wa} \\ \text{hookokusi-ta} \end{array} \right]_S \text{ seebutu-ga i-na-i} \right]_S \text{ to, utyuu-hikoosi-ga}$

"\*That no creature existed on the moon, the astronaut reported"

- (17) a.  $\left[ \begin{array}{l} \text{Utyuu-hikoosi-no} \\ \text{'astronaut' Pos} \\ \text{i-na-i} \\ \text{'exist' 'not' Pres} \end{array} \right]_S \left[ \begin{array}{l} \text{tuki-ni-wa} \\ \text{'moon' 'on' Contr} \\ \text{hookoku} \\ \text{'report' NP} \end{array} \right]_NP \text{ seebutu-ga}$

"the astronaut's report that no creature exists on the moon"

- b.  $\left[ \left[ \begin{array}{l} \text{Tuki-ni-wa} \\ \text{hookoku} \end{array} \right]_NP \text{ seebutu-ga i-na-i} \right]_S \text{ to-yu-u, utyuu-hikoosi-no}$

"\*that no creature exists on the moon, the astronaut's report"

It is evident from the contrast between (16) and (17) that the to and to-yu-u sentential complements are preposed to the beginning of a Sentence



and a Noun Phrase, respectively.

The implicit assumption that this rule of Complement Sentence Preposing applies within Sentences and Noun Phrases can be substantiated by the observation that (16b) and (17b) function as a Sentence and a Noun Phrase, respectively, in larger contexts, as in (18).

- (18) a.  $\left[ \begin{array}{l} \text{Boku-wa,} \\ \text{'I-male' Top(Sub)} \end{array} \right] \left[ \left[ \text{Tuki-ni-wa seebutu-ga i-na-i} \right]_S \text{ to,} \right. \\ \left. \left[ \text{utyuu-hikoosi-ga hookokusi-ta} \right]_S \text{ no-o} \quad \text{kik-a-nak-kat-ta} \right. \\ \text{Nom Obj 'hear' 'not' Pst}$

"\*I did not hear that, that no creature exists on the moon, the astronaut reported / Cf. I did not hear that the astronaut reported that no creature existed on the moon"

- b.  $\left[ \begin{array}{l} \text{Boku-wa,} \\ \text{utyuu-hikoosi-no hookoku} \end{array} \right] \left[ \left[ \text{Tuki-ni-wa seebutu-ga i-na-i} \right]_S \text{ to-yu-u,} \right. \\ \left. \right]_{NP} \text{-o} \quad \text{kik-a-nak-kat-ta} \\ \text{Obj 'hear' 'not' Pst}$

"\*I did not hear (,) that no creature existed on the moon, the astronaut's report / Cf. I did not hear the astronaut's report that no creature existed on the moon"

It is observed in (18a) that the italicized phrase, which is the same as (16b), works like a Sentence, because it is immediately followed and hence nominalized by the sentential nominalizer no; if not, there is no conceivable function which the to sentential complement bears to the higher Predicate kik-u "hear" in that larger context. Furthermore, it is observed in (18b) that the italicized fragment, which is the same as (17b), functions as a Noun Phrase, since it is immediately followed by the object Particle o, and thus is the object of the Predicate of kik-u "hear"; otherwise, no grammatical role is available which the to-yu-u sentential complement plays in that larger context.

These observations, therefore, provide not only confirmation of the assumption that Complement Sentence Preposing operates on the domain of

a Sentence and a Noun Phrase, but also provide decisive evidence for the claim that exact parallelisms obtain between Predicate and Noun sentential complements of the sort under consideration. Thus I conclude that although this rule of Complement Sentence Preposing does not require Complementizers to be present in deep structure, it is more plausible to treat the Predicate Complementizer as a deep structure element than as a transformationally introduced element, provided that the Noun Complementizer is a deep structure element.

As further supporting evidence from a semantic point of view, note the fact that while certain *koto* sentential complements, as in (19), involve a factive presupposition, neither to nor to-yu-u sentential complements of the sort under consideration involve it.

- (19)  $\left[ \begin{array}{l} \text{Utyuu-hikoosi-ga} \\ \text{'astronaut'} \\ \text{(to-yu-u) } \underline{\text{koto-o}} \\ \text{Comp} \end{array} \right] \text{Sub} \left[ \begin{array}{l} \text{tuki-ni-wa} \\ \text{'moon' 'on' Contr} \\ \text{hookokusi-ta} \\ \text{Nom Obj 'report' Pst} \end{array} \right] \text{seebutu-ga} \text{ i-na-i } \left. \right]_{\text{S}} \text{Pres}$

"The astronaut reported the fact that no creature existed on the moon!"

It can readily be ascertained that (19) involves a factive presupposition, but not (16a) and (17a), by the use of tests for the identification of logical contradiction, as in (42) and (44) in Section III.5.2, which involve an expression which negates the factivity of the associated sentential complement. Given this, then, sentences with koto sentential complements cannot be the exact Sentence counterparts of Noun Phrases with to-yu-u complements of the sort in question, and what is more, to complement constructions and to-yu-u complement constructions which contain lexically associated head Nouns and Predicates share the same

semantic property that no factive presupposition is involved in their sentential complements. We have thus reached the same conclusion.

IV.2.2. The Revised Predicate Phrase Expansion Rule On the basis of the discussion of Predicate complementation in Section III.5, and of the Predicate Complementizer to in the preceding section, two possible ways of extending (20a), the Predicate Phrase expansion rule proposed for simplex sentences, present themselves as in (20b) and (20c), where irrelevant details are omitted.

- (20) a. PredP  $\longrightarrow$   $\left\{ \begin{array}{l} \text{NP Copula} \\ ( \text{NP}' ) ( \text{NP}' ) \text{Pred} \end{array} \right\} (\text{Perf})(\text{Dur})(\text{Pol})(\text{Neg})$
- b. PredP  $\longrightarrow$   $\left\{ \begin{array}{l} \dots\dots\dots \\ ( \text{NP}' ) ( \left\{ \begin{array}{l} \text{NP}' \\ \text{S Comp} \end{array} \right\} ) \text{Pred} \end{array} \right\} \dots\dots\dots$
- c. (i) PredP  $\longrightarrow$   $\left\{ \begin{array}{l} \dots\dots\dots \\ ( \text{NP}' ) ( \left\{ \begin{array}{l} \text{NP}' \\ \text{S}' \end{array} \right\} ) \text{Pred} \end{array} \right\} \dots\dots\dots$
- (ii) S'  $\longrightarrow$  S Comp (= (11c-ii))

Although the fact that the Predicate Complementizer occurs just in case the Predicate sentential complement occurs does not select among the two alternative ways (20b) and (20c), because this fact is assured either way, there is one reason which leads me to think that the rules in (20c) would be more appropriate; that is, just as the Particle can never be separated from the Noun Phrase, the Complementizer can never be separated from the sentential complement.

This point can be exemplified by two different transformational phenomena, one which involves the rule of Complement Sentence Preposing, and another which involves the process of Soo Sentential Pro-formation.

Thus, in particular, observe the inseparability of the Predicate Complementizer to from the associated Predicate sentential complement.

- (21) a. Boku-wa,  $\int$  baka-wa sin-a-na-kya naor-a-na-i  
 'I-male' Top(Sub) 'fool' Generic 'die' 'not' 'if' 'be cured' 'not'  
 naor-a-na-i  $\int_S$  to omot-ta Pres  
 'cured' 'not' Pres Comp 'think' Pst  
 "I thought that a fool could not be cured until he had died"
- b.  $\int$  Baka-wa sin-a-na-kya naor-a-na-i  $\int_S$  to, boku-wa, omot-ta  
 "That a fool could not be cured until he had died, I thought"
- c. \* $\int$  Baka-wa sin-a-na-kya naor-a-na-i  $\int_S$ , boku-wa,  $\left\{ \begin{array}{l} \text{to} \\ \emptyset \end{array} \right\}$  omot-ta

It is evident that the Predicate sentential complement must be moved out along with the Predicate Complementizer to; the Complementizer cannot be left behind or deleted.

Observe next that the sentential pro-form soo substitutes for a Predicate sentential complement together with the attached Complementizer.

- (22) a. Boku-wa,  $\int$  baka-wa sin-a-na-kya naor-a-na-i  $\int_S$  to omot-ta;  
 hoka-no hito-tati-mo soo omot-ta  
 'other' Pos 'person' Pl 'also' 'so'  
 "I thought that a fool could not be cured until he had died,  
 and other people thought so, too"
- b. \*Boku-wa,  $\int$  baka-wa sin-a-na-kya naor-a-na-i  $\int_S$  to omot-ta;  
 hoka-no hito-tati-mo soo to omot-ta

Again it is observed that the Complementizer to cannot be separated from the associated Predicate complement with respect to the process of Soo Sentential Pro-formation.

These two observations, which illustrate the inseparability of the Predicate Complementizer to from the Predicate sentential complement, provide evidence for the existence in the Phrase Structure Rules of the node S' which consists of a Sentence and a Complementizer, because this node needs to be referred to by the two rules involving complement

sentences. A pair of rules in (20c) has thus been supported over the alternative rule (20b). This conclusion has now turned out to be exactly parallel to the conclusion reached about the generation of Noun sentential complements in Section IV.1.3. Thus the comparison between (11c) and (20c) indicates that the common property of sentential complementation can be defined in terms of the parallel configurational property that complement sentences, commonly labelled S', immediately preceded their head Nouns and Predicates, and further that there exists only one rule, (11c-ii) (= (20c-ii)), which introduces both the Noun and Predicate Complementizers.

IV.3.     The Predicate Complementizer Yoo-ni     In this section, I will first reconsider the status of yoo-ni as a Predicate Complementizer, in contrast with a possible analysis of yoo-ni as a Noun plus a Particle, ultimately preserving its Predicate Complementizer status, and then I will confirm the adequacy of the revised Predicate Phrase expansion rule proposed in the preceding section with respect to this Complementizer.

IV.3.1.     Defending its Complementizer Status     I will defend the Predicate sentential complement status of yoo-ni sentential complements against their Noun sentential complement analysis within a broader perspective of the sentential complement system. Consider that the rule of Sono Sentential Pro-formation (cf. Section IV.1.3), which is only applicable to Noun sentential complements, actually applies to yoo-ni sentential complements, as in (23).

(23) a.   Isya-wa,                            Taroo-ni    [   undoo-o            si-na-i        ]S  
          'doctor'Contr(Sub)                IO        'exercise'Obj 'do''not'Pres

yoo-ni susume-ta; sensee-mo (Taroo-ni)  
 Comp 'advise' Pst 'teacher' 'also' (Sub) IO  
sono yoo-ni susume-ta  
 'that' Comp 'advise' Pst

"The doctor advised Taro not to take exercise, and the teacher also advised Taro in such a way/like that"

b. Taroo-wa, [ hayaku oki-ru ]<sub>S</sub> yoo-ni  
           Contr(Sub) 'early' 'get up' Pres Comp  
 tutome-ta; Ziroo-mo sono yoo-ni tutome-ta  
 'endeavor' Pst 'also' (Sub) 'that' Comp 'endeavor' Pst

"Taro endeavored to get up early, and Jiro also endeavored in such a way/like that"

These sentences suggest that the Complementizer yoo-ni, literally translatable as "in the way that", functions as a Noun. Based on this observation, one might propose that the italicized phrase in each sentence in (23) constitutes a Noun Phrase which consists of a complement sentence and the head Noun yoo "way". There are at least two reasons for which I personally don't find this proposal highly tenable.

First of all, yoo-ni sentential complements cannot work like Noun Phrases with respect to well-established transformational rules which involve the movement, deletion, or substitution of Noun Phrases (cf. Chapter II and Sections III.3 and 5). If, therefore, it is assumed that this proposal is correct, then it follows that all Noun Phrase-related transformations like Topicalization, Cleft Formation and Sore Pronominalization require the ad hoc condition that they must not apply to a Noun Phrase consisting of a complement sentence and its head Noun yoo. Secondly, yoo-ni sentential complements work like Sentences with such transformations as Complement Sentence Preposing and Soo Sentential Proformation (cf. Sections III.5.1 and IV.2.2). If, therefore, it is assumed that the proposal in question is correct, then it follows that such

transformational rules require the ad hoc condition that they may apply to a Noun Phrase consisting of a complement sentence and its head Noun yoo. Therefore, the adoption of the proposal in question means, in effect, that one gained advantage, namely, that a straight explanation is available for sentences like (23), whose derivation involves the process of Sono Sentential Pro-formation, is counterbalanced by two kinds of disadvantages (many in token) which stem from the above-mentioned two kinds of ad hoc restrictions on exceptions to the pertinent transformations.

This unpleasant situation suggests that the proposal under consideration may be incorrect. Turning back to our original assumption that yoo-ni sentential complements represent a type of Predicate sentential complementation, we are aware that it is well motivated by all pertinent transformational phenomena of which I am aware, except for Sono Sentential Pro-formation. Closer inspection reveals that Sono Sentential Pro-formation does not require that a sentential complement and its head Noun be under the immediate domination of a Noun Phrase, but only requires that they be contiguous and that the head of the sentential complement be a Noun. Thus, in particular, this point is exemplified by the following sentences which contain Adjectival-Nominals like yoo-da "seem", hazu-da "be expected to", keekaku-da "plan" and tumori-da "intend" as their higher Predicates:

- (24) a. Ginkoo-wa,  $\left[ \frac{\text{mada simat-te-i-na-i}}{\text{'yet' 'close' Dur 'not' Pres}} \right]_S$   
           'bank' Top(Sub)  
           yoo-des-u-ka?  
           'seem' 'be-Pol' Pres Q  
           Hai, (ginkoo-wa,) sono yoo-des-u  
           'yes' 'bank' Top(Sub) 'that' 'seem' 'be-Pol' Pres

"Does the bank seem (to you) not to be closed yet?  
 --Yes, it seems so"

- b. Boku-wa,  $\left[ \frac{\text{kono natu Yooroppa-ni yuk-u}}{\text{'this' 'summer' 'Europe' 'to' 'go' Pres}} \right]_S$   
 'I-male' Top(Sub)  
 tumori-da; Kimi-mo  
 'intend' Pres 'you-friendly' 'also' (Sub)  
 sono tumori-des-u ka?  
 'that' 'intend' 'be-Pol' Pres Q

"I intend to go to Europe this summer; do you also intend to?"

Justification for the assumption that the higher Predicates in (24) require Predicate sentential complements will be provided in Chapters V and VI. Given this, the sentences in (24) indicate that Sono Sentential Pro-formation is applicable only if the head Noun of the sentential complement to which the rule applies is lexically marked for the feature of a Noun, even if the sentential complement and its head Noun are not dominated by a Noun Phrase. Along the lines suggested by this observation, therefore, we can explain the grammaticality of such sentences as (23) with yoo-ni sentential complements. The only required extension is to add that the Predicate Complementizer yoo-ni be lexically specified positively for the feature of a Noun, thereby preserving our original well-motivated assumption that yoo-ni sentential complements are instances of Predicate complementation.

#### IV.3.2. Confirming the Adequacy of the Revised Predicate Phrase

Expansion Rule The existence of such a node as S', consisting of a Sentence and a Complementizer in the Phrase Structure Rules, as in (20c), will be supported by observing the inseparability of the yoo-ni Complementizer, like all other Complementizers, from the associated sentential complement. This fact can be seen in such sentences as (25) and (26),



whose derivations involve the processes of Complement Sentence Preposing and Soo Sentential Pro-formation, respectively.

- (25) a. Taroo-wa,  $\left[ \begin{array}{l} \text{hayaku} \quad \text{oki-ru} \\ \text{'early'} \quad \text{'get up'} \text{ Pres} \end{array} \right]_S \frac{\text{yoo-ni}}{\text{Comp}}$   
           Top(Sub)   
           tutome-ta  
           'endeavor' Pst  
           "Taro endeavored to get up early"
- b.  $\left[ \text{Hayaku} \quad \text{oki-ru} \right]_S \frac{\text{yoo-ni}}{\text{Comp}}, \text{ Taroo-wa, tutome-ta}$   
           "\*To get up early, Taro endeavored"
- c. \* $\left[ \text{Hayaku} \quad \text{oki-ru} \right]_S, \text{ Taroo-wa, } \left\{ \begin{array}{l} \text{yoo-ni} \\ \emptyset \end{array} \right\} \text{ tutome-ta}$
- (26) a. Taroo-wa, ootoo-ni  $\left[ \begin{array}{l} \text{benkyoosu-ru} \\ \text{'study'} \text{ Pres} \end{array} \right]_S$   
           Contr(Sub) 'younger brother' IO  
            $\frac{\text{yoo-ni}}{\text{Comp}}$  meezi-ta; Ziroo-mo (otooto-ni)  
           'order' Pst 'also' (Sub) 'younger brother' IO  
            $\frac{\text{soo}}{\text{Comp}}$  meezi-ta  
           'so' 'order' Pst
- "Taro ordered his younger brother to study,\*and Jiro also ordered so (his younger brother)"
- b. \*Taroo-wa, ootoo-ni  $\left[ \begin{array}{l} \text{hayaku} \quad \text{oki-ru} \\ \text{'early'} \quad \text{'get up'} \text{ Pres} \end{array} \right]_S \frac{\text{yoo-ni}}{\text{Comp}}$   
           meezi-ta; Ziroo-mo (otooto-ni)  $\frac{\text{soo}}{\text{Comp}} \frac{\text{yoo-ni}}{\text{Comp}}$  meezi-ta

It is evident from the contrast between (b) and (c) in (25) that the Complementizer yoo-ni cannot be left behind or deleted with Complement Sentence Preposing. It is further evident from the contrast between (a) and (b) in (26) that yoo-ni must work with the associated complement sentence for Soo Sentential Pro-formation.

There is, furthermore, evidence which shows that Soo Sentential Pro-formation applies to sentences where yoo-ni is absent in their sentential complements. Thus compare the following sentences with the higher Predicate nar-u "come to/become", which requires the Complementizer yoo-ni when the complement Predicate is a Verb, although it does not when the

Complement Predicate is an Adjective or a Nominal-Adjective (cf. Section V.4):

- (27) a. Taroo-wa,                  $\left[ \frac{\text{benkyoosu-ru}}{\text{'study' Pres}} \right]_S \frac{\text{yoo-ni}}{\text{Comp}} \text{ nat-ta};$   
           Contr(Sub)                 'become' Pst  
 Zi-roo-mo                    $\left\{ \begin{array}{l} \text{soo} \text{ 'so'} \\ \text{*soo} \text{ yoo-ni 'so' Comp} \end{array} \right\}$   
           'also' (Sub)  
 nat-ta  
           'become' Pst

"Taro has come to be studying, and \*Jiro has done so, too/  
 \*Jiro has become so, too"

- b. Taroo-wa,                    $\left[ \begin{array}{l} \frac{\text{kasiko-ku}}{\text{'wise' (Adj)}} \\ \frac{\text{genki-ni}}{\text{'well' (Nom-Adj)}} \end{array} \right]_S$   
           Contr(Sub)  
 nat-ta;                 Zi-roo-mo  
           'become' Pst                 'also' (Sub)  
           soo nat-ta  
           'so' 'become' Pst

"Taro has become wise/well, and \*Jiro has become so, too"

These data show clearly that Predicate sentential complements without yoo-ni, like those with it, can be replaced by the sentential pro-form soo "so".

All the observations presented so far will thus support the idea that there exists a node like S' which consists of a Sentence and a Complementizer, so that the transformation in question can mention this node for both instances of a Sentence and a Sentence plus a Complementizer.

IV.4.         The Complementizer Status of To-yu-u Reconsidered         I will re-examine the status of to-yu-u as a Noun Complementizer in this section. Implicit in this analysis, henceforth referred to as the Complementizer hypothesis, is the assumption that to-yu-u is a syntactically unanalyzable element. On the basis of the morphological composition of to-yu-u, however, one might object to the Complementizer hypothesis, then proposing

the alternative hypothesis, referred to as the Verb hypothesis, that this expression might consist of three syntactically significant units: to, yuw and ru. Under this hypothesis, one might well identify the first morpheme to with the well-motivated Predicate Complementizer to, because the second morpheme yuw "say" is a Verb, capable of being followed by the Present Tense ru, which requires a Predicate sentential complement. In this section, I will argue for the original Complementizer hypothesis, while refuting the alternative Verb hypothesis.

#### IV.4.1. Confirmatory Consequences of the Complementizer Hypothesis

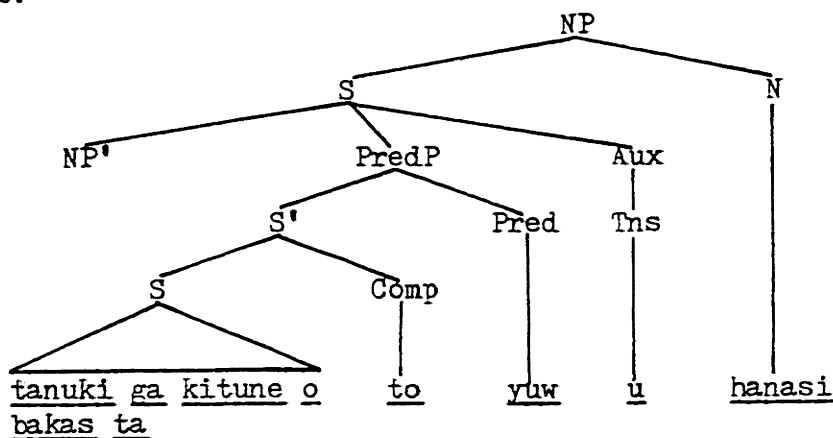
In the preceding discussion, I have worked on the assumption, without justification, that to-yu-u is a syntactically primitive element, in particular, a Noun Complementizer. It should be recalled, however, that several confirmatory consequences of this assumption have emerged. Thus, first, just as there exists a rule called Soo Sentential Pro-formation which applies only to Predicate sentential complements, there exists a rule of the same sort, Sono Sentential Pro-formation, which applies only to Noun sentential complements (cf. particularly Sections IV.1.3 and 2.2). Secondly, just as there exists a rule which preposes a Predicate sentential complement within a Sentence, there exists a rule which preposes a Noun sentential complement within a Noun Phrase (cf. Sections IV.1.3 and 2.1). Thirdly, there exist precise parallelisms in grammatical relations and selectional restrictions between the environments in which certain Predicates and Nouns which are lexically associated with each other appear as the heads of their sentential complements (cf. Section IV.2.1). Finally, the presupposition of factivity is involved in neither Predicate

nor Noun sentential complements of the sort noted in the preceding sentence (cf. Section IV.2.1). These phrase structural, transformational, and semantic parallelisms, therefore, provide external evidence for the correctness of the implicit assumption that the expression to-yu-u is a syntactically unanalyzable unit, in particular, a Noun sentential Complementizer.

IV.4.2. Inadequacies of the Verb Hypothesis According to the Verb hypothesis, a string like (28a), which, under the Complementizer hypothesis, contains a Noun sentential complement, will be specified as tree diagram (28b).

- (28) a.  $\left[ \left[ \begin{array}{l} \text{Tanuki-ga} \quad \text{kitune-o} \quad \text{bakas-i-ta} \\ \text{'raccoon' Sub 'fox' Obj 'bewitch' Pst} \end{array} \right]_S \right]_{\text{S}} \text{to-yu-u}$  Comp  
 hanasi  $\left. \right\}_{\text{NP}}$   
 'story'  
 "the story about a raccoon's having bewitched a fox /  
 (Literally) \*the story that a raccoon bewitched a fox"

b.



One reason which might lend support to this Verb hypothesis is the fact that the expressions to-ka-yu-u, to-it-ta, and to-ka-it-ta can occupy the same position as the expression to-yu-u. Thus we have the following strings:

- (29)  $\left[ \left[ \begin{array}{l} \text{Tanuki-ga} \\ \text{'raccoon' Sub} \end{array} \right] \left[ \begin{array}{l} \text{kitune-o} \\ \text{'fox' Obj} \end{array} \right] \left[ \begin{array}{l} \text{bakas-i-ta} \\ \text{'bewitch' Pst} \end{array} \right] \right]_S \left\{ \begin{array}{l} \text{a. } \underline{\text{to-yu-u}} \\ \text{b. } \underline{\text{to-ka-yu-u}} \\ \text{c. } \underline{\text{to-it-ta}} \\ \text{d. } \underline{\text{to-ka-it-ta}} \end{array} \right\}$
- hanasi  $\left. \right]_{NP}$   
'story'

- a: "the story about a raccoon's having bewitched a fox"  
 b, c, d: "such a story about a raccoon's having bewitched a fox/  
 a story about a raccoon's having bewitched a fox, or  
 something like that"

First, what apparently is the Past Tense form it-ta "said", along with the Present Tense form yuw-u "say", can appear in the same environment; and second, a perhaps independently occurring morpheme ka with the meaning of "or" can intercede between to and yuw-u or it-ta. These two observations would suggest that the Complementizer hypothesis is incorrect, because these facts cannot be explained if the expression to-yu-u is a syntactically frozen element.

Closer inspection, however, reveals many inadequacies of the Verb hypothesis, thereby leading to the conclusion that the above facts do not provide compelling evidence against the Complementizer hypothesis. First, as is apparent from the English counterparts, the expressions yu-u and it-ta have lost their original meanings "say" and "said", respectively. Second, the morpheme yuw has no implication of the subject nor can it take a subject Noun Phrase, as is evident from tree diagram (28b). Third, this morpheme cannot behave like ordinary Verbs; thus, it cannot be followed by any Mood Auxiliary, by any aspectual or Negative Predicate, or by any higher Predicate. Fourth, ordinary Verbs which require to sentential complements can never appear in the same syntactic context as yuw, namely, in (28b). Finally, as is apparent from the English counterparts in (29), the contrast between (29a) and (29c) indicates that they

are different in meaning without any relevance to the difference in Tenses. All these observations strongly suggest that the expression yuw-u is different from the true Verb yuw-u "say" as well as other Verbs which require to sentential complements, and thus has lost all properties common to Verbs. I conclude, therefore, that the expression to-yu-u is a syntactically frozen element rather than a further analyzable element.

The other three expressions in (29) can also be taken to be syntactically frozen elements, (i) because all the properties peculiar to to-yu-u hold true of all these expressions, and (ii) because they appear in the same context as to-yu-u, and only in that context, in particular, in the position immediately preceded by a complement sentence and immediately followed by its head Noun. It seems to me a natural conclusion that the expressions to-ka-yu-u, to-it-ta and to-ka-it-ta, along with the expression to-yu-u, are specified lexically as Noun Complementizers. This conclusion, in turn, seem to corroborate the assumption that Complementizers are present in deep structure; thus, under this assumption, the difference in meaning between (29a) and the other strings in (29) can be explained in terms of deep structure, because the contrast between these clearly indicates that the Complementizers have their own meaning, and that the choice of Complementizers affects semantic interpretation.

IV.4.3. Further Counterevidence to the Verb Hypothesis There are two transformational phenomena which seem to decide between the Complementizer and Verb hypotheses. First, if we assume the Verb hypothesis, then we will expect the rule of Complement Sentence Preposing to apply

to the to sentential complement of the alleged higher Verb yuw-u (cf. (28b)). But in fact, we will get ungrammatical strings like (30b), or strings like (30c) which, if at all acceptable, mean different things from those of input strings like (30a).

- (30) a.  $\left[ \begin{array}{l} \text{Boku-wa,} \\ \text{'I-male' Top(Sub)} \end{array} \right] \left[ \left[ \begin{array}{l} \text{tanuki-ga} \\ \text{'raccoon' Sub} \end{array} \right] \left[ \begin{array}{l} \text{kitune-o} \\ \text{'fox' Obj} \end{array} \right] \left[ \begin{array}{l} \text{bakas-i-ta} \\ \text{'bewitch' Pst} \end{array} \right] \right]_{S_3}$   
 $\left[ \begin{array}{l} \text{to yu-u} \\ \text{'story' Obj} \end{array} \right]_{S_2} \left[ \begin{array}{l} \text{hanasi-o} \\ \text{'know' 'not' Pst} \end{array} \right]_{S_1}$

"I did not know the story about a raccoon's having bewitched a fox"

- b. \* $\left[ \left[ \begin{array}{l} \text{Tanuki-ga} \\ \text{'raccoon' Sub} \end{array} \right] \left[ \begin{array}{l} \text{kitune-o} \\ \text{'fox' Obj} \end{array} \right] \left[ \begin{array}{l} \text{bakas-i-ta} \\ \text{'bewitch' Pst} \end{array} \right] \right]_{S_3} \text{to, boku-wa/ga,}$   
 $\left[ \begin{array}{l} \text{yu-u} \\ \text{'story' Obj} \end{array} \right]_{S_2} \left[ \begin{array}{l} \text{hanasi-o} \\ \text{'know' 'not' Pst} \end{array} \right]_{S_1}$

- c. # $\left[ \begin{array}{l} \text{Boku-wa,} \\ \text{'someone' Sub} \end{array} \right] \left[ \left[ \begin{array}{l} \text{tanuki-ga} \\ \text{'raccoon' Sub} \end{array} \right] \left[ \begin{array}{l} \text{kitune-o} \\ \text{'fox' Obj} \end{array} \right] \left[ \begin{array}{l} \text{bakas-i-ta} \\ \text{'bewitch' Pst} \end{array} \right] \right]_{S_2} \text{to,}$   
 $\left[ \begin{array}{l} \text{yu-u} \\ \text{'say' Pres2} \end{array} \right]_{S_1} \left[ \begin{array}{l} \text{hanasi-o} \\ \text{'know' 'not' Pst} \end{array} \right]_{S_1}$

"I did not know the story, which someone told me, about a raccoon's having bewitched a fox"

Since Complement Sentence Preposing preposes a Predicate sentential complement to the beginning of a higher sentence,<sup>3</sup>  $S_3$  in (30a) could be preposed to the beginning either of the highest sentence  $S_1$ , as in (30b), or of the next higher sentence  $S_2$ , as in (30c). In fact, however, neither of the resulting strings can be a Sentence Preposing counterpart of (30a). (30c), if at all acceptable, although perfectly acceptable with it-ta "said" in place of yu-u "say", is different in meaning from (30a). As is clear from the English counterpart, the expression yu-u is used as a true Verb meaning "say" in (30c), and hence it implies an unspecified subject dareka-ga "someone". In view of the fact that this rule does not admit of any exception among to sentential complements which have been well established up to this point, therefore, these observations suggest

that the Verb hypothesis is incorrect. If, alternatively, the Complementizer hypothesis is assumed, then no trouble of the sort noted above will arise, because  $S_3$  in (30a), for instance, is no longer a sentential complement to a Predicate, and hence it is prevented from meeting the structural condition of the rule of Complement Sentence Preposing. It should be noted that the whole line of argument applies also to the other expressions to-ka-yu-u, to-it-ta, and to-ka-it-ta. Thus I conclude that to-yu-u and the other expressions are syntactically primitive elements, in particular, Noun sentential Complementizers.

As another example of transformational phenomena, observe the sentences in (31), where (31b) and (31c) are apparently the outputs of Soo and Sono Sentential Pro-formation for (31a), respectively.

- (31) a. Anata-wa,  $\left[ \begin{array}{l} \text{tanuki-ga} \quad \text{kitune-o} \quad \text{bakas-i-ta} \\ \text{'you-Pol' Top (IO)} \quad \text{'raccoon' Sub} \quad \text{'fox' Obj} \quad \text{'bewitch' Pst} \end{array} \right]_S$   
to yu-u hanasi-o ki-i-ta koto-ga ar-i-mas-u ka?  
 'story' Obj 'hear' Pst Nom Sub 'exist' Pol-Pres Q
- "Have you ever heard the story about a raccoon's having bewitched a fox?"
- b. Iie, watasi(-ni)-wa, soo yu-u hanasi-o ki-i-ta  
 'no' 'I-Pol' IO Top 'such' 'story' Obj 'hear' Pst  
 koto-wa ar-i-mas-en  
 Nom Contr (Sub) 'exist' Pol 'not'+Pres
- "No, I have not heard such a story/a story like that"
- c. Iie, watasi(-ni)-wa, sono hanasi-o ki-i-ta koto-wa  
 'no' 'I-Pol' IO Top 'that' 'story' Obj 'hear' Pst Nom Contr  
 ar-i-mas-en (Sub)  
 'exist' Pol 'not'+Pres
- "No, I have not heard that story"

In (31b), the sentential pro-form soo "so" apparently substitutes for a complement sentence and to. Since Soo Sentential Pro-formation applies



only to Predicate sentential complements, this observed phenomenon would suggest the correctness of the Verb hypothesis. Closer scrutiny, however, reveals that the phonological string soo in (31b) cannot be taken as a substitute for the complement sentence plus to in (31a). The first reason is that, if this substitution is assumed to be correct, then it follows that, although it does not affect meaning at all when it applies to an well-established to sentential complement, Soo Sentential Proformation actually affects meaning when it applies to (31a), because (31a) and (31b) mean different things, as is apparent from the English counterparts. The second reason is that Sono Sentential Pro-formation applies to (31a), yielding (31c), without affecting meaning, exactly as it applies to a Noun sentential complement which does not allow the occurrence of the string to-yu-u between the sentential complement and its head Noun (cf. IV.1.1), as in (32b), the output of this rule for (32a).

- (32) a. Boku-ni-wa,            ⌈ dareka-ga        samma-o  
           'I-male'IO Contr    'someone'Sub 'mackerel pike'Obj  
           yak-u                ⌋<sub>S</sub> { \*to-yu-u }        nioi-ga        si-ta  
           'broil'Pres            {            ⌀ }        'smell'Sub    'do'Pst  
           "I smelled someone broiling mackerel pikes"
- b. Sono nioi-wa,        kimi-ni-mo                            si-mas-i-ta ka?  
           'that''smell'Top    'you-friendly'IO 'also' 'do' Pol Pst Q  
           "Did you smell someone broiling mackerel pikes, too?"

If, therefore, the Verb hypothesis is assumed, then perhaps the alleged Verb yu-u will have to be lexically marked for the requirement that its to sentential complement not undergo Soo Sentential Pro-formation. If, alternatively, the Complementizer hypothesis is assumed, then no specification of this sort which deals with an exception to Soo

Sentential Pro-formation will be required, because a complement sentence plus to-yu-u no longer meets the structural condition of this rule. I conclude, therefore, that to-yu-u must be taken as a syntactically inseparable unit, in particular, a Noun Complementizer.

One apparent trouble with the Complementizer hypothesis arises when we observe the following sentences:

- (33) Anata-wa,  $\left[ \frac{\text{tanuki-ga kitune-o bakas-i-ta}}{\text{'raccoon'Sub 'fox'Obj 'bewitch'Pst}} \right]_S$   
 'you-Pol' Top(IO)
- |   |                              |
|---|------------------------------|
| { a. <u>to-ka-yu-u</u><br>b. <u>to-it-ta</u><br>c. <u>to-ka-it-ta</u> } | hanasi-o ki-i-ta koto-ga     |
|   | 'story'Obj 'hear'Pst Nom Sub |
|   | ar-i-mas-u ka?               |
- 'exist' Pol Pres Q
- |   |                                      |
|---|--------------------------------------|
| { a. <u>soo-yu-u</u> Cf. * <u>soo-ka-yu-u</u><br>b. <u>soo-it-ta</u><br>c. <u>soo-it-ta</u> Cf. * <u>soo-ka-it-ta</u> } | Iie, watasi-wa,                      |
|   | 'no' 'I-Pol' Top(IO)                 |
|   | hanasi-o ki-i-ta koto-wa ar-i-mas-en |
- 'story'Obj 'hear'Pst Nom Contr(Sub) 'exist'Pol 'not'+Pres

"Have you heard such a story about a raccoon's having bewitched a fox?--No, I have not heard such a story"

As is obvious from the English counterparts, there seems no semantic difference between the italicized parts in each of the pairs of questions and responses in (33). Then it may well be taken as an indication that soo in the responses has substituted for the complement sentence and to as a whole. But in fact, we have seen that soo-yu-u, a semantically single unit meaning "such", appears syntactically as an unanalyzable unit. Furthermore, there is no reason of which I can think that soo-yu-u in the response of (33a) is distinct from this unanalyzable element. Moreover, we have shown that to-ka-yu-u, to-it-ta and to-ka-it-ta can more plausibly be taken as syntactically inseparable units. All these considerations, therefore, support the view that soo-yu-u and analogously

soo-it-ta "such" in (33) are syntactically inseparable units. We can then account for the pro-formation phenomena in (33) by assuming that just as there exists a rule (transformational or interpretive) which substitutes sono "that" for the sequence of a complement sentence and to-yu-u, there exists rules which substitute soo-yu-u "such" and soo-it-ta "such" for the sequence of a complement sentence and to-ka-yu-u "such as" and the sequence of a complement sentence and to(-ka)-it-ta "such as", respectively.

In summary, I have demonstrated that the Verb hypothesis produces a number of subcategorizational and transformational exceptions which are absent in the Complementizer hypothesis. Furthermore, the Verb hypothesis cannot capture parallelisms between Predicate and Noun sentential complementation which follow from the Complementizer hypothesis. These considerations provide both internal and external evidence for the correctness of our initial assumption that the expression to-yu-u is a syntactically primitive unit, in particular, a Noun Complementizer. We have incidentally found that to-kayu-u, to-it-ta, and to-ka-it-ta, all meaning "such as/like", are also Noun Complementizers.

## NOTES

1. This does not hold of English, as is evident from the English counterpart. Note that the process of preposing in Japanese, where a (sentential) modifier precedes the head, corresponds exactly to the process of Extraposition in English, where a sentential modifier is preceded by the head. Such sentences as the English counterpart of (7b) shows that a complement sentence cannot be extraposed from the head Noun Phrase of a relative clause within a bigger complex Noun Phrase; thus,  $\left[ \left[ N \underline{S_1} \right]_{NP} S_2 \right]_{NP} \xrightarrow{*} \left[ \left[ N \underline{\quad} \right]_{NP} S_2, \underline{S_1} \right]_{NP}$ . This fact supports the idea of the Complex Noun Phrase constraint. (cf. Ross, 1967b, 4.1). Observe, however, such Noun Phrases as one of the boys who are here who is a friend of mine, as an example of Extraposition of an embedded sentence from a determiner within a Noun Phrase. (cf. Chomsky, 1967, 220).

2. Or, as Chomsky (1967, 206) called it, a relation of "intrinsic connection".

3. It is independently motivated that the sentence to which a Predicate sentential complement is preposed is not necessarily the next higher sentence. Thus, compare the sentences of the following pair:

$\left[ \text{Taroo-wa,} \right]_{\text{Top(Sub)}} \left[ \left[ \text{zibun-ga tadasi-i} \right]_{S_1} \text{ to } \left[ \text{sinzi-ta} \right]_{S_2} \right]$   
 'self' Sub 'right' Pres Comp 'believe' Pst  
 $\left[ \text{rasi-i} \right]_{S_3}$   
 'likely' Pres

"Taro seems to have believed that he was correct"

$\left[ \left[ \text{Zibun-ga tadasi-i} \right]_{S_1} \text{ to, Taroo-wa,} \left[ \left[ \text{\(\emptyset\)} \text{ sinzi-ta} \right]_{S_2} \text{ rasi-i} \right]_{S_3} \right]$   
 "That he was correct, Taro seems to have believed"

## CHAPTER V: COMPLEMENT SUBJECT RAISING

V.0. Introduction The goal of this Chapter is to prove that there exists a rule of Complement Subject Raising in the Japanese sentential complement system. Toward this goal, I will first demonstrate that there is a class of Predicates which are subjectless and require Predicate sentential complements in deep structure. This class of Predicates include Adjectives like rasi-i "likely", kamosirena-i "may", and nitigaina-i "must",<sup>1</sup> and Nominal-Adjectives like yoo-da "seem", hazu-da "ought to/be expected to", soo-da "It is said/I hear", no-da "It is the case", tokoro-da "about to", and mono-da "used to". This demonstration will suggest that it may be necessary to raise the subject Noun Phrase of the complement sentence into the empty subject position of the next higher sentence. Then I will prove this suggestion to be correct by presenting direct arguments for the existence of a rule with this effect.

V.1. Preliminaries As preliminaries to the demonstration that there exists a class of subjectless Predicates which require Predicate sentential complements, attention should be directed to certain properties of another class of Predicates including tumori-da "intend", kontan-da "(secretly) intend", yotei-da "plan", ketui-da "determine", keikaku-da "plan", and kakugo-da "resolve". In this section, I will show that these Predicates require Predicate sentential complements and that they have deep subjects filled with lexical items, the crucial property distinguishing this class of Predicates from the class of Predicates which will be proved to be subjectless in deep structure.

First, contrast the sentences in (1), which differ in whether they contain an active sentence or its passive counterpart as their embedded sentences.

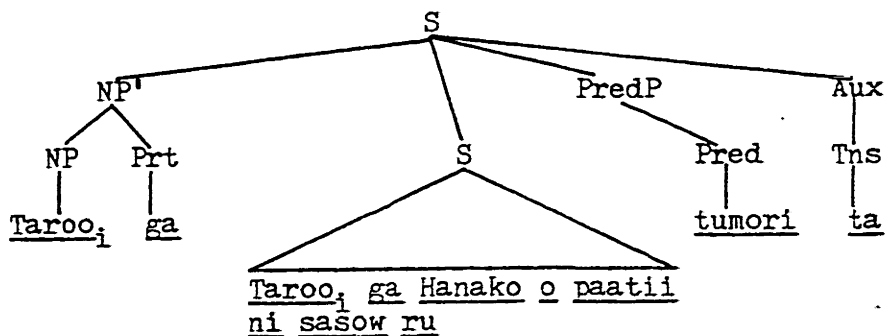
- (1) a. Taroo-ga Hanako-o paatii-ni sasow-u tumori-dat-ta  
           Sub           Obj 'party''to''invite' Pres 'intend' Pst  
 "Taro intended to invite Hanako to the party"
- b. Hanako-ga Taroo-ni paatii-ni sasow-are-ru  
           Sub           'by'           'to' 'invite' Pass Pres  
 tumori-dat-ta  
 'intend' Pst  
 "Hanako intended to be invited by Taro to the party"

It is observed that the two sentences above differ in meaning, that is, do not have the same truth value in the sense that one is true if and only if the other is true, although the sentences in (2), corresponding to the embedded sentences in (1), have the same truth value.

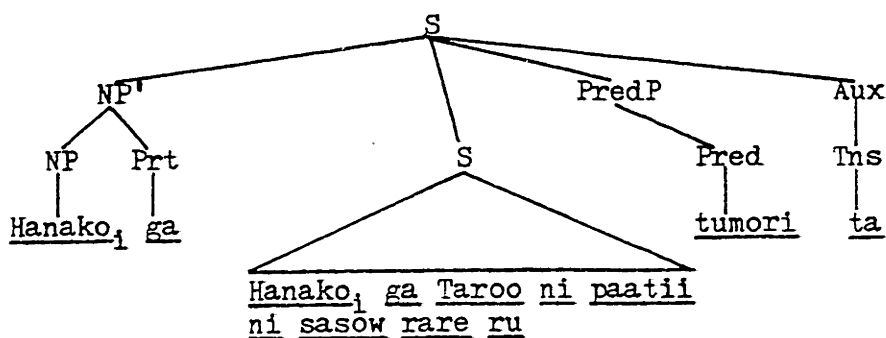
- (2) a. Taroo-ga Hanako-o paatii-ni sasot-ta  
           Sub           Obj 'party''to''invite' Pst  
 "Taro invited Hanako to the party"
- b. Hanako-ga Taroo-ni paatii-ni sasow-are-ta  
           Sub           'by' 'party''to' 'invite' Pass Pst  
 "Hanako was invited by Taro to the party"

In particular, the sentences in (1) differ in meaning with respect to the Experiencer of the volition denoted by the Predicate tumori-da "intend".<sup>2</sup> What functions as the intentional Experiencer is the initial Noun Phrase with the Particle ga, namely, Taro in (1a) and Hanako in (1b). This observation, then, suggests strongly that the two sentences in (1) have different deep subjects. Thus the deep structures for these sentences will be represented roughly as in the following tree diagrams:

(3) a.

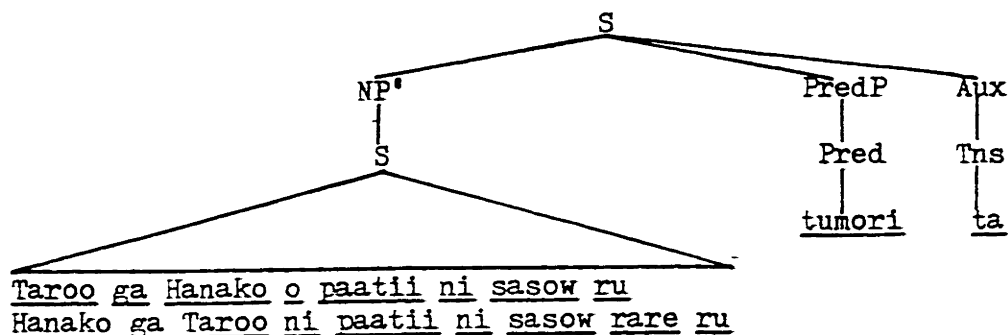


b.



The Predicate sentential complement analysis involved in (3) correctly explains the pertinent difference in meaning, since they differ in the choice of subject Noun Phrases. If, alternatively, we assume a subject sentential complement analysis, then we fail to explain the non-synonymy in question, because we are forced to postulate essentially the same deep structure for the two sentences in (1), as in, roughly, tree diagram (4).

(4)



Second, contrast the sentences in (5), which differ in whether they

involve a subject-conjunct construction or a comitative construction.

- (5) a. Taroo-to Ziroo(-to)-ga kenkasu-ru tumori-da  
           'and'                  Sub 'quarrel' Pres 'intend' Pres  
       "Taro and Jiro intend to quarrel (with each other)"
- b. Taroo-ga Ziroo-to kenkasu-ru tumori-da  
           Sub          'with' 'quarrel' Pres 'intend' Pres  
       "Taro intends to quarrel with Jiro"

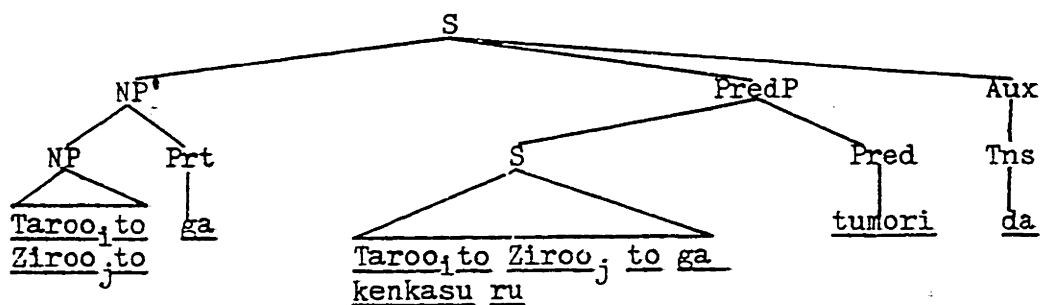
It is observed that the two sentences in (5) differ in meaning in two ways; in addition to the difference in the choice of the agents who take the action expressed by the Predicate kenkasu-ru "quarrel" in the sentences in (6), corresponding to the italicized phrases in (5), they differ in the choice of the Experiencers of the intention expressed by the Predicate tumori-da "intend".

- (6) a. Taroo-to Ziroo(-to)-ga kenkasi-ta  
           'and'                  'and' Sub 'quarrel' Pst  
       "Taro and Jiro quarreled (with each other)"
- b. Taroo-ga Ziroo-to kenkasi-ta  
           Sub          'with' 'quarrel' Pst  
       "Taro quarreled with Jiro"

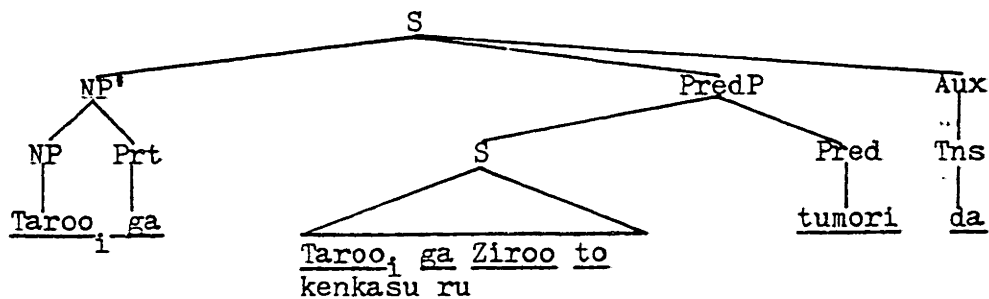
In particular, both the agent and Experiencer in (5a) is Taro and Jiro, while both the agent and Experiencer in (5b) is Taro only. This observation, then, strongly suggests that they have these different lexical items as deep subjects. We have thus come to the same conclusion as was reached about the sentences in (1). The deep structures for the sentences in (5) will, therefore, be represented as in the following tree diagrams:



(7) a.



b.



Thirdly, the following sentences show that there is an animacy constraint involved in sentences of the type under consideration here:

- (8) a. Taroo-wa, saka-o korogar-i-oti-ru tumori-dat-ta  
 Top(Sub) 'slope'Obj 'roll' 'drop' Pres 'intend' Pst  
 "Taro intended to roll down the slope"
- b. \*Sono iwa-wa, saka-o korogar-i-oti-ru  
 'that' 'rock' Top(Sub) 'slope'Obj 'roll' 'drop' Pres  
 tumori-dat-ta  
 'intend' Pst  
 "\*\*That rock intended to roll down the slope"

The contrast between (8a) and (8b) shows that the higher Predicate tumori-da "intend" may not have an initial Noun Phrase which is inanimate. Observe further that the sentences corresponding exactly to the embedded sentences in (8) are both grammatical, as in (9).

- (9) a. Taroo-wa, saka-o korogar-i-oti-ta  
 "Taro rolled down the slope"
- b. Sono iwa-wa, saka-o korogar-i-oti-ta  
 "That rock rolled down the slope"

This data, then, suggests that the ungrammaticality of (8b) does not derive from any selectional restriction which holds between the subject and Predicate of the complement sentence, namely, between sono iwa "that rock" and korogar-i-oti-ru "roll down", but from the animacy constraint which obtains between the initial Noun Phrase and the higher Predicate, namely, between sono iwa and tumori-da "intend".

If the Predicate sentential complement analysis is assumed for the higher Predicate tumori-da in (8), then it allows us to capture this animacy constraint as a restriction imposed by this Predicate upon the subject Noun Phrase. In other words, tumori-da will only have to be lexically marked in such a way as to require that it take an animate Noun Phrase as its subject. The ungrammaticality of (8b) can thus be explained in terms of this lexical specification. If, alternatively, the subject sentential complement analysis is assumed, then the animacy constraint in question must be taken as holding between the subject Noun Phrase of the complement sentence and the higher Predicate. This seems to be an extremely unnatural consequence, however, because verbal selection is not sensitive elsewhere to the subject Noun Phrase of a complement sentence. Since the Predicate complement analysis provides a natural basis for explaining this animacy constraint, as well as the non-synonymy of (1) and (5), it leads me to conclude that tumori-da and similar other Predicates require Predicate sentential complements.

V.2.     Arguments for Subjectless Higher Predicates     Taking the preceding discussion into consideration, I will proceed to demonstrate that Predicates like rasi-i "likely", hazu-da "be expected to" and yoo-da "seem" are subjectless and require Predicate sentential complements in

deep structure. First, observe the fact that there is no semantic difference of the sort noted about the tumori-sentences in (1).

- (10) a. Taroo-ga Hanako-o paatii-ni sasow-u yoo-da<sup>3</sup>  
           Sub          Obj 'party''to' 'invite' Pres 'seem' Pres  
           "Taro seems to invite Hanako to the party"
- b. Hanako-ga Taroo-ni paatii-ni sasow-are-ru yoo-da  
           Sub          'by' 'party''to' 'invite' Pass Pres 'seem' Pres  
           "Hanako seems to be invited by Taro to the party"

It is observed that the sentences in (10) are synonymous to the extent that the sentences in (2), corresponding to the italicized parts in (10), are synonymous. There is no selectional restriction of the sort noted in (1) which is imposed by the higher Predicate yoo-da "seem" upon the initial Noun Phrase.

Second, consider the sentences in (11), which differ in the choice between a subject-conjunct construction and a comitative construction.

- (11) a. Taroo-to Ziroo(-to)-ga kenkasu-ru yoo-da  
           'and' 'and' Sub 'quarrel' Pres 'seem' Pres  
           "Taro and Jiro seem to quarrel (with each other)"
- b. Taroo-ga Ziroo-to kenkasu-ru yoo-da  
           Sub          'with' 'quarrel' Pres 'seem' Pres  
           "Taro seems to quarrel with Jiro"

It is observed that the sentences in (11) are synonymous except that the sentences in (6), corresponding to the underlined fragments in (11), differ in that in (6a), Taro and Jiro are the agents of the action expressed by the embedded Predicate kenkasu-ru "quarrel", while in (6b), only Taro is the agent. This observation suggests that there is no selectional restriction of the sort noted in (5) which obtains between the higher Predicate yoo-da and the initial Noun Phrases with the Particle ga.

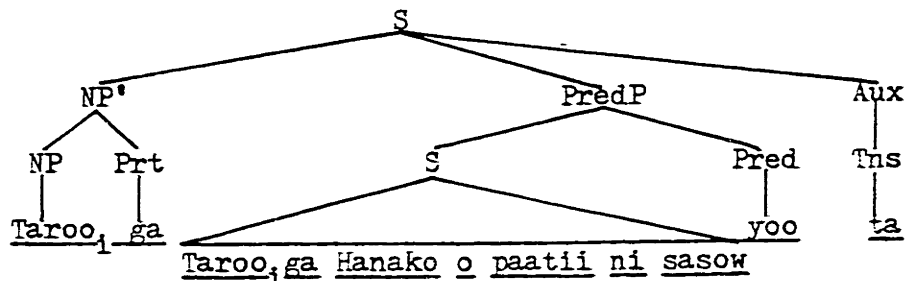
Thirdly, observe that the higher Predicate yoo-da "seem", unlike tumori-da "intend", does not impose any animacy constraint on the initial Noun Phrase, as in (12).

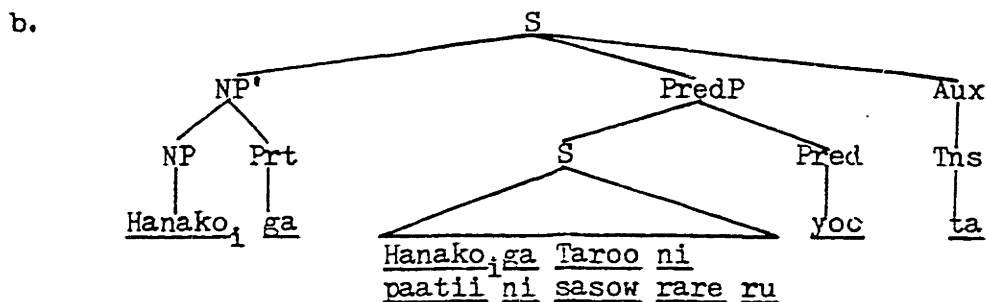
- (12). a. Taroo-wa, saka-o korogar-i-oti-ta yoo-da  
 Top(Sub) 'slope'Obj 'roll' 'drop' Pst 'seem' Pres  
 "Taro seems to have rolled down the slope"
- b. Sono iwa-wa, saka-o korogar-i-oti-ta  
 'that' 'rock' Top(Sub) 'slope'Obj 'roll' 'drop' Pst  
 yoo-da  
 'seem' Pres  
 "That rock seems to have rolled down the slope"

The contrast between (12a) and (12b) tells us that the higher Predicate yoo-da allows an inanimate lexical item to appear as the initial Noun Phrase with the Particle ga, although the initial Noun Phrases have been topicalized in (12).

What is demonstrated by these three observations is simply that the higher Predicate yoo-da "seem" imposes no selectional restrictions of the sorts noted about tumori-da "intend" upon the initial Noun Phrase with the Particle ga. This demonstration, then, excludes the possibility that the initial Noun Phrase might be the deep subject of the higher Predicate yoo-da requiring a Predicate sentential complement. If, therefore, this possibility were correct, then the deep structures for the sentences in (10), for instance, would be represented as in, roughly, the following tree diagrams:

(13) a.





These structures would predict that the allegedly associated actual sentences in (10) exhibit the meaning difference which is directly attributable to the difference in subject Noun Phrases, just as the deep structures (3) for the sentences in (1) correctly predicted it. In fact, however, what is predicted in (13) is not involved in (10). This leads me to conclude that sentences like (10) with yoo-da "seem", rasi-i "likely", etc. as their higher Predicates do not have structures like (13) as their deep structures.

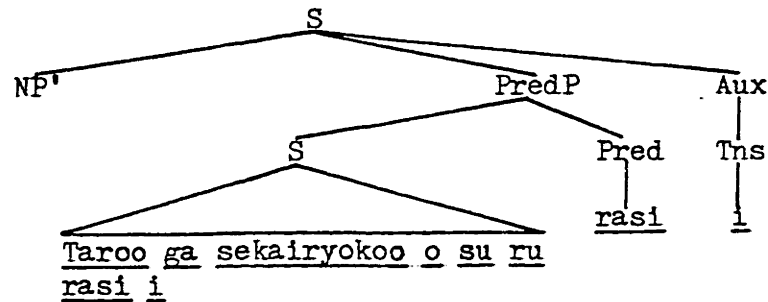
This whole line of argument leaves us with two other plausible analyses: one according to which yoo-da, rasi-i and analogous other Predicates require sentential complements in subject position, and another according to which these Predicates have empty subjects, requiring Predicate sentential complements. I will present evidence which supports the latter alternative in the rest of this section.

The most telling, albeit extremely subtle, argument for the latter alternative analysis stems from an observation of the effects of the application of Soo Sentential Pro-formation to sentential complements of such Predicates as Adjectives rasi-i "likely", kamosirena-i "may" and nitigaina-i "must". Thus observe the following paradigm of sentences with rasi-i as their higher Predicates:

- (14) a. Taroo-ga sekai-ryokoo-o su-ru no des-u ka?  
 Sub'world''trip'Obj'do'Pres 'the case' 'be-Pol'Pres Q  
 "Is it the case that Taro will make a world trip?"
- b. Hai, Taroo-ga sekai-ryokoo-o su-ru rasi-i des-u  
 'yes' 'likely'Pres  
 "Yes, it is likely/it seems(to me) that Taro will make a world trip"
- c. Hai, soo rasi-i des-u  
 'so'  
 "Yes, (literally) \*so is likely / ?it is likely"
- d. ?\*Hai, Taroo-ga soo rasi-i des-u  
 "\*Yes, Taro is so likely"

It is perceived that (14b) and (14c) are proper responses to the question (14a), and that they have the same truth value. The dubious status of (14d) shows that it is not the case that the initial Noun Phrase Taroo-ga has been deleted from (14c) and then that the sentential pro-form soo in (14c) substitutes for the italicized fragment containing the initial Noun Phrase. If we are to explain such a distributional property of the pro-form soo as in (14c) by the same rule which explains its distributional properties in all other cases, thereby providing the greatest possible generality, then it follows necessarily that the Predicate rasi-i requires a Predicate sentential complement, since the independently motivated rule of Soo Sentential Pro-formation operates on sentential complements to Predicates. This necessary conclusion entails that the Predicate rasi-i is subjectless in deep structure.<sup>4</sup> The deep structure for (14b), for instance, will thus be characterized as in the following tree diagram, with irrelevant phrases omitted:

(15)



If, alternatively, we assume that the Predicate rasi-i requires a sentential complement in subject position, then we are forced to explain the distribution of the pro-form soo in such sentences as (14c) by extending the rule of Soo Sentential Pro-formation to apply to, probably, headless subject sentential complements, as well as Predicate sentential complements, thereby losing the generalization which can be captured by the Predicate complement analysis of rasi-i sentences.

It should be noted, incidentally, that no analogous argument for the Predicate sentential complement analysis follows from the observation of the effects of the application of Sono Sentential Pro-formation to sentential complements of such Predicates as Nominal-Adjectives yoo-da "seem" and hazu-da "be expected to" (although it goes without saying that the rule of Soo Sentential Pro-formation does not participate in deciding between the two alternative analyses in question with respect to these Predicates, because it does not apply to any such Nominal-Adjectives.) Thus observe what is involved in the following paradigms of sentences with yoo-da "seem" as their Predicates:

- (16) a. Mamonaku basu-ga ku-ru yoo des-u ka?  
 'soon' 'bus' Sub 'come' Pres 'seem' 'be-Pol' Pres Q  
 "Does it seem (to you) that a bus will come soon?"
- b. Hai, mamonaku basu-ga ku-ru yoo des-u  
 'yes'  
 "Yes, it seems (to me) that a bus will come soon"

- c. Hai, sono yoo des-u  
       'that'  
       "Yes, it seems so"
- d. \*Hai, basu-ga sono yoo des-u  
       "\*Yes, a bus seems so"

The sentences in (16) show exactly the same spectrum of grammaticality as those in (14). It is thus perceived that (16b) and (16c) are proper responses to question (16a), and that they have the same truth value. The ungrammaticality of (16d) shows that it is not the case that basu-ga has been deleted from (16c) and then that the sentential pro-form sono "that" in (16c) substitutes for the italicized fragment containing that ga-phrase. But the parallelism ends at this point. The reason derives from the fact that while Soo Sentential Pro-formation requires not only the contiguity of a sentential complement with its head Predicate, but also their constituency as a Predicate Phrase, Sono Sentential Pro-formation requires simply the contiguity of a sentential complement with its head Noun, whether they may constitute a Noun Phrase or not.<sup>5</sup> What is relevant to the present purpose, therefore, is that the paradigm of sentences in (16) does not provide any piece of evidence for or against the Predicate sentential complement analysis, because the independently motivated rule of Sono Sentential Pro-formation correctly explains the grammaticality of (16c), whether the higher Predicate yoo-da "seem" may take a subject complement analysis or a Predicate complement analysis.

Although I know of no direct evidence for the Predicate complement analysis of such Nominal-Adjectives as yoo-da "seem", hazu-da "be expected to" and tokoro-da "be about to", it seems to me to be a very plausible assumption for the following three reasons: the first reason is that there is no positive counterevidence to this assumption available. The second



reason is that these Nominal-Adjectives fall together with Adjectives like rasi-i "likely", kamosirena-i "may" and nitigaina-i "must", in that they are all speaker-oriented in the sense that they are descriptive of a speaker's, but not a subject's, psychological attitude. On the basis of this similar semantic property, in addition to the syntactic properties common to these two subclasses of Predicates noted in the discussion of the first half of this section, it seems plausible to assume that the Nominal-Adjectives, like the Adjectives, are subjectless in deep structure. Further supporting evidence for this assumption will be provided by the fact that another class of Predicates including the Nominal-Adjectives tumori-da "intend", yotee-da "plan", and ketui-da "determine" (cf. Section V.1), which require human subject Noun Phrases, are subject-oriented in the sense that they are descriptive of a subject's, but not a speaker's, psychological attitude. These three arguments are not syntactic ones, and thus the conclusion reached cannot be definitive.

In summary, I have shown in the preceding two sections that there are two different classes of Predicates which require Predicate sentential complements; they are different only in whether they are subjectless in deep structure or not. I will show in the subsequent section that a rule of Complement Subject Raising is necessary for the class of subjectless Predicates, and in the next chapter that a rule of Complement Subject Deletion is needed for another class of Predicates, with lexically filled subjects in deep structure.

V.3.     Arguments for Complement Subject Raising     I will present four arguments for the existence of a rule of Complement Subject Raising in

the Japanese sentential complement system.

V.3.1. Certain Outputs of Soo and Sono Sentential Pro-formation

The first argument emerges from a consideration of certain effects of the application of Soo and Sono Sentential Pro-formation (Cf. IV.2.2, III. 5.1) to sentential complements of Predicates like rasi-i "likely" and hazu-da "be expected to". Thus observe the following sentences:

- (17) a. Taroo-wa natu-zyuu-ni ronbun-o siage-ru  
 Contr(Sub) 'summer' 'during' 'in' 'thesis' Obj 'finish' Pres  
kamosirena-i; Ziroo-mo soo kamosirena-i  
 'may' Pres 'also' 'so' 'may' Pres

"Taro may finish his thesis during the summer, and Jiro may (\*so), too"

- b. Taroo-wa natu-zyuu-ni ronbun-o siage-ru hazu-da;  
 'be expected to' Pres  
 Ziroo-mo sono hazu-da  
 'that'

"Taro is expected to finish this thesis during the summer, and Jiro is also expected to / and Jiro is so expected, too"

It is observed in both sentences above that Ziroo-mo "Jiro also" is outside the scope of the pro-forms soo "so" and sono "that", because it is evident that these pro-forms substitute for the italicized fragments of the first conjuncts. Since the higher Predicates kamosirena-i "may" and hazu-da "be expected to" are subjectless in deep structure and hence Ziroo-mo "Jiro also" originates as the subject of the complement sentence, this observation requires that the complement subject Noun Phrase be raised into the empty subject position of the next higher sentence, so that the distribution of the pro-forms soo and sono in (17) can correctly be explained by the independently motivated rules of Soo and Sono Sentential Pro-formation.



there is ample reason to believe that this attachment rule requires at least that semantically contrastive phrases be placed in structurally parallel contexts. (E.g., in the simplex sentence Zoo-wa, hana-wa naga-i ga, me-wa tiisa-i "As for an elephant, it is long in the nose, but small in the eyes", hana-wa and me-wa are contrastive, because they are in the same structural contexts, namely, in pre-Predicate position; but zoo-wa is not contrastive with me-wa, because they are not in the same structural contexts.)<sup>6</sup> Therefore, if we are to explain the contrastive phenomena in (18) by an independently necessary rule, thus achieving the greatest possible generalization, then it follows necessarily that the contrastive phrases Taroo-mo and Taroo-wa in the second conjuncts of (18) are in the same subject position of the higher sentence as the contrastive phrase watasi-wa in the first conjunct of (18). This line of argument, therefore, makes it necessary to raise Taroo-mo and Taroo-wa into the empty subject position of the higher sentence out of the original complement subject position.

V.3.3.      The Topical Interpretation of the Particle wa      The third argument for the existence of the rule of Complement Subject Raising derives from a consideration of topical sentences which are syntactically marked by the topical Particle wa. One salient feature of the rule of Topicalization is the restriction that the subject Noun Phrase of an embedded sentence (i.e., a complement sentence, a relative clause and a subordinate clause) cannot be topicalized to the next higher sentence. To illustrate this point, observe what is involved in the following pairs of sentences:

## (19) Noun sentential complements in subject position:

- a.  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub 'thief'} \end{array} \right] \text{doroboo dat-ta} \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to-yu-u syooko-ga} \text{ agat-ta}$   
 "Evidence that Taro was the thief has come out" Pst
- b. \* $\left[ \begin{array}{l} \text{Taroo-wa} \\ \text{Top} \end{array} \right], \left[ \text{doroboo dat-ta} \right] \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to-yu-u syooko-ga} \text{ agat-ta}$   
 "As for Taro, evidence that he (\* $\emptyset$ ) was the thief has come out"
- Cf. c.  $\left[ \begin{array}{l} \text{Taroo-wa} \\ \text{Contr} \end{array} \right] \text{doroboo dat-ta} \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to-yu-u syooko-ga} \text{ agat-ta}$   
 "Evidence that Taro, but nobody else, was the thief has come out"

## (20) Noun sentential complements in object position:

- a. Daremo  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \right] \text{yagaku-ni} \text{ kayot-te-i-ru} \left[ \begin{array}{l} \text{Dur Pres} \\ \text{S} \end{array} \right]$   
 'anyone' 'night school' 'to' 'attend'  
 koto-o sir-a-na-i  
 Nom Obj 'know' 'not' Pres  
 "Nobody knows (the fact) that Taro goes to night school"
- b. \* $\left[ \begin{array}{l} \text{Taroo-wa} \\ \text{Top} \end{array} \right], \text{daremo} \left[ \text{yagaku-ni} \text{ kayot-te-i-ru} \right] \left[ \begin{array}{l} \text{Dur Pres} \\ \text{S} \end{array} \right] \text{koto-o}$   
 sir-a-na-i  
 "As for Taro, nobody knows (the fact) that he (\* $\emptyset$ ) goes to night school"

## (21) To Predicate sentential complements preposed:

- a.  $\left[ \begin{array}{l} \text{Denwa-ga} \\ \text{'phone' Sub} \end{array} \right] \text{kosyoosi-ta} \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to, Taroo-wa}$   
 'get out of order' Pst Top  
 $\left\{ \begin{array}{l} \text{it-ta} \\ \text{'say' Pst} \\ \text{omot-ta} \\ \text{'think' Pst} \end{array} \right.$   
 "That his telephone got out of order, Taro said/thought"
- b. \* $\left[ \begin{array}{l} \text{Denwa-wa} \\ \text{Top} \end{array} \right], \left[ \text{kosyoosi-ta} \right] \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to, Taroo-wa}$   
 Top  $\left\{ \begin{array}{l} \text{it-ta} \\ \text{omot-ta} \end{array} \right.$   
 "As for his telephone, Taro said/thought that it (\* $\emptyset$ ) got out of order"
- Cf. c.  $\left[ \begin{array}{l} \text{Denwa-wa} \\ \text{Top} \end{array} \right] \text{kosyoosi-ta} \left[ \begin{array}{l} \text{Pst} \\ \text{Comp} \end{array} \right] \text{to, Taroo-wa}$   
 Top  $\left\{ \begin{array}{l} \text{it-ta} \\ \text{omot-ta} \end{array} \right.$   
 "Taro said/?thought, "As for my telephone, it got out of order""

(22) Yoo-ni Predicate sentential complements: ?

- a. \*Isya-ga Ziroo<sub>1</sub>-ni [Ziroo<sub>1</sub>-ga kusuri-o nom-u ]<sub>S</sub>  
 'doctor' Sub IO Sub 'medicine' Obj 'drink' Pres  
 yoo-ni susume ta  
 Comp 'advise' Pst  
 "The doctor advised Jiro to take medicine"
- b. \*Ziroo<sub>1</sub>-wa, isya-ga Ziroo<sub>1</sub>-ni [ kusuri-o nom-u ]<sub>S</sub> yoo-ni  
 Top  
 susume-ta  
 "As for Jiro, the doctor advised him to take medicine"

## (23) Relative clauses (together with the head Noun Phrases) preposed:

- a. [Ziroo-ga setumeisi-nak-kat-ta ]<sub>S</sub> zyookyoo-o  
 Sub 'explain' 'not' Pst 'situation' Obj  
 boku-wa setumeisi-ta  
 'I-male' Top (Sub) 'explain' Pst  
 "The situation which Jiro did not explain, I explained"
- b. \*Ziroo-wa, [ setumeisi-nak-kat-ta ]<sub>S</sub> zyookyoo-o, boku-wa  
 Top  
 setumeisi-ta  
 "As for Jiro, I explained the situation which he (\* $\emptyset$ ) did not explain"

## (24) Subordinate clauses:

- a. [Taroo-ga sore-o yar-u ]<sub>S</sub> nara, kimi-wa  
 Sub 'it' Obj 'do' Pres 'if' 'you' Top/Contr (Sub)  
 sore-o yar-a-na-ku-te-yo-i  
 'it' Obj 'do' 'not' 'may' Pres  
 "If Taro does it, you may not do it"
- b. \*Taroo-wa, [ sore-o yar-u ]<sub>S</sub> nara, kimi-wa sore-o  
 Top 'it' Obj 'do' Pres  
 yar-a-na-ku-te-yo-i  
 "As for Taro, if he (\* $\emptyset$ ) does it, you may not do it"

The contrast between (a) and (b) in each pair shows that the subject Noun Phrase of an embedded sentence cannot be topicalized to the beginning of the next higher sentence. Supporting evidence that the italicized wa-phrase in (b) of each pair is not attached to the next higher sentence, moving out of the original complement sentence, is provided by observing

that, contrary to the general property of Topicalization that any scrambled order is possible among topicalized phrases of the same sentence (Cf. Section II.2), the wa-phrase in question cannot be scrambled with the topical wa-phrases of the same sentence to which that wa-phrase is allegedly attached. Thus the best example comes from (23b) in the following manner:

- (25) a. \*#Boku-wa, [setumeisi-nak-kat-ta ]<sub>S</sub> zyookyoo-o, Ziroo-wa  
 setumeisi-ta  
 "As for me, and as for Jiro, he (\* $\emptyset$ ) explained the situation that I (\* $\emptyset$ ) did not explain"
- b. \*Ziroo-wa, boku-wa, [setumeisi-nak-kat-ta ]<sub>S</sub> zyookyoo-o  
 setumeisi-ta  
 "\*As for Jiro, and as for me,  $\emptyset$  explained the situation which  $\emptyset$  did not explain"
- c. \*Boku-wa, Ziroo-wa, [setumeisi-nak-kat-ta ]<sub>S</sub> zyookyoo-o  
 setumeisi-ta  
 "\*As for me, and as for Jiro,  $\emptyset$  explained the situation that  $\emptyset$  did not explain"

Consider first (25a), which is exactly the same as (23b) except for the interchange of Ziroo-wa, originating as the complement subject, and boku-wa, the wa-phrase obviously topicalized on the level of the higher sentence. If (23b) were grammatical, then we would reasonably expect that (25a) is also grammatical, and that it contains the meaning of the source sentence (23a). But this is not the case at all. It can thus be inferred that the ungrammaticality of (23b) stems from the assumption that Ziroo-wa, originally the complement subject, is attached to the next higher sentence by Topicalization. Consider next (25b) and (25c), where the two wa-phrases are scrambled at the beginning of the same higher sentence. These strings are ungrammatical because their meaning is indeterminate,<sup>8</sup> or more specifically, because the meaning of the source





- e.  $\left[ \begin{array}{l} \text{Zi-roo-wa} \\ \text{Contr/*Top} \end{array} \right] \begin{array}{l} \text{setumeisi-nak-kat-ta} \\ \text{'explain' 'not' Pst} \end{array} \left. \vphantom{\left[ \begin{array}{l} \text{Zi-roo-wa} \\ \text{Contr/*Top} \end{array} \right]} \right]_S \begin{array}{l} \text{zyookyoo-o,} \\ \text{'situation' Obj} \end{array}$   
 boku-wa setumeisi-ta  
 'I-male' Top(Sub) 'explain' Pst  
 "I explained the situation which Jiro (but not Taro) did not explain"
- f.  $?* \left[ \begin{array}{l} \text{Taroo-wa} \\ \text{?Contr/*Top} \end{array} \right] \begin{array}{l} \text{sore-o yar-u} \\ \text{'it' Obj 'do' Pres} \end{array} \left. \vphantom{\left[ \begin{array}{l} \text{Taroo-wa} \\ \text{?Contr/*Top} \end{array} \right]} \right]_S \begin{array}{l} \text{nara, kimi-wa} \\ \text{'if' 'you' Contr} \end{array}$   
 yar-a-na-ku-te-yo-i  
 'do' 'not' 'may' Pres  
 "If Taro, but not you, does it, then you may not do it"

The italicized wa-phrases of (26a), (26b), (26e) and (26f) have only the contrastive interpretation, as is apparent from the English counterparts. Sentence (26c), which contains a to Predicate sentential complement to the Verbs of saying and thinking yuw-u "say" and omow-u "think", will constitute apparent counterevidence to our claim, because such to-complements can carry the force of direct quotes even if there are no syntactic markers for direct quotes (Cf. Section III.1). String (26d), which contains a yoo-ni complement, is ungrammatical, because the source string (22a) itself is unacceptable and requires the deletion of the complement subject Zi-roo(-ga) under identity with the indirect object of the higher sentence Zi-roo(-ni). Cf. Chapter VI. I conclude, therefore, that particularly the subject Noun Phrase of an embedded sentence cannot be topicalized within the same embedded sentence. We have thus far seen that the subject Noun Phrase of an embedded sentence cannot be topicalized either in the same embedded sentence or to the next higher sentence.<sup>9</sup>

On the basis of this long preliminary discussion, I will demonstrate the necessity of the rule of Complement Subject Raising for the derivation of certain topical sentences with Predictes like rasi-i "likely" and hazu-da "be expected to", which are subjectless in deep structure. Thus

observe the following sentences, where the complement subjects are topicalized:

- (27) a. Taroo-wa, amari benkyoosi-na-i rasi-i  
 Top(Sub) 'much' 'study' 'not' Pres 'likely' Pres  
 "As for Taro, he (\* $\emptyset$ ) is likely not to study too much"
- b. Kono heya-wa, kura-i nitigaina-i  
 'this' 'room' Top(Sub) 'dark' Pres 'must' Pres  
 "As for this room, it (\* $\emptyset$ ) must be dark"
- c. Hanako-wa, sono uwasa-o sit-te-i-ru hazu-da  
 Top 'that' 'rumor' Obj 'know' Dur Pres 'be expected to'  
 Pres  
 "As for Hanako, she (\* $\emptyset$ ) ought to know that rumor"
- d. Kare-no kuruma-wa, tootoo nusum-are-ta  
 'he' Pos 'car' Top(Sub) 'finally' 'steal' Pass Pst  
 soo-da  
 'be said to' Pres  
 "As for his car, it (\* $\emptyset$ ) is said to have been stolen after all"

My perception that the italicized wa-phrases in (27) have the topical interpretation can be supported by the observation that they are understood exactly the same way as the wa-phrases in the simplex sentences in (28), corresponding exactly to the complement sentences in (27), are understood, namely, as topical phrases.

- (28) a. Taroo-wa, amari benkyoosi-na-i  
 "As for Taro, he (\* $\emptyset$ ) does not study too much"
- b. Kono heya-wa, kura-i  
 "As for this room, it (\* $\emptyset$ ) is dark"
- c. Hanako-wa, sono uwasa-o sit-te-i-ru  
 "As for Hanako, she (\* $\emptyset$ ) knows that rumor"
- d. Kare-no kuruma-wa, tootoo nusum-are-ta  
 "As for his car, it (\* $\emptyset$ ) was stolen after all"

Given these data, the preceding preliminary discussion suggests that the italicized wa-phrases in (27) are attached to the higher sentences, but

not to the original complement sentences, because the subject Noun Phrase of an embedded sentence cannot have the topical interpretation. The preceding discussion further reveals that the italicized wa-phrases in (27) must have been raised into the empty subject position of the next higher sentence before the independently motivated version of Topicalization can adequately operate, because this rule is so restricted that the embedded subject must not be topicalized to the next higher sentence. I conclude, therefore, that if we are to explain the topical phenomena in (27) by the same principle which explains the same phenomena in such simplex sentences as (28), thereby achieving the most general formulation of the rule of Topicalization, then what follows necessarily is that there is a rule of Complement Subject Raising which raises the complement subject into the empty subject position of the next higher sentence.

This conclusion is also supported by a semantic consideration. Note first that the Predicates of the higher sentences in (27) are all speaker-oriented, i.e., they all express a speaker's psychological attitude and that such Predicates typically appear in the highest sentences or direct quotes equivalent to the highest sentences. Note further that the notion of topic is also speaker-oriented. I can see no reason whatsoever, therefore, to doubt that the topical wa-phrases occur attached to the highest sentences or to direct quotes, particularly in such sentences as (27) with speaker-oriented Predicates.

Further supporting evidence for this conclusion comes from the contrast between (27) and (29). The sentences in (29) contain Predicates which require lexically filled (human) subjects in deep structure.

- (29) a. Taroo-wa, amari benkyoosi-na-i tumori-da  
           Top(Sub) 'much' 'study' 'not'Pres 'intend'Pres

"As for Taro, he (\* $\emptyset$ ) intends not to study too much"

- b. Ziroo-wa, mamonaku Nippon-ni kaer-u yotei-da  
 Top(Sub) 'soon' 'Japan''to' 'return'Pres 'plan'Pres  
 "As for Jiro, he (\* $\emptyset$ ) is planning to go back to Japan soon"
- c. Ziroo-wa, sin-demo yar-i-nuk-u kakugo-da  
 Top(Sub) 'die''even if' 'do''through'Pres 'determine'Pres  
 "As for Jiro, he (\* $\emptyset$ ) is determined to accomplish it  
 even if he is going to die"

The italicized wa-phrases in (29) have the topical interpretation. The higher Predicates in (29), like tumori-da "intend" and yotei-da "plan", require the deletion of the complement subject Noun Phrase under identity with the subject Noun Phrase of the next higher sentence (cf. Chapter VI). Thus the input to Topicalization of, say, (29a) will be represented as, roughly, labelled bracketing (30a). If, on the other hand, the rule of Complement Subject Raising is assumed for the derivation of the sentences in (27) prior to the application of Topicalization, then (27a), for example, will be specified as, roughly, labelled bracketing (30b).

- (30) a.  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \left[ \left[ \emptyset \text{ amari benkyoosi-na-i} \right]_S \text{ tumori} \right]_{\text{PredP}}$   
 da  $\left. \vphantom{\left[ \left[ \emptyset \text{ amari benkyoosi-na-i} \right]_S \text{ tumori} \right]} \right]_S$   
 Pres  
 "Taro intends not to study too much"
- b.  $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \left[ \left[ \emptyset \text{ amari benkyoosi-na-i} \right]_S \text{ rasi} \right]_{\text{PredP}}$   
 i  $\left. \vphantom{\left[ \left[ \emptyset \text{ amari benkyoosi-na-i} \right]_S \text{ rasi} \right]} \right]_S$   
 Pres  
 "Taro is likely to study too much"

It is observed here that (29a) and (27a) are exactly parallel in the input structure of Topicalization. Since derived structure (30a) is independently motivated, it will provide indirect evidence for the plausibility of derived structure (30b) and thus for the need of the rule of

Complement Subject Raising.

V.3.4. The Exclusive Interpretation of the Particle ga The fourth, and final, argument for the existence of the rule of Complement Subject Raising in Japanese concerns the distributional properties of the Particle ga which has the interpretation of exclusive listing.<sup>10</sup> There is a basic generalization that a sentence-initial ga-phrase has an exclusive interpretation when it occurs attached to (i.e., immediately dominated by) the highest sentence or a direct quote, while ga, losing this meaning, is neutralized when it appears in embedded sentences (i.e., in complement sentences, relative clauses, and subordinate clauses). The feature of exclusiveness involved in the Particle ga stands out most prominently when it appears in sentences with the Copula da, or stative Predicates including all Adjectives (e.g., kasiko-i "wise"), all Nominal-Adjectives (e.g., sizuka-da "quiet"), and certain classes of Verbs (i.e., inherently stative Verbs like wakar-u "understand(able)", kikoe-ru "hear/audible", deki-ru "can/able/possible", and mie-ru "see/visible", and Verbs which express stativity when immediately followed by the Durative Predicate i-ru, like sit-te-i-ru "know", sun-de-i-ru "live/reside" and nikun-de-i-ru "hate"). The examples given below are thus restricted to such stative Predicates.

To exemplify the basic generalization, contrast the simplex sentences in (31) and the complex sentences in (32), into which (31) are embedded.

- (31) a. Taroo-ga doroboo dat-ta  
           Sub 'thief' Cop Pst  
           "Taro and only Taro was the thief"
- b. Ano heya-ga akaru-i  
           'that' 'room' Sub 'bright' Pres  
           "That room and only that room is bright"

- c. Ziroo-ga atama-ga hen-da  
 Sub 'head' Obj 'crazy' Pres  
 "Jiro and only Jiro is crazy in the head"
- d. Hanako-ga sono uwasa-o sit-te-i-ru  
 Sub 'that' 'rumor' Obj 'know' Dur Pres  
 "Hanako and only Hanako knows that rumor"
- (32) a. Boku-wa, [ Taroo-ga doroboo dat-ta ]<sub>S</sub> koto-ni  
 'I-male' Top(Sub) Sub Nom Obj  
 kizui-ta  
 'notice' Pst  
 "I noticed that Taro was the thief"
- b. Boku-wa, [ ano heya-ga akaru-i ]<sub>S</sub> no-de, suki-da  
 'I-male' Top(Sub) 'because' 'like' Pres  
 "Since this room is bright, I am fond (of it)"
- c. [ Ziroo-ga atama-ga hen-na ]<sub>S</sub> koto-wa,  
 Variant of da(Pres) Nom Top(Sub)  
 yuumee-da  
 'well-known' Pres  
 "It is well-known that Jiro is crazy in the head"
- d. [ Hanako-ga sit-te-i-ru ]<sub>S</sub> uwasa-o, boku-wa  
 'rumor' Obj 'I-male' Top(Sub)  
 sir-i-ta-i  
 'know' 'wish' Pres  
 "The rumor which Hanako knows, I would like to know"

It is clearly observed that the italicized ga-phrases in (31) have the exclusive interpretation, as is apparent in the English counterparts, while the same ga-phrases in (32) lose their exclusive meaning. This clear-cut difference is directly attributable to the difference in whether the ga-phrases in question are immediately dominated by highest sentences or by embedded sentences. Confirming evidence will be provided particularly by the fact that the ga-phrases in (32c) and (32d) have no interpretation of exclusive listing, although they occupy sentence-initial position.

Our basic generalization, namely, that the sentence-initial ga-phrase

has the exclusive interpretation only when it occurs attached to the highest sentence or a direct quote, is further supported by the following sentences, which contain to-Predicate sentential complements:

- (33) a. Boku-wa,                    [ ano heya-ga    akaru-i        ne        ] <sub>S</sub>  
       'I-male'Top(Sub)        'that''room'Sub 'bright'Pres Confirmative  
       to        it-ta  
       Comp 'say'Pst  
       "I said, "That room (and only that room) is bright, isn't it?"
- b. Taroo-wa,                    watasi-ni    [ Hanako-ga    sono uwasa-o  
       Top(Sub)    'I'        IO                    Sub 'that''rumor'Obj  
       sit-te-i-mas-u                    ka?    ] <sub>S</sub>    to    tazune-ta  
       'know' Dur 'be-Pol'Pres Q        Pred 'ask' Pst  
       "Taro asked me, "Does Hanako (and only Hanako) know that rumor?"

The embedded sentences in (33) are both identified as direct quotes by the presence of syntactic markers which appear only in the highest sentences, in particular, by the presence of the Confirmative Mood ne, the Polite Verb mas-u and the Question Mood ka.

Further supporting evidence stems from a semantic consideration. Note first that the exclusive interpretation of the Particle ga is speaker-oriented in the sense that it directly reflects a speaker's psychological attitude. We know independently that most speaker-oriented elements appear only in highest sentences or direct quotes; they include particularly various kinds of Moods like the Polite and Plain Presumptives des-yoo and dar-oo, the Abrupt Imperative ro/e, the Prohibitive na, the Friendly and Polite Requests kure and kudasai, and Polite Predicates like mas-u and des-u (cf. Section III.1). It seems to me a very natural conclusion that the exclusive ga, since it is also speaker-oriented, appears in highest sentences and direct quotes, but not in embedded sentences. Particularly, the direct quotes in (33) are good examples, because the exclusive ga

appears with other speaker-oriented elements like the Confirmative ne and the Polite Verb mas-u.

Turning back to the main theme on the basis of the preceding discussion, consider the following sentences, whose higher Predicates require empty subjects in deep structure:

- (34) a. Taroo-ga doroboo dat-ta rasi-i  
           Sub 'thief' Cop Pst 'likely' Pres  
           "Taro and only Taro is likely to have been the thief"
- b. Anc heya-ga akaru-i nitigaina-i  
    'that''room' Sub 'bright' Pres 'must' Pres  
    "That room and only that room is bright"
- c. Ziroo-ga atama-ga hen-na hazu-da  
           Sub 'head' Obj 'crazy' Variant of da(Pres) 'ought to' Pres  
           "Jiro and only Jiro ought to be crazy in the head"
- d. Hanako-ga sono uwasa-o sit-te-i-ru soo-da  
           Sub 'that''rumor' Obj 'know' Dur Pres 'be said to' Pres  
           "Hanako and only Hanako is said to know that rumor"

Simplex sentences (31) are embedded in complex sentences (34). It is clearly perceived that the italicized ga-phrases in (34), like the same ga-phrases in (31), have the exclusive interpretation, as is apparent in the English counterparts. Since the higher Predicates in (34), like rasi-i "likely" and soo-da "be said to", are subjectless in deep structure, the italicized ga-phrases are the subject Noun Phrases of the complement sentences in deep structure. The only apparent possibility that ga-phrases which appear in the initial position of the entire sentence, although immediately dominated by the embedded sentence, might have the exclusive interpretation has been excluded by our basic generalization, or especially, by examples like (32c) and (32d). If, therefore, the exclusive interpretation of the ga-phrases in (34) is to be explained by



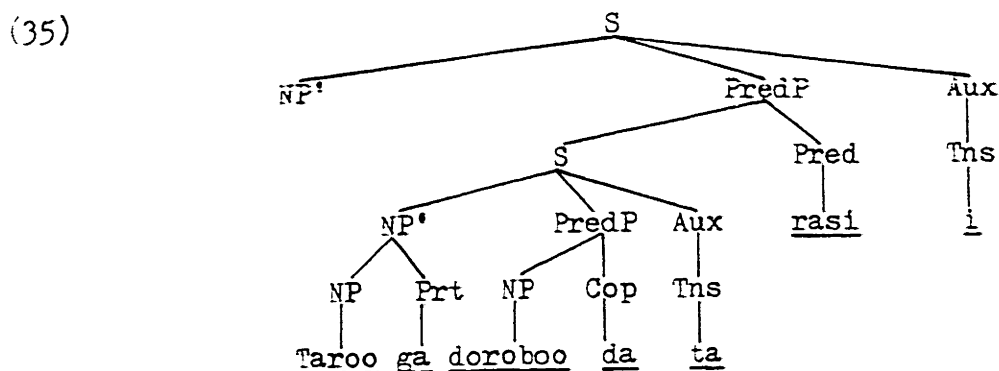
the same principle which explains the exclusive interpretation of the ga-phrase in (31) and (33), then what immediately follows is that there must be a rule of Complement Subject Raising which raises the complement subject Noun Phrase into the empty subject position of the next higher sentence, so that the interpretive rule of the exclusive ga can be expressed in the most general form, which directly projects the syntactic distributional property of the exclusive ga noted in the basic generalization.

Our conclusion that the rule of Complement Subject Raising is obligatory for the derivation of the sentences in (34) is also supported by considerations of speaker-orientedness. The higher Predicates in (34), like nitigaina-i "must" and soo-da "I hear/be said to", are all speaker-oriented and show up in highest sentences or direct quotes. The exclusive use of the Particle ga is also speaker-oriented in the same sense that it directly mirrors a speaker's psychological state. There seems to be no reason, therefore, to prevent the exclusive ga in (34) from appearing in the highest sentences, where the speaker-oriented Predicates appear.

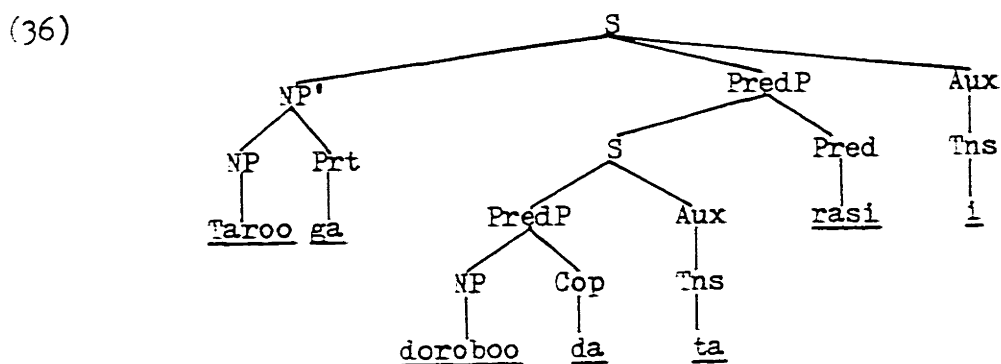
In the preceding section, I have presented four pieces of evidence supporting the necessity of a rule of Complement Subject Raising in the Japanese sentential complement system; it has emerged from considerations (i) of certain effects of the application of Soo and Sono Sentential Pro-formation, (ii) of certain contrastive sentences where the initial Noun Phrase, originally with the subject Particle ga, of two classes of Predicates which are different in the choice between empty and lexically filled subjects are contrastive, (iii) of the distributional properties

of the topical wa, and (iv) of the distributional property of the exclusive ga. The rule of Complement Subject Raising proposed here is the version which raises the subject Noun Phrase of a complement sentence into the empty subject position of the next higher sentence.<sup>11</sup> This rule applies to Predicates which have empty subjects and Predicate sentential complements in deep structure, in particular, to such Predicates as rasi-i "likely", nitigaina-i "must", kamosirena-i "may", hazu-da "be expected to", yoo-da "seem", soo-da "I hear/It is said", and mono-da "used to".

The deep structure for (34a), for instance, will thus be represented as, roughly, in the following tree diagram:



The rule of Complement Subject Raising applies to deep structure (35), yielding derived structure (36).



Then, the rule of Topicalization will apply to this derived structure, producing the surface structure for the sentence Taroo-wa, doroboo dat-ta rasi-i "As for Taro, he (\* $\emptyset$ ) is likely to have been the thief".

7.4. The Inchoative Constructions In this section, I will demonstrate that the inchoative constructions, syntactically marked by the presence of the Predicate nar-u "come to/become", provide independent evidence (i) for the existence of Predicates which have empty subjects and require Predicate sentential complements in deep structure, and (ii) for the necessity of the rule of Complement Subject Raising proposed in the preceding section. The following sentences will exemplify a complete paradigm of inchoative constructions:

- (37) a. Taroo-wa,            benkyoosu-ru    yoo-ni    nat-ta  
                     Top(Sub) 'study'    Pres    Comp    'become' Pst  
 "Taro has come to be studying"
- b. Taroo-wa,            siken-de            isogasi-ku  
                     Top(Sub) 'exam''with' 'busy' Variant of i(Pres)  
 nat-ta  
 'become' Pst  
 "Taro has become busy with the exams"
- c. Taroo-wa,            genki-ni                            nat-ta  
                     Top(Sub) 'well' Variant of da(Pres) 'become' Pst  
 "Taro has become well"
- d. Taroo-wa,            sensee-ni            nat-ta  
                     Top(Sub) 'teacher' IO? 'become' Pst  
 "Taro has become a teacher"

It is evident that (37a) is a complex sentence, because it contains two Predicates, together with their own Tenses, that is, benkyoosu-ru "study" and nat-ta "became", and the Predicate Complementizer yoo-ni as well. It is not evident, however, that the other three sentences are complex sentences in deep structure (as well as in surface structure), because

there is apparently no syntactic clue to that decision.

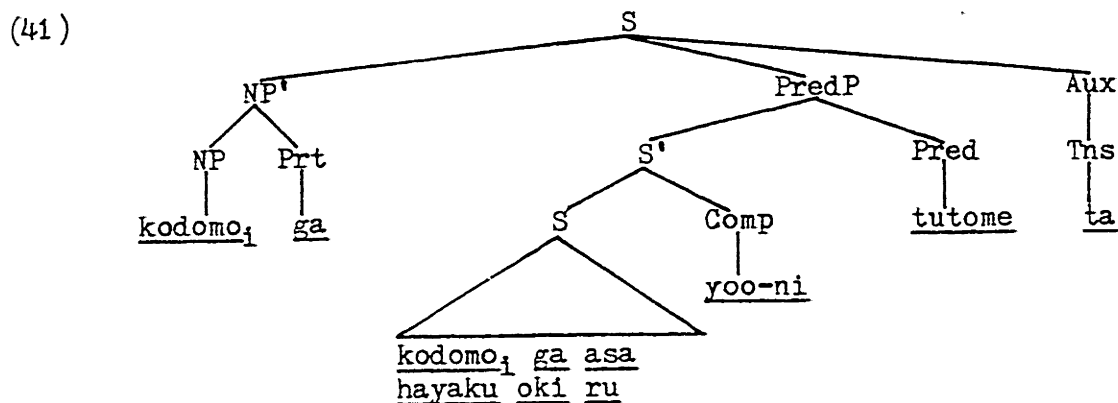
Section 4.1 will deal with the type of sentences including (37a), where the higher Predicate nar-u "become" requires that the Predicate Complementizer yoo-ni be present in deep structure if and only if the Predicate of the complement sentence is a Verb, with a view to justifying the two claims (i) and (ii) above on independent grounds. Section 4.2 will discuss the types of sentences including (37b) and (37c), thereby demonstrating that they are complex sentences in deep structure whose complement sentences contain Adjectives and Nominal-Adjectives, respectively, as their Predicates, and that they fall together with the (37a) type of sentences in supporting the above-mentioned two claims. Finally, Section 4.3 will argue for a simplex sentence analysis of the type of sentences including (37d), according to which the ni-phrase is a Noun Phrase in deep structure, but not a derived phrase.

V.4.1.      Verbs as Complement Predicates      I will first attempt to exclude the apparent possibility that the initial Noun Phrase with the Particle ga in (37a)-type sentences might be the subject of the higher Predicate nar-u "become" in deep structure. One telling argument results from the observation that there is no animacy or humanness constraint for this initial ga-phrase.

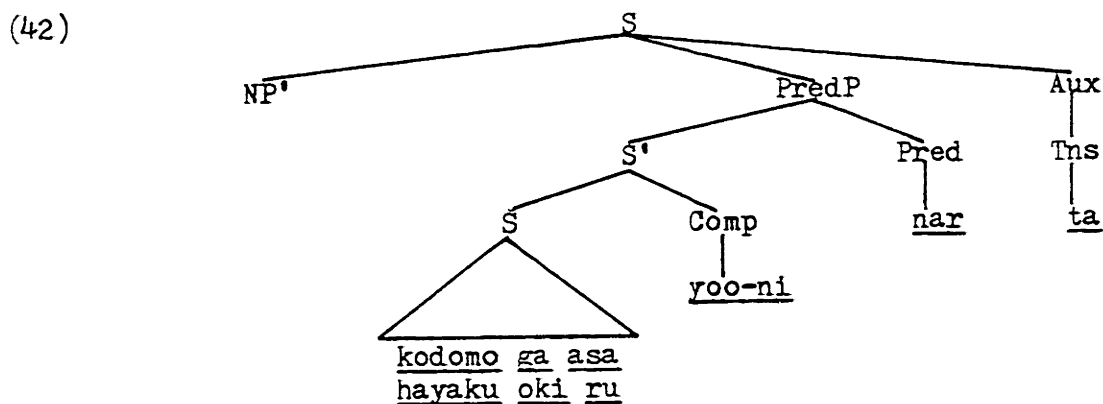
- (38) a. Kodomo-ga    asa            hayaku oki-ru            yoo-ni    nat-ta  
          'child' Sub 'morning' 'early' 'get up' Pres Comp 'become' Pst  
          "The child has come to get up early in the morning"
- b. Ki-ga            kare-ru            yoo-ni    nat-ta  
          'tree' Sub 'wither' Pres Comp 'become' Pst  
          "The trees have come to wither"
- c. Ame-ga            sibasiba    hur-u            yoo-ni    nat-ta  
          'rain' Sub 'often' 'fall' Pres Comp 'become' Pst  
          "It has come to rain very often"



as in tree diagram (41).



Since the higher Predicate nar-u "become" requires a Predicate sentential complement with the Predicate Complementizer yoo-ni, it is a necessary conclusion that it has an empty subject in deep structure. Thus the deep structure for (38a), for instance, will be represented as in tree diagram (42).



The other two arguments, namely, the active-passive synonymy argument and the argument about the subject-conjunct and comitative constructions, will also support the correctness of deep structures (41) and (42). Furthermore, all the four arguments for the rule of Complement Subject Raising, discussed in the preceding section, will apply to the derivation of sentences like (37a) and (38) with nar-u as their higher

Predicates.

V.4.2. Adjectives and Nominal-Adjectives as Complement Predicates

Let us consider the derivation of sentences (37b) and (37c). I will show that these sentences are complex sentences by presenting some arguments that isogasi-ku in (37b) and genki-ni in (37c) are the variants of the Predicates plus Present Tenses isogasi-i "busy" and genki-da "well", respectively.

The first argument derives from an observation of the complementary distribution of Verbs with Adjectives and Nominal-Adjectives with respect to the Predicate Complementizer yoo-ni. The contrast between (37) and (43) thus shows that the Predicate Complementizer yoo-ni occurs if and only if the next lower complement sentence contains a Verb, but not any of the other two types of Predicates or the Copula da.

- (43) a. \*Taroo-wa,           benkyoosu-ru / benkyoosi-te   ∅   nat-ta  
                           Top(Sub) 'study'   Pres                                 'become'Pst  
                           "Taro has come to be studying"
- b. \*Taroo-wa,           siken-de           isogasi-i           yoo-ni   nat-ta  
                           Top(Sub) 'exam' 'with' 'busy'   Pres   Comp  
                           "Taro has become busy with the exams"
- c. \*Taroo-wa,           genki-da / genki-na  
                           Top(Sub) 'well'Pres                   Variant of da(Pres)  
                           yoo-ni   nat-ta  
                           Comp  
                           "Taro has become well"
- d. \*Taroo-wa,           sensee da           /   no  
                           Top(Sub) 'teacher' Cop+Pres   Variant of da(Cop)  
                           yoo-ni   nat-ta  
                           "Taro has become a teacher"

This observation is compatible with further data where the complement sentence has such Adjectives as the desiderative ta-i "wish" and the

Negative na-i "not" immediately preceded by a Verb.

- (44) a. (i) Taroo-wa, oyog-a-na-ku  $\emptyset$  nat-ta  
           Top(Sub) 'swim' 'not' 'become'Pst  
           "Taro has come not to swim"
- (ii) ?\*Taroo-wa, oyog-a-na-i yoo-ni nat-ta  
                           Pres Comp
- b. (i) Taroo-wa, oyog-i-ta-ku  $\emptyset$  nat-ta  
           Top(Sub) 'swim' 'wish' 'become'Pst  
           "Taro has come to wish to swim"
- (ii) \*Taroo-wa, oyog-i-ta-i yoo-ni nat-ta  
                           Pres Comp
- c. (i) Taroo-wa, Hanako-ni ki-te-hosi-ku  $\emptyset$  nat-ta  
           Top(Sub) IO 'come' 'want' 'become'Pst  
           "Taro has come to want Hanako to come"
- (ii) \*Taroo-wa, Hanako-ni ki-te-hosi-i yoo-ni nat-ta  
   Pres Comp

This perfect complementary distribution, noted in the contrast between (37) and (43), and in (44), strongly suggests that the Predicate nar-u is a single lexical item which requires that the Predicate Complementizer yoo-ni be present if and only if the complement Predicate is a Verb, but not an Adjective or a Nominal-Adjective.

The second argument for the complex sentence analysis of sentences like (37b) and (37c) is to rule out a very plausible simplex sentence analysis; thus, in particular, the analysis according to which isogasi-ku in (37b) and genki-ni in (37c) might be manner Adverbs. First, manner Adverbs in general occur freely anywhere, but not ku- and ni-phrases associated with nar-u "become". Thus contrast the members of each of the following pairs, where ku- and ni-phrases are preposed to sentence-initial position.



- (45) a. (i) ?\*(Siken-de) isogasi-ku, Taroo-wa, nat-ta  
                   'exam' 'with' 'busy'                     Top(Sub) 'become' Pst  
                   "\*Busy with the exams, Taro has become"
- (ii) Isogasi-ku, Taroo-wa, hatarai-ta  
                   'busily'                     Top(Sub) 'work' Pst  
                   "Busily, Taro worked"
- b. (i) ?\*Genki-ni, Taroo-wa, nat-ta  
                   'well'                     Top(Sub) 'become' Pst  
                   "\*Well, Taro has become"
- (ii) Genki-ni, Taroo-wa, arui-ta  
                   'well'                     Top(Sub) 'walk' Pst  
                   "Cheerfully/Energetically, Taro walked"

Secondly, manner Adverbs can normally delete without affecting grammaticality, but ku- and ni-phrases associated with nar-u "become" cannot, as in (46).

- (46) a. Taroo-wa, isogasi-ku ( \*  $\emptyset$  ) nat-ta  
                   Top(Sub) 'busy'                     'become' Pst  
                   "Taro has become busy (\* $\emptyset$ )"
- b. Taroo-wa, genki-ni ( \*  $\emptyset$  ) nat-ta  
                   Top(Sub) 'well'                     'become' Pst  
                   "Taro has become well (\* $\emptyset$ )"

Thirdly, ku- and ni-phrases associated with nar-u can be replaced by the Predicate sentential pro-form soo "so", but not true manner Adverbs, as in (47).

- (47) a. Taroo-wa,  $\left\{ \begin{array}{l} \text{isogasi-ku} \\ \text{'busy'} \\ \text{genki-ni} \\ \text{'well'} \end{array} \right\}$  nat-ta;  
                   Contr(Sub)    'become' Pst
- Zi-roo-mo           soo nat-ta  
                   'also'           'so'           'become' Pst

"Taro has become busy/well, and \*Jiro also has become so"

- b. Taroo-wa,                    { nessin-ni } hatarai-ta;  
       Contr(Sub)                { 'in earnest' } 'work' Pst  
                                   { isogasi-ku }  
       \*Ziroo-mo                 { genki-ni }  
       'also' (Sub)                { soo } hatarai-ta  
                                   { 'so' } 'work' Pst

"Taro worked in earnest/busily/energetically, and  
 Jiro also worked so"

This observation not only shows that the ni- and ku-phrases in question are not manner Adverbs, but also suggests that they must be Predicate sentential complements to nar-u "become" at some level of derivations.

Fourthly, no Adverb of any sort can take place of the ku- and ni-phrases under consideration here, although they appear with other Verbs.

- (48) a. (i) \*Taroo-wa,                wazato                nat-ta  
                                   Top(Sub)    'on purpose'    'become' Pst  
                                   "\*Taro has become on purpose"
- (ii) Taroo-wa,                wazato                huzake-ta  
                                   Top(Sub)    'on purpose'    'jest' Pst  
                                   "Taro jested on purpose"
- b. (i) \*Taroo-wa,                mattaku                nar-a-na-i  
                                   Top(Sub)    'quite'            'become' 'not' Pres  
                                   "\*Taro does not become at all"
- (ii) Taroo-wa,                mattaku                hatarak-a-na-i  
                                   Top(Sub)    'quite'            'work'    'not' Pres  
                                   "Taro does not work at all"

The ungrammaticality of (48a-i) and (38b-i) shows that nar-u "become" does not require any Adverb, including manner Adverbs. Thus isogasi-ku in (37b) and genki-ni in (37c) are not Adverbs at all. This strongly suggests that the simplex sentence analysis is incorrect, because it cannot explain why only isogasi-ku and genki-ni, but not wazato "on purpose" and mattaku "quite", appear with nar-u. The complex sentence analysis, however, explains it very naturally by stating correctly that

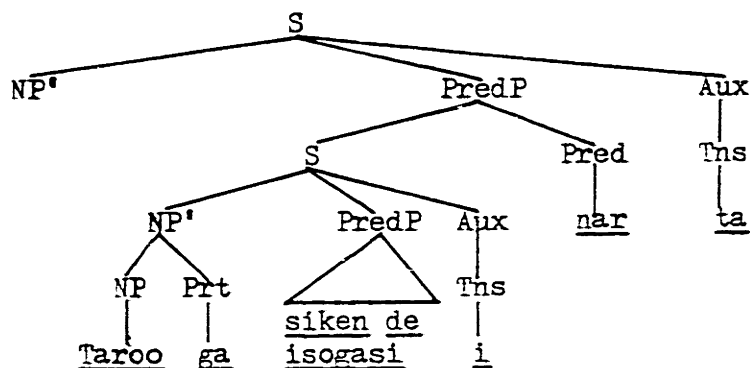
the complement sentence (49a) in (48a-i) is ungrammatical, because wazato "on purpose" is an Adverb, while (49b) and (49c) in (37b) and (37c) are grammatical, because isogasi-ku and genki-ni are not manner Adverbs, but the variants of isogasi-i and genki-da. Similarly, mattaku "quite" is an Adverb, the ungrammaticality of (48b-i) can be explained by the ungrammaticality of the complement sentence (49d) in (48b-i).

- (49) a. \*Taroo-ga wazato-da  
           Sub 'on purpose' Pres  
           "Taro is on purpose"
- b. Taroo-ga siken-de isogasi-i  
           Sub 'exam' 'with' 'busy' Pres  
           "Taro is busy with the exams"
- c. Taroo-ga genki-da  
           Sub 'well' Pres  
           "Taro is well"
- d. \*Taroo-ga mattaku-da  
           Sub 'quite' Pres  
           "\*Taro is quite"

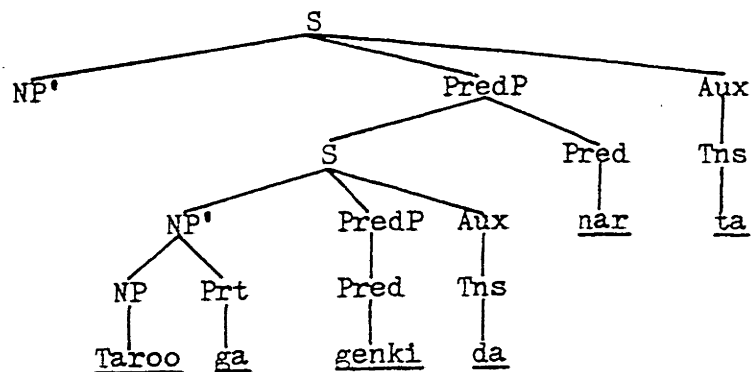
These four observations thus exclude a very likely simplex sentence analysis according to which ku- and ni-phrases associated with nar-u "become" are manner Adverbs, and support the complex sentence analysis for such sentences as (37b) and (37c).

The deep structures for, say, (37b) and (37c) will thus be specified as in the following tree diagrams:

(50) a.

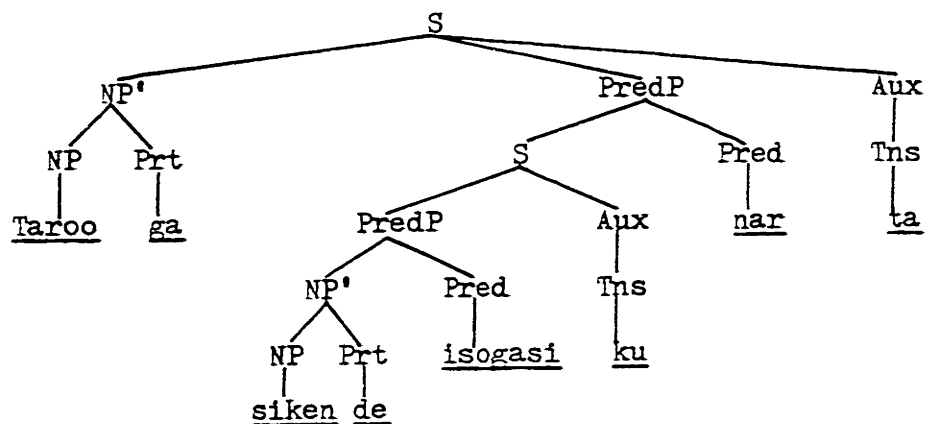


b.

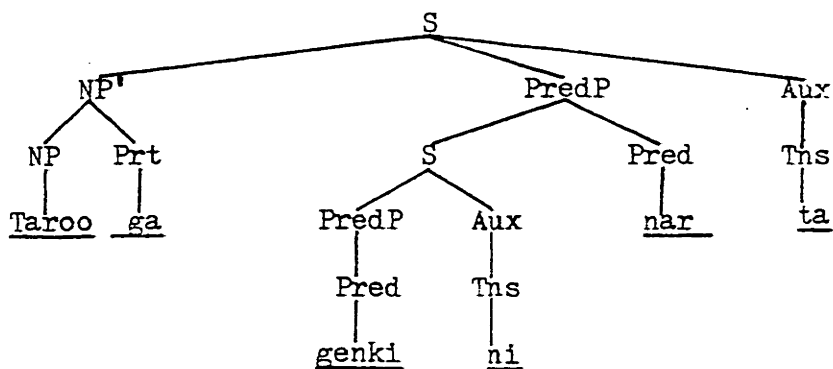


I assume here that the complement sentences take the Present Tense. One reason is the obligatory expansions of a Sentence into a Noun Phrase', a Predicate Phrase and an Auxiliary, and of the Auxiliary into a Tense and an optional Mood. The more relevant reason is that only the Present Tense appears when the complement Predicate in the inchoative construction is a Verb, as in (37a). Although I know of no direct evidence for it, these two reasons will support this assumption. If this assumption is correct, then it is necessary to have morphological rules which convert the Present Tense forms i and da into ku and ni, respectively, so that the actual sentence forms in (37b) and (37c) can be achieved. Thus the application of Complement Subject Raising and these morphological rules to deep structures (50a) and (50b) will generate the following surface structures:

(51) a.



b.



V.4.3. Noun Phrases with the Particle ni In this final section, I will attempt to show that sentences like (37d) are simplex sentences, as distinct from the other inchoative constructions including the types of sentences like (37a) through (37c). I will argue particularly for a simplex sentence analysis according to which the ni-phrase in (37d) is a Noun Phrase in deep structure, but not a transformationally derived phrase.

First of all, sensee-ni "teacher" in (37d) behaves like a Noun Phrase with respect to transformations of Noun Phrase movement such as Cleft Formation and Topicalization, as in (52).

- (52) a. Taroo-ga nat-ta no-wa, sensee (-ni) da  
           Sub 'become' Pst Nom Top(Sub) 'teacher' Cop+Pres  
       "It was a teacher that Taro became"
- b. Sensee-ni-wa, Taroo-ga nat-ta  
    'teacher' Top Sub 'become' Pst  
    "\*As for a teacher, Taro has become it"

Furthermore, sensee-ni in (37d) can seem to be more freely preposed, as in (53a), than isogasi-ku "busy" in (37b) and genki-ni "well" in (37c), as in (53b) and (54c).

- (53) a. Sensee-ni, Taroo-ga nat-ta  
       'teacher' Sub 'become' Pst  
       "A teacher, Taro has become"

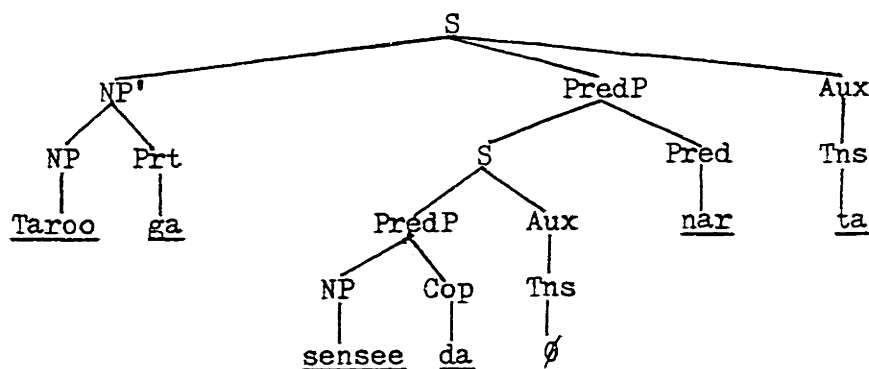
- b. ?\*(Siken-de) isogasi-ku, Taroo-ga nat-ta  
'exam''with' 'busy' Sub 'become' Pst  
"\*Busy with the exams, Taro has become"
- c. ?\*Genki-ni, Taroo-ga nat-ta  
'well' Sub 'become' Pst  
"\*Well, Taro has become"

Secondly, sensee-ni in (37d) may be pronominalized with the anaphoric Pronoun sore "it", preserving the same morpheme ni in the original position, as in (54a), but not isogasi-ku in (37b) and genki-ni in (37c), as in (54b) and (54c).

- (54) a. ?Hanako-wa, sensee-ni nat-ta;  
Contr(Sub) 'teacher' 'become' Pst  
Taroo-mo sore-ni nat-ta  
'also'(Sub) 'it' 'become' Pst  
"Hanako has become a teacher, and \*Taro has also become it"
- b. \*Hanako-wa, siken-de isogasi-ku nat-ta;  
Contr(Sub) 'exam''with' 'busy' 'become' Pst  
Taroo-mo sore-ni nat-ta  
'also'(Sub) 'it' 'become' Pst  
"Hanako has become busy with the exams, and \*Taro has also become it"
- c. \*Hanako-wa, genki-ni nat-ta;  
Contr(Sub) 'well' 'become' Pst  
Taroo-mo sore-ni nat-ta  
'also'(Sub) 'it' 'become' Pst  
"Hanako has become well, and \*Taro has also become it"

Thirdly, the complex sentence analysis proposed for the other inchoative constructions cannot explain the function of sensee-ni in (37d) as a Noun Phrase. Assume this analysis for the derivation of (37d). Then the surface structure for (37d) will be specified as in tree diagram (55) after the application of Complement Subject Raising.

(55)



What is relevant here is that the equivalent of the actual form sensee-ni in (55) is dominated by a Sentence node, not a Noun Phrase node. Under this complex sentence analysis, therefore, the fact noted above that sensee-ni in (37d) works like a Noun Phrase for some transformations of Noun Phrase movement and substitution cannot be explained in a natural way. This suggests that the complex sentence analysis is incorrect for the derivation of sentences like (37d). The three observations in the preceding discussion, therefore, lead me to conclude that Noun Phrases with the morpheme ni in inchoative constructions of the (37d)-type are deep structure elements, but not transformationally derived phrases.

In summary, we have seen that there are two distinct types of the inchoative Predicate nar-u "become"; one type of inchoative Predicate will require a Noun Phrase followed by the Particle ni, whose semantic function is not at all clear to me, and the other type of inchoative Predicate will require an empty subject and a Predicate sentential complement in deep structure. This latter type will further be restricted lexically in such a way as to allow the occurrence of the Predicate Complementizer yoo-ni if and only if the complement sentence contains a Verb, but not any other class of Predicate, and further to prohibit the occurrence of the Copula da in the complement sentence.

## NOTES

1. I assume that kamosirena-i "may--Presumptive" and nitigaina-i "must" are syntactically unanalyzable elements. It is quite conceivable that they may derive from ka-mo-sir-e-na-i ("or"--"also"--"know"--"not"--Pres) and ni-tiga-i-na-i ("differ"--"not"--Pres), respectively. Under this analysis, many ad hoc transformational processes must be postulated in order to produce such amalgams of smaller components, and further many ad hoc rules of semantic interpretation which are exactly parallel to those transformational rules must be postulated in order to produce the meaning of the items in question as semantically primitive units from the associated amalgams of smaller components. Whichever analysis is adopted, however, does not affect the content of the discussion which follows.

2. Cf. Postal (1970, 62) for a notion of Experiencer.

3. Observe that four possible combinations of Tenses obtain between the two Predicates sasow "invite" and yoo "seem" in (10a).

(1) Taroo-ga Hanako-o paatii-ni sasow-u yoo-da (Pres-Pres)  
"Taro seems to invite Hanako to the party"

Taroo-ga Hanako-o paatii-ni sasot-ta yoo-da (Pst-Pres)  
"Taro seems to have invited Hanako to the party"

Taroo-ga Hanako-o paatii-ni sasow-u yoo-dat-ta (Pres-Pst)  
"Taro seemed to invite Hanako to the party"

Taroo-ga Hanako-o paatii-ni sasot-ta yoo-dat-ta (Pst-Pst)  
"Taro seemed to have invited Hanako to the party"

This is generally true with respect to the constructions under consideration. This observation strongly supports the analysis of Predicates like



yoo-da "seem" as higher Predicates.

4. I am loosely using the term "subjectless in deep structure".

By this I mean that the Predicate in question does not have a lexically specified subject Noun Phrase in deep structure, but I don't mean to say that it does not have even an empty Noun Phrase node in the subject position of deep structure. This interpretation holds true in the discussion to follow.

5. The first half of this claim can be confirmed by the discussion of Predicate complementation in Sections III.5.1, IV.2.2, and IV.3.2, and its second half by the discussion of Noun complementation in Sections IV.1.3 and IV.3.1.

6. I feel the grammatical status of such sentences as (ii) to be dubious, because, although interpretable, contrastive phrases like inu-wa and neko-wa do not appear in strictly parallel syntactic contexts.

(ii) Inu-wa Taroo-ga nagut-ta ga,  
 'dog'Contr(Obj) Sub 'beat'Pst 'but'  
neko-wa Ziroo-ni nagur-are-ta  
 'cat'Contr(Sub) 'by' 'beat' Pass Pst  
 "?Taro beat the dog, but the cat was beaten by Jiro"

7. I have listed yoo-ni sentential complements in their deep structure forms, because these are the only candidates for the Topicalization of the complement subject Noun Phrase.

8. I am not saying that they are ambiguous.

9. There is another generalization, that is, that a Noun Phrase of

the embedded sentence whose subject is not present (i.e., has been deleted or raised by Complement Subject Deletion or Raising) can be topicalized to the next higher sentence, as in:

- (iii) Taroo-ga Ziroo<sub>1</sub>-ni  $\left[ \emptyset_1 \text{ sono hon-o } \right] \text{ yom-u } \left. \right]_S$   
           Sub          IO          'that' book' DO 'read' Pres  
           { koto-o Nom DO }          susume-ta (Complement Subject Deletion  
           { yoo-ni Comp }          'advise/suggest' Pst          involved)  
           "Taro advised Jiro to read that book"

Sono hon-wa, Taroo-ga Ziroo<sub>1</sub>-ni  $\left[ \emptyset_1 \emptyset \right] \text{ yom-u } \left. \right]_S$   
           { koto-o }          susume-ta  
           { yoo-ni }  
           "As for that book, Taro advised Jiro to read it"

- (iv) Taroo-ga  $\left[ \emptyset \text{ sono hon-o } \right] \text{ yom-da } \left. \right]_S \text{ soo-da}$   
           Sub          'that' book' Obj 'read' Pst 'be said' Pres  
           "Taro is said to have read that book/ It is said that Taro  
           read that book" (Complement Subject Raising involved)

Sono hon-wa, Taroo-ga  $\left[ \emptyset \emptyset \right] \text{ yom-da } \left. \right]_S \text{ soo-da}$   
           "As for that book, Taro is said to have read it/As for that  
           book, it is said that Taro read it"

10. For penetrating observations of the exclusive or exhaustive ga, as well as of the topic or thematic wa, see Kuno (1970), to which I owe a great deal.

11. It should be noted that this version of the rule of Complement Subject Raising is different from the rule in English which has been referred to variously, e.g., as Pronoun Replacement (Rosenbaum, 1967), It Replacement (Lakoff, 1966a), and Subject Raising (Kiparsky and Kiparsky, 1967). That is, the rule in Japanese I have proposed, but not the corresponding English rule, raises a complement subject into the empty subject position of the next higher sentence.

CHAPTER VI: COMPLEMENT SUBJECT DELETION

VI.0. Introduction The principal purpose of this Chapter is to provide evidence for the existence of a rule of Complement Subject Deletion in Japanese.<sup>1</sup> In the course of the discussion to follow, it will become apparent that there are at least two major subcases of this rule, which deletes the subject Noun Phrase of a complement sentence under identity with either the subject or indirect object Noun Phrase of the next higher sentence. Furthermore, certain considerations indicate that the application of this rule ranges over certain subtypes of Predicates as well as Noun sentential complements, as is exemplified in the following paradigms of sentences:

(1) Predicate complementation:

- a.  $\underbrace{\text{Taroo}_i\text{-wa,}}_{\text{Top(Sub)}} \left[ \begin{array}{l} \emptyset_i \text{ yotto-de} \quad \text{Taiheeyoo-o} \\ \text{'yacht' 'by' 'the Pacific' Obj} \\ \text{oodansi-yoo} \quad \text{to} \quad \text{kuwadate-ta} \\ \text{'cross' Vol} \quad \text{Comp} \quad \text{'undertake' Pst} \end{array} \right]_S$   
 "Taro undertook to corss the Pacific by yacht"
- b.  $\underbrace{\text{Taroo}_i\text{-wa,}}_{\text{Top(Sub)}} \left[ \begin{array}{l} \emptyset_i \text{ konban} \quad \text{tetuyasu-ru} \\ \text{'tonight' 'sit up all night' Pres} \end{array} \right]_S$   
 tumori-da  
 'intend' Pres  
 "Taro intends to sit up all night tonight"
- c.  $\underbrace{\text{Taroo}_i\text{-wa,}}_{\text{Top(Sub)}} \left[ \begin{array}{l} \emptyset_i \text{ deki-ru} \quad \text{dake} \quad \text{monku-o} \\ \text{'possible' Pres 'as far as' 'passage' Obj} \\ \text{yuw-a-na-i} \quad \text{yoo-ni} \quad \text{tutome-ta} \\ \text{'say' 'not' Pres} \quad \text{Comp} \quad \text{'endeavor' Pst} \end{array} \right]_S$   
 "Taro endeavored not to complain as much as possible"
- d.  $\underbrace{\text{Taroo-wa,}}_{\text{Top(Sub)}} \underbrace{\text{Ziroo}_i\text{-ni}}_{\text{IO}} \left[ \begin{array}{l} \emptyset_i \text{ isya-ni} \quad \text{soodansu-ru} \\ \text{'doctor' IO} \quad \text{'consult' Pres} \end{array} \right]_S$   
 yoo-ni susume-ta  
 Comp 'advise/suggest' Pst  
 "Taro suggested to Jiro to consult the doctor"

## (2) Noun Complementation:

- a.  $\underline{\text{Taroo}}_i\text{-wa,}$   $\left[ \emptyset_i \text{ sakadati-si-te} \right]$   $\text{aruk-u}$   $\left. \right]_S$   
 Top(Sub) 'stand on one's hands' 'and' 'walk' Pres  
 koto-o kokoromi-ta  
 Nom Obj 'attempt' Pst  
 "Taro attempted to stand on his hands and walk"
- b.  $\underline{\text{Taroo}}_i\text{-wa,}$   $\text{Zi-roo-ni}$   $\left[ \emptyset_i \text{ Porusye-o} \right]$   $\text{ka-u}$   $\left. \right]_S$   
 Top(Sub) IO 'Porsche' Obj 'buy' Pres  
 koto-o yakusokusi-ta  
 Nom Obj 'promise' Pst  
 "Taro promised Jiro to buy a Porsche"
- c.  $\text{Taroo-wa,}$   $\underline{\text{Zi-roo}}_i\text{-ni}$   $\left[ \emptyset_i \text{ Porusye-o} \right]$   $\text{ka-u}$   $\left. \right]_S$   
 Top(Sub) 'Porsche' Obj 'buy' Pres  
 koto-o susume-ta  
 Nom Obj 'advise/suggest' Pst  
 "Taro suggested to Jiro to buy a Porsche"

Sentences (1d) and (2c) represent the deletion of the complement subject under identity with the matrix indirect object, while the others represent the deletion of the complement subject under identity with the matrix subject.

What is further shown is that the rule of Complement Subject Deletion is obligatory for the derivation of certain other instances of Noun complementation of a type not found in the Indo-European languages. This type of complement constructions will be exemplified by existential sentences like (3).

- (3) a.  $\underline{\text{Taroo}}_i\text{-(-ni)-wa,}$   $\left[ \emptyset_i \text{ Yooroppa-ni} \right]$   $\text{it-ta}$   $\left. \right]_S$   $\text{koto-ga}$   
 ? Top 'Europe' 'to' 'go' Pst 'thing' Sub  
 ar-u  
 'exist' Pres  
 "Taro has been to Europe"
- b.  $\underline{\text{Taroo}}_i\text{-(-ni)-wa,}$   $\left[ \emptyset_i \text{ hito-no} \right]$   $\text{waruguti-o}$   $\text{it-ta}$   $\left. \right]_S$   
 ? Top 'others' Poss 'abuse' Obj 'say' Pst  
 tamesi-ga na-i  
 'attempt' Sub 'not exist' Pres  
 "Taro has made no attempt to speak ill of others /  
 (Literally) \*There has been no attempt to speak ill of others  
 in Taro"

These sentences represent instances where the complement sentence whose subject is deleted under identity with a certain matrix ni-phrase is tensed, or more precisely, involves reference to past time.

Finally, certain other theoretical implications which are suggested by sentential complement constructions which undergo the rule of Complement Subject Deletion will be considered in some detail.

VI.1. Evidence for Underlying Complement Subject      The first logical step towards justifying the existence of a rule of Complement Subject Deletion is to prove that the complement sentences in (1) through (3) have underlying subject Noun Phrases which are identical, i.e., coreferential, to certain Noun Phrases of the matrix sentences. This will in effect exclude the apparent possibility that these complement sentences might not have full sentential forms in underlying structure.

VI.1.1. Reflexivization--a Preliminary Discussion      The most telling argument stems from a consideration of the distributional properties of the reflexive Pronoun zibun "self" in Japanese. I will first discuss this phenomenon in great detail. Kuno (1971b) correctly observes that the antecedent of the reflexive Pronoun is the subject Noun Phrase of the sentence. Thus observe first that zibun refers back only to the subject, but no other phrase.

- (4) a. Taroo<sub>i</sub>-ga Ziroo-ni zibun<sub>i</sub>-no tomodati-o syookaisi-ta  
           Sub            IO 'self' Pos 'friend' DO 'introduce' Pst  
           "Tarō introduced his (own) friend to Jiro"
- b. Taroo<sub>i</sub>-ga Ziroo-o zibun<sub>i</sub>-no kaban-de nagut-ta  
           Sub            Obj 'self' Pos 'bag' 'with' 'strike' Pst  
           "Tarō struck Jiro with his<sub>i</sub> bag"

- c. Taroo<sub>1</sub>-ga Ziroo-to zibun<sub>1</sub>-no heya-de kenkasi-ta  
 Sub 'with' 'self' Pos 'room' 'in' 'quarrel' Pst  
 "Taro<sub>1</sub> quarreled with Jiro in his<sub>1</sub> room"

Observe further that zibun "self" can never be used to refer back to any other Noun Phrase than the subject Noun Phrase even in contexts where its reference to the subject is precluded by the idiosyncratic properties of Predicates.

- (5) a. \*Boku-ga Taroo<sub>1</sub>-ni zibun<sub>1</sub>-no hon-o morat-ta  
 'I-male' Sub 'by' 'self' Pos 'book' Obj 'be given' Pst  
 "I was given his<sub>1</sub> (own) book by Taro<sub>1</sub>"
- b. \*Hanako-ga Taroo<sub>1</sub>-ni zibun<sub>1</sub>-no seekoo-o negat-ta  
 Sub IO 'self' Pos 'success' DO 'wish' Pst  
 "Hanako wished Taro<sub>1</sub> his<sub>1</sub> (own) success"

Since one cannot be given (in the sense of moraw-u) his own property by someone else, the possibility that zibun might refer back to the subject boku "I" in (5a) is precluded. Similarly, since one cannot wish his own success to someone else, the possibility that zibun might refer back to the subject Hanako in (5b) is also precluded. Even under these circumstances, zibun cannot refer back to any Noun Phrase other than the subject Noun Phrase. This fact further corroborates the claim that the antecedent of zibun is a subject Noun Phrase.

This basic generalization holds true of various types of complex sentences as well. The following data will elaborate this generalization further. First, the antecedent of the reflexive zibun may be the subject Noun Phrase of the next higher sentence.

- (6) a. Noun sentential complement:

Taroo<sub>1</sub>-wa, [ zibun<sub>1</sub>-ga doroboo-o hatarai-ta ]<sub>S</sub>  
 Top(Sub) Sub 'robbery' Obj 'undertake' Pst

to-yu-u zizitu-o kokuhakusi-ta  
 Comp 'fact' Obj 'confess' Pst  
 "Taro<sub>i</sub> confessed the fact that he<sub>i</sub> committed robbery"

b. To Predicate sentential complement:

Taroo<sub>i</sub>-wa, Ziroo-ni [ dare-ga zibun<sub>i</sub>-no tokee-o  
 Top(Sub) IO 'who' Sub 'self' Pos 'watch' Obj  
 nusun-da ka ]<sub>S</sub> to tazune-ta  
 'steal' Pst Q Comp 'ask' Pst  
 "Taro<sub>i</sub> asked Jiro who stole his<sub>i</sub> watch"

c. Relative clause:

Taroo<sub>i</sub>-wa, [ zibun<sub>i</sub>-ga nusum-are-ta ]<sub>S</sub>  
 Top(Sub) 'self' Sub 'steal' Pass Pst  
 kuruma-o mituke-ta  
 'car' Obj 'find' Pst  
 "Taro<sub>i</sub> found the car which he<sub>i</sub> had been robbed of"

d. Subordinate clause:

Taroo<sub>i</sub>-wa, [ zibun<sub>i</sub>-ga nai-ta ]<sub>S</sub> toki,  
 Top(Sub) 'self' Sub 'cry' Pst 'when'  
 hazukasi-kat-ta  
 'be ashamed' Pst  
 "Taro<sub>i</sub>, when he<sub>i</sub> cried, felt ashamed"

Secondly, in cases where the antecedent of the reflexive zibun may be the subject Noun Phrase of the next higher sentence, the reflexive zibun may precede its antecedent in the surface ordering. Thus, observe the following sentences in (7), effected by certain transformations from the sentences in (6).

(7) a. Noun sentential complement:

[ zibun<sub>i</sub>-ga doroboo-o hatarai-ta ]<sub>S</sub> to-yu-u zizitu-wa,  
 Taroo<sub>i</sub>-ga kokuhakusi-ta Top(Obj)  
 "As for the fact that he<sub>i</sub> committed robbery, Taro<sub>i</sub> confessed it"

b. To Predicate sentential complement:

$\left[ \text{dare-ga } \underline{\text{zibun}}_i\text{-no tokee-o nusun-da ka } \right]_S \text{ to, } \underline{\text{Taroo}}_i\text{-wa,}$   
 $\text{Zi-roo-ni tazune-ta}$   
 "Who stole his<sub>i</sub> watch, Taro<sub>i</sub> asked Jiro"

c. Relative clause:

$\left[ \underline{\text{zibun}}_i\text{-ga nusum-are-ta } \right]_S \text{ kuruma-o, } \underline{\text{Taroo}}_i\text{-wa, mituke-ta}^2$   
 "The car which he<sub>i</sub> had been robbed of, Taro<sub>i</sub> found"

d. Subordinate clause:

$\left[ \underline{\text{zibun}}_i\text{-ga nai-ta } \right]_S \text{ toki, Taroo-wa, hazukasi-kat-ta}$   
 "When he<sub>i</sub> cried, Taro<sub>i</sub> felt ashamed"

Thirdly, the antecedent of the reflexive Pronoun zibun may be the subject Noun Phrase either of the sentence most directly dominating the zibun or of the next higher sentence. In other words, some sentences are ambiguous with respect to the antecedent of the reflexive zibun.

(8) a. Noun sentential complement:

$\underline{\text{Taroo}}_i\text{-wa, Zi-roo-ni } \left[ \underline{\text{Hanako}}_j\text{-ga } \underline{\text{zibun}}_{i,j}\text{-no kaban-o}$   
 $\text{Top(Sub) IO Sub'self' }_{i,j} \text{ Pos 'bag' Obj}$   
 $\text{nakusi-ta } \right]_S \text{ koto-o tutae-ta}$   
 'lose' Pst Nom DO 'convey' Pst  
 "Taro<sub>i</sub> told Jiro that Hanako<sub>j</sub> had lost his<sub>i</sub>/her<sub>j</sub> bag"

b. To Predicate sentential complement:

$\left[ \underline{\text{Zi-roo}}_i\text{-ga } \underline{\text{zibun}}_{i,j}\text{-no tomodati-o nagut-ta } \right]_S \text{ to,}$   
 $\text{Sub'self' }_{i,j} \text{ Pos 'friend' Obj 'beat' Pst Comp}$   
 $\underline{\text{Taroo}}_j\text{-wa, omot-ta}$   
 $\text{Top(Sub) 'think' Pst}$   
 "That Jiro<sub>i</sub> beat his<sub>i,j</sub> friend, Taro<sub>j</sub> thought"

c. Relative clause:

$\underline{\text{Taroo}}_i\text{-wa, } \left[ \underline{\text{zibun}}_{i,j}\text{-no inu-o koros-i-ta } \right]_S$   
 $\text{Top(Sub) 'self' }_{i,j} \text{ Pos 'dog' Obj 'kill' Pst}$   
 $\underline{\text{otoko}}_j\text{-o tukamae-ta}$   
 'man' Obj 'capture' Pst  
 "Taro<sub>i</sub> captured the man<sub>j</sub> who killed his<sub>i,j</sub> dog"



## d. Subordinate clause:

$\underline{\text{Taroo}}_i$ -wa,  $\int$   $\underline{\text{Ziroo}}_j$ -ga  $\underline{\text{zibun}}_{i,j}$ -no koto bakari  
 Top(Sub) Sub Pos 'thing' 'only'  
 hanas-u  $\int_S$  no-de, hara-ga tat-ta  
 'speak'Pres 'because' 'belly'Obj 'stand'Pst  
 "Taro<sub>i</sub> got angry, because Jiro<sub>j</sub> talked about his<sub>i,j</sub> affair  
 only"

Particularly noteworthy is sentence (8c), where the subject Noun Phrase of a relative clause is deleted. Since this sentence is ambiguous with respect to the referents of the reflexive zibun, it will be represented as deriving from the following two underlying forms:

- (9) a.  $\text{Taroo}_i$ -ga  $\int$   $\int$   $\text{otoko}_j$ -ga  $\text{Taroo}_i$ -no inu-o koros-i-ta  $\int_S$   
 $\text{otoko}_j$ -o  $\int_{NP}$  tukamae-ta

"Taro<sub>i</sub> captured  $\int$  the man<sub>j</sub>  $\int$  the man<sub>j</sub> killed Taro<sub>i</sub>'s dog  
 $\int_S \int_{NP}$ "

- b.  $\text{Taroo}$ -ga  $\int$   $\int$   $\text{otoko}_i$ -ga  $\text{otoko}_i$ -no inu-o koros-i-ta  $\int_S$   
 $\text{otoko}_i$ -o  $\int_{NP}$  tukamae-ta

"Taro captured  $\int$  the man<sub>i</sub>  $\int$  the man<sub>i</sub> killed the man<sub>i</sub>'s dog  
 $\int_S \int_{NP}$ "

Since the rule of Relative Clause Formation in Japanese (cf. Section II.3), which deletes a Noun Phrase of a relative clause under identity with an anaphoric Noun Phrase (i.e., the head Noun Phrase of the relative clause), operates on the structure which goes beyond the boundary of a sentence, it cannot apply to the most deeply embedded sentence (or, more generally, it must start on the next most deeply embedded sentence cycle). On the other hand, the rule of Zibun Reflexivization must apply to the most deeply embedded sentence, because it operates on the boundary of a sentence (including a simplex sentence as well as a complex sentence).

Under this hypothesis of the cyclical application of transformations, it will be proved that there is no unique order between Reflexivization and Relative Clause Formation. Suppose first that Reflexivization applies prior to the application of Relative Clause Formation. Then, the ambiguity of (8c) can be correctly explained in the following manner:

(10) a. First cycle (i.e., the relative clause level) of (9a):

No operations take place.

Second cycle (i.e., the highest sentence level):

(i) Reflexivization:

$$\begin{array}{l} \text{Taroo}_i\text{-ga} \quad \left[ \left[ \text{otoko}_j\text{-ga} \quad \text{zibun}_i\text{-no inu-o koros-i-ta} \right]_S \\ \text{otoko}_j\text{-o} \quad \left]_{NP'} \quad \text{tukamae-ta} \end{array}$$

(ii) Relative Clause Formation:

$$\begin{array}{l} \text{Taroo}_i\text{-ga} \quad \left[ \left[ \emptyset_j \quad \text{zibun}_i\text{-no inu-o koros-i-ta} \right]_S \\ \text{otoko}_j\text{-o} \quad \left]_{NP'} \quad \text{tukamae-ta} \end{array}$$

b. First cycle (i.e., the relative clause level) of (9b):

(i) Reflexivization:

$$\begin{array}{l} \text{Taroo-ga} \quad \left[ \left[ \text{otoko}_i\text{-ga} \quad \text{zibun}_i\text{-no inu-o koros-i-ta} \right]_S \\ \text{otoko}_i\text{-o} \quad \left]_{NP'} \quad \text{tukamae-ta} \end{array}$$

Second cycle (i.e., the highest sentence level):

(ii) Relative Clause Formation:

$$\begin{array}{l} \text{Taroo-ga} \quad \left[ \left[ \emptyset_i \quad \text{zibun}_i\text{-no inu-o koros-i-ta} \right]_S \\ \text{otoko}_i\text{-o} \quad \left]_{NP'} \quad \text{tukamae-ta} \end{array}$$

Suppose next that Relative Clause Formation precedes Reflexivization in the ordering. Then, the ambiguity of (8c) can also be explained correctly in the following fashion:

(11) a. First cycle of (9a):

No operations take place.

Second cycle:

(i) Relative Clause Formation:

$$\begin{array}{l} \text{Taroo}_i\text{-ga} \quad \left[ \left[ \emptyset_j \text{ Taroo}_i\text{-no inu-o koros-i-ta} \right]_S \right. \\ \left. \text{otoko}_j\text{-o} \right]_{NP'} \text{ tukamae-ta} \end{array}$$

(ii) Reflexivization:

$$\begin{array}{l} \text{Taroo}_i\text{-ga} \quad \left[ \left[ \emptyset_j \text{ zibun}_i\text{-no inu-o koros-i-ta} \right]_S \right. \\ \left. \text{otoko}_j\text{-o} \right]_{NP'} \text{ tukamae-ta} \end{array}$$

b. First cycle of (9b):

(i) Reflexivization:

$$\begin{array}{l} \text{Taroo-ga} \quad \left[ \left[ \text{otoko}_i\text{-ga zibun}_i\text{-no inu-o koros-i-ta} \right]_S \right. \\ \left. \text{otoko}_i\text{-o} \right]_{NP'} \text{ tukamae-ta} \end{array}$$

Second cycle:

(ii) Relative Clause Formation:

$$\begin{array}{l} \text{Taroo-ga} \quad \left[ \left[ \emptyset_i \text{ zibun}_i\text{-no inu-o koros-i-ta} \right]_S \right. \\ \left. \text{otoko}_i\text{-o} \right]_{NP'} \text{ tukamae-ta} \end{array}$$

Under the cyclical hypothesis, the derivation of (8c) from (9b) is exactly the same in either order of Reflexivization and Relative Clause Formation, as is apparent from (10b) and (11b). In the derivation of (8c) from (9a), both rules are operative on the same cycle in either order, but no conflict arises because one and the same element is never involved in both rules, as is apparent from the second cycle in (10a) and (11a).

If, however, we do not assume this cyclical application of transformations, then we are faced with the problem of finding some principled basis for excluding the possibility, among others, that Relative Clause Formation may apply prior to the application of Reflexivization, the

possibility which, if it is to be materialized, will bring about the unwanted consequence that the effect of the application of Relative Clause Formation to (9b), namely, Taroo-ga  $\int$   $\emptyset_i$  otoko<sub>i</sub>-no inu-o koros-i-ta  $\int$ <sub>S</sub> otoko<sub>i</sub>-o tukamae-ta, cannot be the proper input to Reflexivization, because the antecedent of otoko(-no) "man('s)", the subject Noun Phrase of the relative clause, has been deleted by the former rule. A conceivable principled basis would be the hypothesis that all transformations of Noun Phrase deletion, including Relative Clause Formation and Complement Subject Deletion, consist of two different operations, Doom Marking and Doom Erasure, to borrow Postal's terms (1968b). If it is assumed to be correct, then the first application of Relative Clause Formation to (9b) will produce something like Taroo-ga  $\int$  otoko<sub>i</sub>(+Doom)-ga otoko<sub>i</sub>-no inu-o koros-i-ta  $\int$ <sub>S</sub> otoko<sub>i</sub>-o tukamae-ta, and the second application of Reflexivization to this structure will yield Taroo-ga  $\int$  otoko<sub>i</sub>(+Doom)-ga zibun<sub>i</sub>-no inu-o koros-i-ta  $\int$ <sub>S</sub> otoko<sub>i</sub>-o tukamae-ta, to which, finally, Doom Erasure applies, then giving the desired result of (8c). Since the operation of Doom Marking is directly associated with phenomena involving Pronominalization as well as Reflexivization in Japanese, the validity of this hypothesis will be left unsettled until it can be gone into in full perspective.

All preceding considerations of the ambiguity of (8c) at least demonstrate the validity of the cyclical application of transformations, and further suggest that the subject Noun Phrase which is the antecedent of the reflexive zibun "self" may not be present in surface structure if a coreferential Noun Phrase is present in the higher sentence.

VI.1.2. Reflexivization in Complementation On the basis of this long preliminary discussion, consider what is implied by the reflexive Pronoun zibun "self" in the sentences in (12), where the Predicate requires an indirect object Noun Phrase and a Predicate or Noun sentential complement.

- (12) a. Taroo<sub>i</sub>-wa, Hanako<sub>j</sub>-ni  $\left[ \begin{array}{l} \emptyset \\ \text{'self'} \end{array} \right]_{i,j}$  -no sensee-ni  
           Top(Sub) IO Pos 'teacher' IO  
 a-u  $\left. \begin{array}{l} \text{yoo-ni} \\ \text{susume-ta} \end{array} \right\}_S$   
 'meet' Pres Comp 'suggest/advise' Pst  
 "Taro<sub>i</sub> suggested to Hanako<sub>j</sub> to meet his<sub>i</sub>/her<sub>j</sub> teacher"
- b. Taroo<sub>i</sub>-wa, Hanako<sub>j</sub>-ni  $\left[ \begin{array}{l} \emptyset \\ \text{'self'} \end{array} \right]_{i,j}$  -no syoozooga-o  
           Top(Sub) IO Pos 'portrait' Obj  
 kak-u  $\left. \begin{array}{l} \text{koto-o} \\ \text{kitaisi-ta} \end{array} \right\}_S$   
 'write' Pres Nom DO 'expect' Pst  
 "Taro<sub>i</sub> expected Hanako<sub>j</sub> to draw his<sub>i</sub>/her<sub>j</sub> portrait"

As is apparent in the English counterparts, the sentences in (12) are both ambiguous; the referent of zibun "self" may be either Taro or Hanako. Along the lines suggested by the basic generalization that the antecedent of zibun is a subject Noun Phrase, one interpretation in which zibun refers to Taro can be correctly explained, because Taroo, the matrix subject in both sentences, is the antecedent of zibun. The other interpretation in which the referent of zibun is Hanako, however, cannot be explained in such a straightforward way, because Hanako, the antecedent of zibun, does not appear in subject position.

If, therefore, we are to preserve this basic generalization, and indeed there is no reason to lose it, then what necessarily follows is that the complement sentence must have a subject Noun Phrase, in particular, Hanako-ga in (12), at the very stage of derivation when Reflexivization takes place. Thus, in particular, (12a), under the interpretation

in which the referent of zibun is Hanako, will be derived from, roughly, the following underlying form:

- (13) Taroo-ga Hanako<sub>i</sub>-ni [ Hanako<sub>i</sub>-ga Hanako<sub>i</sub>-no sensee-ni  
           Sub          IO          Sub          Pos 'teacher'IO  
 a-u          ]S yoo-ni susume-ta  
 'meet'Pres  Comp 'suggest' Pst

"Taro suggested to Hanako<sub>i</sub> [ Hanako<sub>i</sub> meet Hanako<sub>i</sub>'s teacher ]S"

The contrast between (12a) and (13) reveals that the complement subject Noun Phrase must be coreferential, i.e., identical, to the indirect object Noun Phrase of the next higher sentence, because it is this higher sentence element that signals reference of zibun to Hanako in (12a). This contrast further reveals that under this identity condition, the complement subject Noun Phrase must be deleted, because it is not present in surface structure in (12a).

Given the necessity of deleting the complement subject Noun Phrase under identity with the indirect object Noun Phrase of the next higher sentence, it is a necessary conclusion that (12a), under the other interpretation, in which the referent of zibun is Taro, must have a complement subject Noun Phrase, in particular, Hanako-ga, in the underlying structure. Sentence (12a), under this interpretation, will thus be derived from, roughly, the following underlying form:

- (14) Taroo<sub>i</sub>-ga Hanako<sub>j</sub>-ni [ Hanako<sub>j</sub>-ga Taroo<sub>i</sub>-no sensee-ni  
           Sub          IO          Sub          Pos 'teacher'IO  
 a-u          ]S yoo-ni susume-ta  
 'meet'Pres  Comp 'suggest' Pst

"Taro<sub>i</sub> suggested to Hanako<sub>j</sub> [ Hanako<sub>j</sub> meet Taro<sub>i</sub>'s teacher ]S"

Underlying structures (13) and (14), with Hanako-ga as complement

subject, receive general support from the fact that a subject Noun Phrase is an obligatory part of the Sentence expansion rule in Japanese, and thus can be taken as the deep structures for (12a). It should be noted that these structures explain the semantic fact that the understood complement subject in (12a) is Hanako, which is coreferential to the indirect object Noun Phrase of the next higher sentence. The whole preceding discussion applies also to (12b), where a Noun sentential complement is contained in the direct object Noun Phrase.

Given this setting, it should be clear that the ambiguity of (12a) can be correctly explained in exactly the same manner as that of the sentence (8a) with a relative clause as embedded sentence, because both Reflexivization and a transformation of Noun Phrase deletion (i.e., either Relative Clause Formation or Complement Subject Deletion) are involved in the derivation of both sentences. Sentence (12a) will thus be derived from two distinct deep structures (14) and (13) in the following fashion; given the principle of cyclical application of transformations:

(15) a. First cycle (i.e., the complement sentence level) of (14):

No operations happen.

Second cycle (i.e., the highest sentence level):

(i) Given that Reflexivization precedes Complement Subject Deletion in the ordering,

Reflexivization:

$\underline{\text{Taroo}}_i$ -ga Hanako<sub>j</sub>-ni  $\sphericalangle$  Hanako<sub>j</sub>-ga  $\underline{\text{zibun}}_i$ -no sensee-ni  
a-u  $\int_S$  yoo-ni susume-ta

Complement Subject Deletion:

$\underline{\text{Taroo}}_i$ -ga  $\underline{\text{Hanako}}_j$ -ni  $\sphericalangle$   $\emptyset_j$  zibun<sub>i</sub>-no sensee-ni  
a-u  $\int_S$  yoo-ni susume-ta

- (ii) Given that Complement Subject Deletion precedes Reflexivization in the ordering;

Complement Subject Deletion:  
 Taroo<sub>i</sub>-ga Hanako<sub>j</sub>-ni  $\int$   $\emptyset_j$  Taroo<sub>i</sub>-no sensee-ni  
 a-u  $\int_S$  yoo-ni susume-ta

Reflexivization:  
 Taroo<sub>i</sub>-ga Hanako<sub>j</sub>-ni  $\int$   $\emptyset_j$  zibun<sub>i</sub>-no sensee-ni  
 a-u  $\int_S$  yoo-ni susume-ta

- b. First cycle (i.e., the complement sentence level) of (13) in either order:

Reflexivization:  
 Taroo-ga Hanako<sub>i</sub>-ni  $\int$  Hanako<sub>i</sub>-ga zibun<sub>i</sub>-no sensee-ni  
 a-u  $\int_S$  yoo-ni susume-ta

Second cycle in either order:

Complement Subject Deletion:  
 Taroo-ga Hanako<sub>i</sub>-ni  $\int$   $\emptyset_i$  zibun<sub>i</sub>-no sensee-ni  
 a-u  $\int_S$  yoo-ni susume-ta

Although the preceding observation does not provide evidence for a unique order between Reflexivization and Complement Subject Deletion, it lends further support to the principle of the cyclical application of transformations, and further corroborates the hypothesis that an embedded subject Noun Phrase may not be present in surface structure, if a coreferential Noun Phrase is present in a higher sentence, and thus suggests the existence of a general principle of deletion of an embedded subject Noun Phrase in light of phenomena of missing subjects in various embedded sentences. However, I will not pursue this possibility further here.

In summary, I have proved that the complement sentence in the same type of sentences as (1d) and (2c), where the Predicate requires a yoo-ni



Predicate or koto Noun sentential complement together with an indirect object, has a deep subject Noun Phrase which is identical, i.e., co-referential, to the indirect object Noun Phrase of the matrix sentence, and I have further shown that there exists a rule of Complement Subject Deletion which operates under this identity condition. Since this rule is sensitive to the types of Predicates, such Predicates as susume-ru "suggest/advise", kitaisu-ru "expect", meezi-ru "order", tanom-u "ask for", negaw-u "wish", and sii-u "force" will be lexically marked for the obligatory application of the rule of Complement Subject Deletion which operates under the condition that a complement subject Noun Phrase be identical to the indirect object Noun Phrase of the next higher sentence.

No arguments of the same sort can be found in favor of the claim that the complement sentence in the other types of sentences enumerated in the paradigms (1) and (2) has a deep subject Noun Phrase identical to a certain Noun Phrase of the next higher sentence. Specifically, any occurrence of the reflexive Pronoun zibun in the complement sentence of any other type of sentence than (1d) and (2c) shows simply that Reflexivization is compatible with this claim. To illustrate this point, consider the following sentence, the same type of complement construction as (2b):

- (16) Taroo<sub>i</sub>-wa, Hanako-ni [ ∅ zibun<sub>i</sub>-no syoozooga-o kak-u ]<sub>S</sub>  
           Top(Sub)       IO       'self'<sub>i</sub> Pos 'portrait' Obj 'draw' Pres  
 koto-o       yakusokusi-ta  
 Nom   Obj   'promise'   Pst

"Taro<sub>i</sub> promised Hanako to draw his<sub>i</sub> (own) portrait"

This sentence, unlike (12b), is unambiguous with respect to the referent of the zibun, although they both have basically the same surface structure. The reflexive zibun in (16) has Taro as its referent. Since

Reflexivization prevents neither the matrix subject Taroo, nor the complement subject Taroo, if it is assumed to be present in deep structure, from functioning as the antecedent of the zibun in the complement sentence, (16) does not provide any evidence for the existence of a complement subject in deep structure, but merely indicates that Reflexivization is compatible with this claim. The same argument as this applies also to the other cases (1a), (1b), (1c) and (1a).

However, I personally find this compatibility at least encouraging, for there is no compelling reason to rule this claim out as inappropriate; further, there is non-syntactic evidence supporting this claim. First, if a complement sentence in the cases in question is assumed to be subjectless in deep structure, then it will constitute an exception to the initial phrase structure rule of Sentence expansion in Japanese syntax, because it is well-motivated that a subject Noun Phrase, in the greatest majority of both main and embedded clauses, is a necessary part of this rule. Secondly, there is semantic evidence in favor of the existence of a complement subject which suggests that there is an understood complement subject, in the cases under consideration, which is invariably coreferential to the subject Noun Phrase of the next higher sentence. Thirdly, if a complement sentence in the cases in question is assumed to be subjectless in deep structure, then it will constitute an exception to the semantic interpretation rule of the subject relation which is expressed in deep structure in both main and embedded clauses. Finally, taken together with the fact noted above, namely, that an understood complement subject is invariably coreferential to the next higher subject, the so far well-motivated hypothesis that an embedded subject may not be present

in surface structure, if a coreferential Noun Phrase is present in a higher sentence suggests the involvement of Complement Subject Deletion in the derivation of the complement constructions in question. For these reasons, I believe it most plausible to assume that the complement sentences in the other types of complement constructions than (1d) and (2c) of paradigms (1) and (2) have underlying subject Noun Phrases and hence that there exists another version of the rule of Complement Subject Deletion which deletes the complement subject Noun Phrase under identity with the subject Noun Phrase of the next higher sentence. Since this rule is sensitive to the types of Predicates, such Predicates as kuwadate-ru "undertake", tumori-da "intend", tutome-ru "endeavor", kokoromi-ru "attempt", and yakusokusu-ru "promise" will be lexically specified for the obligatory application of this version of Complement Subject Deletion.

VI.2. Tense and Time in Complementation In this section, I will try to explicate the Tense system in sentential complementation and its temporal relation.

VI.2.1. The Present Tense Restriction One common property of all Predicates, with the apparent exception of kuwadate-ru "undertake" in (1a), in paradigms (1) and (2), which require the application of Complement Subject Deletion, is the restriction that the complement sentence take only the Present Tense, as in (17).

(17) a. Taroo<sub>1</sub>wa,  $\left[ \begin{array}{l} \emptyset_i \left\{ \begin{array}{l} \text{tetuyasi-na-i} \\ \text{'sit up all night' 'not' Pres} \\ \text{*tetuyasi-nak-kat-ta} \\ \text{'sit up all night' 'not' Pst} \end{array} \right\} \end{array} \right]_S$   
           Top(Sub)  
           yoo-ni tutome-ta  
           Comp 'endeavor' Pst

- b. Taroo<sub>I</sub>-wa, Ziroo<sub>I</sub>-ni √ ϕ<sub>I</sub> Porusyē-o  
       Top(Sub) IO 'Porsche'Obj  
 { ka-u }  
   'buy' Pres  
 { \*kat-ta } koto-o susume-ta  
   'buy' Pst Nom DO 'suggest' Pst

Closer examination, however, reveals that these Predicates may be divided into two groups with respect to whether the required Present Tense has reference to non-past (i.e., present and future) time or not. Predicates involving this non-past time reference in the complement sentence are kuwagate-ru "undertake" in (1a), tumori-da "intend" in (1b), susume-ru "suggest" in (1d), yakusokusu-ru "promise" in (2b), and susume-ru "suggest" in (2c). Predicates which do not involve this non-past time reference in their complement sentence are tutome-ru "endeavor" in (1c) and kokoromi-ru "attempt" in (2a). A test for the identification of this distinction will be provided by checking whether Adverbs expressing present and future time, like ima "now" and asu "tomorrow", are associated with the Present Tense of a complement sentence in a syntactically and semantically disambiguated context, as in the following sentences in (18) and (19):

- (18) a. Taroo<sub>I</sub>-wa, kinoo √ ϕ<sub>I</sub> ima / konban  
       Top(Sub) 'yesterday' 'now' / 'tonight'  
       tetuyasu-ru }  
       'sit up all night' Pres }S tumori-dat-ta  
       'tend' Pst  
       "Tarō intended yesterday to sit up all night now/tonight"
- b. Taroo<sub>I</sub>-wa, Ziroo-ni √ ϕ<sub>I</sub> ima / asu  
       Top(Sub) IO 'now' 'tomorrow'  
       yat-te-ku-ru }S koto-o kinoo yakusokusi-ta  
       'come over' Pres Nom DO 'yesterday' 'promise' Pst  
       "Yesterday Taro promised Jiro to come now/tomorrow"
- (19) a. \*Taroo<sub>I</sub>-wa, kinoo √ ϕ<sub>I</sub> ima / asu  
       Top(Sub) 'yesterday' 'now' 'tomorrow'

- ne-sugi-na-i           $\int_S$  yoo-ni   tutome-ta  
 'oversleep' 'not Pres      Comp      'endeavor' Pst  
 "Yesterday Taro endeavored not to oversleep now/tomorrow"
- b. \*Taroo<sub>i</sub>-wa,       $\int_{\emptyset_i}$  ima / asu      sakadati-si-te  
                   Top(Sub)      'now'      'tomorrow'      'stand on one's  
 aruk-u           $\int_S$  koto-o      kinoo      kokoromi-ta      hands' 'and'  
 'wal'Pres      Nom Obj      'yesterday' 'attempt' Pst  
 "Yesterday Taro attempted to stand on his hands and walk now/  
 tomorrow"

The contrast between (18) and (19) clearly shows that the Present Tense of the complement sentence required by the first, but not the second, group of Predicates has reference to present and future time.

Taking this situation into consideration, we have three subcases in the Japanese Tense system with respect to their time reference: (i) the Past Tense, which refers to past time, (ii) the Present Tense which refers to present and future time, and (iii) the Present Tense which has no time reference. I will explain the semantic difference between cases (ii) and (iii) by assuming that only those Predicates involved in case (iii) are lexically marked in such a way as to require its complement sentence to take the Tense which is semantically null, although realized as the same morphological shape as that in case (ii).

VI.2.2.      Existential Sentences      In the preceding discussion, I have shown in effect that the rule of Complement Subject Deletion applies to Noun as well as Predicate sentential complements which contain Present Tenses, both with and without time reference. I will show, in what follows, that the rule of Complement Subject Deletion is involved in the derivation of various existential sentences whose complement sentences vary in the kinds of Tenses. Thus observe the following subclassification of existential sentences in terms of complement Tense restrictions:

## (20) a. The Present Tense Requirement:

Taro <sub>i</sub> (-ni)-wa,	⌈	∅ <sub>i</sub>	kuruma-o	{	untensu-ru	} ⌋ <sub>S</sub>
Place Top			'car' Obj		'drive' Pres	
					*untensi-ta	
					'drive' Pst	
{			-ga	ar-u		
sikaku			Sub	'exist' Pres		
'qualification'						
nooryoku						
'ability'						
kenri						
'right'						

"(Literally) \*There exists a qualification/an ability/a right that ∅<sub>i</sub> drives a car in Taro<sub>i</sub> / Taro has the qualification/ability/right to drive a car"

## b. The Past Tense Requirement:

Taro <sub>i</sub> (-ni)-wa,	⌈	∅ <sub>i</sub>	hito-no	waruguti-o		
Place Top			'person' Pos	'abuse' Obj		
{			it-ta	{	tamesi	} -ga na-i
'say' Pst			*yu-u	'attempt'	'experience'	
'say' Pres				zizitu	'fact'	Pres

"(Literally) \*There exists no attempt/experience/fact that ∅<sub>i</sub> spoke ill of others in Taro<sub>i</sub> / Taro has made no attempt to speak ill of others"

## c. Both the Present and Past Tenses allowed:

Taro <sub>i</sub> (-ni)-wa,	⌈	tokidoki	∅ <sub>i</sub>	Yooroppa-ni	{	yuk-u	} ⌋ <sub>S</sub>
Place Top		'sometimes'		'Europe' 'to'		'go' Pres	
						it-ta	
						'go' Pst	
koto-ga							
Nom Sub							

"(Literally) \*There exists a thing that ∅<sub>i</sub> <sup>{goes}</sup> went to Europe sometimes in Taro<sub>i</sub> / Taro sometimes goes/went to Europe"

Since I know of no compelling evidence for a particular analysis of deep structure for such existential constructions as (20), I will leave it unsettled here.<sup>3</sup> What is relevant to the present discussion, however, is to show that the ni-phrase, which I have referred to as a place Noun

Phrase for a purely expository purpose, is a deep structure element, but not a transformationally derived element. One plausible argument for it which I can think of has to do with the fact that the existential Predicates ar-u "exist" and na-i "not exist" require human (or loosely, animate) ni-phrases, when they take Noun sentential complements with particularly such human-oriented lexical items as kenri "right", keeken "experience" and tamesi "attempt" as their head Nouns, as in (21).

- (21)  $\left\{ \begin{array}{l} \text{Taroo(-ni)-wa,} \\ \text{Place Top} \\ * \text{Sono kuruma(-ni)-wa,} \\ \text{'that''car' Place Top} \end{array} \right\} \left[ \begin{array}{l} \emptyset \text{ hito-o} \quad \text{hii-ta} \\ \text{'person'Obj} \quad \text{'run over' Pst} \end{array} \right]_S$
- $\left\{ \begin{array}{l} \text{keeken} \\ \text{'experience' } \\ \text{tamesi} \\ \text{'attempt' } \end{array} \right\} \begin{array}{l} \text{-ga} \quad \text{na-i} \\ \text{Sub} \quad \text{'not exist' Pres} \end{array}$

"Taro has had no experience in running over a person (with his car)/Taro has made no attempt to run over a person (with his car) // \*That car has had no experience in running over a person / \*That car has made no attempt to run over a person"

This observation suggests that the ni-phrase in existential sentences is a matrix sentence node in deep structure, because Predicate selection is not sensitive elsewhere to the subject Noun Phrase of a complement sentence. The other argument for the deep structure node status of the ni-phrase in question comes from the fact that the ni-phrase cannot appear as the subject of the complement sentence. Thus observe (22), which appear equivalent to the complement sentences in (21).

- (22) a.  $\left\{ \begin{array}{l} * \text{Taroo-ni(-wa),} \\ \text{Cf. Taroo-ga} \end{array} \right\} \text{ hito-o hii-ta}$   
 "Taro ran over a person (with his car)"
- b.  $\left\{ \begin{array}{l} * \text{Sono kuruma-ni(-wa),} \\ \text{Cf. Sono kuruma-ga} \end{array} \right\} \text{ hito-o hii-ta}$   
 "That car ran over a person"

These two arguments, therefore, exclude the possibility that the existential Predicates might require the operation of raising the complement subject into higher position. This exclusion, then, suggests the involvement of Complement Subject Deletion in the derivation of such existential constructions as those in (20). The rule involved will delete the complement subject Noun Phrase under identity with the ni-phrase of the matrix sentence. It is not immediately certain whether this rule is equivalent to either one of the proposed two versions. This will be left unsolved, because there are many unexplained aspects of the existential constructions in question. What has been suggested in this subsection is that the rule of Complement Subject Deletion is obligatory for the derivation of existential sentences whose complement sentences contain the Present and Past Tenses and are followed by the head Nouns including independently occurring lexical items like zizitu "fact", keeken "experience" and tamesi "attempt" as well as the abstract nominalizer koto.

VI.3. Factivity in Koto/No Complementation I will consider the problem of factive presupposition involved in the Noun sentential complements, with the abstract nominalizers koto and no as their head Nouns, whose subjects are obligatorily deleted by Complement Subject Deletion. Observe first the differences between the following two sentences with the same higher Predicate wasure-ru "forget", where (23a), but not (23b), presupposes the factivity of the associated koto/no sentential complement.

- (23) a. Boku-wa,                    [     $\emptyset$                     tegami-o    das-i-ta ]<sub>S</sub>  
       'I-male'Top(Sub)    (Unspecified Sub)    'letter'Obj 'send'Pst  
       koto / no - o    wasure-te-i-ta  
       Nom    Nom    Obj    'forget' Dur Pst



"\*I forgot that  $\emptyset$  (Unspecified subject; but the preferred sub:  
boku "I", the same as that of the matrix subject) sent the  
 letter"

- b. Boku<sub>i</sub>-wa,  $\int \emptyset_i$  tegami-o das-u  $\int_S$  koto /  
 'I-male' Top(Sub) 'letter' Obj 'send' Pres Nom  
 no - o wasure-te-i-ta  
 Nom Obj 'forget' Dur Pst  
 "I forgot to send the letter"

The only apparent difference between these two sentences lies in the choice between the Present and Past Tenses in the complement sentences. The semantic difference, as is illustrated by the contrast between their English counterparts, is directly attributable to this Tense difference. The user of (23a), but not of (23b), clearly presupposes that the complement sentence is true.

First of all, when they take action Verbs in the complement sentence, the factive and the non-factive wasure-ru "forget" are complementary with respect to the choice of Tenses; namely, the factive wasure-ru requires the occurrence of the Past Tense in the complement sentence, while the non-factive one requires the occurrence of the Present Tense in the complement sentence. This point is shown in the sentences in (23).

Secondly, when stative Predicates appear in the complement sentence, whether they are associated with the Present or Past Tense, the higher Predicate wasure-ru is only factive. Thus consider (24).

- (24) a. Boku-wa,  $\int \emptyset$  sono uwasa-o  $\left\{ \begin{array}{l} \text{sit-te-i-ru} \\ \text{'know' Dur Pres} \\ \text{sit-te-i-ta} \\ \text{'know' Dur Pst} \end{array} \right\}$   
 'I-male' Top(Sub) (UnspcSub) 'that' 'rumor' Obj  
 $\int_S$  koto / no - o wasure-te-i-ta  
 Nom Nom Obj 'forget' Dur Pst  
 "I forgot that I (the preferred reading; or someone else) knew  
 /had known that rumor"

- b. Boku-wa,            $\left[ \begin{array}{l} \text{Taroo-ga} \\ \text{Sub} \end{array} \right\} \left\{ \begin{array}{l} \text{ko-na-i} \\ \text{'come'not' Pres} \\ \text{ko-nak-kat-ta} \\ \text{'come''not'Pst} \end{array} \right\} \text{S}$

koto / no-o          wasure-te-i-ta  
 Nom    Nom Obj   'forget' Dur Pst  
 "I forgot that Taro would not come/did not come"

- c. Boku-wa,            $\left[ \begin{array}{l} \text{tenki-ga} \\ \text{'weather' Sub} \end{array} \right\} \left\{ \begin{array}{l} \text{waru-i} \\ \text{'bad' Pres} \\ \text{waru-kat-ta} \\ \text{'bad' Pst} \end{array} \right\} \text{S}$

koto / no-o          wasure-te-i-ta  
 Nom    Nom Obj   'forget' Dur Pst  
 "I forgot that the weather was/had been bad"

Thirdly, while the non-factive wasure-ru "forget" invariably requires that the missing but understood subject be coreferential to the main subject, as in (23b), the factive wasure-ru has no such restriction on the complement subject, as in (24b) and (24c). In such factive instances as in (23a) and (24a), the missing complement subject is only contextually or situationally determinable, although the preferred reading is the one where the missing subject is coreferential to the matrix subject in most cases. The syntactic device which fixes this preferred reading is to have the reflexive Pronoun zibun "self" as complement subject in (23a) and (24a).

Fourthly, the abstract nominalizers koto and no are replaceable by the lexical item zizitu "fact", when they are associated with complement sentences which have a factive presupposition. Thus contrast the following sentences corresponding to the sentences in (23).

- (25) a. Boku-wa,            $\left[ \begin{array}{l} \emptyset \\ \text{'I' Top(Sub)} \end{array} \right\} \left\{ \begin{array}{l} \text{tegami-o} \\ \text{'letter' Obj} \end{array} \right\} \left\{ \begin{array}{l} \text{das-i-ta} \\ \text{'send' Pst} \end{array} \right\} \text{S} \quad \text{(to-yu-u)} \\ \text{Comp}$
- zizitu-o   wasure-te-i-ta  
 'fact' Obj 'forget' Dur Pst
- "I forgot that I (=the preferred reading) had sent the letter"

- b. \*Boku<sub>i</sub>-wa, [  $\emptyset_i$  tegami-o das-u ]<sub>S</sub> (to-yu-u)  
 'I' Top(Sub) 'letter'Obj 'send'Pres Comp  
 zizitu-o wasure-te-i-ta  
 'fact' Obj 'forget' Dur Pst

"\*I forgot the fact to send the letter  $\neq$  I forgot the fact of sending the letter (which means, I forgot the fact that I sent the letter)"

Finally, the Present Tense required of the complement sentence of the non-factive wasure-ru "forget" has a time referent of its own; namely, it refers to present time. Thus observe sentence (26), which corresponds to (23b).

- (26) Boku<sub>i</sub>-wa, [  $\emptyset_i$  ima / asu tegami-o  
 'I-male' Top(Sub) 'now' 'tomorrow' 'letter'Obj  
 das-u ]<sub>S</sub> koto / no-o kinoo wasure-te-i-ta  
 'send'Pres Nom Nom Obj 'yesterday' 'forget' Dur Pst

"Yesterday I forgot to send the letter now/tomorrow"

Obviously, both the Present and Past Tenses of the complement sentence of the factive wasure-ru, as in (23a) and (24), have time referents of their own.

By these five arguments, I have shown what restrictions the higher Predicate wasure-ru "forget" (and analogously, omoidasu-u "remember") imposes upon its complement sentence with the head Noun koto or no, in order to distinguish between when the complement sentence involves a factive presupposition and when it does not. We have seen, in particular, that the Predicate wasure-ru is non-factive, when it requires the application of Complement Subject Deletion to its complement sentence with the abstract nominalizer koto/no as the head Noun. But it should be noted that not all Predicates of the same type are non-factive. Existential sentences, particularly those with koto like (20c), are obviously

factive. While I feel it interesting to attempt to explicate under what conditions a complement sentence involves the presupposition of factivity, I will not go into this matter further here.

## NOTES

1. This rule is also termed Equi-NP Deletion in English.
2. Contrast (c) with the following sentence:

(i)  $\left[ \begin{array}{l} \text{zibun-ga} \text{ nusum-are-ta} \\ \text{'self' Sub 'rob' Pass Pst} \end{array} \right]_S \text{ kuruma-wa, } \begin{array}{l} \text{Taroo-ga} \text{ mituke-ta} \\ \text{Sub 'find' Pst} \end{array}$   
 "As for the car which I was robbed of, Taro found it"

Sentence (c) involves the operation of Noun Phrase Preposing, while (i) involves the operation of Topicalization. Some native speakers might find that zibun "self" refers to the subject Taroo in (c), while it refers to the speaker in (i). Observations of the same sort might apply to (a) and (d) as well. If this observation is correct, then the second generalization in question will be incorrect, and then this situation suggests that a topicalized element, but not a preposed element, is Chomsky-adjoined, thus creating a next higher Sentence node.

3. Cf. Kuno (1971a) for discussion of the position of locatives in existential sentences.

CHAPTER VII: COMPLEMENT PREDICATE RAISING

VII.0. Introduction The goal of this Chapter is to demonstrate the existence of a rule of Complement Predicate Raising in Japanese.<sup>1</sup> The version of this rule which I will propose raises the Predicate of a complement sentence into the Predicate position of the next higher sentence by way of Chomsky-adjunction, thereby producing a derived structure containing a composite Predicate structure represented by the labelled bracketing  $\left[ \text{Pred Pred} \right]_{\text{Pred}}$ . Towards this goal, I will show, in the first two sections, that certain Predicates which I claim require the application of this Complement Predicate Raising rule require Predicate sentential complements, a prerequisite for the demonstration of the goal of this Chapter. Then, I will proceed to provide direct justification for the necessity of postulating the rule of Complement Predicate Raising noted above. On the basis of the discussion presented in the first three sections, I will examine the possibility of a higher Predicate analysis for the less clear cases of aspectual Predicates and some others. Finally, I will discuss the status of Auxiliaries in the complement sentence of the Predicates under consideration.

Some Predicates involved in the demonstration of the existence of the rule of Complement Predicate Raising will be exemplified in the following sentences:

- (1) a. Taroo-ga eego-ga hanas-e-ru  
           Sub 'English'Obj 'speak'Potential Pres (e from re)  
           "Taro is able to speak English"
- b. Taroo-ga ame-ni hur-are-ta  
           Sub 'rain''by' 'fall' Pass Pst (are from rare)  
           "Taro was rained on"

- c. Boku-wa,            oni-o            tukamae-ta-i  
'I-male'Top(Sub) 'devil'Obj 'catch' Desiderative Pres  
"I wish to catch a devil"
- d. Taroo-ga tora-o            kowa-gat-ta  
      Sub 'tiger'Obj 'be afraid''show signs of'Pst  
                                  (gat from gar)  
"Taro showed signs of fearing the tiger"
- e. Boku-wa,            Taroo-ni eego-o            yom-ase-ta  
'I-male'Top(Sub)            IO 'English'DO 'read' Caus Pst  
  (ase from sase)  
"I let Taro read English"
- f. Boku-wa,            isya-ni            ki-te-morat-ta  
'I-male'Top(Sub) 'doctor'IO 'come'PolCaus Pst  
  (morat from moraw)  
"I asked and received the favor of the doctor's coming"
- g. Taroo-ga watasi-ni uta-o            utat-te-kure-ta  
      Sub 'I-pol' IO 'song'DO 'sing''do (the speaker) the  
  favor of' Pst  
"Taro did me the favor of singing a song"
- h. Taroo-ga Hanako-ni hon-o            yon-de-yat-ta  
      Sub            IO 'book'DO 'read' 'do someone the favor  
  of' Pst (yat from yar)  
"Taro did Hanako the favor of reading the book"
- i. Boku-wa,            henmee-de            syoosetu-o  
'I-male'Top(Sub) 'under an assumed name' 'novel' Obj  
  *kai-te-mi*-ta  
"I tried writing a novel under an assumed name"
- j. Kimi-wa,            sore-ni            okure-te-mo-yo-i  
'you-friendly'Top(Sub) 'it''for' 'be late''or''may'Pres  
"You may be late for it"

The morphemes italicized in the sentences above are Predicates, because they, like ordinary Predicates, take Tenses, being followed by appropriate morphological forms. However, these morphemes, unlike ordinary Predicates, do not occur independently, namely, they invariably occur attached to ordinary Predicates. I will thus for expository purposes, refer to these Predicates as dependent Predicates, as distinct from

ordinary independently occurring Predicates.

Observation of surface phenomena in the sentences of (1) might suggest an auxiliary Predicate analysis, i.e., a simplex sentence analysis, according to which each of these dependent Predicates would be introduced as a subcomponent of a complex Predicate in the Phrase Structure Rules; thus, in particular, by such a Predicate expansion rule as (2):

$$(2) \text{ Predicate} \longrightarrow \text{Predicate ( Dependent Predicate}^n \text{ )}$$

$$(n \geq 1)$$

Such complex Predicates as hanas-e "able to speak", hur-are "be rained" and tukamae-ta "wish to catch" in (1a) through (1c) would thus be directly generated by this Predicate expansion rule. Closer inspection, however, reveals the correctness of a higher Predicate analysis, i.e., a complex sentence analysis, according to which the dependent Predicates under consideration require Predicate sentential complements.

VII.1. Parallel Arguments for a Higher Predicate Analysis      The discussion to follow in this section will show that the dependent Predicates in question are higher Predicates by demonstrating that they display exactly the same crucial properties as those independently occurring Predicates which require Predicate sentential complements. The immediately following section will then corroborate the higher Predicate analysis by presenting independent arguments about the productive and recursive property of the dependent Predicates in question.

VII.1.1. The Active-Passive Synonymity Argument      One indication that the dependent Predicates are higher Predicates has to do with embedded active-passive synonymity. Consider first the following two



sentences with a complex dependent Predicate ta-gar "show signs of wishing", which are contrastive with each other with respect to the italicized phrases:

- (3) a. Taroo-ga Hanako-o home-ta-gat-ta <sup>2</sup>  
           Sub          Obj 'praise' 'wish' 'show signs of' Pst  
           "Taro showed signs of wishing to praise Hanako"
- b. Hanako-ga Taroo-ni home-rare-ta-gat-ta  
           Sub          'by' 'praise' Pass 'wish' 'show signs of' Pst  
           "Hanako showed signs of wishing to be praised by Taro"

The contrast between the italicized phrases in (3) shows that the process of passivization applies to the independently occurring Predicate home-ru "praise", regardless of the immediately following complex dependent Predicate ta-gar "show signs of wishing". Since this process of passivization apparently involves subject-object inversion, containing an entire sentence as the domain of its structural description, this contrast suggests that passivization takes place in the complement sentence of the complex dependent Predicate ta-gar, which in turn suggests that ta-gar requires a sentential complement.

Proceeding to the main problem of embedded active-passive synonymy, we observe that the two sentences in (3) are not synonymous in the same sense that the sentences in (4), corresponding exactly to the italicized fragments in (3), are synonymous.

- (4) a. Taroo-ga Hanako-o home-ta  
           Sub          Obj 'praise' Pst  
           "Taro praised Hanako"
- b. Hanako-ga Taroo-ni home-rare-ta  
           Sub          'by' 'praise' Pass Pst  
           "Hanako was praised by Taro"

In particular, the sentences in (3) differ in meaning with respect to the Experiencer of the desire expressed by the complex dependent Predicate ta-gar "show signs of wishing". The Experiencer in (3a) is Taro, while it is Hanako in (3b). This semantic difference suggests that the initial ga-phrase in (3) must be the subject of the complex dependent Predicate in question, which in turn shows that ta-gar is a complex of higher Predicates which require Predicate sentential complements.

It should be noted that this whole line of argument is exactly parallel to the argument employed in discussions of independently occurring higher Predicates like those italicized in the following sentences:

- (5) a. (i) Taroo-ga  $\int \emptyset$  Hanako-o home-ru  $\int_S$  tumori-da  
 Sub Obj 'praise' Pres 'intend' Pres  
 "Taro intends to praise Hanako"
- (ii) Hanako-ga  $\int \emptyset$  Taroo-ni home-rare-ru  $\int_S$  tumori-da  
 Sub 'by' 'praise' Pass Pres 'intend' Pres  
 "Hanako intends to be praised by Taro"
- b. (i) Taroo-ga  $\int \emptyset$  Hanako-o nagur-oo  $\int_S$  to si-ta  
 Sub Obj 'beat' Vol Comp 'do' Pst  
 "Taro tried to beat Hanako"
- (ii) Hanako-ga  $\int \emptyset$  Taroo-ni nagur-are-yoo  $\int_S$  to si-ta  
 Sub 'by' 'beat' Pass Vol Comp 'do' Pst  
 "Hanako tried to be beaten by Taro"
- c. (i) Taroo-ga  $\int \emptyset$  Hanako-o sikar-a-na-i  $\int_S$  yoo-ni  
 Sub Obj 'scold' 'not' Pres Comp  
tutome-ta  
 'endeavor' Pst  
 "Taro endeavored not to scold Hanako"
- (ii) Hanako-ga  $\int \emptyset$  Taroo-ni sikar-are-na-i  $\int_S$   
 Sub 'by' 'scold' Pass 'not' Pres  
 yoo-ni tutome-ta  
 Comp 'endeavor' Pst  
 "Hanako endeavored not to be scolded by Taro"

The sentences in (5a), (5b) and (5c) represent three different types of

Predicate sentential complements, respectively, without any Predicate Complementizer, with the to Predicate Complementizer, and with the yoo-ni Predicate Complementizer. For a discussion of the question of embedded active-passive synonymy in these sentences, see Section V.1. Our entire line of argument for a higher Predicate analysis of the dependent Predicates under consideration with respect to the synonymy of embedded active and passive sentences, therefore, receives further support from the parallel to the arguments about higher Predicates like those in (5).

VII.1.2. The Animacy Constraint Argument A second argument for a higher Predicate analysis of the dependent Predicates in question stems from an animacy constraint on a subject Noun Phrase, another phenomenon common to certain higher Predicates independently motivated which require Noun or Predicate sentential complements. Thus observe the following sentences with the complex dependent Predicate ta-gar "show signs of wishing":

- (6) a. Taroo-ga sono e-o yabur-i-ta-gat-ta  
 Sub 'that' 'picture' Obj 'break' 'wish' 'show signs of' Pst  
 "Taro showed signs of wishing to break that picture"
- b. \*Sono e-ga Taroo-niyotte yabur-are-ta-gat-ta  
 'that' 'picture' Sub 'by' 'break' Pass 'wish' 'show  
 signs of' Pst  
 "\*That picture showed signs of wishing to be broken"
- c. \*Sono e-ga yabure-ta-gat-ta  
 'that' 'picture' Sub 'break(Intr)' 'wish' 'show signs of' Pst  
 "\*That picture showed signs of wishing to break"

The contrast between (6a) on the one hand, and (6b) and (6c) on the other shows that the complex Predicate ta-gar does not allow the initial ga- phrase to be inanimate. The reason is that, because the sentences in (7), corresponding exactly to the italicized parts in (6), are all grammatical,

the ungrammaticality of (6b) and (6c) does not come from any restriction involved in those italicized phrases.

- (7) a. Taroo-ga sono e-o yabut-ta  
 Sub 'that' 'picture' Obj 'break' Pst  
 "Taro broke that picture"
- b. Sono e-ga Taroo-niyotte yabur-are-ta  
 'that' 'picture' Sub 'by' 'break' Pass Pst  
 "That picture was broken by Taro"
- c. Sono e-ga yabure-ta  
 'that' 'picture' Sub 'break' (Intr) Pst  
 "That picture broke"

This observation, like the foregoing observation, suggests that the complex Predicate ta-gar is a complex of higher Predicates which require animate subject Noun Phrases and thus Predicate sentential complements. This whole line of argument is supported by the parallel to the argument about independently occurring higher Predicates like those enumerated in (5). Cf. Section V.1.

### VII.1.3. The Argument About the Referential Ambiguity of Zibun

A final argument for a higher Predicate analysis of dependent Predicates of the sort under consideration has to do with the antecedent problem of the reflexive Pronoun zibun "self". For a detailed discussion of Reflexivization, see Section VI.1.1. Thus consider the following sentence with the dependent causative Predicate sase-ru, where the reflexive zibun is ambiguous in two ways: <sup>3</sup>

- (8) Boku<sub>i</sub>-wa, Taroo<sub>j</sub>-ni zibun<sub>i,j</sub> -no nikki-o yom-ase-ta  
 'I-male' Top (Sub) IO 'self' Pos 'diary' DO 'read' Caus Pst

- "(i) I made Taro read my diary /  
 (ii) I made Taro read his own diary"

As is apparent in the English counterparts, this sentence is ambiguous with respect to the referents of the reflexive Pronoun zibun; it may be either the speaker "I" or Taro. If we are to preserve the independently motivated assumption that the antecedent of the reflexive zibun is a subject Noun Phrase, then it follows necessarily that (8) must be a complex sentence whose complement sentence has Taroo-ga as its subject, so that the zibun may refer back either to the matrix subject boku-ga or to the complement subject Taroo-ga at a stage of derivation before the application of the rule of Complement Subject Deletion. This entire line of argument, therefore, suggests clearly that the causative Predicate sase-ru requires a Predicate sentential complement, together with an animate indirect object Noun Phrase. The preceding argument applies also to the dependent Predicate moraw-u "(ask and) receive the favor of". Here again we notice that this conclusion receives indirect support from the fact that the entire line of argument which has led to this conclusion exactly parallels the argument about certain higher Predicates which require Predicate or Noun sentential complements as well as an animate indirect object Noun Phrase, as in (9).

(9) a. Predicate complementation:

Boku <sub>i</sub> -wa,	Taroo <sub>j</sub> -ni	[	∅ <sub>j</sub>	<u>zibun</u> <sub>i,j</sub> -no	nikki-o
'I-male'Top(Sub)	IO			'self' <sub>i,j</sub>	Pos 'diary'Obj
yom-u	yoo-ni	]	susume-ta		
'read'Pres	Comp	S	'suggest/advise' Pst		

- "(i) I suggested to Taro to read my diary /  
(ii) I suggested to Taro to read his own diary"

b. Noun complementation in object position:

Boku <sub>i</sub> -wa,	Taroo <sub>j</sub> -ni	[	∅ <sub>j</sub>	<u>zibun</u> <sub>i,j</sub> -no	nikki-o
'I-male'Top(Sub)	IO			'self' <sub>i,j</sub>	Pos 'diary'Obj

yom-u            7<sub>S</sub>    koto-o    kitaisi-ta  
 'read'Pres      Nom    DO    'expect' Pst

"(i) I expected Taro to read my diary /  
 (ii) I expected Taro to read his own diary"

For a detailed discussion of such sentences as (9), cf. Section VI.1.2.

To sum up, I have so far shown that certain dependent Predicates, like those illustrated in the sentences of (1), can plausibly be taken as higher Predicates which require Predicate sentential complements, along three principal lines of argument which are perfectly parallel to those which apply to certain independently occurring Predicates which require Noun or Predicate sentential complements.

VII.2.    Independent Arguments for the Higher Predicate Analysis    In this section, I will present independent arguments for the higher Predicate analysis of the dependent Predicates under consideration, and against the alternative auxiliary Predicate analysis. The first two subsections will examine the cooccurrence and selectional restrictions of such dependent Predicates as the passive morpheme rare-ru and the causative morpheme sase-ru, respectively, thereby demonstrating the plausibility of the higher Predicate analysis rather than the alternative auxiliary Predicate analysis. Compelling evidence for the higher Predicate analysis which derives from a consideration of the recursion of the dependent Predicates under consideration will come up in the third subsection. Finally, I will sum up the types of those Predicates.

VII.2.1.    The Indirect Passive Rare-ru    Consider first the following paradigm of sentences, where (10a) and (10d) represent indirect passives with the passive morpheme rare-ru:

- (10) a. Taroo-ga titi-ni sin-are-ta  
 Sub 'father''by''die' Pass Pst  
 "Taro was adversely affected by his father's death /  
 Taro had his father die / (Literally) \*Taro was died on  
 by his father"
- b. \*Taroo-ga titi-ni sin-da  
 Sub 'father''by''die' Pst  
 "(Literally) \*Taro died by his father (in the agentive sense  
 of by)"
- c. \*Titi-ga Taroo-ni / -o sin-da  
 'father'Sub 'on' Obj 'die' Pst  
 "(Literally) \*Father died (on) Taro (in the non-physical  
 sense of on)"
- d. \*Taroo-ga ame-ni sin-are-ta  
 Sub 'rain''by''die' Pass Pst  
 "\*Taro was adversely affected by having the rain die /  
 (Literally) \*Taro was died on by the rain"

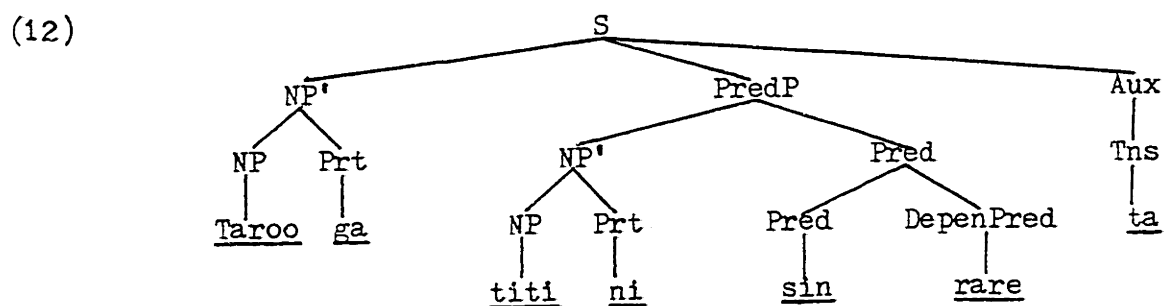
The contrast between (10a) and (10b) shows that sin-u "die" does not share the same set of grammatical restrictions with the complex Predicate sin-are-ru "\*be died". The contrast between (10a) and (10c) shows that the indirect passive has no active counterpart which differs only in subject-object inversion. Finally, the contrast between (10a) and (10d) suggests that the same animacy restriction which the Predicate sin-u "die" imposes upon its subject when it occurs independently (i.e., not followed by such dependent Predicates as the passive rare-ru) holds between the ni-phrases and sin-u "die" in the indirect passives in question. This point is evident from the comparison of (10a) and (10d) with (11a) and (11b).

- (11) a. Titi-ga sin-da  
 'father'Sub 'die' Pst  
 "Father died"
- b. \*Ame-ga sin-da  
 'rain'Sub 'die' Pst  
 "\*The rain died"

This final observation then suggests that the subject Taroo-ga in (10a)

is uniquely governed by the dependent Predicate rare-ru, but not by the complex Predicate sin-are-ru as a whole.

Our immediate problem concerns the derivation of indirect passives like (10a). Assume first a simplex Sentence analysis (i.e., an auxiliary Predicate analysis) for the derivation of (10a). This sentence would then have as its deep structure the following structure, which is identical to its surface structure; given the Predicate expansion rule (2):

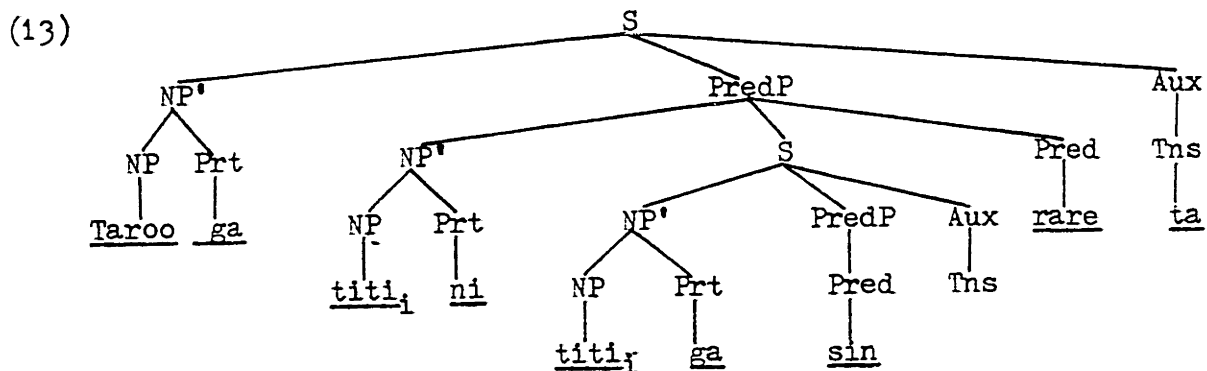


On the basis of the preceding basic observations, the indirect passive rare-ru rather than the main Predicate sin-u "die" would have to be lexically marked in such a way as to require an agentive as well as a subject Noun Phrase. Since, however, the independently necessary Predicate sin-u is an intransitive Verb which requires an animate subject, and yet the required subject appears as an agentive Noun Phrase in the indirect passive, it would be necessary to restrict sin-u "die" lexically so as to require an agentive Noun Phrase which is animate just in case it is immediately followed by the indirect passive dependent Predicate rare-ru. Similar restrictions of this sort must be imposed upon every Predicate which may be immediately followed by this particular dependent Predicate and many other similar Predicates. Presumably, this could be done by lexical redundancy rules. With such additional devices, the



simplex sentence analysis explains the ungrammaticality of such indirect passives as (10d). It thus provides an extremely unnatural explanation for the derivation of indirect passives in general.

If, alternatively, we assume the complex sentence analysis (i.e., the higher Predicate analysis), then (10a) will be derived roughly from the following deep structure:



The crucial advantage of the complex sentence analysis is that ad hoc lexical restrictions of the sort forced by the simplex sentence analysis are superfluous. Thus, in particular, consider how to explain the ungrammaticality of (10d). Under this analysis, the deep structure for (10d) will contain an ill-formed string (11b) as its complement sentence. Since an animacy restriction which obtains between sin-u "die" and its subject Noun Phrase must be stated independently to exclude simplex sentences like (11b) as ungrammatical, the ungrammaticality of (10d) can be explained in terms of this selectional restriction, and hence without any additional restriction. This shows that the complex sentence analysis is correct.

I will attempt now to justify certain other aspects of the complex sentence analysis. Particularly, consider the deep structure (13) for

(10a). First of all, this deep structure correctly predicts that the initial ga-phrase, Taroo-ga, will be uniquely governed by the indirect passive dependent Predicate rare-ru. The fact that rare-ru imposes a human (or at least animate) constraint on this initial Noun Phrase, as in (14), lends independent support to this deep structure.

- (14) a. Sono hito-ga            ame-ni            hur-are-ta  
          'that' 'person' Sub    'rain''by' 'fall' Pass Pst  
          "That person was rained on"
- b.            {    ?Sono        uma-ga  
                   'that'        'horse' Sub  
                   {    ?\*Sono        iwa-ga  
                           'that'        'rock' Sub  
                           }            ame-ni            hur-are-ta  
     'rain''by' 'fall' Pass Pst  
     "?\*That horse/rock was rained on"

Secondly, the existence of an agentive Noun Phrase in deep structure, like that of titi-ni "by father" in (13), is supported by the fact that rare-ru bears a special relation to this ni-phrase, namely, it requires an agentive Noun Phrase which involves a human (or an animate) object or a weather phenomenon (e.g., snow, rain, sleet). Since verbal selection is not sensitive elsewhere to the subject of a complement sentence, it is plausible to assume that this agentive Noun Phrase appears in deep structure.

Justification for the existence of the Tense as an unspecified element in deep structure, as in (13), will be provided in Section 5.

The preceding discussion of the derivation of indirect passives seems to suggest that a sensible, though perhaps not decisive, procedure for a choice between a higher Predicate analysis and an auxiliary Predicate analysis is to find whether a certain dependent Predicate bears a

grammatical relation to, or imposes a selectional restriction on, a particular Noun Phrase. In the following subsections, I will discuss the plausibility of the higher Predicate analysis for certain other dependent Predicates, along the same line of argument.

VII.2.2.      The Causative Sase-ru      Consider now the following two sets of sentences, the first set of which contains the causative dependent Predicate sase-ru:

- (15) a. Taroo-ga    Ziroo-ni    yuk-ase-ta  
                   Sub            IO    'go' Caus Pst  
                   "Taro let Jiro go"
- b. \*Taroo-ga    ame-ni    yuk-ase-ta  
                   Sub 'rain' IO 'go' Caus Pst  
                   "\*Taro let the rain go"
- c. \*Taroo-ga    ame-ni    hur-ase-ta  
                   Sub 'rain' IO 'fall' Caus Pst  
                   "?Taro let it rain"
- (16) a. Ziroo-ga it-ta  
                   Sub 'go' Pst  
                   "Jiro went"
- b. \*Ame-ga    it-ta  
                   'rain' Sub 'go' Pst  
                   "\*The rain went"
- c. Ame-ga    hut-ta  
                   'rain' Sub 'fall' Pst  
                   "It rained"

The contrast between (15a) and (15b) suggests that the same animacy restriction which the Predicate yuk-u "go" imposes on its subject when it occurs independently holds between yuk and the ni-phrases in (15a) and (15b). This point is evident from the parallelism in grammaticality between these causative sentences and simplex sentences (16a) and (16b).

It follows from this observation that the subject Taroo-ga in (15a) is uniquely governed in deep structure by the causative Predicate sase-ru, but not by the entire complex Predicate yuk-ase-ru "let someone go". By the same line of argument as that in the preceding subsection, it will be plausibly assumed that sase-ru is a higher Predicate which requires a Predicate sentential complement.

Furthermore, the contrast between (15a) and (15c) suggests that the ungrammaticality of (15c) depends upon an animacy restriction imposed by the causative Predicate sase-ru upon the ni-phrase ame-ni, because it is evident from the contrast between (15c) and (16c) that it does not depend upon any restriction which obtains between ame-ni and hur-u. It follows, then, that sase-ru requires an animate indirect object, as well as a Predicate sentential complement. The existence of a ni-phrase in deep structure with respect to causatives of the sort under consideration will also be supported by an embedded active and passive synonymy argument of the sort outlined in Section 1.1.

The contrast between (15a) and (15c) on the one hand and (17a) and (17b) on the other reveals the existence of two types of causative construction with the causative morpheme sase-ru as higher Predicate.<sup>4</sup>

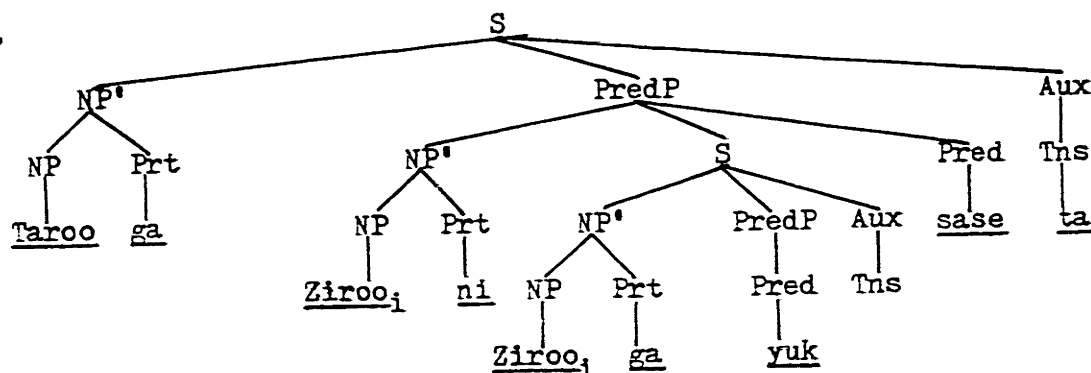
- (17) a. Taroo-ga    Ziroo-o    yuk-ase-ta  
           Sub            DO    'go' Caus Pst  
           "Taro made Jiro go"
- b. Taroo-ga    ame-o        hur-ase-ta  
           Sub    'rain'DO    'fall' Caus Pst  
           "Taro made it rain"

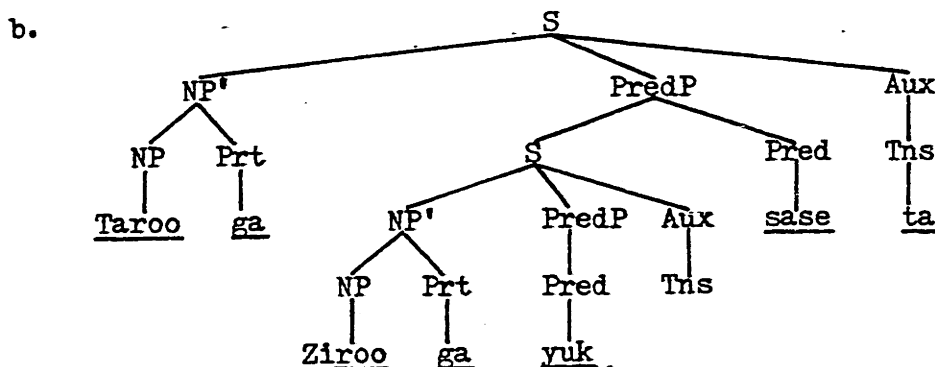
The first type of causative constructions is what may be called an indirect causative, and the second is what may be called a direct causative.

The syntactic difference lies in the choice between the indirect object Particle ni and the direct object Particle o. This difference is correlated with a semantic difference; thus, in particular, in indirect causatives, the subject of the causative Verb sase-ru causes the indirect object to take an action expressed by the complement Verb in complicity with the volition or at least agreement of this indirect object, but in direct causatives, the subject of the causative Verb sase-ru forces the direct object to take an action expressed by the complement Verb without regard to, or even contrary to, the volition or agreement, if it is involved, of this direct object. This semantic difference can be seen particularly in the fact that an inanimate Noun Phrase can appear as the direct object of direct causatives as in (17b), but not as the indirect object of indirect causatives as in (15c). Since this particular contrast shows that direct causatives, unlike indirect causatives, have no animacy restriction which holds between the causative Verb sase-ru and the object Noun Phrase, the causative Verb sase-ru in direct causatives, unlike that in indirect causatives, does not require an object Noun Phrase to be present in deep structure.

On the basis of the preceding discussion, indirect causative (15a) and direct causative (17a) will be derived from the following deep structures (18a) and (18b), respectively:

(18) a.





The existence of a complement subject identical to the higher indirect object in the deep structure of an indirect causative, like the existence of Ziroo-ga in (18a) for (15a), was justified in Section 1.3 by the referential ambiguity of zibun "self".

The entire line of argument about the deep structure of indirect causatives applies to polite causatives with the polite causative morpheme moraw-u, literally translatable as "receive/be given". These two types of construction are subject to the deletion of the complement subject under identity with the higher ni-phrase in their underlying structure. It should be noted that this process of Complement Subject Deletion is independently motivated by sentences with such Predicates as susume-ru "advise/suggest", kitaisu-ru "expect" and many others, which require certain Predicate or Noun sentential complements. Cf. Chapter VI.

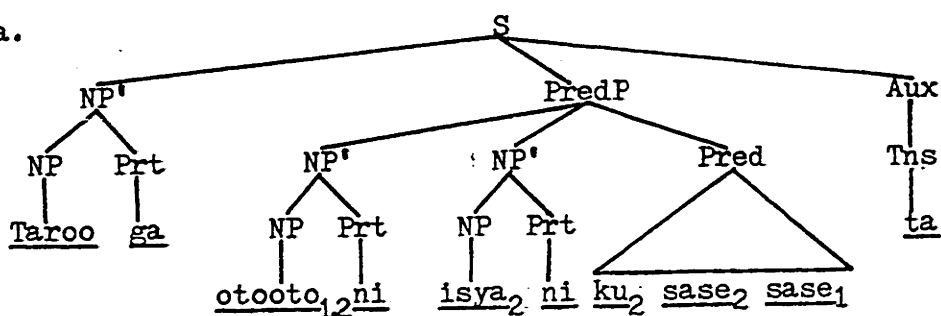
VII.2.3. Evidence from the Recursive Property This section will argue for the higher Predicate analysis of dependent Predicates of the type considered in the previous subsections, by examining the recursive property of these dependent Predicates. Focussing particularly on the indirect causative morpheme sase-ru, consider the following paradigm of sentences with various complex Predicates:

- (19) a. Taroo-ga isya-ni ko-sase-ta  
 Sub 'doctor'IO 'come' Caus Pst  
 "Taro caused the doctor to come"
- b. Taroo-ga ototoo-ni isya-ni ko-sase-sase-ta  
 Sub 'brother'IO 'doctor'IO 'come' Caus Caus Pst  
 "Taro caused his younger brother to cause the doctor to come"
- c. Taroo-ga ototoo-ni isya-ni ki-te-moraw-ase-ta  
 Sub 'brother'IO 'doctor'IO 'come' PolCaus Caus Pst  
 "Taro caused his younger brother to ask the doctor to come"
- d. Taroo-ga isya-ni ki-te-mi-ta-gar-ase-ta-gat-ta  
 Sub 'doctor'IO 'come''try''wish''show signs of' Caus  
 'wish''show signs of' Pst  
 "Taro showed signs of wishing to cause the doctor to show  
 signs of wishing to try coming"
- e. Taroo-ga ototoo-ni isya-ni ki-te-mi-sase-te-mi-ta-  
 Sub 'brother'IO 'doctor'IO 'come''try' Caus 'try''wish'  
gar-ase-te-mi-ta  
 'show signs of' Caus 'try' Pst  
 "Taro tried causing his younger brother to show signs of  
 wishing to try causing the doctor to try coming"

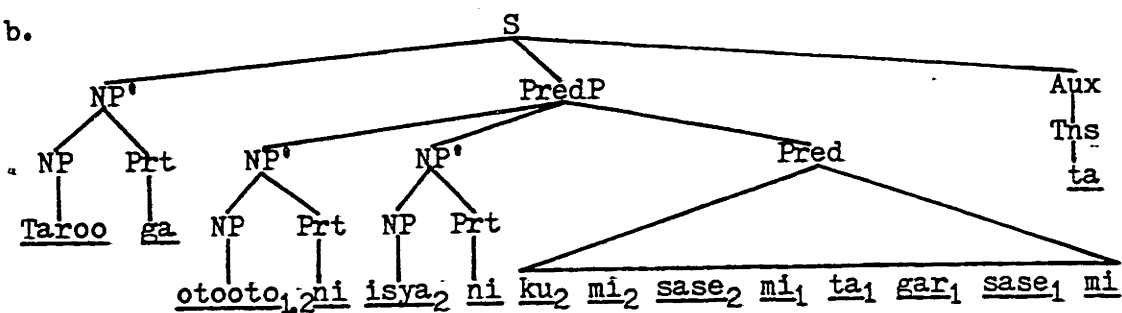
All these examples clearly show that the causative Predicate sase-ru is productive. (19b) and (19e) particularly show that this causative Predicate is recursive. Thus it does not differ at all from independently occurring Predicates in these two respects. What is unique to dependent Predicates in general is that they invariably occur preceded by independently occurring Predicates. Closer inspection of the data adduced in (19) shows that the causative Predicate sase-ru occurs in four different environments; in particular, (i) immediately preceded by an independently occurring Predicate, as in (19a) and (19b), (ii) immediately followed by the Tense, as in (19b) and (19c), (iii) immediately followed or preceded by the same morpheme sase-ru, as in (19b), and finally, (iv) in between other dependent Predicates, as in (19d) and (19e).

Assume that a simplex sentence analysis is correct for the dependent Predicate sase-ru. Then, it follows that sentences like (19) will be directly derived by the Phrase Structure Rules, in particular, by such a Predicate expansion rule as (2). Thus the deep structures for sentences (19b) and (19e), for instance, will be characterized as basically the following tree diagrams (20a) and (20b), respectively.

(20) a.



b.



Under this simplex sentence hypothesis, therefore, the causative Predicate sase-ru will have to be lexically specified as appearing in such a context as (21), on the basis of the preceding discussion.

(21)  $\left[ X \text{ NP } \underline{ni} \text{ X } \left[ X \text{ \_\_\_\_\_\_ } \text{ X } \right]_{\text{Pred}} \right]_{\text{PredP}}$

The proposed lexical specification contains variables, indicated by X in (21), which in effect implies that only vacuously can the causative Predicate be strictly subcategorized. Since this specification does not

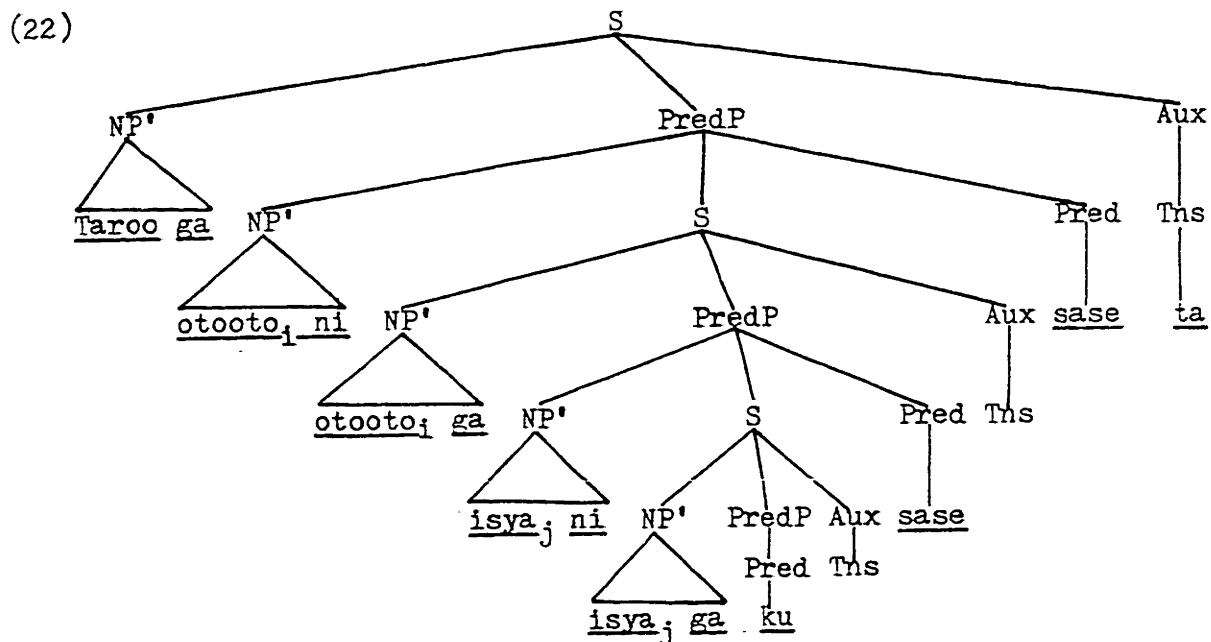


allow the assumption that the causative Predicate will be uniquely associated with the appropriate ni-phrase which it requires, and since it is not generally true that variables are involved in lexical subcategorization, it follows that the simplex sentence hypothesis is incorrect. Vacuous subcategorization induced by the occurrence of variables in (21) clearly depends upon the recursive property not only of the causative Predicate sase-ru but also of other dependent Predicates, such as mi-ru "try", as is apparent in (21b).

This vacuous subcategorization makes it necessary for the simplex sentence hypothesis to have an infinite number of additional devices which explain selectional restrictions as well as grammatical relations inherent to such dependent Predicates as well as independently occurring Predicates which actually occur followed by dependent Predicates (in particular, ku-ru "come" in the above examples). Thus, for example, ototo-ni in (19b) is the indirect object of sase-ru<sub>1</sub> and at once the understood subject of sase-ru<sub>2</sub>, as is marked by the same index number in its proposed deep structure (20a). Isya-ni in (19b) is the indirect object of sase-ru<sub>2</sub> as well as the understood subject of ku-ru "come". Such facts as these are infinite, in fact, as many as possible combinations of Predicates. It is immediately clear that there are some generalizations underlying these facts which cannot be captured in terms of the simplex sentence hypothesis.

Assume, alternatively, that a complex sentence analysis is correct for the dependent Predicates under consideration including the causative sase-ru. Then, the recursion as well as productivity of these dependent Predicates will be correctly explained in terms of the Phrase Structure

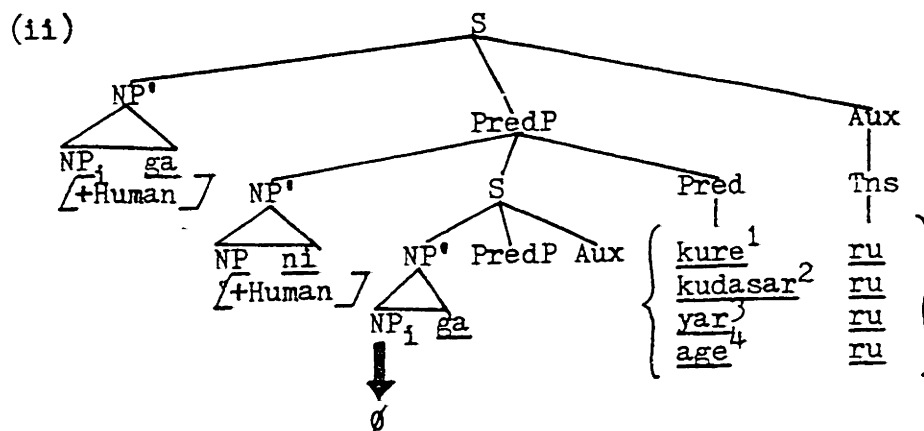
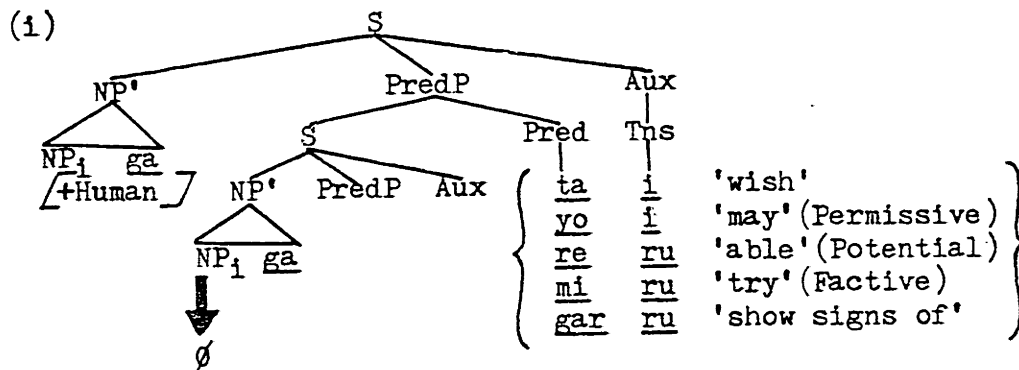
Rules, independently motivated, which permit sentence embedding. Thus, for example, (19b) will be derived from deep structure (22). As was seen in previous sections, no additional mechanism will be needed to explain both selectional restrictions and grammatical relations inherent to both dependent and independent Predicates.



VII.2.4. A Classification of Dependent Predicates In summary, I

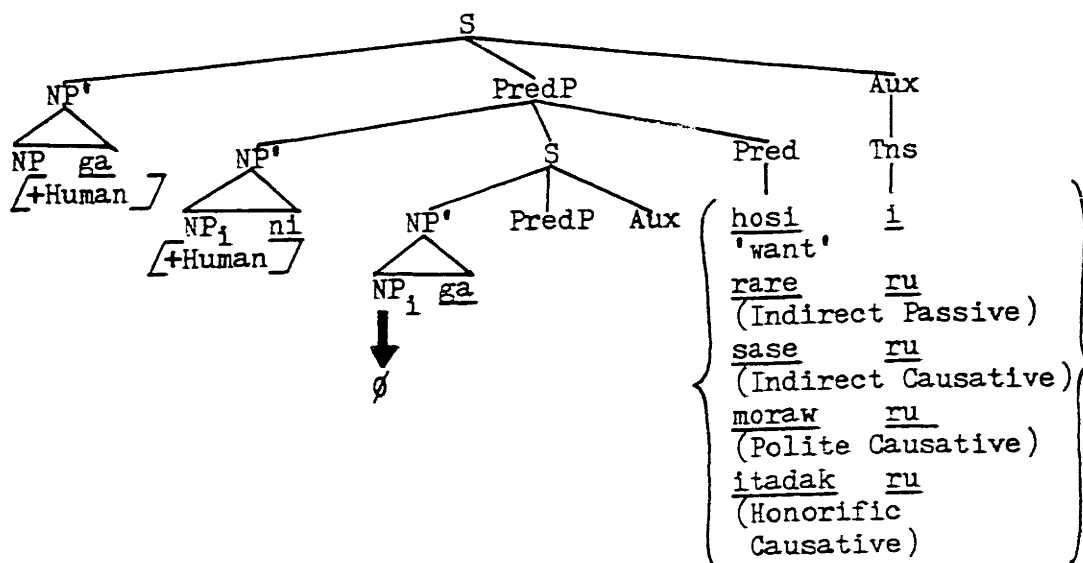
will present a classification of dependent Predicates of the type considered in the previous sections in the following manner:

- (23) a. Dependent Predicates which require the application of Complement Subject Deletion under identity with the matrix subject:



- 1 and 2: 'Someone does the speaker the favor of'  
2 is the polite version of 1.  
3 and 4: 'The speaker does someone the favor of'  
4 is the polite version of 3.

- b. Dependent Predicates which require the application of Complement Subject Deletion under identity with the matrix ni-phrase:



VII.3.      Evidence for Complement Predicate Raising      In this section, I will show that dependent Predicates of the sort examined in the preceding sections require the raising of the next lower Predicate into their Predicate position. Evidence for the existence of this process will be provided by demonstrating that a dependent Predicate and the next lower Predicate (dependent or independent Predicate) must function as a single syntactic unit, in particular, as a Predicate. This demonstration will automatically exclude the apparent possibility that surface forms of complex Predicates like tabe-ta-gar "show signs of wishing to eat", kowa-gar-ase-te-mi-ta-gar "show signs of wishing to try making someone show signs of being afraid", and kuturog-ase-te-mora-e(-ru) "be able to receive the favor of someone making the subject relaxed" could be derived by morphological rules which merely concatenate embedded and higher Predicates.

VII.3.1.      The Gapping Argument      One piece of evidence for the existence of the rule of Complement Predicate Raising proposed above results from a consideration of certain phenomena effected by the rule of Gapping. The function of Gapping is to delete identical elements (non-constituents), including the Tense and Mood Auxiliaries and the Predicate, of all conjuncts except for the last conjunct in certain contrastive sentences. Cf. Section II.6. Thus contrast the following two paradigms of sentences, the first of these containing an independently occurring Predicate tutome-ru "endeavor" and the second containing a dependent Predicate mi-ru "try". Both these Predicates require Predicate sentential complements.

- (24) a. Taroo-wa eego-o hanas-u yoo-ni tutome-ta;  
 Contr 'English'Obj 'speak'Pres Comp 'endeavor'Pst  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 Contr 'Japanese'Obj  
 "Taro endeavored to speak English, and Jiro endeavored to speak Japanese"
- b. Taroo-wa eego-o hanas-u yoo-ni tutome  $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 "(Literally) \*Taro endeavored to speak English, and Jiro  $\emptyset$  endeavor to speak Japanese"
- c. ?Taroo-wa eego-o hanas-u yoo-ni  $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 "Taro endeavored to speak English, and Jiro  $\emptyset$   $\emptyset$  to speak Japanese"
- d. \*Taroo-wa eego-o hanas-u  $\emptyset$   $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 "\*Taro endeavored to speak English, and Jiro  $\emptyset$   $\emptyset$   $\emptyset$  speak Japanese"
- e. Taroo-wa eego-o hanas-i  $\emptyset$   $\emptyset$   $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 "\*Taro endeavored to speak English, and Jiro  $\emptyset$   $\emptyset$   $\emptyset$  speak Japanese"
- f. Taroo-wa eego-o  $\emptyset$   $\emptyset$   $\emptyset$   $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-u yoo-ni tutome-ta  
 "Taro endeavored to speak English, and Jiro  $\emptyset$   $\emptyset$   $\emptyset$   $\emptyset$  Japanese"
- (25) a. Taroo-wa eego-o hanas-i-te-mi-ta;  
 Contr 'English'Obj 'speak' 'try' Pst  
 Zi-roo-wa nihongo-o hanas-i-te-mi-ta  
 Contr 'Japanese'Obj  
 "Taro tried speaking English, and Jiro tried speaking Japanese"
- b. Taroo-wa eego-o hanas-i-te-mi  $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-i-te-mi-ta  
 "(Literally) \*Taro tried speaking English, and Jiro  $\emptyset$  try to speak Japanese"
- c. ?\*Taroo-wa eego-o hanas-i  $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-i-te-mi-ta  
 "Taro tried speaking English, and Jiro  $\emptyset$   $\emptyset$  speaking Japanese"
- d. Taroo-wa eego-o  $\emptyset$   $\emptyset$   $\emptyset$  ,  
 Zi-roo-wa nihongo-o hanas-i-te-mi-ta  
 "Taro tried speaking English, and Jiro  $\emptyset$   $\emptyset$   $\emptyset$  Japanese"

(24b) and (25b) are exactly parallel in that only the Tense is deleted from the corresponding complete sentences (24a) and (25a), respectively, (24c), which is possible, has no counterpart in the paradigm of (25). (24d) is impossible, because the Tense form ru completes a sentence under some conditions which I don't understand. The contrast between (24f) and (25d) shows that they are parallel in that all identical elements are deleted from (24a) and (25a), respectively, but it does not show at all whether the complex Predicate plus the Past Tense in (25d), hanas-i-te-mi-ta "tried speaking" is or is not deleted from the underlying structure parallel to that of hanas-u yoo-ni tutome-ta "endeavored to speak" in (24f). The crucial argument derives from the contrast between (24e) and (25c). I feel that (25c) is dubious, unless it is effected by Gapping from the sentence Taroo-wa eego-o hanas-i-ta; Jiroo-wa nihongo-o hanas-i-te-mi-ta "Taro spoke English, and Jiro tried speaking Japanese", thus deleting only the Past Tense ta from the first conjunct. If my observation is correct, then the contrast between (24e) and (25c) suggests that Gapping is inapplicable to the underlying structure of (25a) which is parallel to that of (24a). The contrast between (25c) and (25d), then, suggests that the complement Predicate hanas- "speak" and the suffixed higher Predicate mi "try" must function as a single syntactic unit, i.e., as a Predicate. This leads me to assume that the dependent Predicates under consideration require the next lower complement Predicates to be raised into their Predicate position.

A further complex case will corroborate this conclusion. Thus observe the following paradigm of sentences:

- (26) a. Taroo-wa Hanako-o kowa-gar-ase-te-mi-ta-gat-ta;  
 Contr Obj 'afraid' 'show signs of' 'make' 'try' 'wish'  
 'show signs of' Pst  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 Contr Obj  
 "Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro showed signs of wishing to try making Tomoko show signs of being afraid"
- b. Taroo-wa Hanako-o kowa-gar-ase-te-mi-ta-gar-i  $\emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "(Literally) \*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  show signs of wishing to try making Hanako show signs of being afraid"
- c. ?\*Taroo-wa Hanako-o kowa-gar-ase-te-mi-ta-ku  $\emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "\*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  wishing to try making Hanako show signs of being afraid"
- d. ?\*Taroo-wa Hanako-o kowa-gar-ase-te-mi  $\emptyset \emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  to try making Hanako show signs of being afraid"
- e. ?\*Taroo-wa Hanako-o kowa-gar-ase  $\emptyset \emptyset \emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "\*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  making Hanako show signs of being afraid"
- f. \*Taroo-wa Hanako-o kowa-gar-i  $\emptyset \emptyset \emptyset \emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "\*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  Hanako show signs of being afraid"
- g. \*Taroo-wa Hanako-o kowa-ku  $\emptyset \emptyset \emptyset \emptyset \emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "\*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  Hanako  $\emptyset$  being afraid"
- h. Taroo-wa Hanako-o  $\emptyset \emptyset \emptyset \emptyset \emptyset \emptyset \emptyset$  ,  
 Ziroo-wa Tomoko-o kowa-gar-ase-te-mi-ta-gat-ta  
 "\*Taro showed signs of wishing to try making Hanako show signs of being afraid, and Jiro  $\emptyset$  Tomoko  $\emptyset$ "

(26a) is a contrastive sentence with two conjuncts which contain the same

sequence of a complex Predicate and a Tense. (26b) through (26h) are consequences of the application of Gapping to (26a). The contrast between (26a) and (26b) shows that only the Tense, in particular, the Past Tense, is deleted by Gapping from the first conjunct in (26b). The contrast between (26a) and (26h) shows that the entire complex Predicate kowa-gar-ase-te-mi-ta-gar plus the Tense ta are deleted by Gapping in the first conjunct of (26h). The contrast between (26a) and (26c) through (26g) shows that no part of the entire complex Predicate, together with the Tense, can be deleted by Gapping. If we are to explain such phenomena of complex Predicate Gapping as in (26h) by the same rule which explains phenomena of simplex Predicate Gapping noted in Section II.6, then the last two observations suggest that a complex Predicate must function as a single syntactic unit, in particular, as a Predicate. What follows from this is the necessity of raising a complement Predicate into the next higher Predicate position by way of Chomsky-adjunction.

VII.3.2. The Contrastive Attachment Argument      Another piece of evidence for the postulation of the rule of Complement Predicate Raising has to do with certain distributional properties of emphatic or contrastive elements like wa (followed by na-i "not" in certain cases), sae "even" and mo "also". These elements can be attached not only to Nouns, Noun Phrases, and Predicate Phrases, but also to Predicates, thus emphasizing or contrasting the elements to which they are attached. Thus observe the following examples:

- (27) a. Zyon-wa,            nihongo-wa,            hanas-i-wa-su-ru      ga,  
                           Top(Sub)   'Japanese' Top(Obj)   'speak'      AuxVb Pres   'but'  
                           kak-i-wa-si-na-i  
                           'write'      AuxVb 'not' Pres  
                           "John speaks Japanese, but does not write it"



- b. Sono zizitu-wa, Taroo-mo Zi-roo-mo  
 'that' 'fact' Top(Obj) 'also' (Sub) 'also' (Sub)  
sir-i-sae-si-nak-kat-ta  
 'know' 'even' AuxVb 'not' Pst  
 "Neither Taro nor Jiro even knew of the fact"
- c. Hanako-wa, ongaku-o ki-i-te-mo-i-na-kereba,  
 Top 'music' Obj 'listen' 'also' Dur 'not' 'if'  
 ongaku-ga kikoe-te-sae-i-na-i  
 'music' 'hear' 'even' Dur 'not' Pres  
 "Hanako neither is listening to music nor even hears it"

Particularly noteworthy is the fact that whenever Predicates, including stative Predicates like sir-u "know", kikoe-ru "audible", are associated with such emphatic elements, the auxiliary Verb su-ru "do", which is semantically null, appears, if not followed by the Durative Predicate i-ru, as in (27c), or perhaps by some other forms.

Consider now the following sentences, where these emphatic elements are attached either to an entire complex Predicate or to a certain part of it.

- (28) a. Taroo-wa, sensee-ni-sae sakubun-o  
 Top(Sub) 'teacher' 'by' 'even' 'composition' Obj  
home-rare-wa-si-nak-kat-ta  
 'praise' Pass Contr AuxVb 'not' Pst  
 "Taro did not have his composition praised by the teacher /  
 Taro was not praised for his composition by the teacher"
- b. Zi-roo-wa, oyog-i-ta-gar-i-sae-si-ta  
 Top(Sub) 'swim' 'wish' 'show signs of' 'even' AuxVb Pst  
 ga, oyog-i-wa-si-nak-kat-ta  
 'but' 'swim' Contr AuxVb 'not' Pst  
 "Taro even showed signs of wishing to swim, but (in fact)  
 he did not swim"
- c. Taroo-wa, sono ziken-o zibun-de  
 Top(Sub) 'that' 'incident' Obj 'for oneself'  
sirabe-te-mo-mi-ta si, (sore-o) hito-ni  
 'investigate' 'also' 'try' Pst 'and' 'it' Obj 'person' IO  
sirabe-sase-te-mo-mi-ta  
 'investigate' Caus 'also' 'try' Pst  
 "Taro tried not only investigating that incident for himself,  
 but also tried having some other people investigate it"

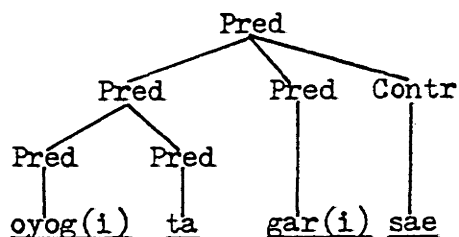
It is observed in the first two examples of (28) that the entire complex Predicates, contained in the italicized fragments, are marked as emphatic or contrastive by being immediately followed by wa and sae "even". It is evident that in (28a), the Particle wa is contrastive, because it cooccurs with the Negative Predicate na-i "not", and that in (28b), the complex Predicate oyog-i-ta-gar-i "show signs of wishing to swim", as an inseparable unit, is directly associated with sae "even", because it is in contrast with the simplex Predicate oyog-i "swim" immediately followed by the contrastive marker wa. It is further observed that in the last example of (28c), certain parts of the entire complex Predicates, in particular, sirabe "investigate" in sirabe-te-mi "try investigating" and sirabe-sase "cause someone to investigate" in sirabe-sase-te-mi "try causing someone to investigate", are contrastive with each other, as is evident from the fact that they are immediately followed by the contrastive marker mo "also". We have seen, in short, that such emphatic or contrastive markers wa, mo "also" and sae "even" can be attached not only to an entire complex Predicate but to some part of it.

This observation, then, suggests that the component Predicates of a complex Predicate or of its part to which these emphatic markers are attached must constitute a syntactically single unit, namely, a Predicate. Then, it follows that a complement Predicate must have been Chomsky-adjoined to the next higher Predicate prior to the application of Contrastive Attachment, because Contrastive Attachment is clearly a syntactic process (which affects meaning).

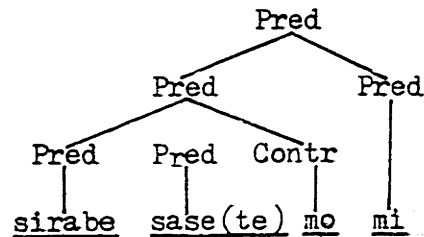
What must be noted further is that this rule of Complement Predicate Raising must be cyclically applied. The principle of cyclical application

is substantiated by the fact that a contrastive marker may be attached to (and modifies) some part of a complex Predicate and yet that part invariably contains the first component Predicate (i.e., the most deeply embedded Predicate) up to the last component immediately followed by the associated contrastive marker. To illustrate this point, observe the partial derived structures for the complex Predicates oyog-i-ta-gar-isae "even show signs of wishing to swim" in (28b) and sirabe-sase-te-mo-mi "try also having someone investigate" which are effected after the application of Complement Predicate Raising and Contrastive Attachment in this order, together with the assumption of cyclical application of transformations:

(29) a.



b.

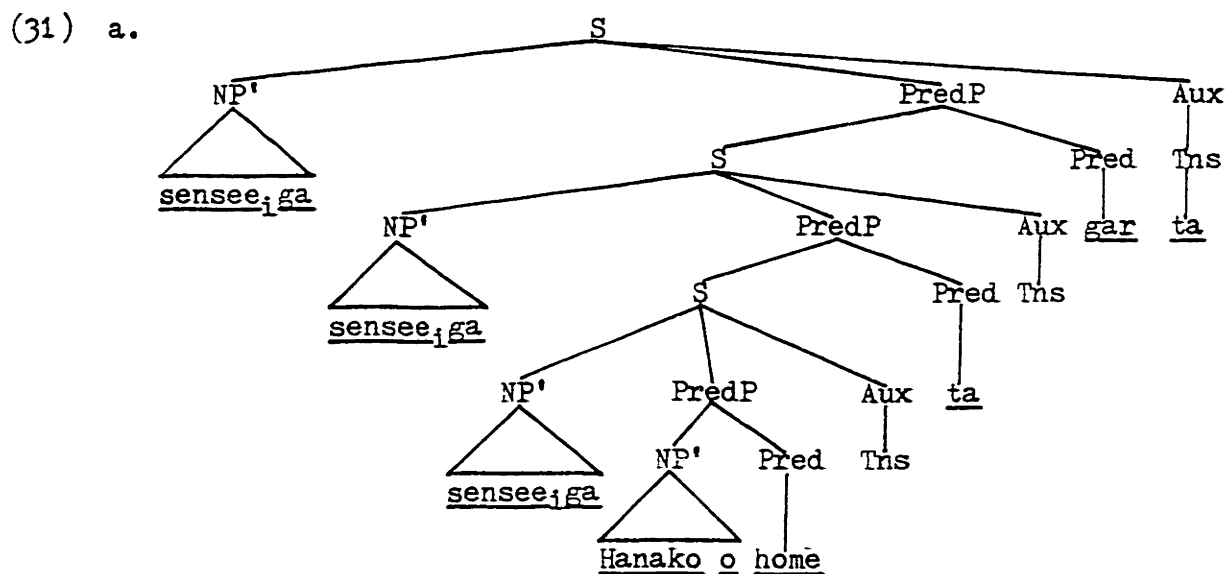


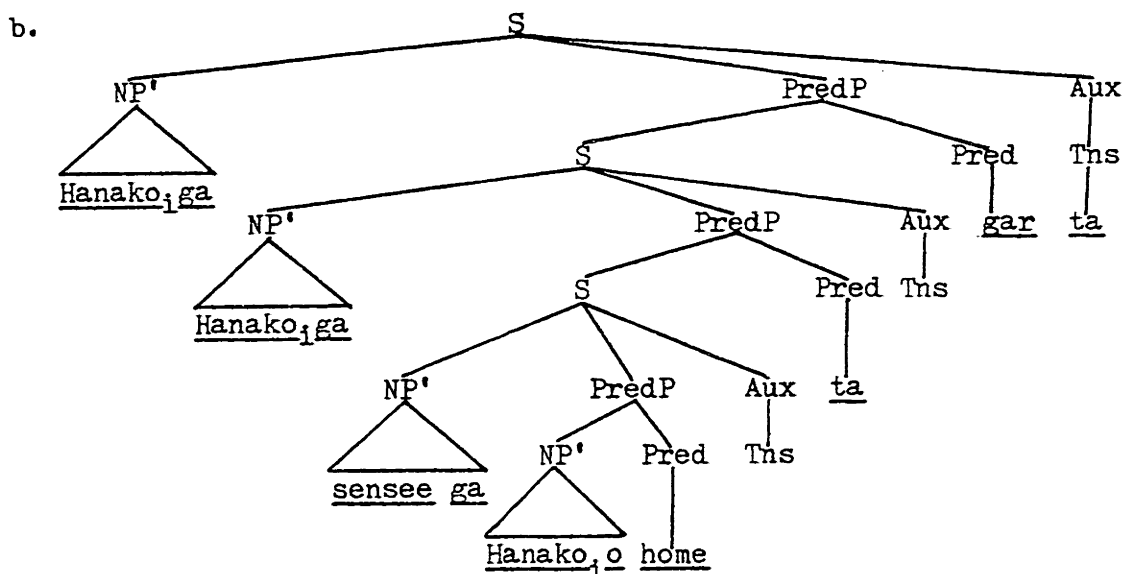
These derived structures show that the cyclical application of Complement Predicate Raising makes it possible to attach such contrastive elements as wa, sae and mo to an appropriate Predicate unit and hence to specify formally which sequence of component Predicates of a complex Predicate is contrastive or emphatic.

VII.33. The Direct Passivization Argument As a final piece of evidence for the postulation of the rule of Complement Predicate Raising, consider the derivation of direct passives with complex Predicates like (30b), which have sentences like (30a) as their active counterparts.

- (30) a. Sensee-ga Hanako-o home-ta-gat-ta  
 'teacher'Sub Obj 'praise''wish''show signs of'Pst  
 "The teacher showed signs of wishing to praise Hanako"
- b. Hanako-ga sensee-ni home-ta-gar-are-ta  
 Sub 'teacher''by' 'praise''wish''show signs of'  
 Pass Pst  
 "(Schematically) \*Hanako was (show signs of wishing to  
 praise)ed by the teacher"
- c. Hanako-ga sensee-ni home-rare-ta-gat-ta  
 Sub 'teacher''by' 'praise' Pass 'wish''show signs of'  
 Pst  
 "Hanako showed signs of wishing to be praised by the teacher"

As is apparent from the English counterparts, (30b), but not (30c), is the passive counterpart of the active (30a). Particularly, the agent of the action denoted by a partial complex Predicate ta-gar "show signs of wishing" is sensee "teacher" in (30b), but it is Hanako in (30c). The deep structures for the active sentences corresponding to (30b) and (30c) will thus be specified as the following tree diagrams:





The contrast between (30b) and (31a) shows that passivization takes place in the highest Sentence in (30b), while the contrast between (30c) and (31b) shows that it takes place in the most embedded Sentence in (30c).

A basic generalization about direct passives in Japanese, as in English, is that the subject of an active invariably appears, if present, as an agentive Noun Phrase in its passive counterpart, and that the object of the active always appears as subject in its passive counterpart. In short, what is apparently involved in this process of passivization is the interchange of subject and object Noun Phrases. Observe the following pairs of active and passive sentences:

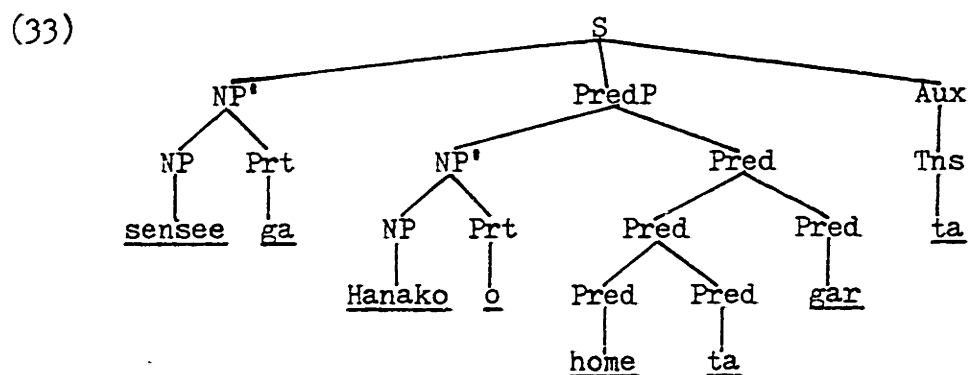
- (32) a. (i) Taroo-ga Ziroo-o nagut-ta  
           Sub           Obj 'beat' Pst  
           "Taro beat Jiro"
- (ii) Ziroo-ga Taroo-ni nagur-are-ta  
               Sub           'by' 'beat' Pass Pst  
               "Jiro was beaten by Taro"
- b. (i) Kuruma-ga Taroo-ni butukat-ta  
       'car' Sub           IO 'bump' Pst  
       "The car bumped Taro"

- (ii) Taroo-ga kuruma-ni butukar-are-ta  
 Sub 'car' 'by' 'bump' Pass Pst  
 "Taro was bumped by the car"

There are two competing approaches to the formulation of the process of direct passivization. One is a simplex sentence analysis according to which direct passives will be derived from basically the same underlying structures of their active counterparts by a transformation which involves the interchange of subject and object Noun Phrases. The alternative is a complex sentence analysis according to which direct passives will be derived from complex underlying structures containing their active counterparts as sentential complements to the passive higher Predicate rare, by transformations which delete the complement subject and object Noun Phrases under identity with the matrix agentive and subject Noun Phrases, respectively. Since a precise formulation of direct passivization must await further research, I will not commit myself to one rather than the other of these two alternative approaches. Regardless of the analysis adopted, however, what is relevant to our present discussion is that direct passivization affects the subject and object Noun Phrases of a Predicate, or more specifically, of a Verb.

On the basis of this preliminary observation, let us turn back to consider the derivation of passives (30b) as well as (30c). The derivation of (30c) poses no problem, because the simplex Predicate homeru "praise" is passivized in the most deeply embedded sentence of its active counterpart (31b). The central problem concerns the derivation of (30b), where the complex Predicate homeru-ta-garu "show signs of wishing to praise" is passivized. If the passivization of (30b) is to be explained by the

same principle which explains the passivization of such passives as (30c) and (32), thereby providing the most general formulation of direct passivization (whichever analysis is assumed), then what necessarily follows is that the input to passivization for (30b) must contain a Predicate Phrase of the form given in tree diagram (33), because a Predicate capable of passivization has a subject and an object Noun Phrase of its own.



Thus it is necessary to convert deep structure (31a) for the active counterpart of the passive (30b) into a derived structure (33), the input to passivization. Since the higher Predicates ta "wish" and gar "show signs of" are both lexically marked for the obligatory application of the rule of Complement Subject Deletion conditional on subject-subject identity, two occurrences of sensee "teacher" in the complement sentences will be legitimately deleted in (31a). Since, however, the three Predicates home "praise", ta "wish", and gar "show signs of" do not constitute a single unit, in particular, a Predicate, in (31a), we must have a rule which Chomsky-adjoins a complement Predicate to the next higher Predicate, so that the desired derived structure (33) can be yielded.

In summary, I have presented three syntactic arguments for the

existence of a rule of Complement Predicate Raising in the Japanese complement system. They have emerged from considerations of the effects of the application of Gapping, Contrastive Attachment, and direct passivization to certain complex Predicate constructions. In Section 5, I will adduce phonological evidence which follows from an observation of the accentual patterns of certain complex Predicates.

VII.4.     The Aspectual Predicates     There are numerous other dependent Predicates which are as productive as independently occurring Predicates but which do not display such properties as those noted in Sections 1 and 2 about a class of dependent Predicates including the causative sase-ru, the indirect passive rare-ru, and the desideratives ta-i and hosi-i. In this section, I will pursue the plausibility of a higher Predicate analysis rather than an auxiliary Predicate analysis for another class of dependent Predicates, referred to here as aspectual Predicates. This class of aspectual Predicates includes such transitive morphemes as hazime-ru "begin", tuzuke-ru "continue", owe-ru "end", yame-ru "stop", and das-u "start", and also the perfective simaw-u "complete/finish" and the durative i-ru. This class also includes less productive intransitive counterparts like tuzuk-u "continue", owar-u "end", and yam-u "stop".<sup>5</sup>

VII.4.1.     The Predicate Phrase Pro-formation Argument     The most telling argument for the plausibility of a higher Predicate analysis for aspectual Predicates of the sort under consideration has to do with certain phenomena involving Soo Su Predicate Phrase Proformation. A basic generalization involved in this process, as is stated in Section II.1, is the substitution of the pro-form soo su "do so" for a Predicate



Phrase containing an action Verb. Consider the following paradigm of sentences with the dependent Predicate hazime-ru "begin".

- (34) a. Taroo-wa ronbun-o kak-i-hazime-ta;  
 Contr(Sub) 'thesis'Obj 'write''begin'Pst  
 Hanako-mo ronbun-o kak-i-hazime-ta  
 'also'(Sub) 'thesis'Obj 'write''begin' Pst  
 "Taro began to write a thesis, and Hanako also began to write a thesis"
- b. Taroo-wa ronbun-o kak-i-hazime-ta;  
 Hanako-mo soo si-hazime-ta  
 'so''do'  
 "Taro began to write a thesis, and Hanako also began to do so"
- c. Taroo-wa ronbun-o kak-i-hazime-ta; Hanako-mo soo si-ta  
 "Taro began to write a thesis, and Hanako also did so"

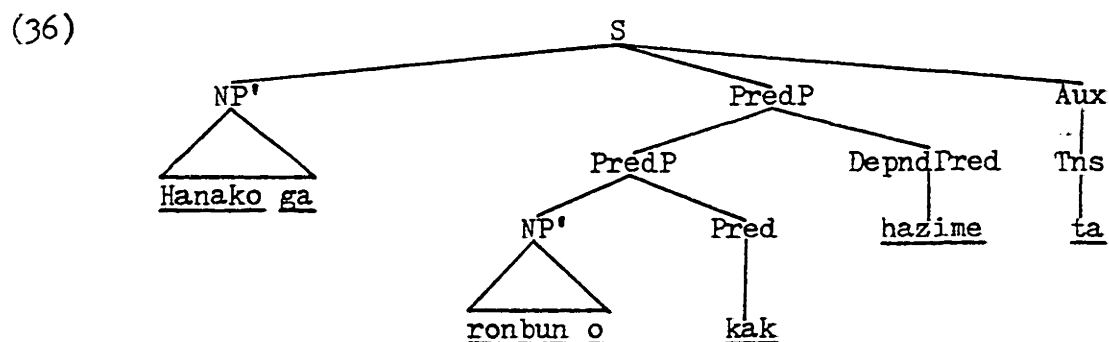
It is observed that the sentences in (34) have the same truth value. It is further observed that the pro-form soo su "do so" in the second conjunct of (34b) refers back to the italicized phrase ronbun-o kak "write a thesis", and that the pro-form in the second conjunct of (34c) refers back to the italicized phrase ronbun-o kak-i-hazime "begin to write a thesis". If the behavior of the pro-form soo su concerning complex Predicates, as in the above examples, is to be explained by the rule which is independently necessary for simplex Predicates illustrated in Section II.1, which makes it possible to achieve the greatest possible generality, then what necessarily follows is that both phrases like ronbun-o kak "write a thesis" and phrases like ronbun-o kak-i-hazime "begin to write a thesis" must constitute Predicate Phrases at some levels of derivation.

The most probable solution in an auxiliary Predicate analysis is to allow among the rules of the base another Predicate Phrase expansion rule

in which a Predicate Phrase immediately dominates itself, as in (35a), in addition to the independently necessary Predicate Phrase expansion rule (35b), where irrelevant details are omitted. (cf. Section IV.2.2).

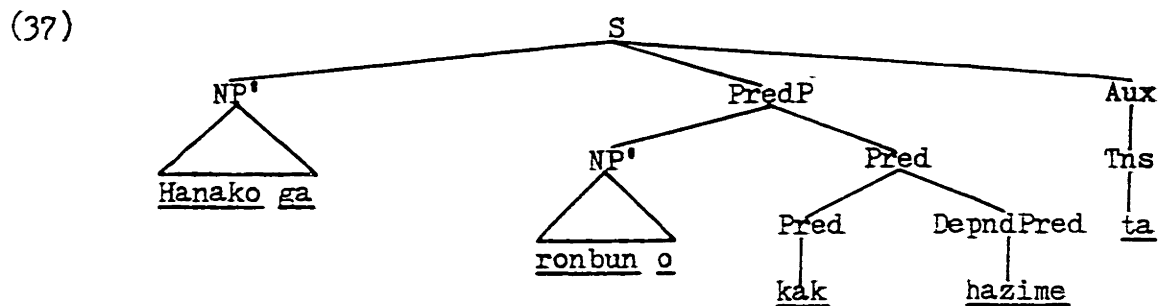
- (35) a. PredP  $\longrightarrow$  PredP ( Dependent Predicate )  
 b. PredP  $\longrightarrow$  ( NP' ) (  $\left\{ \begin{array}{l} \text{NP}' \\ \text{S}' \end{array} \right\}$  ) Pred .....

According to this auxiliary Predicate analysis, the second conjuncts of (34b) and (34c) will be derived from the following deep structure for the second conjunct of (34a).



The rule of Soo Su Predicate Phrase Pro-formation in its most general form will apply to two different Predicate Phrases in (36), thus yielding the desired second conjuncts of (34b) and (34c).

In fact, however, there is ample syntactic evidence for the constituency of a main Predicate like kak "write" and a dependent Predicate like hazime "begin" as a Predicate, as in (37).



Thus it is observed in the following sentences that the italicized complex Predicates function as single syntactic elements:

- (38) a. Ronbun-ga Hanako-ni(yotte) kak-i-hazime-rare-ta  
 'thesis'Sub 'by' 'write''begin' Pass Pst  
 "(Schematically) \*A thesis was (begin to write)ed by Hanako"
- b. Hanako-wa, ronbun-o kak-i-hazime-te-wa-i-ru  
 Top(Sub) 'thesis'Obj 'write''begin' Contr Dur Pres  
 ga, kak-i-owe-te-wa-i-na-i  
 'but' 'write''end' Contr Dur 'not' Pres  
 "Hanako has begun to write a thesis, but has not finished  
 writing it"

In (38a), the complex Predicate kak-i-hazime "begin to write" is passivized, which suggests that the passive subject ronbun "thesis" appears as the object of this complex Predicate. In (38b), kak-i-hazime "begin to write" are in contrast with kak-i-owe "finish writing", as is evidenced by the contrastive wa attachment to these complex Predicates. These observations, then, suggest that the main and dependent Predicates as in (36) must constitute a single Predicate unit, as is exemplified in (37), at the stage of derivation when direct passivization and Contrastive Attachment apply. The proposed auxiliary Predicate analysis will therefore require the conversion of tree diagram (36) into tree diagram (37). What matters to the present purpose is that the rule which effects this conversion is a new and otherwise unmotivated rule, which is distinct from the independently necessary rule of Complement Predicate Raising in that the latter, but not the former, operates beyond the boundary of a sentence, in particular, Chomsky-adjoins the Predicate of a complement sentence to the Predicate of the next higher sentence. Nevertheless, they effect basically the same composite Predicate structure.

In short, I have shown that the proposed auxiliary Predicate analysis of such aspectual Predicates as hazime-ru "begin" and yame-ru "stop" requires the introduction of two otherwise unmotivated rules--the Predicate Phrase expansion rule (35a) and the rule which adjoins the main Predicate to the dependent Predicate--into the syntactic component of Japanese, so that it can explain phenomena of Soo Su Predicate Phrase Pro-formation, direct passivization, and Contrastive Attachment in the most general way. Closer inspection of the data adduced in the preceding discussion, however, reveals that a higher Predicate analysis of the aspectual dependent Predicates under consideration explains the syntactic phenomena in question within the independently motivated framework of rules, and hence without the two additional rules forced by the auxiliary Predicate analysis.

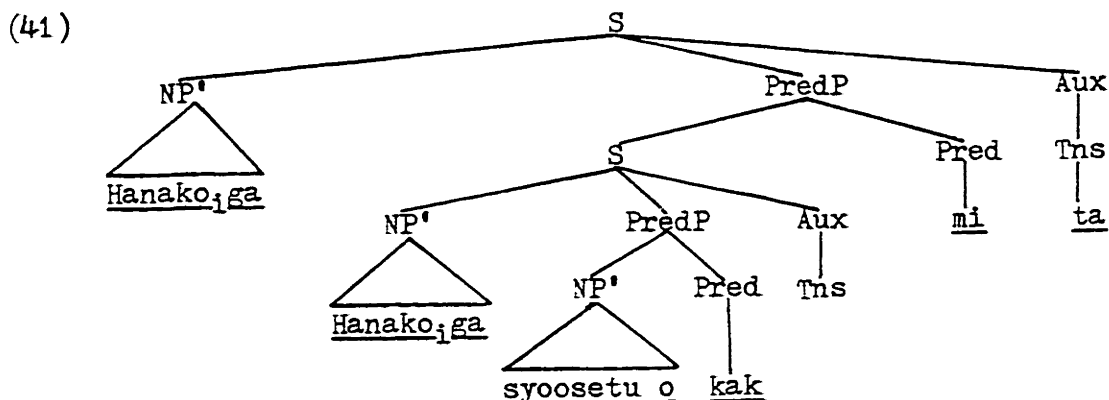
It should be noted that the data in (34) and (38) exactly parallel the data adduced in connection with the class of dependent Predicates which includes the causative sase-ru, gar-u "show signs of", (te-)mi-ru "try", and so forth. Thus compare (34) and (38) with (39) and (40), where the higher dependent Predicate mi-ru "try" and gar-u "show signs of" are suffixed to independently occurring Predicates kak-u "write" and kowa-i "dreadful of".

- (39) a. Taroo-wa syoosetu-o ka-i-te-mi-ta; Hanako-mo  
 Contr(Sub) 'novel' Obj 'write''try'Pst 'also'(Sub)  
 syoosetu-o ka-i-te-mi-ta  
 'novel' Obj 'write' 'try' Pst  
 "Taro tried writing a novel, and Hanako also tried writing a novel"
- b. Taroo-wa syoosetu-o kai-te-mi-ta; Hanako-mo soo si-te-mi-ta  
 'so''do'  
 "Taro tried writing a novel, and Hanako also tried doing so"

c. Taroo-wa syoosetu-o kai-te-mi-ta; Hanako-mo soo si-ta  
 "Taro tried writing a novel, and Hanako did so"

- (40) a. Zoo-ga kodomo-ni(yotte) kowa-gar-are-ta  
 'elephant' Sub 'child' 'by' 'afraid' 'show signs of'  
 Pass Pst  
 "(Schematically) \*The elephant was (show signs of being  
 afraid of)ed by the child"
- b. Sono kodomo-wa, zoo-o kowa-gat-te-wa-i-ru  
 'that' 'child' Top(Sub) 'elephant' Obj 'afraid' 'show signs of'  
 Cntr Dur Pres  
 ga, (sore-o) zitto mitume-te-i-ta-gat-te-mo-i-ru  
 'but' 'it' Obj 'fixedly' 'stare' Dur 'wish' 'show signs of'  
 'also' Dur Pres  
 "That child shows signs of feeling afraid of the elephant,  
 but she also shows signs of wishing to stare at it"

In (39), the pro-form soo su substitutes for both italicized Predicate Phrases, in particular, syoosetu-o kai "write a novel" in (39b), and syoosetu-o kai-te-mi "try writing a novel" in (39c), because the second conjuncts of (39b) and (39c) are derived from the following deep structure for the second conjunct of (39a):

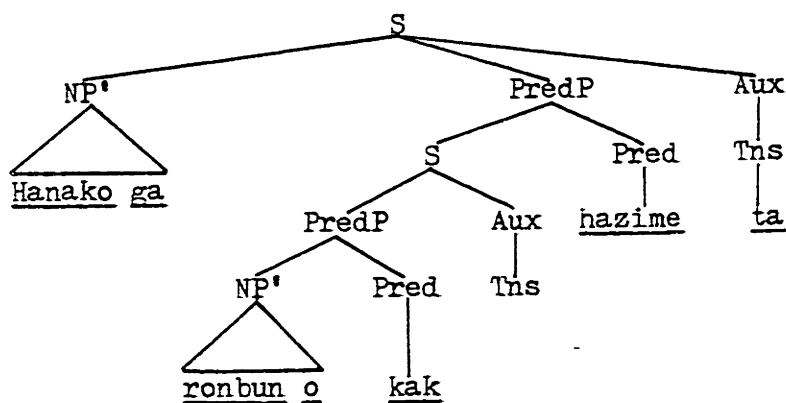


In (40a), kowa-gar "show signs of being afraid" is passivized, and in (40b), kowa-gar "show signs of being afraid" is contrastive with mitume-te-i-ta-gar "show signs of wishing to stare" (evidenced by the contrastive

markers wa and mo). These observations, then, suggest that the rule of Complement Predicate Raising, which applies prior to the application of direct passivization and Contrastive Attachment, is obligatory for such higher dependent Predicates as gar-u "show signs of" and mi-ru "try".

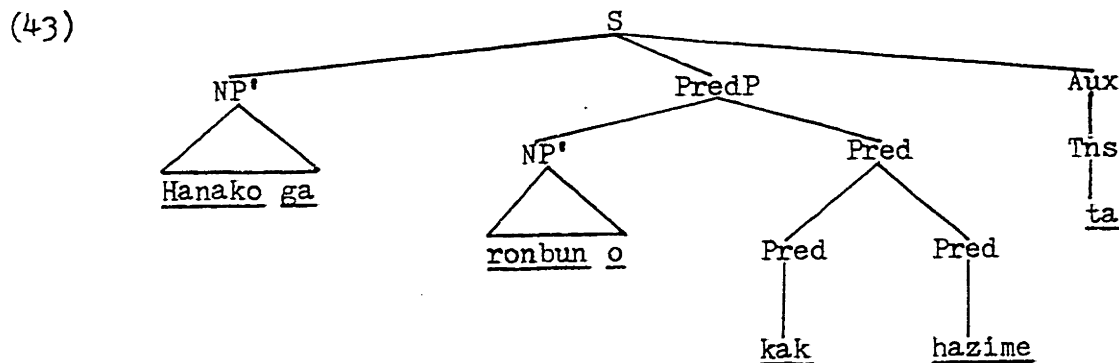
Since, therefore, there exist parallelisms between higher dependent Predicates of this class and dependent Predicates of the class in question including hazime-ru "begin" and yame-ru "stop" with respect to the processes of Soo Su Predicate Phrase Pro-formation, direct passivization, and Contrastive Attachment, these parallelisms seem to make it more plausible to assume that aspectual Predicates in question are higher Predicates which require the application of Complement Predicate Raising. This assumption will thus make it possible to explain the transformational phenomena in question in the most general way without any extension of the framework of independently necessary rules. To illustrate this point, the second conjuncts of (34b) and (34c) will be represented at some point in the derivation as the following tree diagram, where two different Predicate Phrases can undergo Soo Su Predicate Phrase Pro-formation:

(42)



The application of Complement Predicate Raising to (42) will produce

(43), which is susceptible of direct passivization and Contrastive Attachment, thus yielding such sentences as (38).



#### VII.4.2. Two Occurrences of One and the Same Aspectual Morpheme

A second argument for the plausibility of the higher Predicate analysis of aspectual dependent Predicates arises from the contrast between the independently and dependently occurring versions of one and the same transitive morpheme like hazime-ru "begin", tuzuke-ru "continue", yame-ru "stop" and owe-ru "end". The discussion to follow concerns two occurrences of, say, hazime-ru in the following contexts: <sup>6</sup>

- (44) a. Zyon-ga nihongo-o manab-u koto-o hazime-ta  
 Sub 'Japanese' Obj 'study' Pres Nom Obj 'begin' Pst  
 "John began studying Japanese"
- b. Zyon-ga nihongo-o manab-i-hazime-ta  
 Sub 'Japanese' Obj 'study' 'begin' Pst  
 "John began to study Japanese"

Hazime in (44a) is an independently occurring Predicate, but not hazime in (44b).

First of all, the independent version of hazime requires an animate subject, but not the dependent version. This difference is illustrated

in the following pairs of sentences:

- (45) a. (i) \*Yu-ga wak-u koto-o hazime-ta  
 'hot water' Sub 'boil' Pres Nom Obj 'begin' Pst  
 "Water began boiling"
- (ii) Yu-ga wak-i-hazime-ta  
 "Water began to boil"
- b. (i) \*Ooki-na ie-ga tate-rare-ru  
 'big' Variant of da (Pres) 'house' Sub 'build' Pass Pres  
 koto-o hazime-ta  
 Nom Obj 'begin' Pst  
 "A big house began being built"
- (ii) Ooki-na ie-ga tate-rare-hazime-ta  
 "A big house began to be built"
- c. (i) \*Ongaku-ga hitobito-o tanosim-ase-ru koto-o  
 'music' Sub 'people' Obj 'amuse' Caus Pres Nom Obj  
 hazime-ta  
 'begin' Pst  
 "Music began amusing people"
- (ii) Ongaku-ga hitobito-o tanosim-ase-hazime-ta  
 "Music began to amuse people"

This distinction in the animacy constraint on a subject Noun Phrase suggests that the independent hazime requires a Noun sentential complement with the head Noun koto in object position, but not the dependent hazime.

Secondly, comparison of the following two passives, the exact counterparts of the actives (44a) and (44b), brings a difference in meaning to light:

- (46) a. Nihongo-o manab-u koto-ga Zyon-ni(yotte)  
 'Japanese' Obj 'study' Pres Nom Sub 'John' 'by'  
hazime-rare-ta  
 "\*Studying Japanese was begun by John"
- Cf. \*Nihongo-ga Zyon-ni(yotte) manab-u koto-o hazime-rare-ta  
 "(Literally) \*Japanese was begun studying by John"



- b. Nihongo-ga Zyon-ni(yotte) manab-i-hazime-rare-ta  
 "(Schematically) \*Japanese was (begin to study)ed by John"

The semantic difference is attributable to the fact that passivization applies to different Predicates, in particular, to the simplex Predicate hazime in (46a) and to the complex Predicate manab-i-hazime "begin to study" in (46b), which is evidenced by the difference in passive subject between nihongo-o manab-u koto "studying Japanese" and nihongo "Japanese". This difference stands out most prominently when the subject Noun Phrases are separated out in such constructions as cleft and topical constructions. In the following, the subject Noun Phrases are clefted.

- (47) a. Zyon-ni(yotte) hazime-rare-ta no-wa,  
 'John' 'by' 'begin' Pass Pst Nom Top(Sub)  
nihongo-o manab-u koto da  
 'Japanese' Obj 'begin' Pres Nom Cop+Pres  
 "\*It was studying Japanese that was begun by John /  
 \*What was begun by John was studying Japanese"
- b. Zyon-ni(yotte) manab-i-hazime-rare-ta no-wa,  
nihongo da  
 "(Schematically) \*It was Japanese that was (begin to study)ed  
 by John / \*What was (begin to study)ed by John was Japanese"

These observations suggest that the independent hazime requires a sentential complement with the abstract nominalizer koto as the head Noun in object position, but not the dependent hazime, and further that at some level of derivation, the dependent version, together with the immediately preceding transitive Predicate, constitutes a single Predicate unit.

Thirdly, the independent hazime requires that the preceding Predicate be an action-expressing Verb, but not the dependent hazime.

- (48) a. (i) \*Taroo-ga sono uwasa-o sir-u koto-o  
 Sub 'that' 'rumor' Obj 'know' Pres Nom Obj  
 hazime-ta  
 'begin' Pst  
 "Taro began knowing of the rumor"
- (ii) Taroo-ga sono uwasa-o sir-i-hazime-ta  
 "Taro began to know of the rumor"
- b. (i) \*Ziroo-ga Beetooben-ga wakar-u koto-o  
 Sub 'Beethoven' Obj 'understand' Pres Nom Obj  
 hazime-ta  
 'begin' Pst  
 "Jiro began understanding Beethoven"
- (ii) Ziroo-ga Beetooben-ga wakar-i-hazime-ta  
 "Jiro began to understand Beethoven"
- c. (i) \*Taroo-ni-wa, dareka-no sugata-ga mie-ru  
 IO Top 'someone' Poss 'figure' Sub 'visible' Pres  
 koto-o hazime-ta  
 Nom Obj 'begin' Pst  
 "(Literally) Someone's figure began being visible to  
 Taro"
- (ii) Taroo-ni-wa, dareka-no sugata-ga mie-hazime-ta  
 "(Literally) Someone's figure began to be visible to  
 Taro"

Finally, a consideration of the synonymy of active and passive sentences suggests the distinction between the independent and dependent versions of hazime. Consider the difference between (49a) and (49b).

- (49) a. (i) Taroo-ga Hanako-o nagusame-ru koto-o hazime-ta  
 Sub Obj 'soothe' Pres Nom Obj 'begin' Pst  
 "Taro began soothing Hanako"
- (ii) Hanako-ga Taroo-ni nagusame-rare-ru koto-o hazime-ta  
 Sub 'by' Pass  
 "Hanako began being soothed by Taro"
- b. (i) Taroo-ga Hanako-o nagusame-hazime-ta  
 "Taro began to soothe Hanako"
- (ii) Hanako-ga Taroo-ni nagusame-rare-hazime-ta  
 "Hanako began to be soothed by Taro"

It will be observed in (49a) that the active and passive sentences are different in meaning with respect to the agent of the action indicated by the independently occurring version of hazime; the agent of (49a-i) is Taro, while that of (49a-ii) is Hanako. In (49b), however, it is not immediately certain whether the two sentences are differentiated from each other with respect to the volitional agent of the action which might be denoted by the dependent version of hazime.

One might think that the dependent version of hazime would require the volitional agency of the initial ga-phrase when it is an animate Noun Phrase, but there is evidence which suggests that the dependent hazime has no such constraint of its own. Observe first the following three sentences, which imply three different situations with respect to the involvement of the animate subject's volitionality: volitional, non-volitional, and two ways ambiguous, in the order given.

- (50) a. Doroboo-ga nige-ta  
           'thief' Sub 'escape' Pst  
           "The thief escaped"
- b. Akanboo-ga sodat-ta  
           'baby' Sub 'grow up' Pst  
           "The baby grew up"
- c. Taroo-ga korogat-ta  
           Sub 'roll' Pst  
           "Taro rolled"

Observe then the sentences in (51), where the dependent version is suffixed to the Verbs of the sentences in (50).

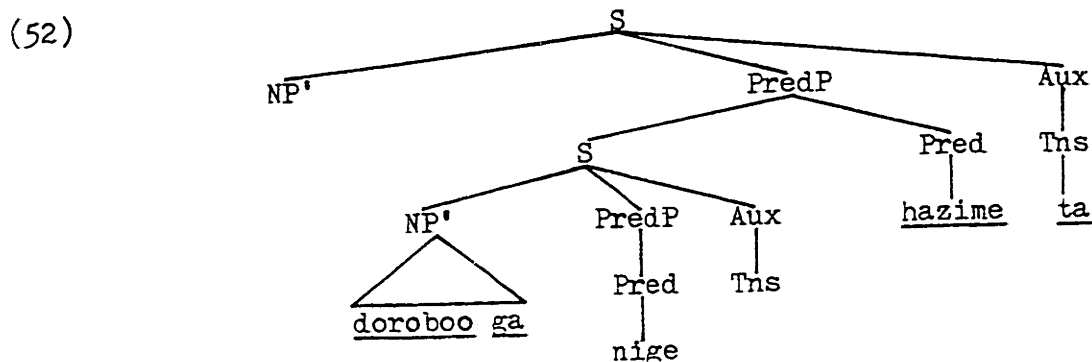
- (51) a. Doroboo-ga nige-hazime-ta  
           "The thief began to escape"
- b. Akanboo-ga sodat-i-hazime-ta  
           "The baby began to grow up"

- c. Taroo-ga korogar-i-hazime-ta  
 "Taro began to roll"

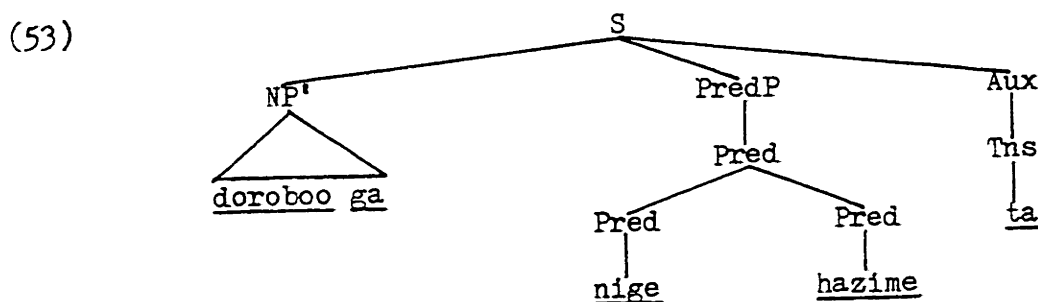
The subject Noun Phrases in (51), like those in (50), are volitional, non-volitional, and ambiguous in two ways, respectively. These exact parallelisms, therefore, indicate that the volitional agency of the subject Noun Phrases in (51) is determined by the idiosyncratic properties of the main Predicates nige-ru "escape", sodat-u "grow up", and korogar-u "roll", but not by those of the dependent Predicate hazime-ru "begin". Thus turning back to the sentences in (49b), it follows that it is not the dependent version of hazime which, if there is any at all, imposes a volitional agency constraint on the initial ga-phrases.

In the preceding discussion, I have pointed out four distinguishing properties which lead to the conclusion that the independently occurring version of hazime requires a Noun sentential complement with the abstract nominalizer koto as the head Noun, and hence that the dependent version is not transformationally related to this independently occurring version. This distinction notwithstanding, however, the fact that the independent version is a transitive higher Predicate seems to me to lend more plausibility to a higher Predicate analysis than to an auxiliary Predicate analysis for the dependent version of the same morpheme. This plausibility will increase when we notice that the properties noted above about the dependent version exactly parallel the properties inherent to such subjectless higher Predicates as yoo-da "seem", rasi-i "likely" and hazu-da "be expected to". Cf. Section V.2. This parallelism, then, suggests that the dependent hazime, like those speaker-oriented Predicates, may plausibly be taken as a Predicate which requires an empty

subject and a Predicate sentential complement. The entire preceding discussion of the dependent hazime applies to other aspectual dependent Predicates like tuzuke-ru "continue", yame-ru "stop", and owe-ru "end". I will assume, therefore, that (51a), for instance, will be derived from the following deep structure:



The obligatory application of both Complement Subject Raising and Complement Predicate Raising will yield the wanted surface structure (53).



VII.4.3. Further Less Clear Cases of Dependent Predicates We are now left with the discussion of the perfective simaw-u "complete/finish" and the durative i-ru "be", and of the intransitive counterparts of transitive aspectual dependent Predicates, like tuzuk-u "continue", yam-u "stop", and owar-u "end", but I will not go into detail about this matter at present. I will simply point out that along the lines suggested

in the preceding discussion, these Predicates may also be plausibly taken as higher Predicates, although there seems to be no compelling evidence for a higher Predicate analysis. By the same line of argument, one might propose that the negative Predicate na-i "not" and the polite Predicate mas-u would be higher Predicates.

The most convincing argument I can think of is the fact that all these dependent Predicates, like all independently occurring Predicates and higher dependent Predicates like sase-ru "cause" and ta-i "wish", may take their own Tense forms. Thus compare the following three cases in each paradigm:

- (54) a. (i) Tori-wa                      uta-u (Independent Verb)  
           'bird'Generic(Sub) 'sing' Pres  
           "Birds sing"
- (ii) Tori-o    utaw-ase-ru (Higher dependent Verb)  
               'bird'Obj 'sing' Caus Pres  
               "make the bird sing"
- (iii) Tori-ga    utat-te-i-ru (Dependent Verb in question)  
                'bird'Sub 'sing' Dur Pres  
                "The bird is singing"
- b. (i) Boku-wa,                      sabisi-i (Independent Adjective)  
               'I-male'Top(Sub) 'lonely' Pres  
               "I am lonely"
- (ii) Boku-wa,                      oyog-i-ta-i (Higher dependent Adjective)  
                'I-male'Top(Sub) 'swim' 'wish' Pres  
                "I want to swim"
- (iii) Boku-wa,                      oyag-a-na-i (Dependent Adjective in  
                'I-male'Top(Sub) 'swim' 'not' Pres                      question)  
                "I won't swim"

Crucial evidence comes from (b-ii) and (b-iii); namely, the dependent Adjectives ta "wish" and na "not", which are suffixed to Verbs, are immediately followed by the Present Tense form i for Adjectives in general,

not by ru for Verbs. Thus the choice of Tense morphemes is determined by the Predicate to which the Tense is immediately attached. It is evident, therefore, that dependent Predicates like the durative i-ru and the negative na-i "not" in (a-iii) and (b-iii) behave exactly like independently occurring Predicates and well established higher dependent Predicates such as those in the other examples of (54).

VII.5. Auxiliaries in Complex Predicate Complementation As should have been apparent in examples illustrated in the preceding sections, complex Predicates may not be intervened among their component Predicates by any Auxiliary element, including Tenses and Moods. Thus compare (55a) with the other examples in (55).

- (55) a. tabe-sase-hazime-ta-gar-a-na-i-yo  
 'eat' Caus 'begin'wish''show signs of''not' Pres Assertive  
 "does not show signs of wishing to begin to make someone eat"
- b. \*tabe-ru-sase-hazime-ta-gar-a-na-i-yo  
 Pres Pres Assertive
- c. \*tabe-sase-ta-ka-hazime-ta-gar-a-na-i-yo  
 Pst Q Pres Assertive
- d. \*tabe-sase-hazime-ta-i-ne-gar-a-na-i-yo  
 Pres Confirmative Pres Assertive
- e. \*tabe-sase-hazime-ru-yo-ta-gar-a-na-i  
 Pres Assertive Pres

The above examples indicate that no possible types of occurrence of Auxiliaries consisting of Tenses and Moods in this order are permissible, except for cases of the type as in (55a), where Auxiliaries occur attached to the end of an entire complex Predicate. In effect, no Auxiliary element can intercede between any of the component Predicates of a complex Predicate.

Furthermore there is evidence suggesting that no Auxiliary occurs in deep structure with any of the component Predicates other than the final one of a complex Predicate. Thus compare the minimal pairs of sentences in (56) with soo-da as their higher Predicates, which differ in the presence or absence of the Tense Auxiliary in surface structure.

- (56) a. (i) Doroboo-ga nige-ta soo-da  
 'thief' Sub 'escape' Pst 'be said/I hear' Pres  
 "It is said/I hear that the thief ran away"
- (ii) Doroboo-ga nige-  $\emptyset$  - soo-da  
 'look like' Pres  
 "The thief looks like he escapes"
- b. (i) Ano yama-ga itiban taka-i soo-da  
 'that' 'mountain' Sub 'most' 'tall' Pres 'be said' Pres  
 "That mountain is said to be tallest"
- (ii) Ano yama-ga itiban taka -  $\emptyset$  - soo-da  
 'look like' Pres  
 "That mountain looks tallest"
- c. (i) Kono heya-wa, sizuka-da/na soo-da  
 'this' 'room' Top (Sub) 'quiet' Pres Variant of da 'be said' Pres  
 "This room is said to be quiet"
- (ii) Kono heya-wa, sizuka -  $\emptyset$  - soo-da  
 'look like' Pres  
 "This room looks quiet"
- d. (i) Tanaka-san-wa, isya da soo-da  
 Title Top (Sub) 'doctor' Copular+Pres 'be said' Pres  
 "Mr./Mrs./Miss Tanaka is said to be a doctor"
- (ii) \*Tanaka-san-wa, isya ( da -  $\emptyset$  - ) soo-da  
 Cop 'look like' Pres
- Cf. Tanaka-san-wa, isya - no yoo-da  
 Variant of Cop da 'seem' Pres  
 "Mr./Mrs./Miss Tanaka seems to be/looks like a doctor"

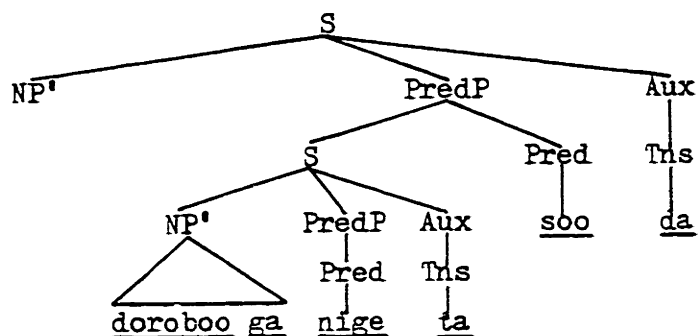
The pairs of sentences in (56a) through (56d) represent the kinds of complex sentences whose complement Predicates are Verbs, Adjectives,



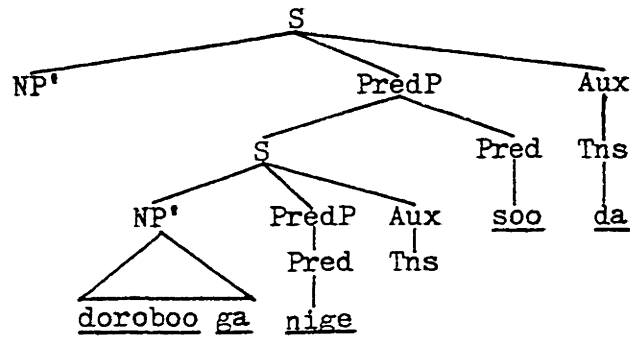
Nominal-Adjectives, and the Copula, respectively. The members of each pair, except for those of (d), semantically differ in whether the higher Predicate soo-da means "I hear/It is said that" or "It looks like/as if", as is apparent from the English counterparts. The only syntactic clue which signals this semantic difference is the presence or absence of the Tense Auxiliary for the complement Predicate in surface structure.

This situation makes it most natural to assume, therefore, that the members of each pair in (65) differ in the presence or absence of the Tense Auxiliary in deep structure, whether one may or may not take the position that two instances of the same morpheme soo(-da), as in each pair above, are registered as two distinct lexical items. Since the Tense is the obligatory part of the Auxiliary in the Phrase Structure Rules of Japanese syntax (cf. Section I.0), this requirement will make it necessary to distinguish formally between two instances of soo-da by assuming that one but not the other of these two cases is lexically marked for the obligatory selection of the Tense as an unspecified element in the complement sentence. The deep structures for (a-i) and (a-ii) in (56), for example, will thus be differentiated from each other only in whether the Tense Auxiliary dominates a specified element or not, as is exemplified in tree diagrams (57a) and (57b), respectively.

(57) a.

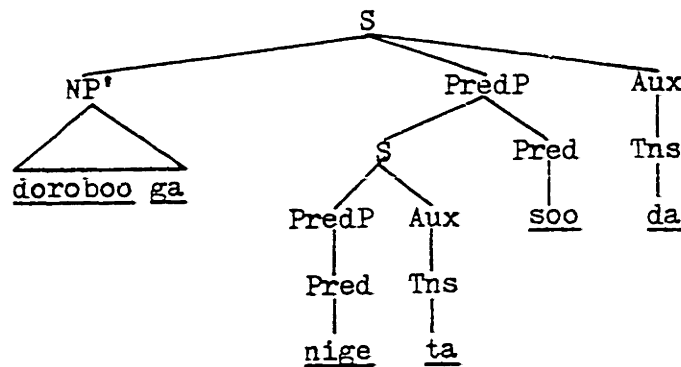


b.

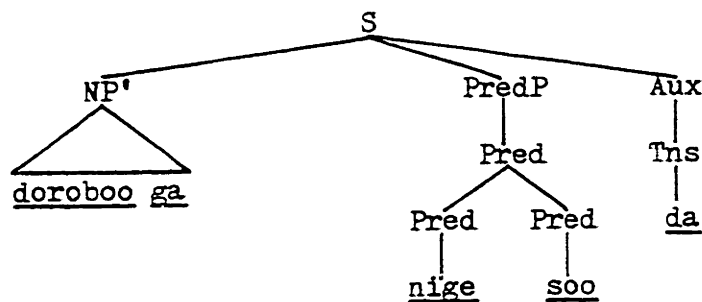


(56a-i) will be derived from (57a) by Complement Subject Raising, whereas (56a-ii) will be derived from (57b) by Complement Subject Raising and Complement Predicate Raising, thus resulting in the following surface structures (58a) and (58b), respectively:

(58) a.



b.



The assumption that Complement Predicate Raising is obligatory for the derivation of (56a-ii), but not for the derivation of (56a-i), will be supported particularly by phonological evidence which indicates that the surface structures in (58) are the proper inputs to the phonological

component, or more specifically, the accentual system of Japanese.<sup>7</sup>

Thus compare the following paradigms of accentual patterns, where the accented moras are capitalized:

(59) a. "is said to have escaped" in (58a) for (56a):

- (i) NIge ta SOO da
- (ii) \*nige ta SOO da

b. "looks like (he) escapes" in (58b) for (56b):

- (i) \*NIge SOO da
- (ii) nige SOO da

c. "looks like (he) wishes to escape":

- (i) \*NIge ta SOO da
- (ii) nige ta SOO da

The contrast between (59a) and (59c) clearly indicates that syntactic information is operative for accent placement on Predicates, because the only differentiating factor in their different accentual patterns, despite their identical phonological strings, is the fact that a phonological string ta has two different syntactic correlates, that is, a Past Tense, as in (a), and a Predicate (meaning "wish"), as in (c); if this syntactic information were not available, then there would be no formal basis for the distinction in accent placement between (a) and (c). This contrast further indicates that nige "escape" and soo "be said to" in (a) each function as simplex Predicates, exactly as all simplex Predicates actually do, in accent placement, whereas it is the complex Predicate nige-ta-soo "looks like (he) wishes to escape" in (c), and analogously, the complex Predicate nige-soo "looks like (he) escapes" in (b), which behave exactly like simplex Predicates with respect to their accentual patterns. If,

therefore, we are to explain accentual patterns of complex Predicates as in (b) and (c) in exactly the same fashion in which accentual patterns of simplex Predicates and compound Predicates are explained, then it follows that Complement Predicate Raising is obligatory for the derivation of such complex sentences as (56a-ii), but not (56a-i). It has thus turned out that this rule is only applicable to Predicates which require the occurrence of an unspecified Tense Auxiliary in the complement sentence. Since unspecified elements of this sort do not participate in semantic interpretation and they do not dominate terminal strings, they will not play any role in the formulation of transformations.<sup>8</sup> Taking this matter into consideration, we would be able to formulate the rule of Complement Predicate Raising as in the following form:

(60) Complement Predicate Raising:

$$\begin{array}{ccccccc}
 X & \left[ & X & \left[ & X & \left[ & X & - & \text{Pred} & \right]_{\text{PredP}} & \right]_{\text{S}} & - & \text{Pred} & \right]_{\text{PredP}} & - & X \\
 & & 1 & & & & & & 2 & & & & & & & & 4 & \longrightarrow \text{OBL} \\
 & & 1 & & & & \emptyset & & & & 2 \# & & 3 & & & & 4 & 
 \end{array}$$

The obligatory application of Complement Predicate Raising seems to be correlative with the fact that Soo Sentential Pro-formation never applies to the complement sentence of any higher dependent Predicate, unlike that of a higher independently occurring Predicate. Thus observe the following strings, where each of the component Predicates of a complex Predicate tukamae-te-hosi-gar-i-tuzuke "continue to show signs of wishing someone to capture" in (61a) is dominated by a Sentence in deep structure.

(61) a. Taroo-ga    boku-ni    doroboo-o    tukamae-te-hosi-gar-i-  
                   Sub    'I-male'IO    'thief' DO    'capture' 'wish' 'show signs of'

tuzuke-ta

'continue' Pst

"Taro continued to show signs of wishing me to capture the thief"

- b. \*Taroo-ga soo hosi-gar-i-tuzuke-ta  
 "\*\*Taro continued to show signs of wishing so"
- c. \*Taroo-ga soo gar-i-tuzuke-ta  
 "(Literally)\*Taro continued to show signs so"
- d. \*Taroo-ga soo tuzuke-ta  
 "\*\*Taro continued so"

This observation thus allows the assumption that a complex Predicate like that in (61a) constitutes a single Predicate unit in surface structure.

## NOTES

1. McCawley (1968a) proposes in English semantics what is equivalent to the rule I am proposing here. He terms it Predicate Lifting or Raising. His version is a mechanism which converts a bundle of semantic units into a lexical item. It will become apparent that the rule of Predicate Raising in Japanese is motivated on several syntactic grounds.
2. There is ample evidence, as in (1c) and (1d), that ta-gar is analyzable into two dependent Predicates: ta(-i) "wish" and gar(-ru) "show signs of", and that they must be treated as two separate Predicates, but, for purely expository purposes, I will deal with this complex dependent Predicate as if it were originally a single element, because its component Predicates, taken separately, show certain peculiar properties which are irrelevant for the purpose of the present discussion. This treatment does not affect the content of the discussion to follow, because a complex Predicate, like ta-gar, functions syntactically the same way as the final component, i.e., gar-u, does.
3. I owe this subsection entirely to Kuno (1971b), who has written a whole paper about exactly this argument.
4. Cf. Kuroda (1965a) and Kuno (1967) for discussion of two types of causatives.
5. It should be noted that although hazimar-u "begin" and de-ru "come out" are the intransitive counterparts of hazime-ru "begin" and das-u "start", respectively, they function only as independently

occurring Predicates.

6. For discussion of the English Verb begin, cf. Perlmutter (1968), Fischer and Marshall (1969), and Newmeyer (1969a, 1969b).
7. For some detailed discussion in transformational terms, cf. McCawley (1968, particularly III.6).
8. Cf. Chomsky (1971, fn.39) for a discussion of the status of unspecified elements in grammar.

SUMMARY: PREDICATE SUBCATEGORIZATIONS IN JAPANESE

In summary, I will present a list of subcategorizations of Japanese higher Predicates of the types proposed in the present investigation. We have noted that Predicates are subcategorized for the types of Noun and Predicate sentential complements, their internal structure, and the types of Complementizers. We have further noted that the abstract sentential nominalizers koto, no and tokoro, and some limited number of lexical items participate in Predicate subcategorization, where they act as the head Nouns of Noun sentential complements. We have also seen that there are three fundamental transformational rules required for the derivation of sentential complement constructions, namely, Complement Subject Raising, Complement Subject Deletion, and Complement Predicate Raising. These rules thus play a role in the subclassification of Predicates. The following list covers some representative examples which are subclassified in terms of these factors:

(1) Noun sentential complementation:

a. Noun sentential complementation in subject position and no transformational operation required:

- (i) Verbs: ((to-yu-u) koto-ga) hanmeesu-ru "become apparent",  
((to-yu-u) no-ga) medat-u "stand out"
- (ii) Adjectives: ((to-yu-u) no/koto-wa(ga)) yasasi-i "easy",  
muzukasi-i "difficult", nozomasi-i "desirable",  
omosiro-i "interesting", okasi-i "funny",  
mazu-i "awkward", tumarana-i "trivial"  
(to-yu-u no/koto-wa(ga)) utagawasi-i "doubtful"
- (iii) Nominal-Adjectives: ((to-yu-u) no/koto-wa(ga)) akiraka-  
da "obvious", husigi-da "strange", toozen-da  
"natural", hen-da "odd", kenmee-da "wise",  
hituyoo-da "necessary", baka-da "foolish";



(to-yu-u no/koto-wa(ga)) zizitu-da "fact",  
mondai-da "problem(atical)", uso-da "false",  
matigai-da "incorrect"

b. Noun sentential complementation in object position and no transformational operation required:

(i) Verbs: ((to-yu-u) no/koto-o) kitaisu-ru "expect",  
negaw-u "pray", sir-u "know";  
((NP-ni)(to-yu-u) no/koto-o) tutae-ru "tell",  
setumeesu-ru "explain";  
((to-yu-u) koto-o) kateesu-ru "assume";  
suiteesu-ru "presume"; (huri-o) su-ru "pretend";  
(no/tokoro-o) mi-ru "see", torae-ru "capture",  
tukamae-ru "catch", soozoosu-ru "imagine";  
(no-o) kanzu-ru "feel", kik-u "hear"; samatage-ru  
((to-yu-u) koto-ni) kizuk-u "notice" "prevent";

(ii) Adjectives: (no-ga) arigata-i "grateful/glad", kowa-i  
"afraid", nikurasi-i "hate", hazukasi-i  
"ashamed", natukasi-i "long for", omosiro-i  
"interested"

(iii) Nominal-Adjectives: (no-ga) suki-da "fond", kirai-da  
"dislike", iya-da "weary", tune-da "habitual",  
zannen-da "regret"

c. Noun sentential complementation in object position and Complement Subject Deletion required:

(i) Verbs: (koto-o) kokoromi-ru "try", kuwadate-ru "under-  
take", hazime-ru "begin", tuzuke-ru "continue",  
yame-ru "stop", owe-ru "end";  
(koto-ni) seekoosu-ru "succeed", sippaisu-ru  
"fail" nar-u "be to", nare(te-i)-ru "be accus-  
tomed to";  
(NP-ni S koto-o) kitaisu-ru "expect", inor-u  
"pray", nozom-u "hope", susume-ru "advise/sug-  
gest", meesu-ru "order", kyooseesu-ru "force",  
sii-ru "force", tanom-u "ask for", yookyuusu-ru  
"request" (IO-Sub identity condition);  
(NP-ni S koto-o) yakusokusu-ru "promise", tika-u  
"vow" (Sub-Sub identity condition)

(ii) Adjectives: (no-ga) kurusi-i "feel pain in"

(iii) Nominal-Adjectives: (no-ga) tokui-da "strong at",  
nigate-da "poor at", heta-da "poor at"

(2) Predicate sentential complementation:

- a. Predicate sentential complementation with the Complementizer to and no transformational operation required:

Verbs: (S to) omow-u "think", sinzi-ru "believe", handansu-ru "judge", soozoosu-ru "imagine", suiteesu-ru "presume", kateesu-ru "assume"  
 ((NP-ni) S to) setumeesu-ru "explain", tutae-ru "tell/convey", hookokusu-ru "report", hanas-u "speak/talk", tow-u "ask", tazune-ru "ask", yu-u "say"

- b. Predicate sentential complementation with the Complementizer to or yoo-ni, or without it, and Complement Subject Deletion required:

(i) Verbs: (yoo(Vol) to) su-ru "try", kokoromi-ru "attempt", kuwadate-ru "undertake", mokurom-u "conspire" (Sub-Sub identity condition)  
 (NP-ni S hosi-i to) negaw-u "wish", tanomu-u "ask for" (IO-Sub identity condition)  
 (NP-ni S to) yakusokusu-ru "promise", tikaw-u "vow" (Sub-Sub identity condition)  
 (S yoo-ni) tutome-ru "endeavor", su-ru "arrange" (Sub-Sub identity condition)  
 (NP-ni S yoo-ni) tutae-ru "tell/convey", susume-ru "advise/suggest", settokusu-ru "persuade", tokihuse-ru "persuade", meezu-ru "order", tanom-u "ask for", negaw-u "wish" (IO-Sub identity condition)

(ii) Nominal-Adjectives: (S  $\emptyset$ ) yotee-da "plan", keekaku-da "plan", tumori-da "intend", ikoo-da "mean", harazumori-da "intend", kontan-da "secretly intend", kakugo-da "determine", ketui-da "resolve", netui-da "enthusiastic", ikigomi-da "eager", tehazu-da "arrange" (Sub-Sub identity condition)

- c. Predicate sentential complementation and Complement Subject Raising Required:

(i) Verbs: (S yoo-ni) nar-u "become/come to", mie-ru "appear", omoe-ru "seem"  
 (S  $\emptyset$ ) des-u "be-Polite"

(ii) Adjectives: (S  $\emptyset$ ) rasi-i "likely", nitigaina-i "must", kamosirena-i "may"

(iii) Nominal-Adjectives: (S  $\emptyset$ ) hazu-da "ought to/be expected to", soo-da "be said to/I head", yoo-da "seem", mono-da "used to", tokoro-da "be about to", no-da "It is the case that"

d. Predicate sentential complementation, and Complement Subject Deletion and Complement Predicate Raising required:

- (i) Verbs: (S  $\emptyset$ ) gar-u "show signs of", re-ru "able", (-te-) mi-ru "try (do)ing" (Sub-Sub identity condition)  
 (NP-ni S  $\emptyset$ ) kure-ru "Someone does the speaker the favor of", kudasar-u "Someone does the speaker the favor of--Polite", yar-u "The speaker does someone the favor of--Abrupt", age-ru "The speaker does someone the favor of --Polite" (Sub-Sub identity condition)  
 (NP-ni S  $\emptyset$ ) rare-ru (Indirect Passive), sase-ru (Indirect Causative), moraw-u (Polite Causative), itadak-u (Honorific Causative)  
 (IO-Sub identity condition)

- (ii) Adjectives: (S  $\emptyset$ ) ta-i "wish", te-mo-yo-i "may-Permissive", nakerebanarana-i "must-Obligatory", te-wa-ike-na-i "must not" (Sub-Sub identity condition)  
 (NP-ni S  $\emptyset$ ) hosi-i "want" (IO-Sub identity condition)

e. Predicate sentential complementation, and Complement Subject Raising and Complement Predicate Raising required:

- (i) Verbs: (S  $\emptyset$ ) hazume-ru "begin", tuzuke-ru "continue", owar-u "end", owe-ru "end", yame-ru "stop", yam-u "stop", tuzuk-u "continue", i-ru "be--Durative", simaw-u "complete/finish--Perfective", mas-u (Polite Verb attached only to Verbs).

- (ii) Adjectives: na-i "not"

- (iii) Nominal-Adjectives: soo-da "seem/look like", gati-da "tend"

f. Predicate sentential complementation, and Complement Predicate Raising required:

Verbs: sase-ru (Direct Causative), gar-u "show signs of"

This list is neither definitive nor exhaustive. It should be noted, first, that some Predicates which range over several patterns are not listed in all of their appropriate patterns; second, that there are a few other patterns where higher Predicates appear; and finally, that such Predicates as ar-u "exist", na-i "not exist", kikoe-ru "audible/hear" and mie-ru "visible/see", which require ni-ga constructions, are not included in this list.

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## BIOGRAPHICAL NOTE

The author was born on January 22, 1941 in Kobe, the largest cosmopolitan port of Japan, and he was reared in an atmosphere of rigorous discipline. In his elementary and junior high school years, he participated in extracurricular activities like the Student Government as president, the Wandervogel and Shodoo (Calligraphy) societies. During his senior high school days, he, like many other boys of the same age, was bound to prepare thoroughly for extremely rigid competitive university entrance examinations. In April, 1959, he was admitted to the Department of English of the Oosaka University of Foreign Studies, the institution of his first preference, where he obtained the degree of Bachelor of Arts in March, 1963, and stayed the next one year in the special graduate course of the same university. In April, 1964, he went on to the Graduate School of Toohoku University, Sendai, to pursue his interest in a linguistic approach to English, received the degree of Master of Arts in March, 1966, and worked there as a Ph.D. candidate for the following two years. In April, 1968, he took the position of instructor in English linguistics at the Miyagi College of Education. In July of the same year, he came to the United States as a Fulbright all expense grantee, on official leave from the same college, and started his work on linguistics at M.I.T. In August, 1970, he resigned from the above-mentioned Japanese affiliation in order to complete the Ph.D. program in the United States. He held a research assistantship during his second and third years' stay at M.I.T.