Cases and Other Relational Morphemes in Japanese

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by

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ABSTRACT

In the following thesis, the term "case" is used in a very wide sense. I will first discuss the peculiar characteristics of the case functions in Japanese which do not answer to the traditional notions of them. In view of the fact that no existing theories provide an adequate description of the cases, the main concern of this thesis is to develop a new grammar of Japanese which will provide some formal, syntactic basis to explain (i) how the case markers are derived and associated with their nominals, and (ii) how they acquire their functional meanings.

An initial hypothesis is made on the relationship between certain case markers and the corresponding sentence connectives, on the basis of close similarities of their semantic functions. Then, a set of syntactic rules are constructed to account for the development of the case-marked nominals from their underlying sentence structures. Subsequently, the hypothesis is tested on the two cases, the "topicalizing" _wa_ and "contrastive" _ga_,

as well as the "uncertain" case <u>ka</u>.

Finally, in conjunction with the transformational introduction of the case markers into the noun phrases, the parallel introduction of their related sentence connectives into the sentences are investigated, along with a number of semantic constraints on their occurrences.

SYMBOLS AND CONVENTIONS

[   ]   embedded structure

'   '   English translation

___   Japanese words quoted from earlier
passages, or for emphasis

"   "   quotation or reference to the previous
passages or phrases

<   >   semantic or syntactic feature

[   ]   feature complex

△   unspecified or partly specified
structured sentence

*   ungrammatical phrases and sentences

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Chapter I

Background to the Description of Japanese

Cases, and an Initial Hypothesis

Introduction

This chapter will serve to acquaint the reader
with some general linguistic features of Japanese
that are prerequisite to the formation of a new des-
cription of Japanese cases. Some current theories
of cases and related sentence formations will be set
out and discussed. Some postulates concerning case
assignment and semantic roles are subsequently proposed.
These postulates will provide the basis for an initial
hypothesis concerning the development of the rules with
respect to the most basic case-marker.

Section 1.   Structural characteristics of Japanese

1.1   The following is a compact account of
Japanese sentence structures and is by no means intended
to be a comprehensive description of the syntactic
characteristics of Japanese.   It will consist of selected
samplings of what appear to be the linguistic features of
that language, with some brief comments on them.   The
material will serve as an index to the typology of
Japanese, and will provide some information relevant to
Japanese cases and relational morphemes which will be
discussed in the later chapters.

1.2.   The basic word order in a Japanese sentence
is subject-object-verb.   The grammatical relations of the
sentence constituents are overtly marked by various case
markers such as,

a. boku wa uma o mita   'I saw a horse'

b. usi mo uma mo sore o tabeta   'cows as well as horses
                                       ate it'

It should be noted that the nominal segments such as
usi 'cow', boku 'I', uma 'horse' and sore 'it', which

constitute subject and object in the given sentences, are not specified for number and gender nor do they require any articles. Uma 'horse', for example, can be interpreted as 'a horse', 'the horse', 'horses' and 'the horses' -- that is to say, as any member of the universal class of horses. If necessary, the particular members of a class of horses may be identified through the use of additional numerals, demonstrative adjectives, plural suffix and so on,

a. ip-piki no uma   'one horse'

b. aru uma   'a horse'

c. sono uma   'the horse (in the current discourse)'

d. uma-tati   'horses'

e. sono uma-tati   'the horses (in the current discourse)'

These distinctions, however, are not relevant for native speakers of Japanese when they name an individual they wish to introduce into their discourse. G. B. Sansom observed semantic ambiguities of this nature some half a century ago, and attributed it to the "non-analytical" and "comprehensive" way by which

such concepts are given their linguistic forms[1] in the Japanese language.

1.3.   A basic noun phrase in Japanese consists of a noun and a case marker.   The case marker identifies not only the syntactic functions of a given noun phrase such as "subject", "object", "prepositional object", etc. but it also indicates a particular manner in which the noun phrase is introduced into a sentence.   For example,

a. boku <u>wa</u> sore <u>o</u> mituketa   'as for me, I found it'

b. boku <u>ga</u> sore <u>mo</u> mituketa   'I found it too'

c. boku <u>mo</u> kore <u>ka</u> are <u>ka</u> hosii   'I too would like to have this or that'

d. boku <u>demo</u> sore <u>wa</u> wakaru   'as for that, even I will understand it'

<u>Wa</u> generally associates the noun phrase with topicalizing function; <u>o</u> with object function; <u>ga</u> with contrastive sense; <u>mo</u> with inclusive sense; <u>ka</u> with uncertain sense and <u>demo</u> with emphatic sense.   There is, however, a considerable disagreement as to the interpretation of the semantic sense generated by the presence of these case markers among the grammarians (bibliography: 15, 22, 23, 24,

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[1]Sansom, G. B.   1925   Notes on the Japanese Language TASJ II.

25, 35, 36, 42 and 43) as well as among the native
speakers of Japanese. The main concern of this thesis
is to investigate how these case markers arise grammatically and what meanings are to be assigned to them.

1.4 'WH'-pronouns, indefinite pronouns, and
restrictive pronouns are not morphologically distinguished
in Japanese. What may remotely correspond to these
pronouns is a set of such primitives as _dare_ 'uncertain
one (person)', _nani_ 'uncertain one (thing)', _doko_
'uncertain place', and _dore_ 'uncertain one (of them)',
all of which are unspecified in their meanings. Therefore, without context, _dare_, for example, may correspond
to any one of 'who, somebody, anybody, everybody, no one'.
Likewise _nani_ represents any one of 'what, something,
anything, everything, nothing'; _doko_ any one of 'where,
anywhere, somewhere, everywhere, nowhere', and _dore_ any
one of 'which, any one, some one, every one, no one'.
Only in co-occurrences with the case markers such as in
1.3 these pronouns are assigned the specific meanings.

a. dare _ga_ kuru ka   'who is coming'

b. dare _ka_ kuru   'someone is coming'

c. dare <u>mo</u> konai   'no one is coming'

d. dare <u>demo</u> kuru   'everyone is coming'

     1.5   There are no independent series of the third person pronouns in the native Japanese vocabulary. The equivalents of 'he', 'she', and 'they' are expressed by a common noun <u>hito</u> 'person' which is further specified as to the location in relation to the speaker by <u>ko</u> 'here, this'; <u>so</u> 'the' and <u>a</u> 'over there, that'.

a. <u>ko-no hito</u> wa tomodati desu   'he/she is a friend'

b. <u>so-no hito no</u> ban desu   'it is his/her turn'

c. <u>a-no hito</u> mo kimasu   'he/she too will come'

d. <u>a-no hito-tati</u> wa yasumi desu   'they are absent'

    Non-personal pronouns are,

a. <u>ko-re</u> o kure   'give (me) this one'

b. <u>a-re</u> ga hoka yori ii   'that one is better than the others'

c. <u>so-re</u> wa kowareta   'it was broken'

d. <u>so-re-ra</u> wa omosiroi   'those are interesting'

   etc.

    Locative pronouns are derived through the similar combinations,

a. ko-ko ni koi   'come to this place/here'

b. boku wa so-ko ni sumu   'I am living in that place'

c. a-so-ko wa doko ka   'what is the place over there'

    1.6   The basic structure of a verb phrase consists of a verb stem and a modal aspect.   Tense is more adequately associated with a class of temporal adverbs in Japanese.   Modal aspect morphemes are u/i (u for verb stem; i for adjective stem, non-perfect), ta (perfect), e/o (e for consonant stem; o for vowel stem, imperative) and oo (future).   The future modal oo is further distinguishable as volitional future or suppositive future depending on the contexts.

a. boku wa hon o kaes-oo   'I will return the book'

b. musuko wa hon o kaesu dar-oo 'my son may return the book'

c. are wa musuko dar-oo   'that one may be (my) son'

Oo in a. is interpretable as volitional future by virtue of the first person subject and the non-copula verb stem. On the other hand, oo in b. and c. which has the copula verb stem is always interpreted as suppositive future regardless of the person of the subject nominal.

    A verb stem is open for further expansion into

a sequence of various auxiliaries which form such compound
verb phrases as causative, passive, negative, progressive
and so on.

a.1 boku wa sore o <u>tabe-ru</u>   'I eat it'

a.2 boku wa sore o <u>tabe-te-i-ru</u>   'I am eating it'

a.3 boku wa sore o <u>tabe-na-i</u>   'I do not eat it'

a.4 boku wa sore o <u>tabe-rare-ru</u>   'I have it eaten'

a.5 boku ni sore wa <u>tabe-rare-ru</u>   'by me it is eaten'

ä.6 boku wa sore o <u>tabe-sase-ru</u>   'I have it to be eaten
                                            (by someone)'

a.7 boku wa kore o sore ni   'I do not let it eat
    <u>tabe-sase-na-i</u>   this'

a.8 boku wa sore o <u>tabe-sase-   'I was made to eat it'
    rare-ta</u>

a.9 boku wa sore o <u>tabe-sugi-   'I may not eat it too
    na-i-dar-oo</u>   much'

The order of occurrences of these auxiliary verbs seem to
be severely constrained.   The negative follows the
passive, causative or progressive auxiliary verbs; the
passive follows the causative when they co-occur and so on.

  1.7   Verbs can be subclassified into true verbs,
adjectives and nominal verbs on the basis of their
morphophonemic as well as some syntactic peculiarities.
Certain members of these verb subclasses may also function

as the auxiliary verbs.   The negative auxiliary, for example, is an adjective by this subclassification.

Nominal verbs consist of a predicative noun and an optional copula verb such as,

a. boku wa sore ga <u>kirai da</u>   'I am not fond of it'

b. kare wa <u>genki da</u>   'he is in good health'

Like true verbs there are both transitive and intransitive nominal verbs and adjectives, but the latter require a different case marker on their object nominals.   Compare the following, and see the object case marker <u>o</u> and <u>ga</u> alternate in accordance with the co-occurring verb types.

a. kare wa sigoto <u>ga</u> suki da   'he is fond of his job'

b. kare wa sigoto <u>o</u> suku   'he likes his job'

c. kare wa sigoto <u>ga</u> tanosii   'he is pleased with his job'

d. kare wa sigoto <u>o</u> tanosimu   'he enjoys his job'

Nominal verbs and adjectives do not develop the passive, causative, progressive and many other compound verb phrases.   Yet it is possible for the adjectives to form a compound stem, and then expand into the various verb phrases.   For example,

a.   boku wa sore ga <u>hosi-i</u>   'I am desirous of it'

a.1 boku wa sore o <u>hosi-gar-u</u>   'I want it'

a.2 sore wa <u>hosi-gar-are-ru</u>   'it is being wanted'

a.3 boku wa sore o <u>hosi-gar-ase-ru</u>   'I have (someone)
                                             want it'

a.4 boku wa sore o <u>hosi-gat-te-i-ru</u> 'I am wanting it'

     1.8   A large number of adverbs share the stems
with verbs and nouns in common.   Consequently it is
more adequate to say that a large number of nouns and
verbs are potentially adverbs, too.   Only foreign loan
words appear to independently constitute a class of
true adverbs.   Temporal nouns such as <u>kyoo</u> 'today',
<u>rainen</u> 'next year', <u>mae</u> 'time before', <u>kesa</u> 'this morning'
etc. specify the temporal aspects of verbal expressions
which are primarily defined for modal aspects alone (1.6).
Predicate nouns with or without adverbial markers <u>-to</u>
and <u>-ni</u> modify various aspects of a state of affairs
such as <u>yukkuri (to)</u> 'slow-ly', <u>sakan (ni)</u> 'vigorous-ly',
<u>assari (to)</u> 'without complication', <u>taihen (ni)</u> 'unusually'
and so on.   The adjectives and verbs when functioning
adverbially have manifestation in the endings <u>-ku</u> and <u>-te</u>
respectively.

a. asa <u>haya-ku</u> okiro   'get up early in the morning'

b. <u>taka-ku</u> tobu   '(something) is flying high'

c. to o <u>ket-te</u> aketa   '(someone) opened the door by kicking'

d. soko e <u>ton-de</u> iku   '(someone) will go flying there'

      1.9   Sentences are conjoined progressively in such orders as the modifying sentence always precedes the one modified; the report sentence the one reporting; the quotation sentence the one quoting; etc.

a. <u>tomaru</u> <u>tokoro</u> wa asoko desu   'the place where we will
   'stay' 'place'   stay is over there'

b. <u>sore wa matigai da</u> to omou   'I think that it is a
   'it is a mistake'   mistake'

c. "<u>sore wa tigau</u>" to hito wa iu 'people say,"it is wrong"'
   'it is wrong'

Unlike languages such as English, all logical connectives occur between the conjoined sentences,

a. samui <u>kara</u>, ikanai   'it is cold, because of that,
      'because'   I do not go'

b. sore o yonda <u>ato</u>, kaese   'read it, after that, return
          'after'   it'

c. taberu <u>ka</u>, nemuru   '(I) eat or sleep'
       'or'

d. taberu <u>sosite</u>, nemuru   '(I) eat and sleep'
        'and'

The connective <u>sosite</u> 'and' seems to be reducible to yield

the segment te,

e. tabe te, nemuru   '(I) eat and sleep'

where the meaning remains synonymous to d.   Furthermore,
this segment te can be totally eliminated, thereby allow-
ing the so-called con-verb conjoining of the sentences
to develop.

f. tabe, nemuru   '(I) eat (and) sleep'

Section 2. Current theories of cases and a new approach

2.1.   In the section one it was briefly men-
tioned (1.2, 1.3) that the syntactic functions such as
"subject" and "object" etc. are overtly marked by various
case markers.   The present grammar will be mainly con-
cerned with semantic aspects and formal realization of
the grammatical functions with specific reference to
Japanese.

In this section, I will refer to the previous
case theories developed by Chomsky and Fillmore, and
point out how my case analysis differs from theirs.
Also the underlying theory of sentence formation
prerequisite to my case analysis will be discussed.
Owing to the peculiar characteristics of Japanese case
nominals, the current theories do not adequately apply
to their description.   I will, therefore, attempt to
develop Japanese cases within the framework of a new
description.   For the basis of the description, I will
postulate that wa is the most basic case marker and
illustrate the grammatical formation of it.

2.2.   In retrospect, Chomsky argued (1965) that
a sentence's grammatical functions such as subject,
object, predicate verb,etc. are accounted for in terms
of grammatical relations alone.   Insofar as the elementary
rewriting rules are to define the grammatical relations
among given terms, the information as to what terms are
functionally subject, object, predicate verb,and so on
are already contained in the system of rewriting rules,
and, thereby, these grammatical functions are directly
reflected in the Phrase-Marker.   The grammatical func-
tions are not entirely determined by the grammatical rela-
tions alone, but the semantically compatible set of terms
must be introduced in the position of subject, object,
complement, etc.   So by the later addition of selectional
rules, it is only the compatible verb-noun set which
can be selected and assigned appropriate syntactic
roles.

2.3.   The essential weakness of Chomsky's
characterization of grammatical functions, however, is
that the deep structure of a sentence is still accounted
for in terms of grammatical relations, and the semantic
interpretation of a sentence has to operate with the

notions of subject, object, and so on.   While Chomskyian
grammar will eliminate such sentences as,

*1. garasu wa John o kowasita   *'the glass broke John'

a pair of sentences like

2. John wa garasu o kowasita   'John broke the glass'

3. kanazuti wa garasu o kowasita   'a hammer broke the glass'

are assigned the same grammatical relations although the
semantic relationships between the subjects "John" and
"hammer" and their predicates are entirely different from
each other.   The respective meanings of the subjects
differ in that "John" plays an agent role with respect to
"breaking the glass", and "hammer" is an instrument used by
a cognitive agent in "breaking the glass".   Based on the
fact that grammatical relations are quite independent
of the semantic role relationships in the deep structure,
Fillmore (1968, 1969) proposed that the deep structure
is better stated in terms of semantic relationships by the
case categories such as "agent", "patient", "instrument",
"location" etc. which directly reflect the semantic roles
played by the relevant nominals.   Subsequently, these
nominals are transformationally brought into the syntactic

relations such as subject of a sentence, object of a predicate verb, etc. in the surface structure of a sentence.

2.4.   Fillmore's categorial description of cases was based on the various semantic relations which hold between predicate verb and co-occurring noun phrases in the deep structure of a sentence. Take sentences 2 and 3 (p.21), for example.   In sentence 2, 'John' is categorized as the deep structure agent; whereas in sentence 3, kanazuti 'a hammer' is categorized as the deep structure instrument.   Subsequently, 'John' becomes the surface structure subject, since it is the only agent-noun.   The instrument-noun, kanazuti 'a hammer', in sentence 3 also acquires the syntactic function of being the subject of a sentence transformationally, but it is only because there is no agent-noun in the deep structure.   Thus, despite the identical syntactic roles of 'John' and kanazuti 'a hammer', the difference in their deeper semantic functions are revealed by these transformational processes.

Yet, there are instances of what may be regarded as case relationships in a wide sense whose interpretations

do not depend on their deep structure grammatical
relations (Aspects) or semantic relationships alone.
In Japanese, noun phrases which function as the topic
of a sentence must be identified by either the case
particle _wa_ or _ga_.   The meanings of these case relation-
ships are much richer than possible definition given
by the deep structure case categories.   Furthermore,
the _wa-_ or _ga_-marked noun phrases may play the same
syntactic roles, such as the subject of a sentence,
regardless of their deep structure. semantic functions.
Then, the assignments of the _wa-_ or _ga_-case to a given
noun phrase cannot simply be based on what semantic role
it plays in the deep structure.   Some complex underlying
element which I might call the speaker's mood seems to
determine the selection of the _wa-_ or _ga_-case.

    2.5.   It is to be observed in what way the
relationships between the speaker's mood and a given
noun phrase are reflected in the use of the _wa-_ or _ga_-case.
First, compare the meanings of the _wa-_ and _ga_-marked
nominals in the following sentences.

4. tori _wa_ tobu   'as for a bird, it flies'

5. tori _ga_ tobu   'there is a bird flying'

In these sentences the case markers <u>wa</u> and <u>ga</u> identically

assign the semantic role of agent and the syntactic func-

tion subject to <u>tori</u> 'bird'.   Yet Japanese speakers

distinguish the subject of 4 as any member of a universal

class of birds, without further qualification; while

they distinguish the subject of 5 with qualification

such as "bird, and only bird", i.e. excluding any other

class of objects from consideration.   The sentence

contexts of 4 and 5 being identical, there is no basis

for determining whether <u>wa</u> or <u>ga</u> is to be selected.

Whereas, if we postulate the case markers <u>wa</u> and <u>ga</u> are

transformationally introduced into the surface structure

of a sentence, their syntactic development itself may

account for the difference in their meanings.   In fact,

there is some similarity of meanings between certain

compound sentences and <u>wa</u>-and <u>ga</u>-case nominals.   On this

ground I suspect that <u>wa</u>- and <u>ga</u>-nominals may arise from

the underlying structures which are shared in common with

these compound sentences.   This lead me to consider further

that the case markers <u>wa</u> and <u>ga</u> are transformationally

derived from their corresponding sentence connectives which

occur in these compound sentences.   On a syntactic basis of this

sort, we may formally create the sufficient contexts in which wa and ga acquire their meanings. Such analysis of case relationships, however, presupposes a particular hypothesis of sentence formation which will be illustrated briefly in the following sections.

      2.6. At some initial stage of sentence formation, a speaker's underlying propositions are presumably replaced by logically compatible sets of semantic terms, which are compatible by virtue of their inherent meanings and selectional restrictions. Take a sentence John wa garasu o kowasita 'John broke the glass', for example. For one possible interpretation, the sentence may first be analyzed into a number of underlying propositions by which an individual "John" is mentioned and an assertion is made of him as follows,

i.   John da   'there is a person named John'

ii.   John wa mono o kowasita   'John caused something to break'

iii. garasu wa kowareta   'the glass broke'

iv. John wa garasu o kowasita 'John broke the glass'

etc.

As the initial formalization, these propositions may be representable by two pairs of terms: (John, kowasita)

'John, broke something' and (garasu, kowareta) 'glass,
broke'.   By some semantic rules, these pairs may be
put together to form a three-term set (John, garasu,
kowasita) 'John, glass, broke'.   Supposedly, these
terms at this stage have already been specified for their
semantic features as well as their selectional restric-
tions in the dictionary.   Semantic representation of
John, for example, may be a complex of such features as
〈nominal, agentive, animate, unbreakable〉 , garasu 'glass'
〈nominal, patient, inanimate, breakable〉 , kowas 'to break'
〈verbal, with animate agent, with breakable patient〉 and
so on.   Based on the information of this sort, the seman-
tic roles played by the nominal terms are identified as:
animate agent for John and inanimate patient for garasu
'glass' with respect to the verb kowasita 'broke'.   Accord-
ing to these semantic role identifications, the terms are
now brought into an order,

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        ┌──────────────┐
        │         ┌────┴───┐
        │         │        │
      John     garasu   kowasita
```
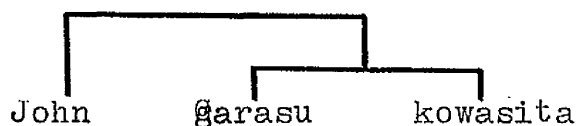
where John may be said to be a topic and garasu kowasita
to be a predicate.   Admittedly this is a tentative and
oversimplified sketch, but at least it serves to

illustrate the basic mechanism by which given set of terms are interpreted for their semantic roles and are brought into particular semantic structure.

2.7.   Based on a similar hypothesis that the sentence is primarily made up of semantic units, Chafe (1970) postulated that the generation of a sentence begins with the verb to which one or more nouns are added in accordance with their selectional restrictions. Whether the verb is central (Chafe) or the noun is central (Chomsky 1965) to the semantic structure of a sentence is debatable and it is of little concern in the present thesis.   Considering that the deep structure of a sentence may be much deeper and more complex than they are generally considered to be (Lakoff 1968 a, Lakoff and Ross 1968, McCawley 1968 b, Postal 1970), I have tentatively postulated the set of two terms as the meaningful units for a sentence expansion.   These terms have replaced the base propositional forms which determine the actual interpretation of the meaning of a sentence.   These two-term semantic units, instead of a single verb unit such as in Chafe's grammar, may also be advantageous to account for various cognate elements

which are crucial for assigning the meaning to some sentences.

There are many instances where the interpretation of a sentence is affected by the deep structure presence of a subject nominal. Take "hammer broke the glass", for example. One possible interpretation may be "someone used the hammer to break the glass", where the subject nominal who plays the role of an agent is not mentioned in the surface structure of the sentence. If any verb is opted to occur with a subject nominal which is lexically unclassified in the semantic structure, it will provide the basis for this interpretation. Later on, such a nominal may either be realized as an indefinite pronoun "someone" or may be deleted from the surface structure.

There is yet another interpretation that "the hammer fell and hit the glass and accidentally broke it" due to someone's having left the tool in a precarious position. This sort of interpretation requires a full discourse analysis which at present is hardly developed. Postulation of the deep structure cognate subject, however, may provide at least some context for the desired interpretation of the sentence. This deep structure subject can

never be realized superficially but must be obligatorily deleted and that deletion may reflect the deep structure presence of cause or agent "who broke the glass'.

This grammar also differs from the Chafean grammar in that in semantic structure formation it does not require the units of verb and noun. Presumably the semantic terms at this stage are already specified for their basic semantic features of being verbal or being nominal or of being both. If the selection of terms is so stipulated that at least one term is marked for ⟨verbal⟩, we may obtain the desired set of terms by this feature reference alone.

2.8. The conceptual content of the speaker's propositions which has been formalized in a set of semantic terms and their relations (diagram, p.26) must at some stage be further converted into the syntactic representations which are closer to the surface sentences. At the initial stage of the syntactic conversion, a set of semantic terms in the form of inherent feature complex are introduced into sentence frames which are marked by various sentence features such as ⟨declarative⟩, ⟨imperative⟩, ⟨interrogative⟩, ⟨contrastive⟩ etc. The individual functions of the terms 'John', 'glass', and 'broke', for example, have already been

determined in terms of the semantic roles they play with respect to one another. Yet how they function as associated with the structural unit of a sentence as a whole such as expressing a question, an ordinary assertion, a command, the contrastive facts etc. must also be determined. '·John', 'glass', and 'broke' may be realized as an ordinary declarative statement, 'John broke the glass'; or as an interrogative statement, 'did John break the glass'; or as a passive-style declarative statement, 'the glass was broken by John' and so on. The sentence features postulated here not only determine the direction of the syntactic development of the input set of semantic terms into a specific surface sentence type, but they also serve as the index to the functional meaning of the sentences.

With reference to the sample set of semantic terms (p.26) its syntactic expansion into the surface structure <u>John</u> <u>wa</u> <u>garasu</u> <u>o</u> <u>kowasita</u> 'John broke the glass' will now be shown. Unformalized as the rules of this grammar may be, they are similar to the conventional transformational rules in that they consist of the structural description of the input string and the instruction of the structural changes to be performed on the input string. The rules are mainly

to be given by verbal statements and where necessary, diagrams will be added to illustrate the transformations on a given structure. Transformational operations are also of the conventional types such as deletion, substitution and permutation (or the combined operation of deletion and substitution) and in addition, the feature copying will be used. This operation takes the specified feature or features which are assigned to either the constituents of a sentence or the sentence itself and copy them at the desired position of the structure. The feature copying will be frequently introduced in this grammar to account for the complex distributions of the case markers and the other relationals under the selectional restrictions with the co-occurring verbs and the sentence types.

The semantic relations which emerge among the given three terms John, garasu 'glass', kowasita 'broke' are interpreted in terms of the syntactic relations. John, on account of being agental and is semantically predominant over the patient garasu 'glass', is placed in the highest position of a sentence frame. Garasu 'glass', on the other hand, is placed in a position lower than John and inside the same structure shared with the verbal term kowasita 'broke'.

Then the three semantic terms constitute the syntactic

relationships such as,

$$
\begin{array}{c}
\text{S} \\
\langle\text{declarative}\rangle
\end{array}
$$

$$
\begin{bmatrix}
\text{+nominal} \\
\text{+agent} \\
\text{+animate} \\
\text{+unbreakable} \\
\text{etc.}
\end{bmatrix}
\qquad \text{Predicate}
$$

$$
\begin{bmatrix}
\text{+nominal} \\
\text{+patient} \\
\text{+inanimate} \\
\text{+breakable} \\
\text{etc.}
\end{bmatrix}
\begin{bmatrix}
\text{+verbal} \\
\text{+verb} \\
\text{+transitive} \\
\text{+animate agent} \\
\text{+breakable patient} \\
\text{etc.}
\end{bmatrix}
$$

John   garasu   kowasita
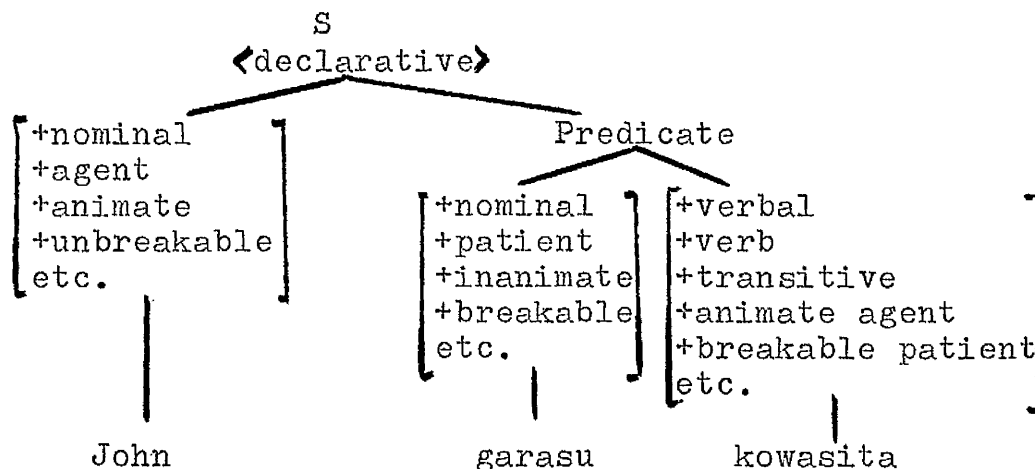
2.9.   More conservative grammars may designate the

sentential positions in which John, garasu, and kowasita

occur as "subject", "object", and "predicate verb", or any

variety of such labels.   These notions are irrelevant in

this grammar to account for the grammatical relations.

The elements of John being a "subject of" of a sentence;

garasu being an "object of" of a verb phrase, and kowasita

being a "main verb of" of a sentence, are already indicated

by the placement of their respective positions in the sen-

tence.   It may appear that the grammatical relations are

defined in essentially the same way as Chomsky's (1965) in

that they are already contained in the system of the con-

stituent structure rules and are directly extractable from

the "P-Marker".   But remember that the sentence constituents

in a certain grammatical relation are already assigned the
semantic functions as well in this grammar, whereas in
Chomsky's (1969) the semantic functions have to be separately
accounted for as part of the semantic interpretations which
apply to the deep structure with grammatical relations. In
the given passive structure as follows,

$$
\begin{array}{c}
\text{S} \\
\begin{bmatrix} \text{declarative} \\ \text{passive} \end{bmatrix}
\end{array}
$$

$$
\begin{bmatrix} \text{+nominal} \\ \text{+patient} \\ \text{+breakable} \\ \text{etc.} \end{bmatrix}
\qquad
\text{Predicate}
$$

$$
\begin{bmatrix} \text{+nominal} \\ \text{+agent} \\ \text{+animate} \\ \text{etc.} \end{bmatrix}
\qquad
\begin{bmatrix} \text{+verbal} \\ \text{+verb} \\ \text{+transitive} \\ \text{+animate agent} \\ \text{+breakable patient} \\ \text{etc.} \end{bmatrix}
$$

| garasu | John ni | kowasareta |
| 'glass' | 'by John' | 'was broken' |
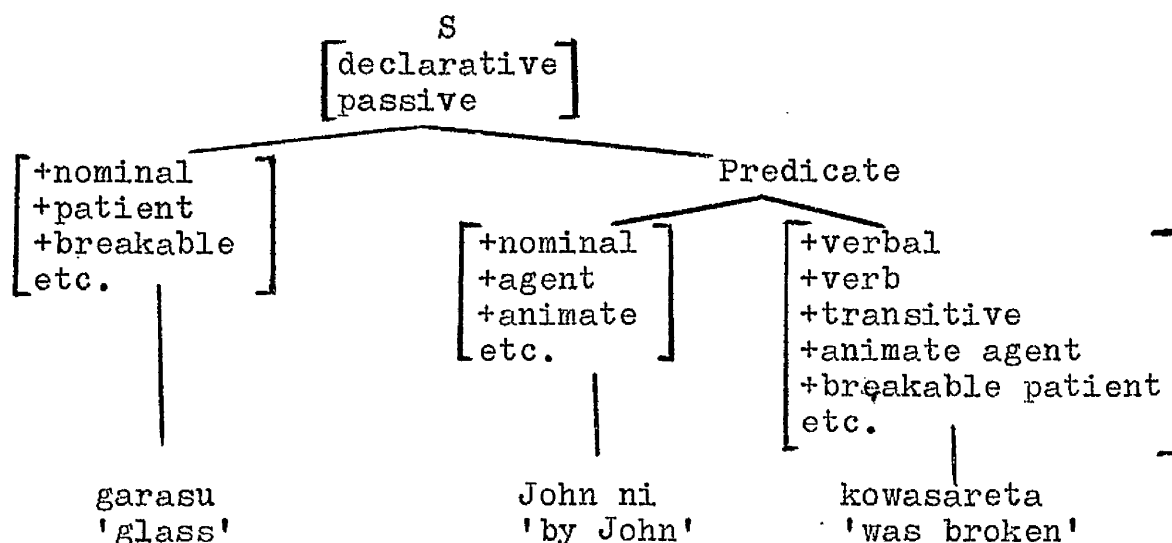
garasu is the grammatical subject, yet its underlying semantic
role as a patient of someone's "breaking the glass" remains
unchanged, and this information is an inherent part of the
sentence derivation itself.

2.10.   In this grammar the semantic functions need
not be accounted for in terms of the deep structure case
categories (Fillmore, 1968) either.   By representing the
semantic functions such as agent, patient, instrument etc.

as specific instances of semantic features, they are directly

introduced as part of the properties of the semantic terms.

In other words, each term is specified for one or more

semantic roles it may assume. In fact, the feature analysis

of semantic functions would appear to be more convenient in

Japanese. For example, in the following sentences,

6. boku wa sore o kirau   'I dislike it'

7. boku wa sore ga kirai da 'I am disliking it'

the pronoun sore 'it' is identifiable as semantically a

patient and syntactically an object in both 6 and 7, yet

it is marked by the different object case markers o and ga

depending on the co-occurring verb. The verbs in 6 and 7

are what may be called a true verb and a nominal verb

respectively. They share the common characteristics in one

respect as being a transitive verb, but they differ in another

in the selection of the o- or ga-case of their object nominals.

By cross-classifying them in terms of such feature complex

as <+verbal, +transitive, +verb> and <+verbal, +transitive,

-verb> the selection of o or ga is determined by the presence

or absence of the verb feature <verb>.

2.11. We now return to the derivation of the sample

sentence John wa garasu o kowasita 'John broke the glass'.

The subject nominal <u>John</u> and the object nominal <u>garasu</u> are
marked by the case morphemes <u>wa</u> and <u>o</u> respectively. For
the reasons I will discuss in detail in Chapter Two, these
case markers are considered to be introduced transformationally
into the surface structure of a sentence. I will discuss
briefly what kind of underlying structure is postulated for
the <u>wa</u>-nominal and through what syntactic processes it is
developed.

Compare the following sentences,

8.   <u>John wa</u> garasu o kowasita

                         'John broke the glass'

8.1 <u>John nara ba</u>, garasu o kowasita

In 8 the subject <u>John</u> is introduced by the case marker <u>wa</u>,
and in 8.1 in the full sentence form consisting of <u>John</u>, the
copula predicate verb <u>nara</u> '(conditional), if it is', and
the sentence connective <u>ba</u>. Yet they are synonymous (or
near-synonymous) in that both merely refer to "John" as agent
of the action "breaking the glass". The connective <u>ba</u>
normally represents the relation of if-condition, but in
co-occurrence with the sentence of the specific description
such as 8.1, <u>ba</u> functions merely to introduce "John" as the
discourse topic.

Moreover, the <u>wa</u>-case nominal and the <u>ba</u>-marked

sentence have the same distributions with respect to the object and the adverb positions in a sentence (Section 6, p.105).

9.   John wa <u>garasu wa</u> kowasita

'John broke the glass'

9.1 John wa <u>garasu nara ba</u>, kowasita

10.   <u>asita wa</u> boku wa hima da

'tomorrow I will be free'

10.1 <u>asita nara ba</u>, boku wa hima da

Based on these facts I suspect that these <u>wa</u>-nominals and <u>ba</u>-sentences may arise from the common underlying structure which may also provide the syntactic source for the "topical" interpretation of the <u>wa</u>-marked nominal. The syntactic relationship which appears to exist between the two is not entirely based on their synonymity and distributional similar- ities. Observe that the particular <u>ba</u>-sentence contains as its predicate verb a copula. Not only does this copula's function represent the most unmarked of all verbal relations, but the Japanese copula is unique in its co-occurrence with caseless nouns such as,

i.   uma nara ba   'if(it)is a horse'

ii.   uma da   '(it)is a horse'

*iii. uma <u>ga</u> nara ba

*iv. uma <u>wa</u> da

Recall that all noun phrases in Japanese, except such as those

quoted above, are marked by a case morpheme such as <u>wa</u>, <u>ga</u>, <u>ka</u>, and <u>mo</u> (1.3, p.10). But it is only if something is first pinpointed and named, can any reference to it be made by any one of these case morphemes. A union of a noun which is unmarked for cases and a copula verb seems to represent the most fundamental linguistic structure in Japanese from which all the surface noun phrases are developed with the case assigned by means of syntactic devices. In fact, this caseless noun-copula verb construction will occur in the underlying structure of other case nominals too.

Now I will make a set of hypotheses concerning the <u>wa</u>-case nominal.

i.   every Japanese noun has an inherent feature ⟨--⟨copula⟩⟩, i.e. it forms a semantic unit with a copula verb.

ii.   every noun is syntactically developed into the full sentence form such as <u>ba</u>-sentence.

iii. the <u>ba</u>-sentence may optionally be reduced to give rise to a noun phrase. When this occurs, the connective <u>ba</u> comes to function as the nominal case marker in the new syntactic environment.

The actual syntactic derivation of the <u>wa</u>-case nominal based on i, ii, and iii is now shown in approximation.

When the nominals <u>John</u> and <u>garasu</u> are assigned to the

different positions in the ⟨declarative⟩-sentence frame, they
are independently expanded into the sentence structures S_1
and S_2. The sentence feature ⟨topical⟩ associated with
S_1 and S_2 indicates that the elements in the sentence structure
has the "topical" interpretation.

```
                          S
                      ⟨declarative⟩
           S₁                              Predicate
        ⟨topical⟩                  S₂                      VB
  ⎡+nominal ⎤                   ⟨topical⟩              ⎡+verbal ⎤
  ⎣+-⟨copula⟩⎦ Predicate⟨topical⟩       ⎡+nomianl ⎤    ⎢+verb   ⎥
       |       ⟨copula⟩    |    ⎣+-⟨copula⟩⎦Predicate⟨verb⟩⟨topical⟩ ⎢+trans. ⎥
                                                             ⎣etc.    ⎦
     John      nara      ba        |     ⟨copula⟩   |     |
           'as for John'        garasu    nara      o    ba   kowasita
                                 'as for glass'                'broke'
```
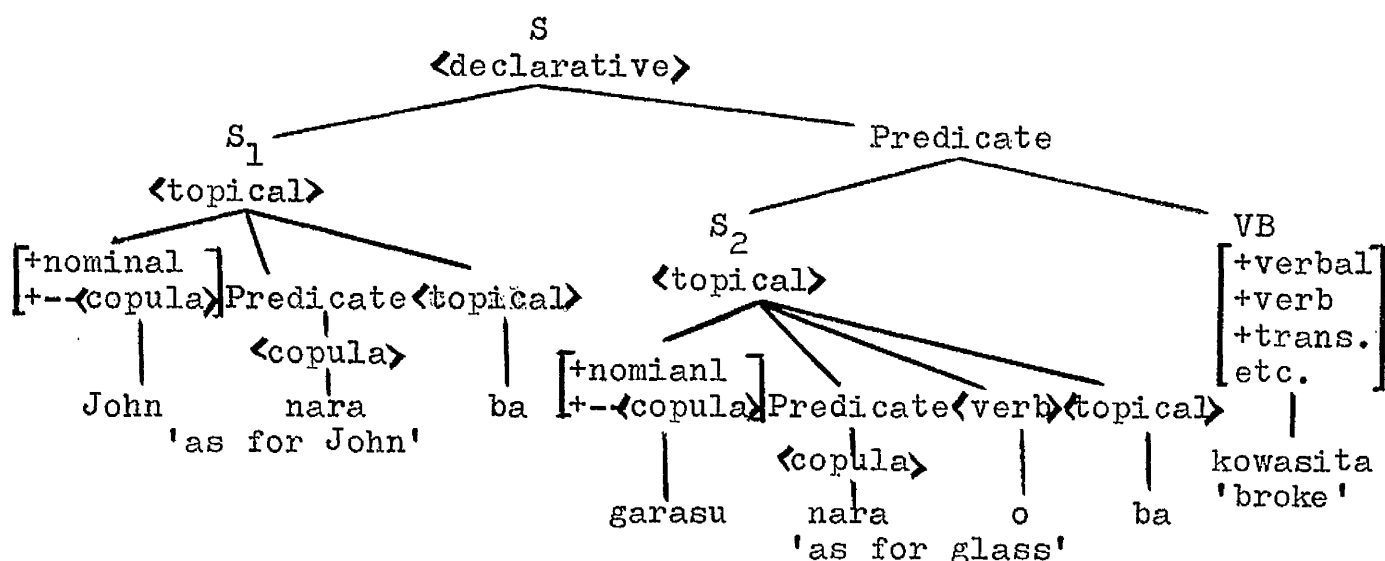
The formations of S_1 and S_2 are as follows. In accordance
with the semantic specifications of the nominal, the feature
⟨copula⟩ is copied in the predicate verb position to the right
of each nominal where the copula verb is introduced. The
sentence feature ⟨topical⟩ is also copied at the final positions
of S_1 and S_2 where the sentence connective occurs in Japanese.
The connective morpheme ba is subsequently introduced there
from the lexicon by virtue of its possessing the feature ⟨topical⟩.

The syntactic development of the object nominal _garasu_ into

S_2 differs from that of the subject nominal _John_ into S_1 only

in that the object case marker must be introduced into the

former.   The predicate verb _kowasita_ 'broke' to which S_2 is

the sentence-form object governs the o-case.   This selectional

restriction is represented in the above diagram by the copy of

the feature ⟨verb⟩ from the feature matrix which represents

the predicate verb at the designated position in S_2.   The

case morpheme o is subsequently introduced in that position

which immediately follows the object nominal.

At the next stage, a series of deletions apply to S_1

and S_2, optionally eliminating the copula verbs in them,

whereby S_1 and S_2 are structurally reduced to the noun phrases:

John _ba_ 'as for John' and _garasu_ o _ba_ 'as for the glass, (object

case)'.   The connective _ba_ in these new syntactic contexts is

morphophonemically reinterpreted as _wa_.   Since the object

nominals are marked by a single case marker in modern Japanèse,

either o or _wa_ must be deleted from S_2.   As for the o-deletion,

it will be discussed later in Section 6, Chapter Two.   For the

present, when _wa_ is deleted, the sample sentence _John_ _wa_

garasu o _kowasita_ 'John broke the glass' is obtained with the

following surface structure,

```
                        S
                   〈declarative〉
        S₁                              Predicate
     〈topical〉                  S₂                    VB
      ╱╲              〈topical〉                 ┌+verbal  ┐
    John wa            ╱╲                       │+verb    │
  'as for John'      garasu o                   │+transitive│
                    'as for glass'              └etc.     ┘
                                                     |
                                                 kowasita
                                                  'broke'
```
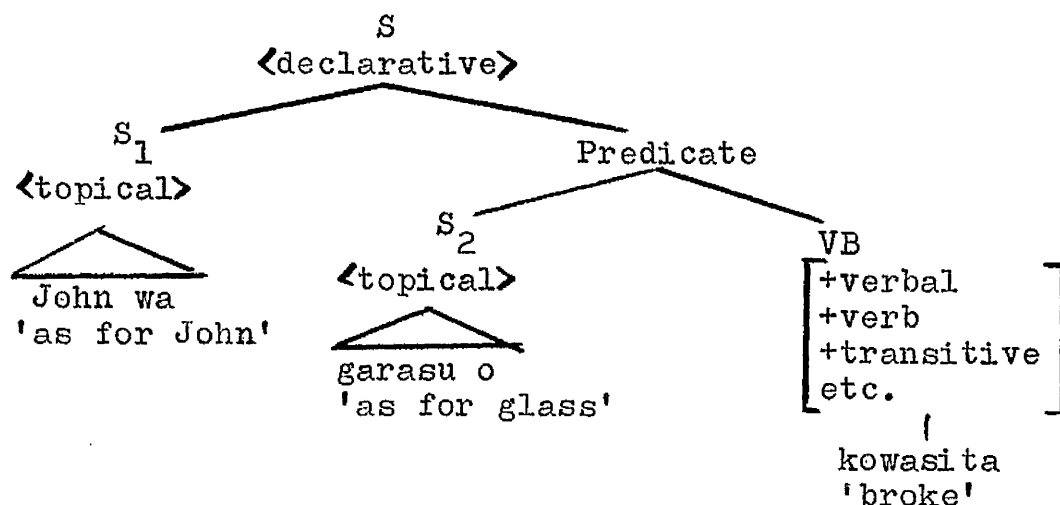
I have hypothesized that <u>wa</u>-case nominals arise
from the full underlying sentence.   I will show that this
hypothesis is also applicable to other case nominals such
as marked by <u>ga</u> and <u>ka</u>.   In the following chapter, I will
investigate the <u>wa</u>-nominal formation in detail, and extend
the hypothesis to account for the <u>ga</u>-case nominal formation.

Chapter II

Wa- and Ga-Cases

Introduction

Subtle meanings of wa and ga are best described

in contrast with each other.   For this reason, I will

first compare the semantic characteristics of wa and

ga together, and then proceed with their syntactic

distributions.   Subsequently, the formation of wa-case

nominals will be developed, with that of ga-case nominals

to follow.   Then I will compare my hypothesis concerning

wa-and ga-case nominals with other views and show how mine

differs from the others.   I will then further discuss

wa- and ga-case nominals with respect to various grammatical

functions such as object, object of verb stem and object of

prepositional phrases.   Finally, I will give the overall

summary of wa- and ga-case nominals and assess the implication

of the present case analysis on the theory of grammar; that

semantic interpretation need to apply to the intemediate

as well as the surface structures of a sentence.   For

illustration, I will show how genitive case nominals are topicalized into <u>wa</u>-marked nominals based on the information on their earlier structural development.

Section 1. Comparison of _wa_ and _ga_

1.1. Of all case markers in Japanese, _wa_ and _ga_ are the most complex. Their meanings are more clearly definable when they are compared with each other, rather than studied independently. Therefore, in the following section, I will investigate how and when _wa_ and _ga_ mark nominals, and what kind of interpretations they dictate. Then I will characterize the semantic functions of _wa_ and _ga_. The syntactic distributions of _wa_ and _ga_ are investigated next with respect to the syntactic roles and sentence types with which they are associated.

1.2. Recall the pair of sentences in 2.5, Chapter One,

4. tori _wa_ tobu   'bird flies, i.e. there is a bird
5. tori _ga_ tobu   flying'

4 and 5 are superficially alike in that both assert that "given the notion of 'bird', birds are further characterized by the notion of 'flying'". However, there is a subtle difference in the manner in which the _tori_ 'bird' functions in each sentence. By 4, one recalls the scene,

for example, where the speakers are watching a bird flying
in the air and one of the speakers is describing what
they see.   In actual discourse, sentence 4 is unlikely to
occur in isolation without some proper context.   For the
above interpretation, it is necessary that both speakers
are aware of "the bird" in flight.   The necessary context
may be supplied as,

4.i tori ga iru   'there is a bird'
Once "the bird" is registered as their common knowledge in
the current discourse, 4 is now introduced,

4.   tori wa tobu   'there is a bird flying'

     For another possible interpretation, sentence 4
may be part of the definition of "the bird" such as given
in school text-books.   At first the topic tori 'bird' is
simply pointed out and named,

4.ii. kore wa tori da   'this is a bird'
whereupon,

4. tori wa tobu   'the bird flies'
is introduced to further specify the genetic nature of "the
bird".

     Whereas, by sentence 5 one recalls such scene as

a speaker upon witnessing a bird flying, points it out to
attract the attention of his audience to it; <u>tori</u> <u>ga</u> <u>tobu</u>
'ah, the bird is flying!' The audience may be aware of
"the bird" or "the bird's flying", but the speaker, by
identifying "the bird" by <u>ga</u>, appears to be giving the
fact as new information which only he himself is aware of.
Suppose there are some other objects also flying in the air
at the time of speech, then <u>tori</u> <u>ga</u> is further interpretable
as specifying "the bird" in contrast with other flying
objects, so that <u>tori</u> 'bird' and only this is considered
as the topic of the current discourse.

    1.3. The characteristics of <u>wa</u>- and <u>ga</u>-marked
nominals may be more clearly exhibited in specific
discourse situations. Suppose the speakers are crossing
the street watching for the traffic on the right and the
left. One speaker may say to the other,

1. hidari <u>ga</u> abunai desu yo 'the left side is dangerous!'

Both speakers may be aware of the danger of crossing the
street in busy traffic and in fact they may be watching
for the traffic on both sides, but as far as the first
speaker is concerned, he is giving the warning to the

other speaker as if the latter is not aware of the danger
or is only aware of the traffic on the right side. How-
ever, if the same speaker is aware that the other is
carefully watching the right and the left may say,

2. hidari wa abunai desu yo   'as for the left side, it is
                                dangerous'

which implies that he is making a comment on the topic
hidari 'the left side' which he assumes is registered in
the knowledge of the other speaker. The other speaker
may respond upon being given the warning,

i. soo desu ne   'it is indeed so'

just in case he is also aware of the danger, or

ii. soo desu ka 'oh, is it so"

by which he reveals that he has not been aware of the fact.

The selection of wa and ga appears to depend on the
speaker's assumption of the common knowledge or the lack of
it about something which he wants to introduce as the cur-
rent discourse topic. Suppose there is a fatal airplane
crash. A speaker assumes that his audience is already
aware of the accident and furthermore, that they know that
their friend x was on board. X's death will be informed
as,

3. x <u>wa</u> sinda   'as for x, he has died'

That the topic <u>x</u> is identified by means of <u>wa</u> implies

that the speakers may have anticipated <u>x</u>'s death in

the given situation.

    But suppose a speaker does not assume the know-

ledge of the accident or <u>x</u>'s being the passenger among

the audience, then <u>x</u>'s death will be reported as,

4. x <u>ga</u> sinda   'x has died'

The subject <u>x</u> is singled out by <u>ga</u> and <u>x</u>'s death is intro-

duced as new information. It is also possible that many

other passengers have also been killed in the accident,

then 4 is further interpretable as,

4. x <u>ga</u> sinda   'x, not any other passengers, has
                      died'

where the subject <u>x</u> is distinguished in contrast with any

other passengers and is introduced exclusively as the

topic of the discourse.

    Furthermore, the contextual situation is supposed

to involve not only <u>x</u> but their other friends <u>y</u> and <u>z</u>

as the passengers of the crashed airplane.

*5. x <u>wa</u> sinda

will never occur, since the function of <u>wa</u> does not allow

the exclusive reference to x, when y and z are also among

the common knowledge of the speakers and wa should refer

to all of x, y, and z.

If x is the only casualty, and provided the reporter

does not assume the fact is known to the audience, he will

introduce x's death in contrast with the surviving y and z

such as,

6. x ga sinda

Furthermore, in the given situation, 6 is paraphrasable as,

6.1 y, z denaku, x ga sinda   'not y and z, but x has died'

where wa will never mark x,

*7. y, z denaku, x wa sinda

For the last illustrative example, in telling a

story, the topic is always introduced by ga.   In a passage

such as,

8. mukasi uma ga ita. uma wa...   'once upon a time, there
                                      was a horse. the horse..'

The topic matter of a story is always intended as new

information to the audience, and moreover, it must be initial-

ly be distinguished from any other objects which the audience

may have in mind.   Therefore, once the topic uma 'horse'

in the story is identified by ga, it is thereafter

predictably referred to by anaphoric <u>wa</u>, beginning with
the second occurrence. In reality, however, logic
yields to an unpredicatable motivation of a speaker, and
a non-initial occurrence of "horse" may be <u>ga</u>-marked if
the speaker chooses to re-specify it as "the horse to
the exclusion of anything else in the story" in order to
stimulate renewed interest among the audience or for some
other reason.

   1.4. Predominant semantic characteristics of <u>wa</u>
and <u>ga</u> nominals have been observed and the functional
meanings of <u>wa</u> and <u>ga</u> can now be defined.

(i) The speaker uses <u>wa</u> so as to refer to something
   which he assumes to be registered as general
   knowledge among the conversants and introduces it
   as the current discourse topic.

(ii) The function of <u>ga</u> is two-fold,

  a. the speaker uses <u>ga</u> to distinguish the subject
    exclusively in contrast with something else

  b. the speaker uses <u>ga</u> so as to introduce some new
    information or knowledge to the hearer in contrast
    with what the hearer is assumed to be already aware
    of or have knowledge of. Furthermore,

b.1 new information may be something which the hearer
is not aware of at the time of speech

b.2 new information may be contrary to what the hearer
is already aware of .

b.3 new information may be completely new to the
hearer

Let's call these functions as manifested by _wa_ and _ga_ as
"topicalizing" and "contrastive" respectively.   Now we
are going to investigate the syntactic distributions of
_wa_ and _ga_ to see if any relationship can be drawn between
their semantic functions and their syntactic distributions.

1.5.   _Ga_ may occur with subject and object nomi-
nals.   _Ga_ subject nominals are exclusively associated
with the sentences of certain semantic classes.   "Wh"-
subjects in interrogative sentences are always identified
by _ga_.

9. dare _ga_ iku ka   'who is going'

Recall that a speaker signals some unpresupposed topic by
means of _ga_.   The questioned nominal is interpretable as
"specific individual who is going"; the identity is only
to be revealed by the answer to this question.   When
lacking in any reference to the identity of "who" the

nominal must be ga-marked.

In subordinate sentences, the embedded subjects
of relative and nominalized sentences, for example, are
always marked by ga,

10. [boku ga katta] hon   'the book which I bought'

11. [hon ga takai] koto   'the fact that the books
                                are expensive'

Consider that these embedded ga nominals must be uniquely
identified with respect to their antecedent nominal or
nominalizer in a manner such as,

10.1 'the book which I and no one else has bought'

11.1 'speaking of only the fact that the books are ex-
      pensive'

Then, the occurrences of ga in these sentences are indeed
in correspondence with the primary semantic function of
ga.

In conditional sentences, the antecedent subject
is always specified by ga, while there is no such restric-
tion on the consequent subject,

12. kimi ga kure ba, boku wa komaru   'if you come, I will
                                        be in trouble'

13. sore ga wakaru to, kare ga urusai   'if it is known, he
                                        will make fuss'

Consider the particular relation represented by conditional
sentences. The consequent is either denied or affirmed
only in cognizance of the truth of the antecedent. The
antecedent, therefore, stands in an unique contrast with
respect to the consequent. The antecedent subject,
therefore, may be so construed as marked by ga in contrast
with the consequent subject.

In comparative sentences, there is also similar
agreement between the occurrence of ga and the semantic
content of the sentences. The comparative sentence
subject is introduced by the designator hoo 'the particular
one (in comparison with something else)' and it is further
identified by means of ga,

14. sore no hoo ga, are yori, ookii   'it is larger than
                                          that'

15. yomu hoo ga, kaku yori, yasasii   'reading is easier
                                          than writing'

The function of comparative sentences is to bring out a
particular property of one thing in contrast with something
else as to whether the former possesses the property more
than or less than the latter. The comparative sentence
subject is, therefore, marked by ga.

Ga may also occur with the object nominal of a specific class of verbs as has been mentioned in 1.7, Chapter One (p.15). To quote some of the examples again,

i. boku wa sore ga kirai da   'I am not fond of it'

ii.kare wa sigoto ga suki da   'he is fond of his job'

Since the occurrence of ga as an object maker will be discussed extensively in a later section, no further explanation is given here.

1.6.   The case marker wa has much wider syntactic distributions than ga. Wa may occur in the following where ga may not. Wa may occur with the prepositional object of verbs,

16. Tokyo ni wa boku ga iku   'as for to Tokyo, I will go(i.e. I will go to Tokyo)'

17. boku wa kare to wa tukiawanai   'as for me, as for with him, I have no contact (i.e. I have no contact with him)'

Wa can also occur with nominal-base adverbs. Temporal adverbs are not normally marked as in,

18. kyoo boku wa yasumu   'today I am taking a holiday'

However, when the time designated by the adverb kyoo 'today'
is topicalized, the following will result,

18.1 kyoo wa boku wa yasumu   'as for today, I am taking
                                                     a holiday'

The verb stems can also be topicalized by wa which is then
separated from the predicative auxiliary verbs such as,

19. tori wa tobi wa suru   'as for bird, it does flying'

20. sore wa tori de wa nai   'as for that, it is not
                                                  being a bird'

21. tori wa kasikoku wa aru   'as for bird, it is clever'

Theoretically, these uses of wa can occur in any
combinations and any number of times.   For example,

22. soko de wa   hito wa   mainiti wa   hataraki wa
    'there'   'people' 'everyday'   'work'

    sinai to wa   boku wa   omou
   'do not' (nominalizer) 'I'   'think'

These wa nominals can be roughly approximated in transla-
tion as follows,

   'as for there, and as for people, and as for everyday,

   and as for working, (they) do not; I think (i.e. I

   think people do not work there everyday)'

It now becomes apparent that from the above examples, wa

serves to topicalize the co-occurring nominals. Further-
more, unrestricted syntactic distributions of wa with any
nominal or nominalized elements characterize it as probably
the most basic, unmarked case.

With respect to the sentence types, wa subject
nominals are exclusively associated with the contrastive
sentences such as,

23. soko wa abunai ga, koko wa ii   'it is dangerous there
                                      but it is alright here'

Probably the presence of the contrastive sentence connective
ga 'but' may prevent the superfluous occurrences of contras-
tive ga-case subjects. Otherwise, wa subject nominals can
occur freely except in the class of sentences which require
only ga subject nominals such as in 1.5. Moreover, wa can
occur with any object nominals without restrictions.

Complex characteristics of wa and ga cases have been
observed in both semantic and syntactic aspects. The syn-
tactic distribution of wa is much less restricted than that
of ga. Semantically the speaker merely presents something
as a topic by means of wa, and ga further specifies the
topic in contrast with something else. In the examples to

follow, the reader will have to infer which semantic
inferences are intended for the functions of <u>wa</u> and <u>ga</u>,
in addition to their literal translations.

Section 2.   Derivation of wa-case nominals

2.1.   In accordance with the initial hypothesis
that the wa-case nominal develops from the full under-
lying sentence structure, I will further elaborate on
its derivational processes.   I will also give deeper
reasons why the present postulate on the relatedness of
wa-case nominals and ba-marked sentences is the valid
one based on the semantic as well as syntactic grounds.
In particular this purely synchronic hypothesis seems to
reconstruct the proto-Japanese common origin of the case
marker wa and the sentence connective ba.

2.2.   Compare the following sentences,

24.   uma wa kasikoi   '(as for) a horse (it) is clever'

24.1 uma nara ba, kasikoi 'as for a horse, it is clever'

The meaning of ba-marked sentence 24.1 is strikingly similar
to that of 24 which has the wa-marked subject.   Moreover,
the sentence connective ba and the case marker wa resemble
each other in phonetic shape.   Suppose ba and wa share a
common syntactic source, then the structure with approximate-
ly the following description may underlie 24 and 24.1.

```
                         S
                   ⟨declarative⟩
                  _____
            S                    Predicate
        ⟨topical⟩                   |
      ⎡+nominal  ⎤                  VB
      ⎢+-- ⟨copula⟩⎥            ⎡+verbal⎤
      ⎣etc.      ⎦             ⎢-verb  ⎥
            |                   ⎣etc.   ⎦
           uma                      |
         'horse'                 kasikoi
                               'is clever'
```
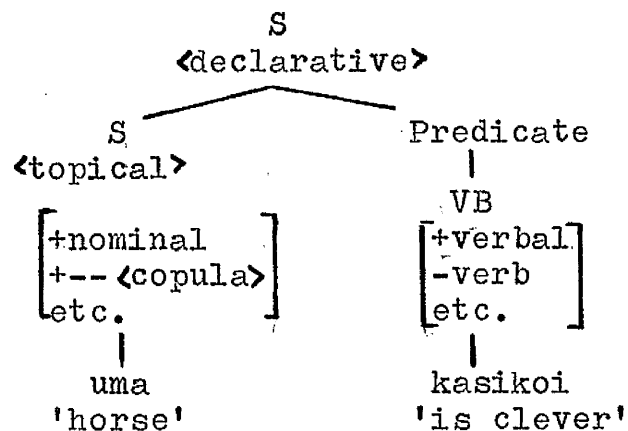
A pair of semantic terms (uma, kasikoi) are first brought
into a sentence frame marked by the feature ⟨declarative⟩,
and these terms are assigned to the subject and the predicate
positions in the sentence in accordance with their inherent
features ⟨nominal⟩ and ⟨verbal⟩. Uma 'horse' being a noun,
will be further expanded into a sentence structure which
serves as a syntactic base for the case assignment. Since
uma 'horse' will be marked by the wa-case in the surface
structure, it must first develop into the ba-sentence by
means of a set of sentence formation rules such as those given
in 2.11, Chapter One. The feature ⟨copula⟩ is copied from
the semantic matrix representing the subject nominal and
is introduced in the predicate verb position following the
nominal.   Then the feature ⟨topical⟩ is copied at the sentence

connective position.

S
⟨declarative⟩

        S   Predicate
     ⟨topical⟩ |
                                                 VB
┌+nominal ┐ Predicate   ┌ +verbal ┐
│+--⟨copula⟩⟨copula⟩⟨topical⟩   │ -verb   │
└ etc.   ┘   └ etc.   ┘
     | |
    uma   kasikoi
  'horse'   'is clever'
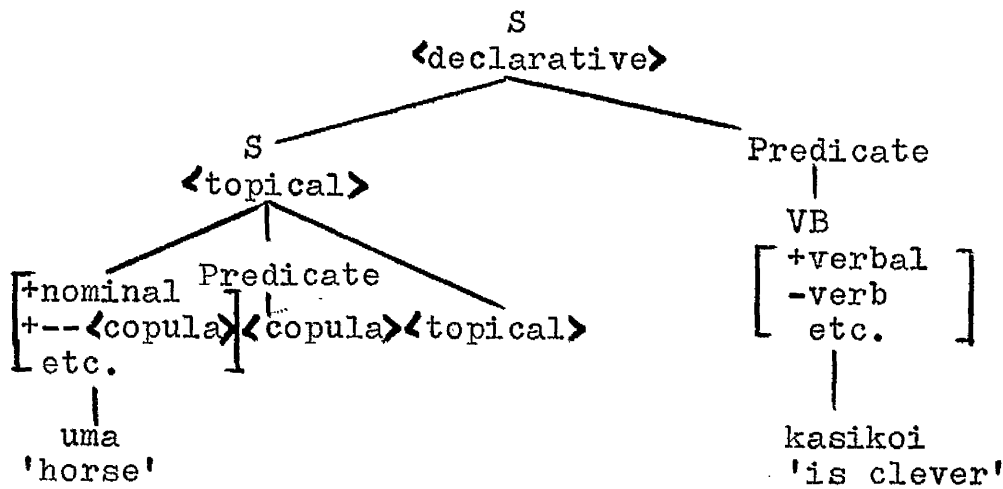
The feature ⟨topical⟩ provides an important source for the
introduction of the sentence connective _ba_ whose occurrence
is actually governed by the former. This feature copy is
intended to represent the government relationship which
holds between the ⟨topical⟩-sentence and the connective _ba_.
In the position where the feature has been copied the
connective morpheme _ba_ is subsequently introduced from the
lexicon.

The morphemes in the structure are now spelt out
as,

i. uma deare _ba_ kasikoi

The copula verb in the ⟨topical⟩-sentence is realized in the
morphophonemically more basic form _deare_ '(conditional),

if it is' before the connective $\underline{ba}^2$.   Subsequently, it

undergoes a morphophonemic change which yields a more

common copula form <u>nara</u> '(conditional), if it is'.   As

a result, sentence 24.1 will arise.

ii. uma <u>nara</u> <u>ba</u> kasikoi   sentence 24.1

At the next stage, the copula verb may be optionally deleted,

only if it is next to a single noun phrase,

iii. uma <u>ba</u> kasikoi

Whenever the connective <u>ba</u> immediately follows a noun phrase,

it must be morphophonemically altered to <u>wa</u>.   Since the

connective <u>ba</u> in iii. now being next to a subject nominal

<u>uma</u> 'horse', this rule applies to it.   Then sentence 24

will be derived.

iv. uma <u>wa</u> kasikoi   sentence 24

---

[2]When the paradigms of the two copula forms <u>dear</u>
and <u>nar</u> merged historically, the conditional form of the latter
<u>nara</u> 'if it is' remains as the only surviving member and has
come to cause the irregularity in the copula paradigm in
modern Japanese.   <u>Deare</u> 'if it is' is postulated to be a
theoretical underlying form of <u>nara</u> for the sake of more
general account of the copula verb inflections.   For the
morphophonemic detail, see my Japanese Copula Verb Morpho-
phonemics, Journal Newsletter, 1969, The Association of
Teachers of Japanese. Yale University:Institute of Far Eastern
Languages.

As for the functional meaning of ba, it is interpreted as a sentence connective at stage ii (sentence 24.1), and as a case marker at stage iv (sentence 24). The varied interpretations of ba such as these are dependent on the particular syntactic contexts which ba is associated with during the course of its introduction into the sentence structure. In other words, the structural descriptions of ba in different surface structures directly contain the information how the meaning of ba is to be interpreted.

2.3. Actually, the syntactic relationship of the wa-case nominal and the ba-marked sentence is accounted for at no added cost to the present grammar. The ba-sentence which yields the wa-case nominal has the very specific description such as 24.1. There are other types of ba-connected sentences with different descriptions, and these represent the usual if-conditional relation.

25. uma ga are ba, boku wa noroo   'if there is a horse,
    I will ride'

26. uma ga otonasii nara ba,
    boku wa noroo   'if it is that a horse is
    gentle, I will ride (i.e.
    if a horse is gentle, I
    will ride)'

At an intermediate stage of the conditional sentence
development, the <u>ba</u>-sentence in 25 is considered to have
the following structural description,

$$
\begin{array}{c}
S \\
\langle\text{conditional}\rangle
\end{array}
$$
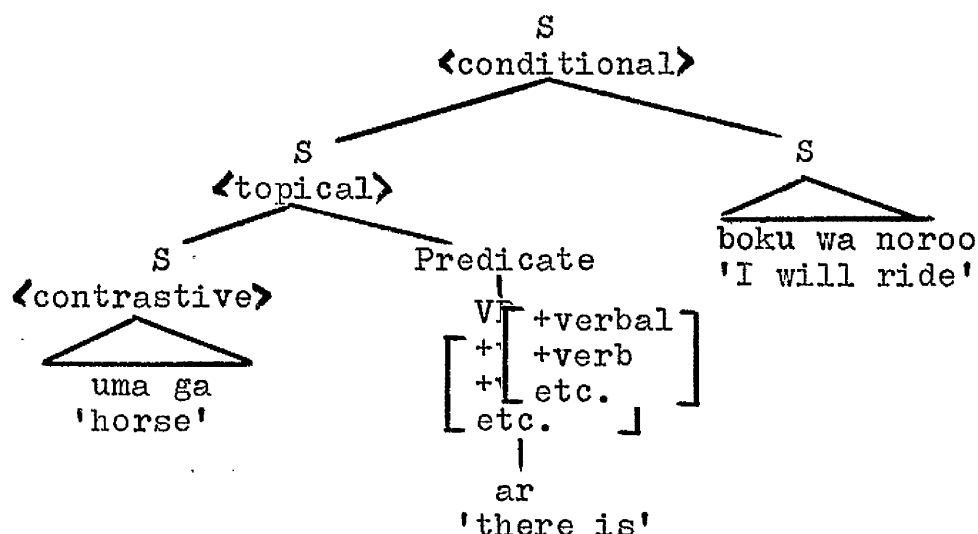
Observe that the predicate verb of the ⟨topical⟩-sentence
is not a copula, and its <u>ga</u>-case subject nominal is originated
from a full underlying sentence as indicated by its direct
domination by the node S⟨contrastive⟩(to be discussed in
Section 3).   The subsequent formational processes are almost
the same as those of 24.1.   The sentence feature ⟨topical⟩
is copied at the final position of the sentence structure
where the connective <u>ba</u> is introduced.   Unlike 24.1, however,
no deletion will apply to the predicate verb, neither being
a copula verb nor following a single noun phrase.   Then

the <u>ba</u>-sentence in 25 will directly arise with the surface

structure such as,

```
                          S
                      ⟨conditional⟩
              S                              S
          ⟨topical⟩                        ╱───────╲
      S                                 boku wa noroo
  ⟨contrastive⟩ Predicate ⟨topical⟩     'I will ride'
   ╱─────╲          │          │
  uma ga           VB          │
  'horse'      ⎡+verbal ⎤      │
               ⎢+verb   ⎥      │
               ⎣etc.    ⎦      │
                   │           │
                  are          ba
               'there is'     'if'
```
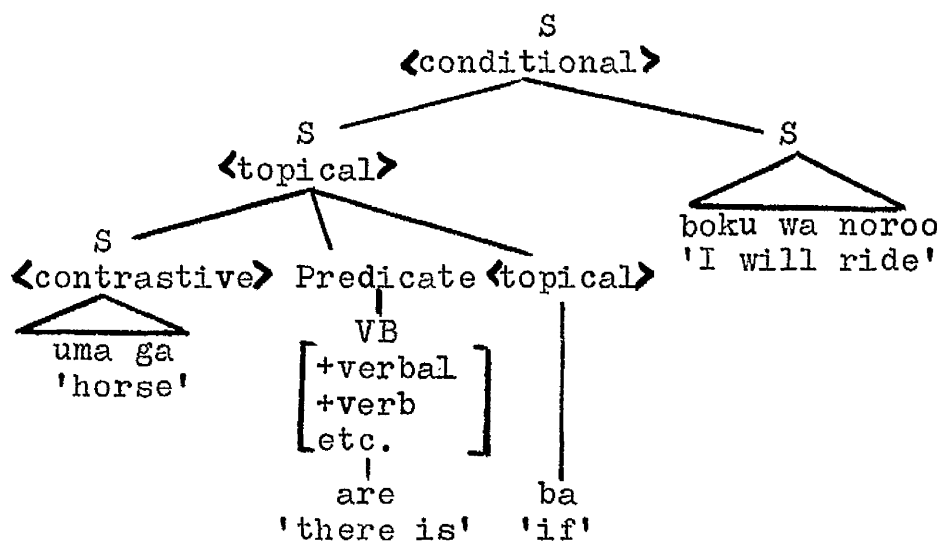
On the other hand, sentence 26 is considered to develop

from a more complex underlying structure approximately such

as follows,

```
                          S
                      ⟨conditional⟩
            S                                S
        ⟨topical⟩                          ╱───────╲
    S                 Predicate         boku wa noroo
⟨contrastive⟩                           'I will ride'
 ╱─────╲          VB          VB
  uma ga      ⎡+verbal⎤   ⎡+verbal ⎤
              ⎣-verb  ⎦   ⎣+copula ⎦
                  │           │
               otonasii      nara
              'is gentle'   'it is'
```
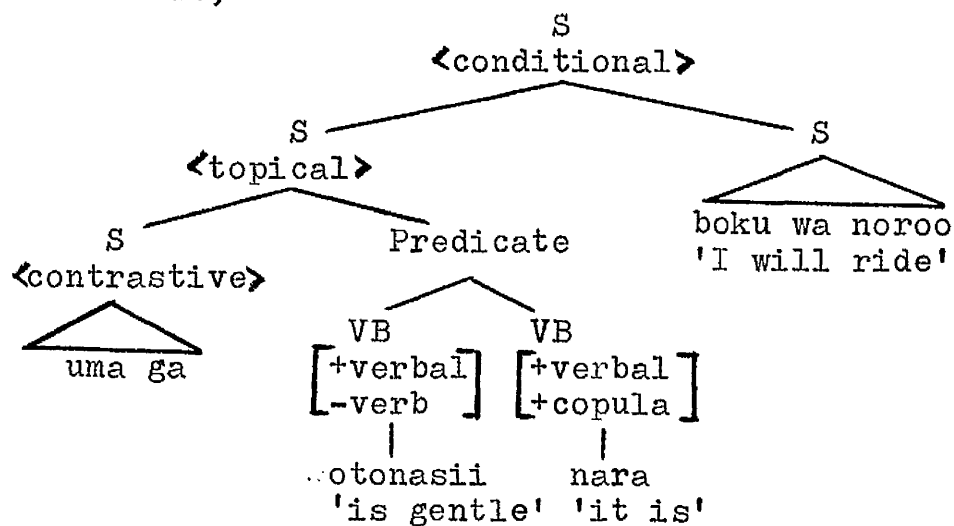
The ❰topical❱-sentence structure does contain a copula verb

which is realized as <u>nara</u> '(conditional), if it is', but

it occurs as the auxiliary verb with the adjective stem

<u>otonasii</u> 'is gentle'.. Together they constitute a verbal

compound.

In the prescribed manner, the feature ❰topical❱ is

copied at the final position of the ❰topical❱-sentence

where the connective <u>ba</u> is introduced,
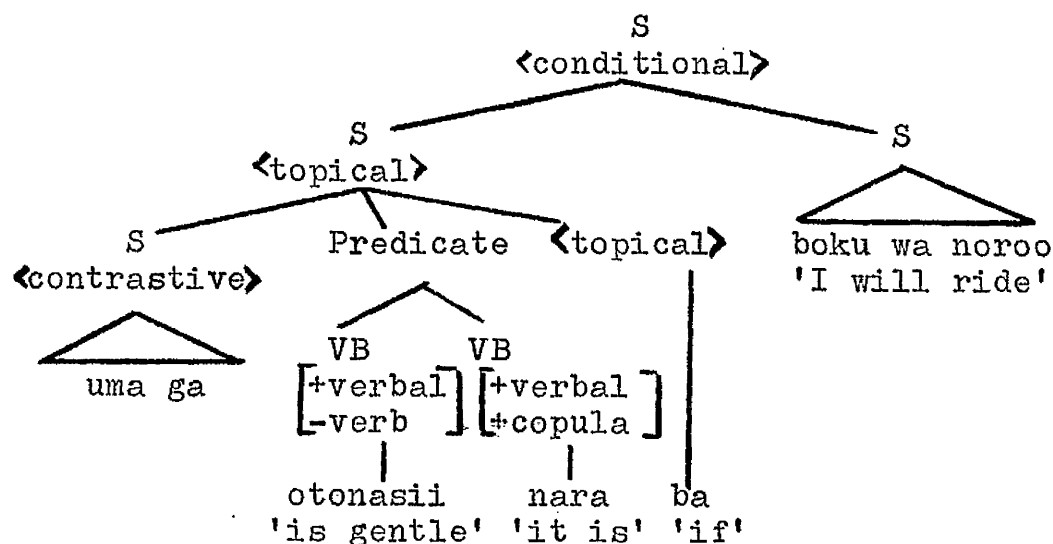
26. 'if a horse is gentle, I will ride'

No element in this structure satisfies the deletion condition.

The copula verb, for example, does not immediately follow

a single nominal. Then the usual conditional sentence

develops from this structure.

The result of our investigation on the wa-nominal
formation can be summarized as follows. The wa-case
nominal is uniquely associated with the underlying ba-marked
sentence which has a specific description such as 24.1.
Yet sentences 24.1, 25, and 26 have been shown to be derivable
through the very similar syntactic processes. Then we may
consider that they are all specific instances of ba-connected
sentences. Then the grammar need not separately account
for those ba-sentences which are related to the wa-case
nominal and those which are not. Moreover, although the
present description of wa-case nominals is based on the
purely synchronic hypothesis that the sentence connective
ba and the case marker wa are semantically and syntactically
related, this appears to coincide with the historical hypothesis
that ba actually separated to have two functions of sentence
connective and case marker during the period of proto-Japanese.

Section 3.   Derivation of ga-case nominals

3.1.   The derivation of the ga-case nominal will
now be shown in contrast with the wa-case nominal.   The
"contrastive" interpretation which is peculiar to ga is
recalled from the sentence discussed in 1.3 (p.48).

27. x ga sinda   'x died'

where x's death is introduced as new information by the
speaker who assumes neither the knowledge of x nor x's
death among his audience at the time of speech.   The
speaker uses ga so as to distinguish x from any other objects
as the topic of the current discourse.   Therefore, if the
objects in contrast with x are actually present in the
situational context such as x's surviving friends "y" and "z",
27 is paraphrasable as,

28. y, z denaku, x ga sinda   'not y and z, but x has died'

where the objects to be excluded from the current topic are
explicitly mentioned by "y, z" and are brought into contrast
with the ga-marked subject.

On account of the fact that only ga-case nominal can
occur in the context of 28, the sentence like 28 may be

further abstracted as the linguistic analogue of the function

of ga-case. That is, the contrastive sense which is

generally added to the nominal by ga may be related to the

presence of the variables like "y, z" in the underlying

structure of the ga-case nominal.

3.2. Then we may hypothesize further that ga-case

nominals arise from an underlying structure similar to that

of sentence 28 which has approximately such structural

description as,

$$
\begin{array}{c}
\text{S} \\
\langle\text{declarative}\rangle
\end{array}
$$

$$
\begin{array}{cc}
\text{S} & \text{Predicate} \\
\langle\text{contrastive}\rangle &
\end{array}
$$

$$
S_1 \qquad S_2 \qquad \text{VB}
$$

$$
\begin{bmatrix} +\text{nominal} \\ +-\langle\text{copula}\rangle \end{bmatrix}
\begin{bmatrix} +\text{nominal} \\ +-\langle\text{copula}\rangle \\ +\text{pro} \end{bmatrix}
\begin{bmatrix} +\text{verbal} \\ +\text{verb} \\ -\text{transitive} \\ \text{etc.} \end{bmatrix}
$$

$$
x
$$

$$
\begin{array}{c}
\text{sinda} \\
\text{'died'}
\end{array}
$$
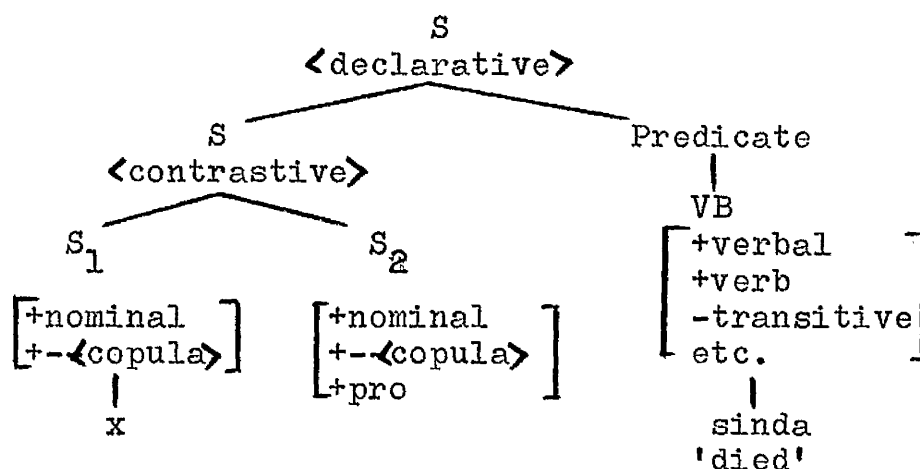
Three semantic terms which constitute a set (x, pro, sinda)

are assigned to the different positions in the sentence

frame marked by the feature $\langle$declarative$\rangle$. The two nominals

assigned to the embedded sentence frame with the feature

$\langle$contrastive$\rangle$ are to be expanded into S_1 and S_2 respectively.

The feature ⟨contrastive⟩ will serve as the syntactic source of _ga_ and as the index of contrastive meaning associated with _ga_. The nominal in S_1 will eventually develop as the main sentence subject in the surface structure. On the other hand, the element in S_2 which bears the feature ⟨pro⟩ is an abstract unit which refers to any objects which are in contrast with the main sentence subject. I will show how the _ga_-subject nominal of 27 can actually be derived from the structure such as above.

In accordance with the hypothesis i (Chapter One, p.37), the nominals in S_1 and S_2 will develop into the structure with a copula predicate verb. By means of the feature copy, the ⟨copula⟩ is selected from the semantic matrix associated with each nominal and is copied at the predicate verb position. Furthermore, the copula verb in S_2 is to be realized in the negative form[3] which indicates that the ⟨pro⟩ element 'is not' the topic of the discourse.

---

[3]The negative form of verbs in Japanese consists of a compound verb phrase with a negative verb functioning like an auxiliary verb. It takes a sentence complement, and forms a negative compound with the main verb of that sentence complement structure.
e.g. [boku wa ik]$_S$ nai --→ boku wa ika.nai 'I do not go'

The structural representation at this stage is approximately
such as,

```
                                 S
                            <declarative>
                 S                                    Predicate
            <contrastive>                                 |
       S₁                    S₂                          VB
 ┌─────────┐         ┌──────────┐                  ⎡+verbal   ⎤
[+nominal ] Predicate    S       Predicate          ⎢+verb     ⎥
[+-<copula>]<copula>  ⎡+nominal ⎤     ⎢              ⎣-transitive⎦
    |         |       ⎢+-<copula>⎥  S      VB
    |         |       ⎣+pro     ⎦ ┌────┐    |
                           S   Predicate ⎡+verbal ⎤
    x        dear      ⎡+nom.  ⎤ <copula> ⎢+S--    ⎥
             'is'      ⎢+-<cop>⎥    |     ⎢-verb   ⎥
                       ⎣+pro   ⎦   dear   ⎢+negative⎦
                                   'is'
                                           nak      sinda
                                         'is not'  'died'
```
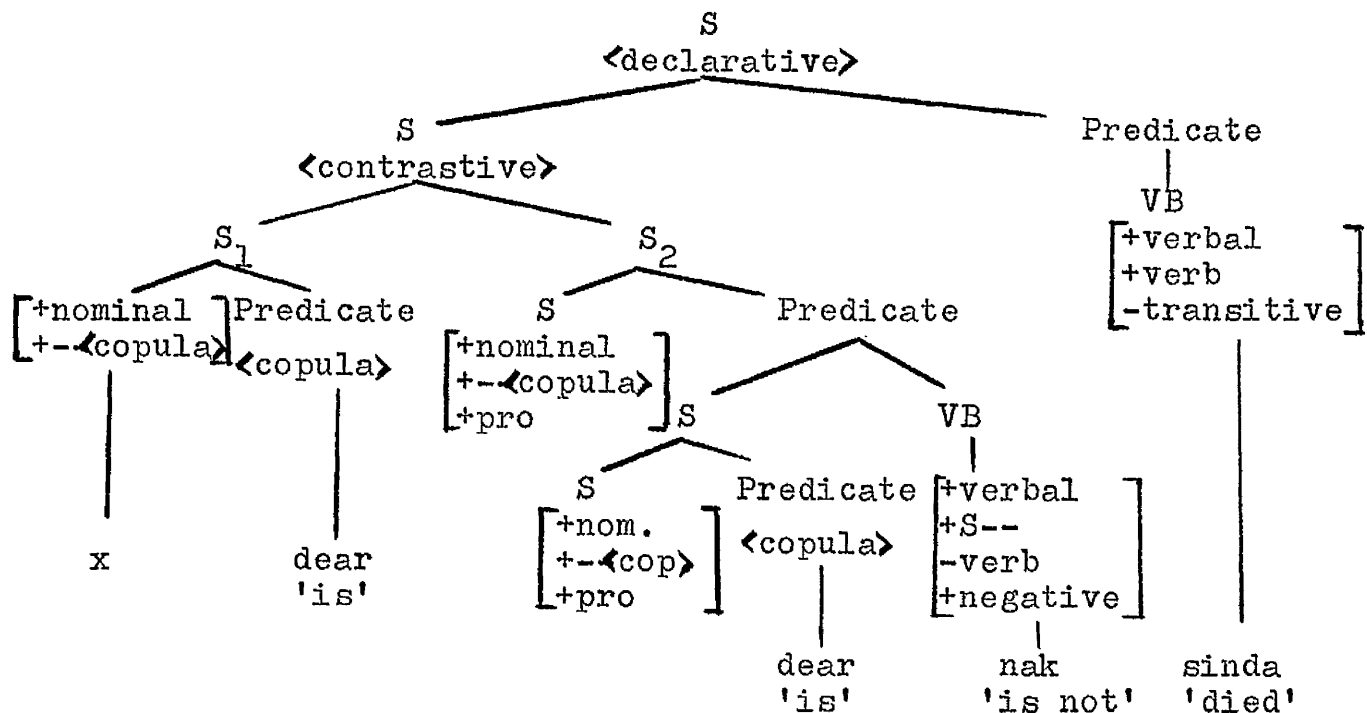
Then the following structural changes will take place. The
sentence feature <contrastive> is copied at the final position
of S_1 where the connective _ga_ is subsequently introduced.   In
S_2 the negative verb compounding occurs.   The sentence which
consists of the subject identical to the main subject of S_2
and the copula verb is embedded in the predicate structure
as the sentence complement of the negative auxiliary.   The

sentence complement subject is eventually deleted.   Then
the resulting structure is as follows,

```
                              S
                         〈declarative〉
                   S
              〈contrastive〉                          Predicate
        S₁                          S₂                    │
  ┌──────┴──────┐            ┌──────┴──────┐              VB
┌─────────┐ ┌──────────┐ 〈contrastive〉 S    Predicate  ┌──────────┐
│+nominal │ │Predicate │                ┌───┐ ┌────┐    │+verbal   │
│+-〈copula〉│ │〈copula〉  │                │+nom.│ 〈copula〉VB │+verb     │
└─────────┘ └──────────┘                │+-〈cop〉│     │    │-trans.   │
     │           │          │           │+pro.〉│     │  └──────────┘
     x          dear        ga          └────┘      │     sinda
                'is'                                 │     'died'
                                        de   nak  ┌──────────┐
                                        'is not'  │+verbal   │
                                                  │+S--      │
                                                  │-verb     │
                                                  │+neg.     │
                                                  └──────────┘
```
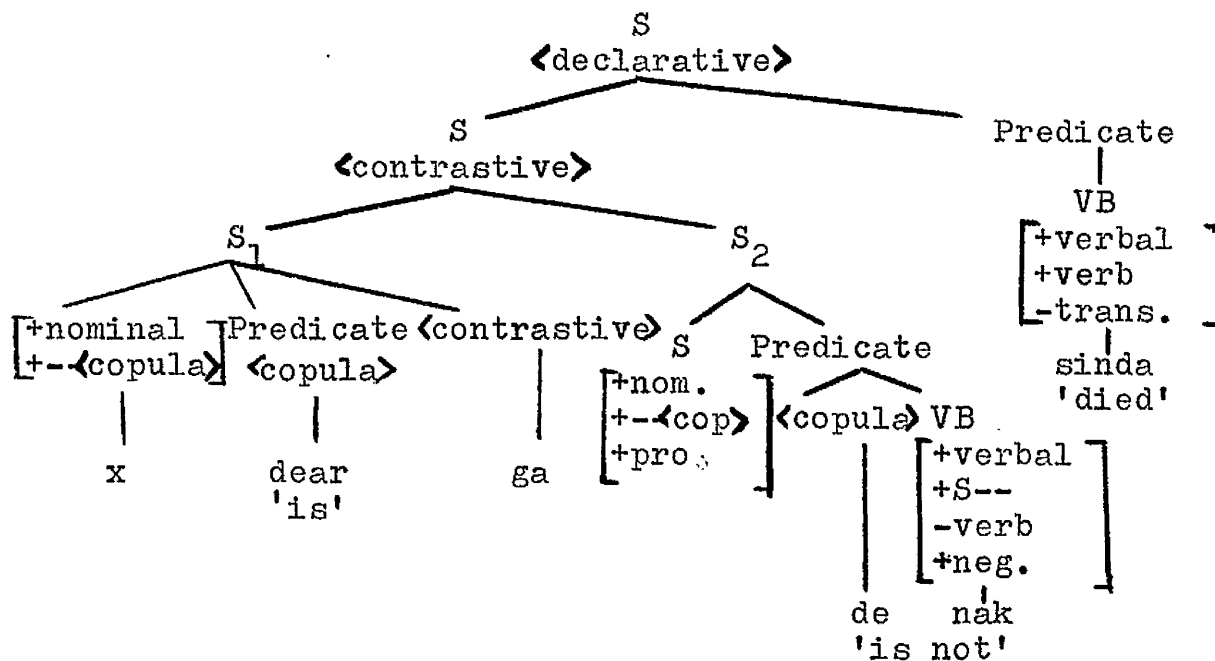
Since the unit with 〈pro〉 in S₂ is universally deletable,
it is eliminated from the above structure.   This has the
effect that the negative-copula verb phrase in S₂ is also
deleted.   On the other hand, in S₁ the copula verb
immediately follows a single nominal x.   By the general
copula-deletion rule which has been developed earlier
(Section 2, p.60), the copula verb may optionally be deleted.
Then sentence 27 will result in the following surface
structure,

```
                        S
                   ⟨declarative⟩
            S ─────────────────── Predicate
       ⟨contrastive⟩                    │
     S₁ ──────── ⟨contrastive⟩          VB
   ⎡+nominal  ⎤                    ⎡+verbal    ⎤
   ⎣+-⟨copula⟩⎦                    ⎢+verb      ⎥
        │             │           ⎣-transitive⎦
        x            ga                 │
                                      sinda
                                      'died'
```
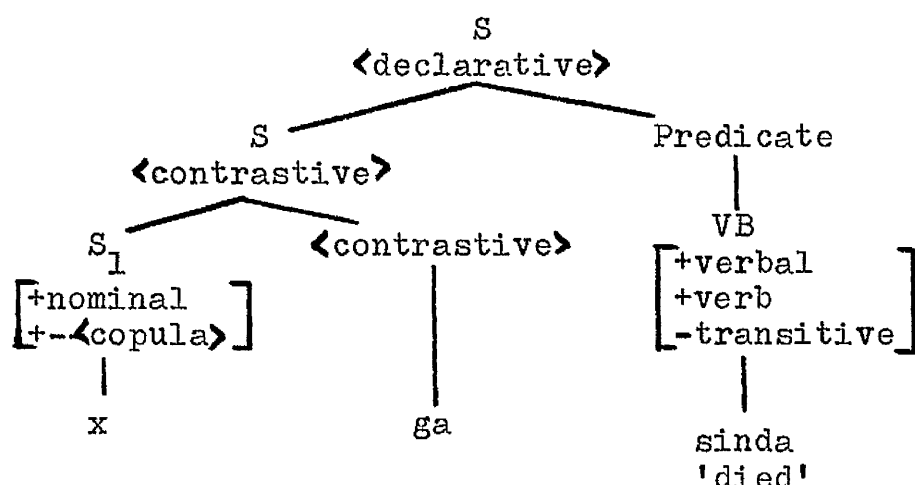
The copula deletion leaves the subject nominal x as a single

element of S_1.   This brings x and ga next to each other,

thus yielding the ga-marked nominal.

The structural content of S_1 and S_2 as has been

developed within the ⟨contrastive⟩-sentence frame directly

provides the information that the nominal x in S_1 is in

contrast with the ⟨pro⟩element of S_2 and that the latter is

to be excluded as the current discourse topic by virtue of the

presence of the negative copula verb in the same structure.

The underlying elements in S_2 are later deleted from the

surface structure, but the content of these elements remain

as part of the meaning of the ga-nominal.   This is why

the subject nominal x ga 'x, not any others' in 27 is

interpretable with the contrastive sense and it appears
that the predicate of 27 is also associated with the same
sense automatically.

3.3.   Now recall sentence 28,

28. y, z denaku, x _ga_ sinda   'not y and z, but x has died'

In sentence 27 which we have just discussed, the objects
in contrast with the subject nominal are represented by
the underlying ⟨pro⟩element, whereas in sentence 28, the
objects in contrast with the subject nominal x _ga_ are
actually present in the surface structure which are referred
to as "y, z".   I have said that 27 and 28 are both
derivable from a very similar underlying structure (p.67),
and now I will show how 28 is formed based on the following
structure.

$$
\begin{array}{c}
\text{S} \\
\langle\text{declarative}\rangle
\end{array}
$$

S
⟨contrastive⟩   Predicate
                                            |
S_1 S_2 VB

$\begin{bmatrix} +\text{nominal} \\ +-\langle\text{copula}\rangle \end{bmatrix}$ $\begin{bmatrix} +\text{nominal} \\ +-\langle\text{copula}\rangle \end{bmatrix}$ $\begin{bmatrix} +\text{verbal} \\ +\text{verb} \\ -\text{transitive} \end{bmatrix}$

x   (y,z)   sinda
                                           'died'
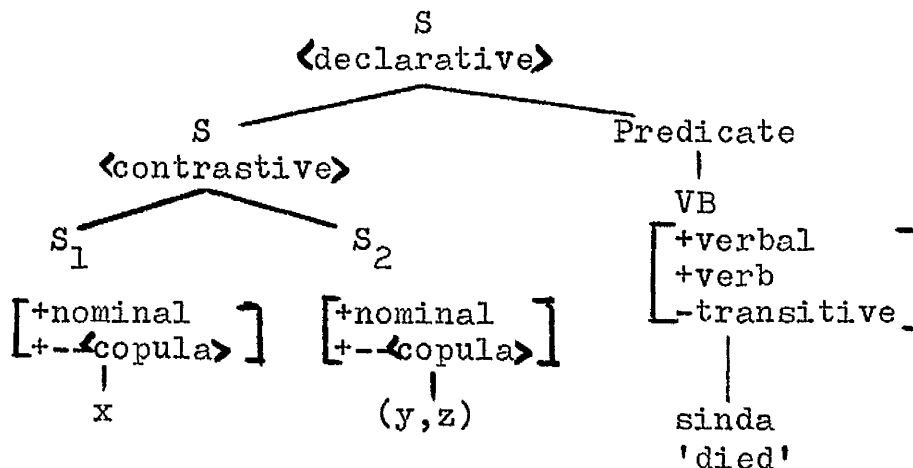
Compare this structure with the one on p.67. It is
noticed that the feature complex assigned to S_2 does not
contain the ⟨pro⟩ feature which means it will be replaced
by the actual morphemes. Through exactly the same processes
as in the formation of sentence 27, the feature ⟨copula⟩ is
copied at the predicate verb position in S_1 and in S_2 where
the copula verb is introduced from the lexicon. In S_2
the copula verb is further developed into a negative
compound. On the other hand, the sentence feature ⟨contras-
tive⟩ is copied at the final position of S_1 where the
connective ga is introduced. As a result, the following
intermediate structure is obtained.


```
                        S
                  ⟨declarative⟩
              S                              Predicate
          ⟨contrastive⟩                          |
      S₁                    S₂                    VB
                                            ⎡+verbal ⎤
 ⎡+nom. ⎤ Predicate ⟨contrastive⟩  S   Predicate  ⎢+verb  ⎥
 ⎣+--⟨cop⟩⎦ ⟨copula⟩           ⎡+nom. ⎤ ⟨copula⟩ VB ⎣-trans.⎦
                              ⎣+--⟨cop⟩⎦        ⎡+verbal⎤
                                               ⎢+S--   ⎥
                                               ⎢-verb  ⎥
                                               ⎣+neg.  ⎦
    x      dear         ga    (y,z)     de  nak      sinda
           'is'                        'is not'      'died'
```
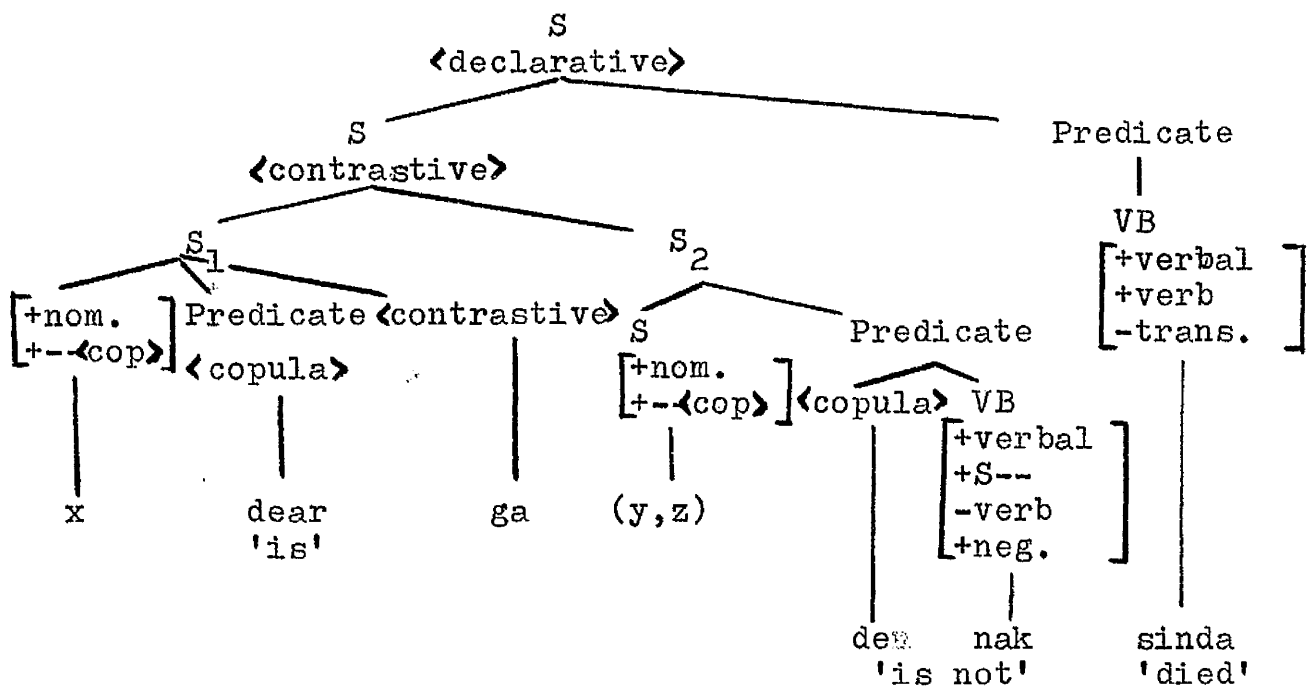
The only element which satisfies the deletion-condition is the copula verb in S_1 which immediately follows a single nominal. When the copula is deleted, S_1 is structurally reduced to the two elements x and ga, thereby giving rise to the ga-marked nominal. Finally, permutation rearranges S_1 and S_2 so that they are placed in a more common constituent ordering in a Japanese sentence. After this, the surface structure of 28 looks like,
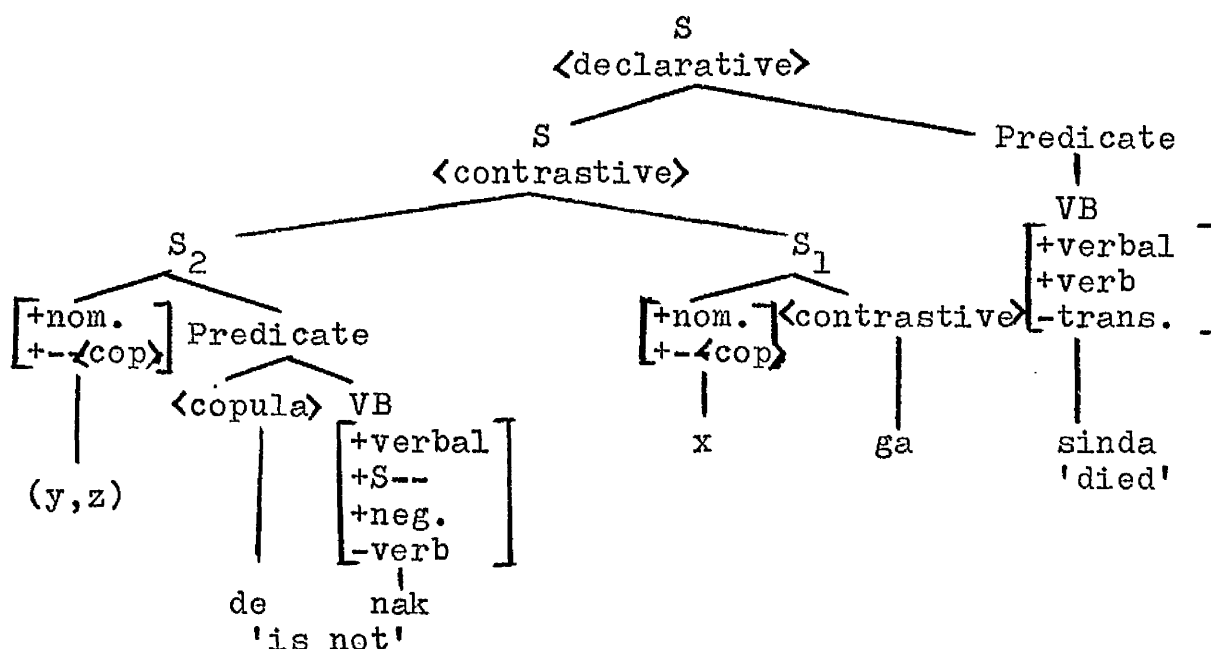
3.4. The processes of derivation of the wa-case nominal presented in Section 3 can now be compared to the derivation of the ga-case nominal. Earlier, wa-case nominals

were shown to emerge from a specific ba-marked sentence
consisting of a caseless noun and a copula verb through
steps of structural reduction.   Now the underlying form
which has been postulated for the ga-case nominal consists
of two sentences embedded in the sentence frame specified
with the feature <contrastive>.   The ga-case nominal
actually develops from one of them which is made up of a
caseless noun and a deletable copula verb.   The other
embedded sentence which consists of the <pro>element and
the negative copula compound may be deleted altogether.
Thus, wa- and ga-nominal formations are essentially the
same in that both come from their underlying structures through
a process of deletions.

Wa-and ga-nominal formations are also similar in
that both can be accounted for economically in conjunction with
general compound sentence formation.   The wa-case nominal is
the syntactic consequence of deletions which apply to the
ba-marked sentence with a specific description.   Then the
deletions will not apply to the ba-sentence with any other
structural descriptions, and they will develop into ordinary
ba-compound sentences (Section 3, 2.3).   Likewise, the ga-case
nominal develops primarily from the sentence structure with

specific description consisting of a caseless nominal and a copula embedded in the sentence frame marked with the feature ⟨contrastive⟩. Then if these structural requirements are not satisfied, no deletions will apply and the ga-nominal will never develop. Instead, the embedded sentences in the ⟨contrastive⟩-frame may develop into full compound sentences with the sentence connective ga.

Conveniently enough, ga-compound sentences actually exist in Japanese such as follows,

29. are wa ii ga, kore wa warui   'that is good but this is bad'

30. kimi wa iku ga, boku wa ikanai 'you will go but I will not go'

The internal structures of these sentences are radically different from those which underlie ga-case nominals. However, it may be possible that despite the difference, all ga-compound sentences share essentially the common underlying structure like,

$$
\begin{array}{c}
S \\
\langle\text{contrastive}\rangle
\end{array}
$$

S₁ and S₂ branching structure
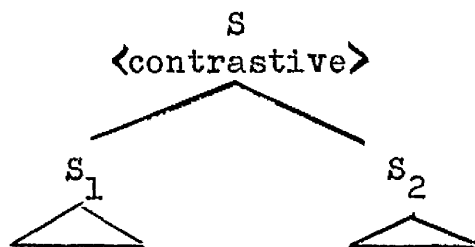
Then it is only the internal structures of S_1 and S_2 which

determine the direction of the development of the

❮contrastive❯-sentence either as ga-marked nominals or

ga-compound sentences.

The ultimate sense of 29 and 30, for example, is

interpretable in such a way that if something is good, the

other is bad; if someone will go, then the other will not

go. That is to say the sentence connective ga has the

function of providing for contrast. In fact, the sentences

are rendered senseless by removing the contrasting elements,

*29.1 are wa ii ga, kore wa ii	'that is good but this is good'
*30.1 kimi wa iku ga, boku wa iku	'you will go but I will go'

Earlier, the function of ga was explained as introducing a

subject or a statement in contrastive manner (Section 1, 1.4).

We can now see in the ga-connected sentences a mere extension

of the same function of ga-case.

If all ga-marked sentences are considered to be

related in the underlying structures, a full ga-compound

sentence must develop through the processes similar to those

of ga-case nominals. Take the derivation of 29, for example.

Its underlying structure is approximately,

```
                                S
                           ⟨contrastive⟩
                    S₁                      S₂
            S           Predicate      S           Predicate
        ⟨topical⟩           VB       ⟨topical⟩         VB
    ┌+nominal  ┐  ┌+verbal ┐    ┌+nominal  ┐   ┌+verbal ┐
    └+--⟨copula⟩┘  └-verb   ┘    └+--⟨copula⟩┘   └-verb   ┘
        │            │              │              │
       are          ii            kore          warui
      'that'      'is good'       'this'        'is bad'
```
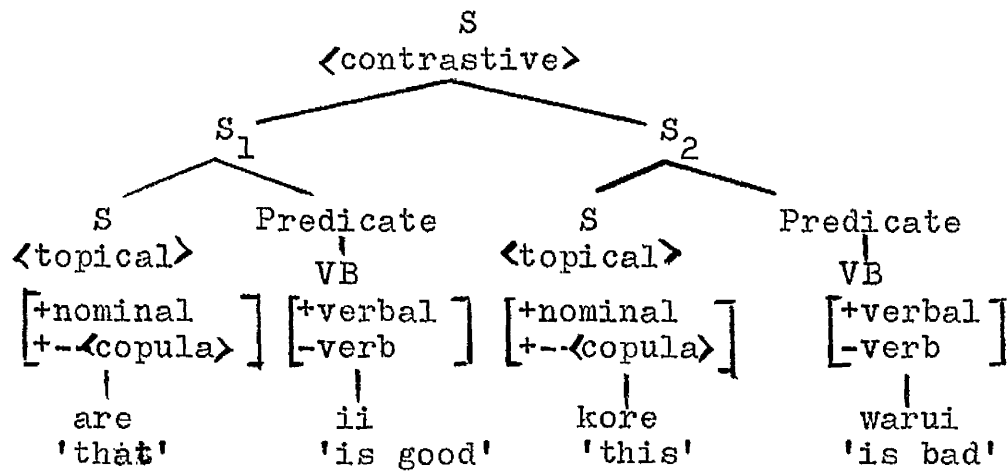
In the prescribed manner, _wa_-subjects are developed in S_1 and
S_2 at the positions indicated by the sentence node with the
feature ⟨topical⟩. Then the above structure becomes,

```
                                S
                           ⟨contrastive⟩
                    S₁                          S₂
            S           Predicate        S            Predicate
        ⟨topical⟩           VB        ⟨topical⟩            VB
    ┌+nom. ┐⟨topical⟩  ┌+verbal┐  ┌+nom.┐⟨topical⟩   ┌+verbal┐
    └+--⟨cop⟩┘         └-verb  ┘  └+--⟨cop⟩┘          └-verb  ┘
      │      │           │         │      │             │
     are    wa          ii        kore   wa           warui
    'that'           'is good'   'this'              'is bad'
```
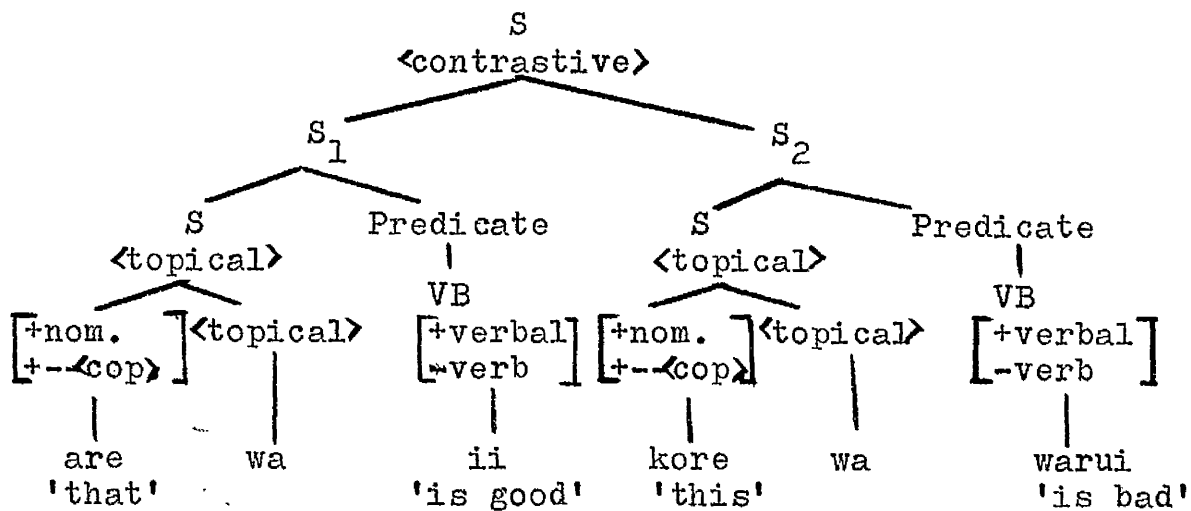
Now the sentence feature ⟨contrastive⟩ is copied at the final
position of S_1 where the sentence connective _ga_ is introduced,

```
                              S
                        ⟨contrastive⟩
           S₁                                      S₂
    S              Predicate ⟨contrastive⟩    S              Predicate
  ⟨topical⟩         VB                      ⟨topical⟩         VB
  ┌────────┐      ┌────────┐                ┌────────┐      ┌────────┐
  │+nom.   │      │+verbal │                │+nom.   │      │+verbal │
  │+-⟨cop⟩ │⟨topical⟩│-verb  │              │+-⟨cop⟩ │⟨topical⟩│-verb  │
  └────────┘      └────────┘                └────────┘      └────────┘
     are    wa       ii         ga            kore    wa       warui
    'that'          'is good'   'but'         'this'          'is bad'
```
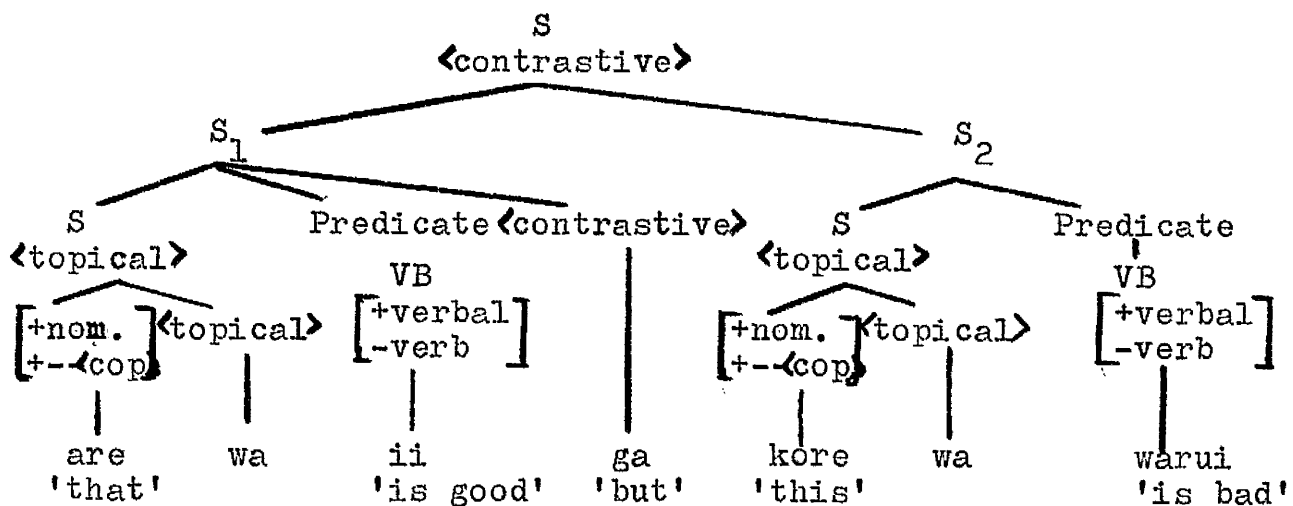
Since S_1 and S_2 contain no deletion relevant elements, the

derivation is over and the connective _ga_ in this context

will automatically function as a sentence connective.

If, on the other hand, S_1 and S_2 meet the deletion

conditions, they will be structurally reduced, and as a

result S_1 will consist of a single nominal with _ga_ immediately

following it, thereby this _ga_ acquiring a function of nominal

case marker.   Thus, the formations of full _ga_-marked

sentences and _ga_-marked nominals need no separate set of

rules.   Only the deletion condition in their underlying

structures determines the direction of their realization in

one way or the other.

The _ga_-nominal derivation has been developed and

based on that, wa- and ga-case nominals are compared for
similarities in their formational processes in two respects.
They both arise from the underlying sentence structures with
specific descriptions which meet the deletion conditions.
Subsequently, the underlying structures are reduced to a
single nominal element, and a sentence connective ba or ga
acquires the new function of nominal case marker in the
surface structure.   Thus the relationship between case markers
and sentence connectives can be established for both wa and ga.
In another respect, wa-and ga-nominal formations do not require
any separate set of rules, because their underlying structures
can be developed through basically the same syntactic processes
which yield ordinary ba- or ga-compound sentences.

Section 4.   Criticisms of other views of _wa_ and _ga_

4.1.   Interpretations of _wa_ and _ga_ are quite
diverse among the grammarians.   In this section I will
briefly introduce what appears to be the standard analysis
of _wa_ and _ga_ from the structural and early transformational
grammars.   I will then discuss another independent and
more semantic-oriented analysis in comparison with mine.

4.2.   Bernard Bloch and his fellow descriptivists
consider that _wa_ is a generalized topic marker used when
the speaker's emphasis is on the predicate part of a given
sentence.[4]   If we recall the anaphoric function of _wa_.
which refers to something already in the general knowledge
of the speakers, their "predicate emphasis" is exactly the
effect of this semantic function of _wa_.   If the subject is
not introduced as new information, naturally the attention
among the speakers must be focused on the predicate.   How-
ever, this analysis of _wa_ cannot account for the varied
distributions of _wa_ whose occurrence and function are not

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[4]R.A. Miller, _Bernard Bloch on Japanese_,
(New Haven: Yale University Press, 1970), p. 54.

restricted to the sentence subject marker.

Ga is explained as an emphatic subject marker
when the speaker's emphasis is on the subject rather than
on the predicate.[5]   As we have seen before (Section 1,
1.4, Chapter Two), ga is not always subject-emphasis, but
it can emphasize a predicate or both subject and predicate
as new information.   The analysis of wa and ga in terms
of "subject-emphasis" and "predicate-emphasis" fails on
at least two counts.

First, the occurrences of wa and ga are not
restricted in the sentence subject position.   For example,

31. boku wa koohii ga suki da   'I am fond of coffee'

where ga is identifying the object of the verb suki da
'is fond of'.   In the following sentence,

32. kare ga atama wa ii   'as for brains, he is good,
                                     (i.e. he is clever)'

wa is specifying the predicate phrase subject of the
sentence.

Secondly, ga and wa do not always occur in accordance

_____

[5]R.A. Miller, The Japanese Language, (Chicago:
The University of Chicago Press, 1967), p. 343.

with subject or predicate emphasis.   The embedded subject

of a relative clause, for example, is invariably identified

with _ga_, but the emphasis may be on the subject, on the

predicate or on both.

33 [boku _ga_ nomu] koohii   'the coffee which I drink'
                             'the coffee which I drink'
                             'the coffee which I drink'

4.3.   In earlier transformational grammars, _ga_ and

_wa_ are mainly regarded as the deep structure constituents

and are introduced at what appear to be the most basic

syntactic positions.   Then their surface distributions are

accounted for by the rules which specify the relevant contexts

and move _wa_ and _ga_ to desired positions in the surface

structure.   Since earlier transformational grammars do not

accomodate the semantic aspects of _wa_ and _ga_, it is of no use

to pursue how _wa_ and _ga_ are semantically interpreted in these

grammars.   Only sometimes a short remark such as _wa_ represents

the sense of contrast or selection, with no further explanation[6]

is given.

4.4.   Sceptical of the view that _wa_ and _ga_ are different

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[6]Kazuko Inoue, A Study of Japanese Syntax, Ph.D.
dissertation, University of Michigan 1964, p.4.

subject markers, a number of the native Japanese grammarians consider that the above view is based on the fallacy that the traditional subject-predicate constituent analysis is applicable to all Japanese sentences.   Haruhiko Kindaichi, for example, assumes that there exist in Japanese subjectless sentences as well.   Wa, according to Kindaichi, marks the subject of the subject-predicate structure, but ga marks a constituent contained in the predicate of a subjectless sentence. In other words, the presence of ga in a given sentence signals the lack of the grammatical subject.   For example, as for

i.1 Huji ga mieru
                          'Mt. Huji can be seen'
i.2 Huji wa mieru

sentence i.1 is considered to refer to a state of affairs that the speaker is witnessing Mt. Huji without making "Mt. Huji" as the subject of the predicate "can be seen".   Whereas, sentence i.2 represents the normal subject-predicate structure and "can be seen" is the predicate or the statement about the subject "Mt. Huji".

Akira Mikami carries the argument a little further in that he also deals with the co-occurrences of wa- and ga- nominals in the same sentence such as,

i.3 <u>boku</u> <u>wa</u> <u>Huji</u> <u>ga</u> mieru   'Mt. Huji can be seen to me,
                                (i.e. I can see Mt. Huji)'

He actually proposes the re-analysis of the constituent
structure of Japanese sentences by which <u>wa</u>-and <u>ga</u>-nominals
are uniquely associated with the different syntactic
structures which correspond to the different interpretations
of <u>wa</u> and <u>ga</u>.   Sentences i.1, i.2, and i.3 are now assigned
the separate syntactic descriptions which may be formalized
as follows (diagrmas mine),

i.1

```
              S
              |
          Predicate
           ___/\
      Huji ga    VB
                 |
               mieru
```

'Mt. Huji can be seen'

i.2

```
                 S
             ___/  \___
      Subject          Predicate
         |                 |
      Huji wa             VB
                          |
                        mieru
```

'Mt. Huji can be seen'

i.3

```
                 S
             ___/  \___
      Subject          Predicate
         |              __/\__
      boku wa      Huji ga    VB
                              |
                            mieru
```
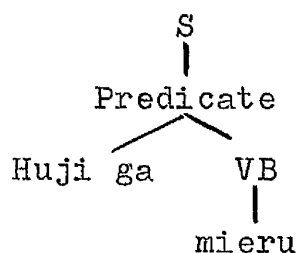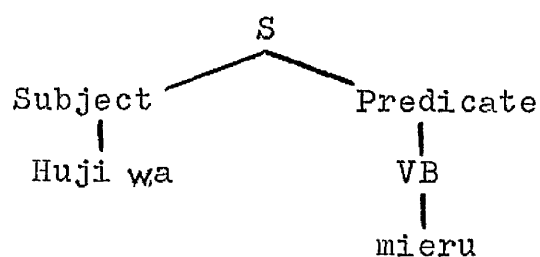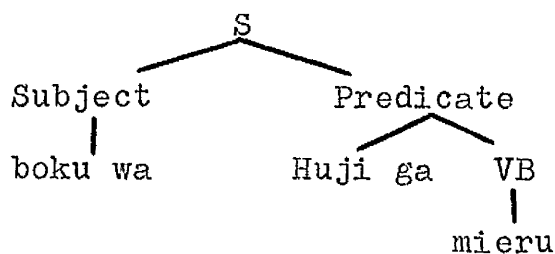
'I can see Mt. Huji'

These proposals can be summarized as consisting of (i) existence of a subjectless sentence and its unique relationship to the ga-marked nominal and (ii) the constituent analysis which will assign wa-and ga-nominals into the different positions of a sentence, and both points are objectionable for the following reasons. With respect to the point (i), there are a number of sentences with ga-nominals in Japanese such as,

i.4 kare ga uso ga heta da 'he is clumsy at telling a lie'

i.5 boku ga sore ga hosii   'I am desirous of it'

which represent the state of affairs "being clumsy at telling a lie" and "being desirous of it" which are clearly predicated of the ga-marked subjects: kare ga 'he' in i.4 and boku ga 'I' in i.5.   Then ga can mark the sentence subject nominal, and the reasoning behind (i) must be questioned.

Secondly, wa-and ga-marked nominals can occur in any combinations and in various orders.

i.6 uso ga kare ga heta da

i.7 uso ga kare wa heta da

i.8 uso wa kare wa heta da   'he is clumsy at telling a lie'

i.9 uso wa kare ga heta da

If ga is totally excluded from occurring in the subject

position of a sentence as Mikami has suggested, then his

analysis cannot assign any structural description to

sentences i.6, i.7, and i.8.   Or at least, since he does

not give any rules which have the power of permuting the

relevant nominals, we do not know how he might handle

these combined occurrences of wa and ga.

With entirely different motivation, Kuroda (1969)

follows a similar line and assumes that wa marks the subject

of the subject-predicate structure and ga marks a constituent

within the predicate of a subjectless sentence.   Since he

is not concerned with the justification of this assumption

(p.115) nor is interested in the grammatical characterization

of wa and ga, his paper has no direct relation to the present

case analysis of mine.

Even when the purely syntactic distributions of wa

and ga are considered, let alone their distributions with

respect to the various discourse types, they are too

complex to be handled in the scheme proposed by these

grammarians which is primarily a "surface structure" analysis.

It is odd that the main concern of any arguments on wa and

ga has been whether they are subject-marking or not and

no attempt has been made to work out a more general scheme

which will account for any occurrences of wa and ga

regardless of their syntactic functions.

4.5.   In a more semantic-oriented analysis of wa

and ga, Kuno also (see footnote 6, p.83) attributes the

contrastive function to wa on the basis of such occurrences

as,

i.   ame wa hutte-imasu ga...   'it is raining but...'[7]

ii.   ame wa hutte-iru ga, yuki   'it is raining, but it[8]
       wa hutte-inai   is not snowing'

iii. oozei no hito wa party ni   'many people came to the[9]
     kita ga, omosiroi hito wa   party, but interesting
     konakatta   people didn't'

Kuno defines the contrastive function of wa as marking

"an element which is contrasted with some other element,

either present or understood, in the sentence."[10] Notice,

<hr />

[7]Susumu Kuno, "Theme, Contrast, and Exclusive Listing--
Wa and Ga in Japanese." Mathematical Linguistics and Automatic
Translation Report FSF-24, 1970, p. 324.

[8]
Susumu Kuno, "The Position of Locatives in Existential
Sentences," Linguistic Inquiry II, 3, 1971, p. 337.

[9]
Ibid.

[10]
Ibid.

however, that these wa-nominals occur exclusively in ga-
compound sentences where the connective ga 'but' already
represents the contrastive relation between the sentences.
Moreover, in contrastive ga-compound sentences, the subject
nominals are always marked by wa, when it should logically
be the case that they are marked by contrastive ga, but the
sentence like,

*34. ame ga hutte-iru ga, yuki ga hutte-inai.

is ungrammatical.   If wa-marked nominals in ga-compound
sentences are interpretable as contrastive, then it must
be due to the effect of the presence of sentence connective
ga 'but'.

Kuno further assigns contrastive function alongside
with thematic function to the single occurrence of the wa-
nominal,

iv. John wa Tokyo ni itta   Theme: 'speaking of John, he
                                     went to Tokyo'

                             Contrast:'as for John, he went to
                                      Tokyo (but as for the
                                      other people)'[11]

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[11]Ibid.

The ambiguity of iv obviously arises from the absence of
the proper underlying contexts, and as a matter of fact,
Kuno reconstructs the appropriate contexts in his English
translation of iv.   Two diverse interpretations of a
sentence like iv must be based on the different underlying
structures; namely, the contrastive interpretation of wa
given by the underlying ga-sentence, and the topicalization
of wa given by the underlying ba-sentence.

Furthermore, according to Kuno, if wa occurs with
non-subject nominals, only the contrastive interpretation
results.

35. boku wa kore wa kirau   'I dislike this (but may
                                    like something else)'

36. boku wa soko ni wa iku   'I will go there (but may not
                                    go elsewnere)'

In ga-compound sentences, since any contrasting elements
such as subject, object, prepositional object etc. are all
marked by wa, these contrastive wa-marked elements must be
associated with the underlying sentences like,

35.1 boku wa kore wa kirau ga, are wa konomu

                        'I dislike this but like that'

36.1 boku wa soko ni wa iku ga, yoso ni wa ikanai

                        'I will go there but will not go elsewhere'

There is yet another interpretation of these wa which Kuno
seems unaware of.

When the object nominal is topicalized by wa, its
case marker o is completely superceded by wa and yields
the wa-object nominal. Topicalization of the object nominal
of a prepositional phrase gives no superficial effect. Yet
clearly there emerge differences in meaning between the
topicalized and non-topicalized nominals.

37. boku wa kore wa suku   'as for this, I like'

38. boku wa kore o suku   'I like this'

39. boku wa soko ni wa sumu   'as for the place, I will live
          there'

40. boku wa soko ni sumu   'I will live there'

When topicalized and non-topicalized nominals actually occur
in ga-compound sentences, the following will result,

37.1 boku wa kore wa suku ga, are wa kirau

        'as for this, I like but as for that, I dislike'

38.1 boku wa sore o suku ga, are o kirau

        'I like this but I dislike that'

39.1 boku wa soko ni wa sumu ga, yoso ni wa sumanai
           'as for the place, I will live but as for other
           places, I will not live'

40.1 boku wa soko _ni_ sumu ga, yoso _ni_ sumanai

'I will live there but will not live elsewhere'

Now, these nominals marked by _wa_, _o_, and _ni_ all have the
"contrastive" interpretation and therefore, the contrastive
function must be attributed to _wa_ as well as _o_ and _ni_. This
will make the sentences of each pair (i.e. 37.1 and 38.1,
39.1 and 40.1) to be synonymous, but they are obviously not.
Then the meaning difference of these sentences must be
attributed to the topicalizing effect of the nominals marked
by _wa_.

It is doubtful that _wa_ has contrasting function (Kuno),
and that has been shown to be the case on the grounds of
(i) co-occurrence relation between _wa_-nominals and contrastive
_ga_-compound sentences and (ii) the relationship between _wa_
and other case markers such as _o_ and _ni_.

As for _ga_, Kuno cites descriptive _ga_, exclusive _ga_
and objective _ga_. The exclusive and objective _ga_ are
discussed in this grammar (Section 1, 3, 5, 6). Descriptive
_ga_ for "neutral description of action or temporary status"[12]

12
  Susumu Kuno, "Theme, Contrast, and Exclusive Listing--
Wa and Ga in Japanese." Mathemeatical Linguistics and Automatic
Translation Report NSF-24, 1970, p.25.

is not of concern for this grammar, therefore there will
be no further account of this.

4.6.   The semantic interpretation of wa and ga
may vary even among the speakers of Japanese depending on
the particular context they have in mind in which wa- or
ga-nominals occur.   Without some formal basis, any arbitrary
interpretations of wa and ga may be yielded.   The primary
concern of the present grammar is to create the explicit,
syntactic basis from which wa-and ga-nominals are derived,
along with their meanings assigned by the grammar.   As far
as I know, no other grammars have ever attempted to formalize
the derivation of wa-and ga-nominals nor explained their
complex meanings on formal grounds.   In this respect, the
present grammar differs from others including those descrip-
tions of wa and ga which have been discussed in this section.

In the recent development of generative semantics,
such elements of semantic representation as "presuppositions",
"topic", "focus of the sentence" etc. have come to be talked
about as the part of the meaning of a sentence (McCawley 1968b,
Lakoff 1969, Ross 1970).   Particularly, their handling of the
notion of "topic" in English sentences seem to have some
connection with my case analysis.   According to Lakoff (1969)

the notion "topic" is grammatically captured by the two-place relations having the meaning of "concerns" or "is about" (pp. 30-31). In summarizing his argument, in the following sentences,

i. sonatas are easy to play on this violin

ii. this violin is easy to play sonatas on

Sentence i requires "sonatas" as the topic; and ii "this violin". There are predicates in English which relate topics to the thing they are topics of such as,

iii. that discussion concerned sonatas

iv. my story is about this violin

The predicates "concern" and "be about" are two-place relations, whose arguments are a description of a proposition or discourse and the item which is the topic of that proposition or discourse. Thus, i and ii are synonymous to the sentence of each group,

i.1 concerning sonatas, it is easy to play them on this violin

i.2 concerning sonatas, they are easy to play on this violin

ii.1 about this violin, it is easy to play sonatas on it

ii.2 about this violin, it is easy to play sonatas on

Compare this treatment of the "topic" in English based on the

predicates "concern" and "be about" to my analysis of the

cases in Japanese.   Since a semantic specification of

"concern" and "be about" is needed on independent ground,

just as that of ba- and ga-sentences in Japanese are, the

notion "topic" in English and in Japanese does not require

a grammar to have any specific device to account for it.

Of course, I am not saying that the English and the Japanese

grammars indicate what is the topic under discussion in a

similar way.   As a matter of fact, if the notion "focus"

in English refers to the "new" or the "focused" rather than

the assumed information in the discourse, then the notion

"topic" in Japanese which is represented by the wa-and ga-

cases must range over the notion of "focus" as well.   But

it is significant that the way in which the notion "topic"

is subject to a grammatical analysis is similar in English

and in Japanese in a fundamental aspect.

Section 5.   Object case markers o and ga
_____

5.1.   For easier reference, wa-and ga-subject

nominals have been most frequently quoted for the discussions

on the wa-and ga-nominal formations.   Object nominals are

also marked by either wa or ga in addition to o which is

uniquely an object case marker.   This section is concerned

with only o and ga and their distributions with respect to

the particular verbs, the background knowledge of which is

essential for the later discussion of wa-case object nominals.

I will first identify the verb features which govern the

o- or ga-cases and subclassify the verbs according to these

features.   Then based on the verb subclassification I will

account for the o- or ga-case assignment to the object

nominals.

5.2.   The basic structure of verb phrases in Japanese

consists of a verb stem and a modal aspect.   Verbs fall

into either of the two main classes, intransitive or

transitive, by virtue of co-occurrence or non-co-occurrence

with the object nominal.   Transitive verbs are further

subclassified into those which occur with the o-marked

object and those with the ga-marked object such as,

41. boku wa mizu o nomu   'I will drink water'

42. boku wa iku no o yameta   'I have cencelled going'

43. boku wa koohii ga kirai da 'I am not fond of coffee'

44. boku wa sore ga hosii   'I am desirous of it'

Transitive verbs from now on will be simply referred to
as o-verb or ga-verb in accordance with their selections
of either the o-case or the ga-case.

Auxiliary verbs[13] select the particular case
independently, and when they form the compound verb phrases
with various verbs, including the o- and ga-verbs, it is the
auxiliary verbs which govern the case of the object nominal.

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[13]
Japanese auxiliary verbs constitute a subclass of
transitive verbs which occur with a sentence-form complement
in the underlying structure. They develop such compound
verb phrases as negative, passive, causative, progressive,
desiderative etc. with the main verb of the complement through
the following processes(in abbreviation).

e.g. boku [[kare ik]$_S$ seru]$_{Pred.}$ --> boku wa kare o ik.a.seru
     'I   he   go   cause'   'I cause that he goes (i.e.
                                  I make him go)'

When the main sentence subject and the complement subject
are identical, the latter is deleted.

e.g. kare [[kare ik]$_S$ nai]$_{Pred.}$ --> kare wa ik.a.nai
    'he   he go is not'   'it is not that he goes(i.e.
                                  he does not go)'

For example,

45. boku wa sore o̱ taberu   'I will eat it'

45.1 boku wa sore g̱a̱ tabe-tai   'I am desirous of eating it,
                                       (i.e. I want to eat it)'

45.2 boku wa sore o̱ tabe-ta-garu[14] 'I want to eat it'

In 45.1, the desiderative auxiliary ṯa̱i̱ 'is desirous of doing
something' requires the g̱a̱-case; therefore, although the
verb stem is an o̱-verb, ṯa̱ḇe̱ṟu̱ 'eat', the object case is
realized as g̱a̱.   The verb phrase is further compounded by
the verbalizer auxiliary[15] g̱a̱ṟu̱ 'want to do something' in
45.2.   Since g̱a̱ṟu̱ is o̱-governing, the g̱a̱-case in 45.1 is
now replaced by the o̱-case.

_____

      14
      Since the last element of a verb phrase of any
complexity is always a modal morpheme in Japanese, the morpheme
boundary is not indicated.   The verb phrases in 45, 45.1,
45.2, for example, must be analyzed as,

e.g. 45.   taber-u   'eat-(non-perfect)'
     45.1 tabe-ta-i   'eat-is desirous of-(non-perfect)'
     45.2 tabe-ta-gar-u   'eat-is desirous of-want to-(non-perfect)'

      15
      Any verb phrase with this auxiliary acquires the
syntactic and morphophonemic characteristics of the real
verb (in contrast with adjectives, nominal verbs etc.).

e.g. kare wa sore g̱a̱ uresii   'he is pleased with it'
     kare wa sore o̱ uresi-g̱a̱ṟu̱   'he enjoys it'
     kare wa sore o̱ uresi-g̱a̱ṟi̱-tai 'he wants to enjoy it'

5.3.   There are two subclasses of o-verbs which
contrast with each other when passivized,

46. tori ga mizu o nomu   'a bird is drinking water'

46.1 tori ni mizu ga nomareru   'water is drunk by a bird'

47. tori ga mizu o oyogu   'a bird is swimming in the water'

47.1 tori ni mizu o oyogareru   'the water is swum in by a bird,
                                 (i.e. a bird is swimming in the
                                 water, implying some annoyance
                                 to the speaker by the fact)'

Some o-verbs yield so-called "victimized" passive form,

conveying a sense of suffering, damage, loss or some such

adverse effect on the speaker.   47.1 implies that "the

bird's swimming in the water" is regarded undesirable by

the speaker.   Since most o-verbs of this type are expressing

motion such as noboru 'climb up', aruku 'walk', tobu 'jump,

fly', wataru 'cross over' etc., they are specified by the

feature <+motion> in this grammar.

The motion verbs further contrast with the non-motion

o-verbs when they combine with the desiderative auxiliary

tai 'is desirous of doing something'.   Only the non-motion

verbs acquire the ga-case of the object nominal in co-occurrence

with the ga-governing tai, while the motion verbs retain the

o-case as follows,

Motion verb:

48.   boku wa uti o kawaru   'I will move to a new house'

48.1 boku wa uti o kawari-tai 'I want to move to a new house'

Non-motion-verb:

49.   boku wa sore o miru   'I will look at it'

49.1 boku wa sore ga mi-tai   'I want to look at it'

In the potential-verb compounds, however, the object
case of both motion and non-motion verbs is governed by the
ga-auxiliary eru 'is able to do something',

Motion verb:

50.   hito wa oka o noboru   'people are climbing up the hill'

50.1 hito wa oka ga nobor-eru 'people can climb up the hill'

Non-motion verb:

51.   kodomo wa tegami o kaku   'the child is writing a letter'

51.1 kodomo wa tegami ga kak-eru 'the child can write a letter'

5.4.   Ga-verbs consist of such subclasses of verbs
as adjectives, nominal verbs, and true verbs.   For morphophonemic
reasons, adjectives and nominal verbs are distinguished, but
they are quite similar in their meaning in that both represent
some aspect of human sensation such as like, dislike, fear,
joy, sorrow, worry, sympathey, envy, and so on,

Adjectives:

52. kare wa musuko _ga_ _kawaii_   'he is fond of his son'

53. boku wa sono hanasi _ga_ _kowai_ 'I am afraid of that story'

54. boku wa kimi _ga_ _urayamasii_   'I am envious of you'

Nominal verbs:

55. kare wa eigo _ga_ _tokui_ _da_   'he is good at English'

56. kare wa gakkoo _ga_ _iya_ _da_   'he hates school'

57. kare wa tabi _ga_ _huan_ _da_   'he is worried about his trip'

Characteristically they never form the _tai_-compound.   The
auxiliary _tai_ 'is desirous of doing something' itself has
the sense of desire, so there may be some semantic restriction
which prevents two sensation verbs from co-occurring in a single
verb phrase.

True verbs are distinct from the other _ga_-verbs in
that they form neither _tai_- nor _garu_-compounds.   They have
such members as,

58. kare wa sigoto _ga_ _dekiru_   'he can do his job well'

59. boku wa kane _ga_ _iru_   'I am in need of money'

60. boku wa kimi no kuse _ga_
    komaru
    'I am troubled by your habits,
    (i.e. your habits are bothering
    me)

5.5.   The verbs under our investigation are now specified by the features which are relevant to the object case selection.   All o-verbs including the verbalizer auxiliary garu are specified with the feature <+verb> which corresponds to the o-case.   Furthermore, non auxiliary o-verbs are subclassified by the features <+motion> and <-motion>.   The feature <+motion> indicates that in co-occurrence with the auxiliary tai, the o-case remains unchanged, while <-motion> indicates that the ga-case is selected under the government of the auxiliary tai.

On the other hand, all ga-verbs including the desiderative and potential auxiliaries tai and eru are specified with <-verb> indicating that they require the ga-case of the object nominal.   The <-verb>-verbs are further subclassified by the features <+sensation> and <-sensation>. The <+sensation>-verbs do not form the tai-compound, while the <-sensation>-verbs do not form either the tai- or the garu-compounds.

Based on these feature specifications the selectional restrictions which hold between the verbs and the cases are formulatable as follows,

i.   if the main verb has ⟨+verb⟩, the object nominal is

marked by o̱

ii.   if the main verb has ⟨-verb⟩, the object nominal is

marked by g̱a̱   .

iii. in a compound verb phrase, if the verb has ⟨+motion⟩

and the next higher verb (i.e. auxiliary) has ⟨-verb⟩

but not ⟨+potential⟩ (i.e. auxiliary e̱ṟu̱), then the

object nominal is marked by o̱.

e.g. boku wa uti o̱ kawari-tai   'I want to move to a new house'
$$\begin{bmatrix}+verb\\+motion\end{bmatrix}\begin{bmatrix}+S--\\-verb\\+sensation\end{bmatrix}$$

iv.   in a compound verb phrase, if the next higher verb has

⟨+verb⟩, then the object nominal is marked by o̱.

e.g. boku wa kare o̱   urayamasi-garu   'I envy him'
$$\begin{bmatrix}-verb\\+sensation\end{bmatrix}\begin{bmatrix}+S--\\+verb\end{bmatrix}$$

v.   in a compound verb phrase, if the next higher verb has

⟨-verb⟩, then the object nominal is marked by g̱a̱.

e.g. boku wa sore g̱a̱   mi-eru
$$\begin{bmatrix}+verb\\-motion\end{bmatrix}\begin{bmatrix}+S--\\-verb\\+potential\end{bmatrix}$$

In fact, iv. and v. are redundant.   By stipulating the

case assignment rules to apply cyclically, the o̱- or g̱a̱-

cases are predicted by the distributional constraints expressed by i. and ii. The actual processes of the case assignments will be shown in the following section in conjunction with the wa-case object nominal formation.

Section 6.   Wa-, ga-, and o-case object nominals

_____

6.1.   In this section, the semantic and
syntactic characteristics of wa-object nominals are
examined, and the derivation is discussed based on the
initial hypothesis that the wa-nominal is related to
the ba-sentence.   Next, I will account for the o- and
ga-object nominals in conjunction with the wa-object
nominal formation.   I will further generalize and apply
the same derivational scheme to the wa-marked verb stem
and show that this too can be accounted for as a specific
instance of the basic wa-case nominals.

6.2.   Compared with the o- and ga-object nominals,
wa-marked object nominals are unique in that they are under
no selectional restrictions with the co-occurring verbs.

61. boku wa sore o yomu   'I will read it'

61.1 boku wa sore wa yomu   'as for it, I will read'

62. boku wa mizu ga hosii   'I want some water'

62.1 boku wa mizu wa hosii   'as for water, I want it'

63. kare wa e ga tokui da   'he is good at painting'

63.1 kare wa e wa tokui da   'as for painting, he is good'

Earlier in Section 4, it has been observed that
wa-object nominals have either "contrastive" (Kuno) or
"topical" (Takahara) interpretation.   The contrastive
sense has been explained (Takahara) as owing to the
underlying presence of wa-nominals in the contrastive ga-compound
sentences.   In addition to indicating the syntactic function
of object, the wa-object nominal seems to have the topicalizing
function.   For example, in such discourse situation as
affirmative question-answer, the wa-object nominal clearly
exhibits such function.   Suppose sentence 61.1 is considered
as the answer to the following question.

i.   kimi wa sore o yomu ka   'will you read it'

61.1 boku wa sore wa yomu   'I will read it (that we have
                                  been referring to)'

By identifying the object nominal sore 'it' by the wa-case,
the speaker is reconfirming his recognition of the commonly
discussed object sore 'it'.

Also on the syntactic grounds the topicalizing
function of the wa-case which marks the object nominal
can be further evidenced.   Sentence 61.1 will be quoted
again as follows,

61.1 boku wa sore wa yomu 'as for it, I will read'

Its object noun phrase can be paraphrased as,

61.2 boku wa sore nara ba, yomu 'as for it, I will read'

The object nominal sore 'it' is introduced by the wa-case
in 61.1, and in the full sentence form marked by ba in 61.2.
Recall the underlying relationship which has been postulated
between the wa-nominal and the ba-sentence (Section 2,
Chapter One and Section 2, Chapter Two). There is an
analogous relationship between the wa-object nominal and the
ba-sentence. Moreover, the above ba-sentence in 61.2 consists
of a nominal sore 'it', a copula predicate verb nara '(condition-
al), if it is', and the sentence connective ba. This
corresponds to the structural description of the ba-sentence
which is syntactically related to the other wa-nominals we
have seen earlier. Then we may generalize that the wa-object
nominal is another instance of wa-nominals and it is developed
through the similar syntactic processes of the wa-nominal
formation which we have already discussed (Section 2). The
only difference is that the underlying structure of the wa-object
nominal must be embedded within the predicate phrase, so that
the wa-object nominal is introduced at the object position

in the surface structure of a sentence.

6.3.   Furthermore, since neither the case _o_ nor _ga_
have any other function than merely marking the syntactic
object, they need not be accounted for separately. That
is, I will consider that _o_ or _ga_ are added to the underlying
structure of the _wa_-object nominal in accordance with their
co-occurrence restrictions with the case-governing verbs
(5.5, Section 5). Taking sentences 61 and 61.1 for example,

61.   boku wa <u>sore</u> <u>o</u> yomu   'I will read it'

61.1 boku wa <u>sore</u> <u>wa</u> yomu   'as for it, I will read'

I will show the derivations of their _o_- and _wa_-object nominals.
Since their derivational processes have much in common with
the base _wa_-nominal formation developed earlier (Section 2,
Chapter Two), the structural descriptions and formational
processes will be illustrated in abbreviation where their
detailed presentation is not absolutely essential.

I will first postulate the common underlying structure
of the following description from which sentences 61 and 61.1
are developed,

```
                              S
                         <declarative>
          S₁ ─────────────────┐        Predicate
       <topical>              S₂ ──────────────┐
        ╱▔▔╲            <topical>              VB
      boku wa         ┌+nominal  ┐         ┌+verbal ┐
       'I'            └+-<copula>┘         └+verb   ┘
                           │                    │
                         sore                 yomu
                         'it'                 'read'
```
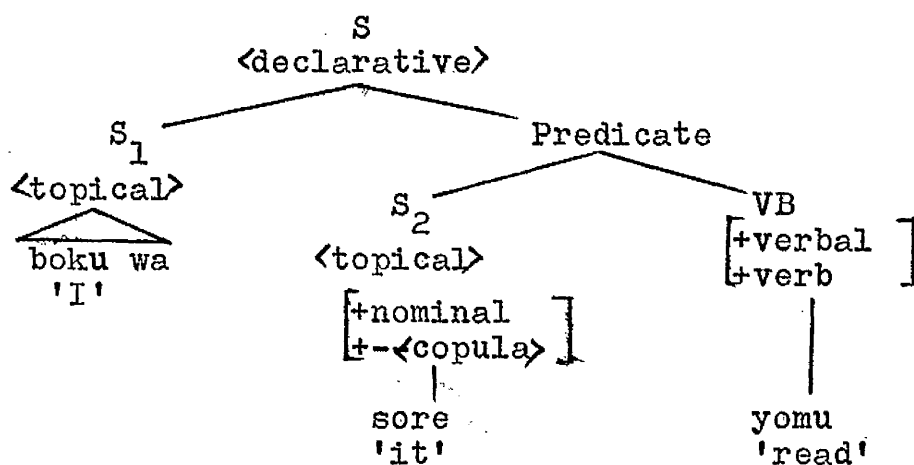
Its <u>wa</u>-sentence subject is assumed to have already been developed.

The object nominal <u>sore</u> 'it' is introduced into the sentence

frame specified by the feature <topical> which is within

the predicate structure. S_2 is now developed into the sentence

structure as follows. The feature <copula> is copied from

the feature matrix representing the nominal at the predicate

verb position immediately following the nominal. The copula

verb is eventually introduced there. The sentence feature

<topical>, on the other hand, is copied at the final position

of S_2 following the copula where the connective morpheme <u>ba</u>

is subsequently introduced. In co-occurrence with the

connective <u>ba</u>, the copula is morphophonemically realized in

the conditional form <u>nara</u> 'if it is'. Then the following

structure is derived,

```
                          S
                     <declarative>
         S₁ ─────────────────────── Predicate
      <topical>                          S₂ ───────── VB
        /\                            <topical>      [+verbal]
     boku wa                                         [+verb ]
       'I'
              [+nominal ]  Predicate <topical>
              [+-<copula>] <copula>                    yomu
                 |            |        |              'read'
                sore        nara       ba
                'it'      'if it is'
```
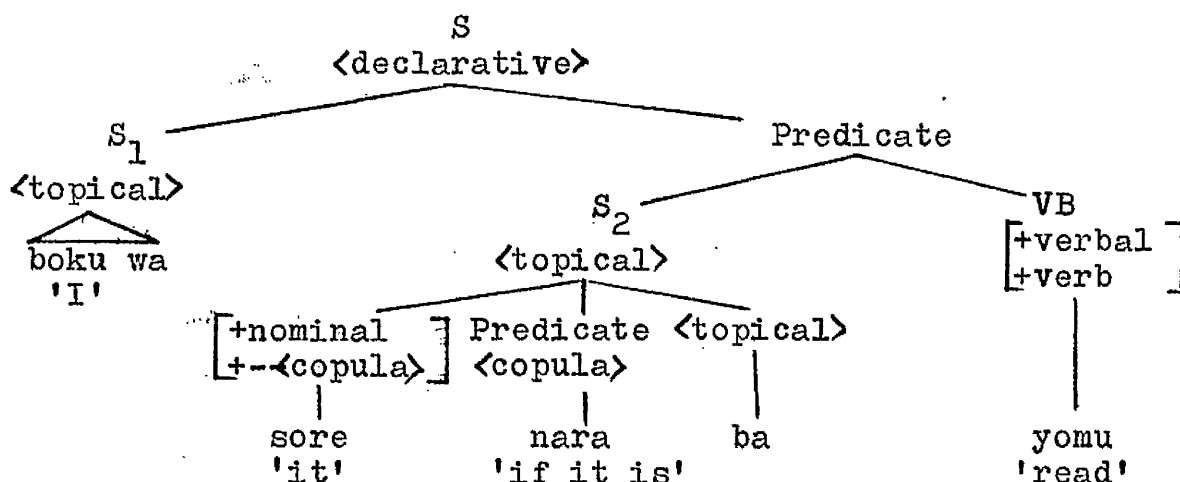
The government relationships which hold between various
sentence elements have been represented in this grammar by
the identification and the subsequent copy of the particular
feature of the governing element at the position where the
governed element occurs.   In the above structure, for example,
the relationship between the specific sentence type and the
corresponding sentence connective **ba** is represented by the
placement of the feature <topical> at the final position of
S_2 structure which has been copied from the connective-
governing sentence feature <topical>.   The similar relationship
between the verbs and the case they require of their object
nominals may also be represented through the same syntactic
device of feature copy.   The predicate verb being a real
verb as indicated by <+verb>, it governs the o-case.

Then the feature ⟨+verb⟩ is identified as the o-governing

feauture , and it is copied and introduced into the object

structure at the position immdiately following the copula

verb where the case morpheme o is subsequently introduced

such as,

S
⟨declarative⟩

S₁
⟨topical⟩
boku wa
'I'

S₂
⟨topical⟩

$\begin{bmatrix} +nominal \\ +⟨copula⟩ \end{bmatrix}$ Predicate ⟨+verb⟩ ⟨topical⟩
           ⟨copula⟩

sore   nara   o   ba
'it'   'if it is'

Predicate

VB
$\begin{bmatrix} +verbal \\ +verb \end{bmatrix}$

yomu
'read'
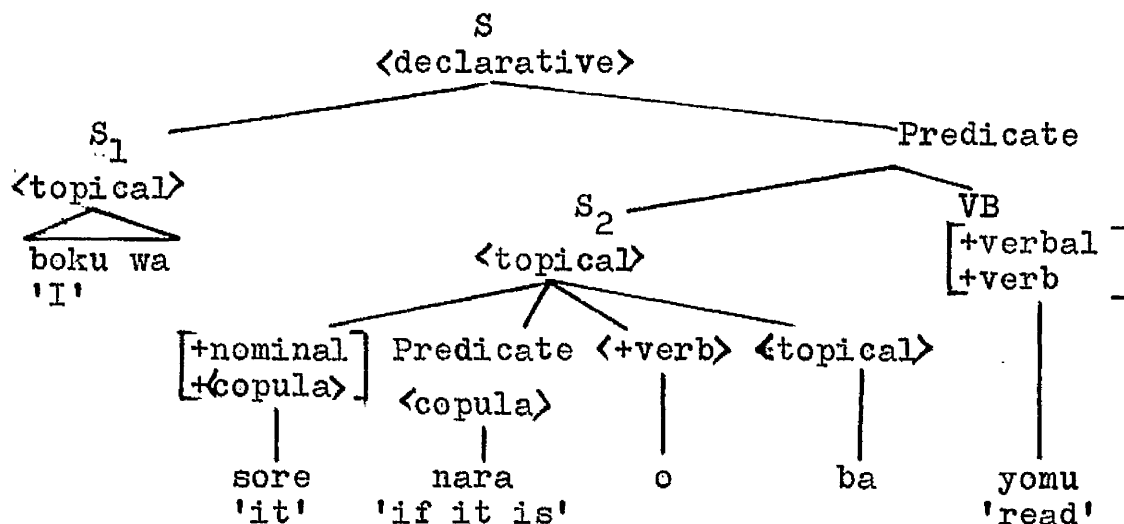
At this stage, the object is marked by the compound case

markers o ba which can actually occur in the semi-classical

literary Japanese, but no longer in the modern, colloquial

Japanese.   Therefore, either of o or ba has to be deleted

from the surface structure.   If ba is deleted, then the

above structure comes to underlie the o-object in 61 which

now has the following description,

```
                        S
                   <declarative>
           S                          Predicate
            1
        <topical>            S                      VB
          /\                  2                  [+verbal]
        boku wa          <topical>              [+verb  ]
          'I'        /      |      \
              [+nominal ]Predicate <+verb>           |
              [+-<copula>]<copula>                  yomu
                  |          |         |           'read'
                 sore       nara       o
                 'it'     'if it is'
```
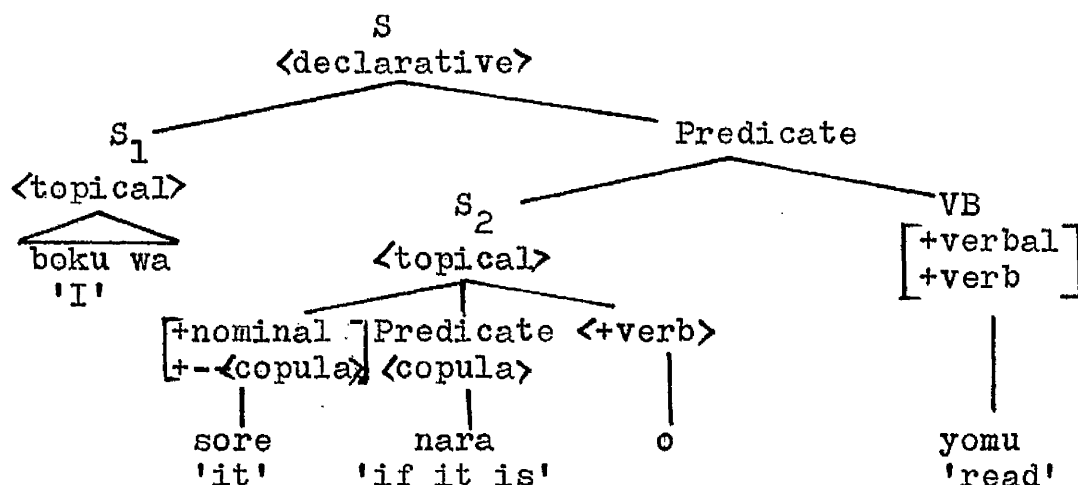
When the copula verb which does not appear in the surface
structure of the o-case object is deleted from this
structure, 61 is derived,

```
                        S
                   <declarative>
           S                          Predicate
            1
        <topical>            S              VB
          /\                  2          [+verbal]
        boku wa          <topical>       [+verb  ]
          'I'              /\               |
                         sore o           yomu
                         'it'            'read'
```
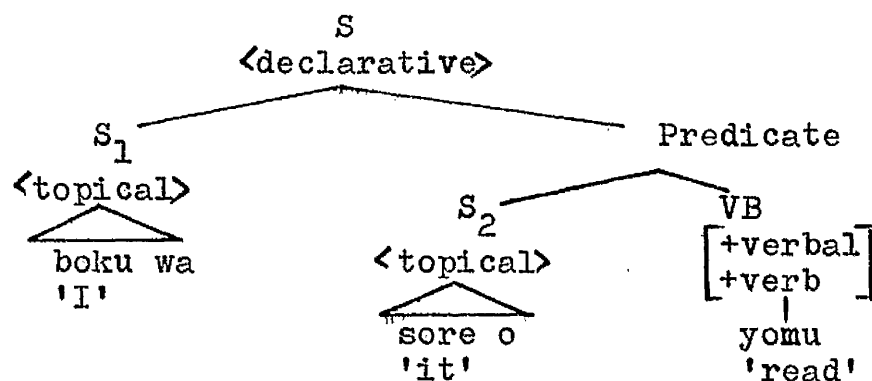
If, on the other hand, the object case marker o is
deleted from the earlier structure (p.111), the ba-sentence
form object will arise which directly underlies the wa-case
object in 61.1.

```
                              S
                         ⟨declarative⟩
         S₁                                    Predicate
      ⟨topical⟩               S₂                           VB
      boku wa           ⟨topical⟩                    ⎡+verbal⎤
       'I'                                           ⎣+verb ⎦
              ⎡+nominal ⎤  Predicate ⟨topical⟩
              ⎣+-⟨copula⟩⎦ ⟨copula⟩
                  sore        nara        ba          yomu
                  'it'      'if it is'                'read'
```
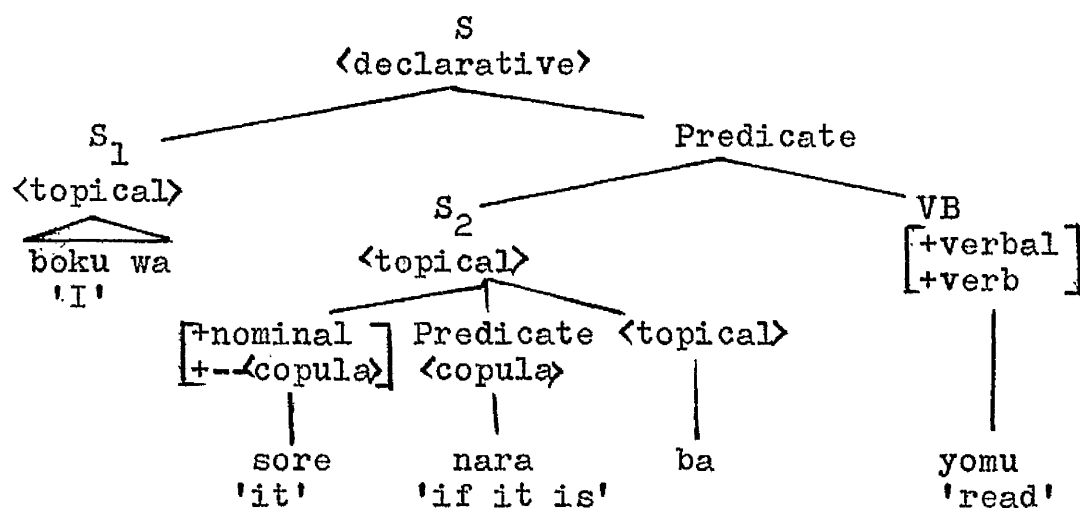
When the copula verb is optionally deleted from this
structure, the connective **ba** occurs immediately following
the nominal **sore** 'it'. By the morphophonemic rule (p.60,
Section 2) **ba** is changed to **wa** in the given context, thereby
the **wa**-object nominal in 61.1 is resulted in the following
surface structure,

```
                        S
                   ⟨declarative⟩
       S₁                          Predicate
    ⟨topical⟩          S₂                     VB
    boku wa         ⟨topical⟩            ⎡+verbal⎤
     'I'                                 ⎣+verb ⎦
                    sore wa              yomu
                     'it'               'read'
```
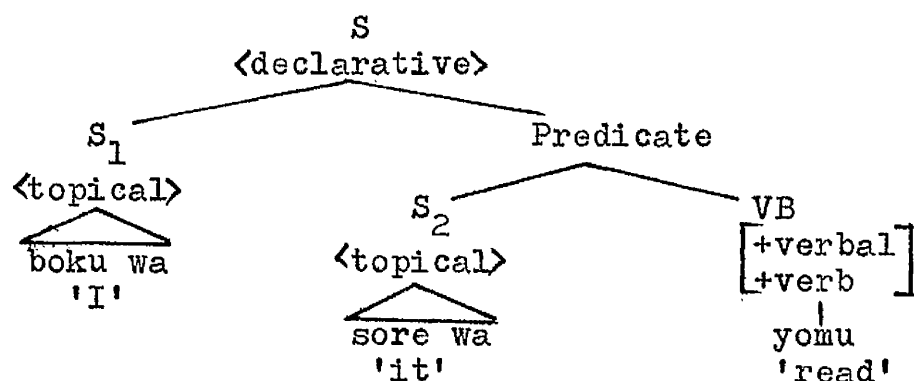
6.4. The <u>ga</u>-object nominal can be derived in exactly the same manner as the <u>o</u>-object nominal in conjunction with the <u>wa</u>-object nominal formation. Take sentences 62 and 62.1 for example,

62. boku wa mizu <u>ga</u> hosii 'I am desirous of water (i.e. I want some water)'

62.1 boku wa mizu <u>wa</u> hosii 'as for water, I am desirous of it'

their object nominal derivations will be shown. Suppose their underlying structure is now at the intermediate stage of its development as follows,
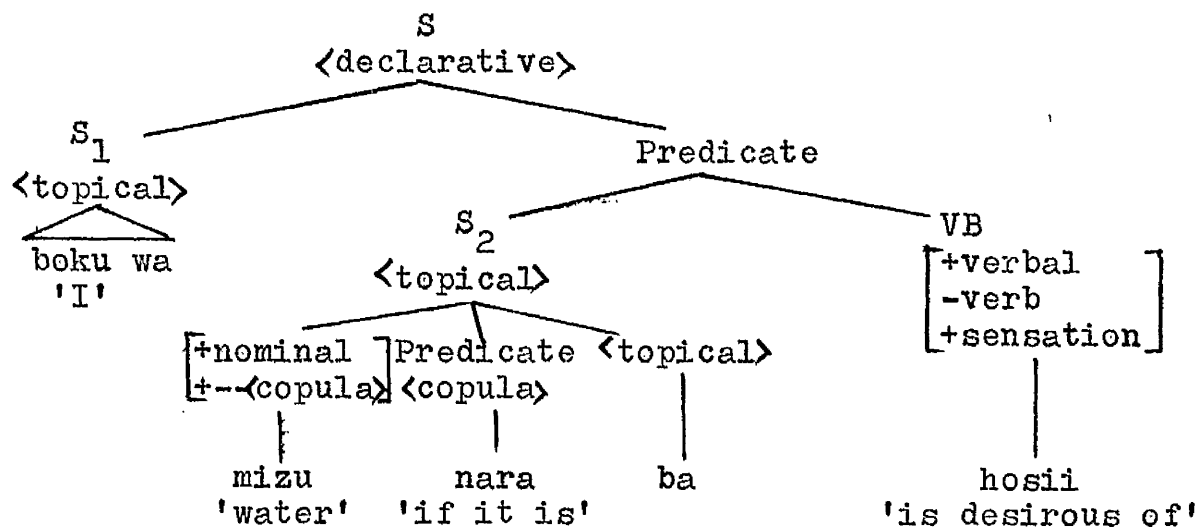
the next operation is the object case introduction. Owing to the fact that the predicate verb is an adjective which is

ga-governing, the ga-governing feature is first identified
as ⟨-verb⟩ in the feature matrix representing the predicate
verb and is then copied at the position following the
copula verb in S_2 where the case morpheme ga is introduced.
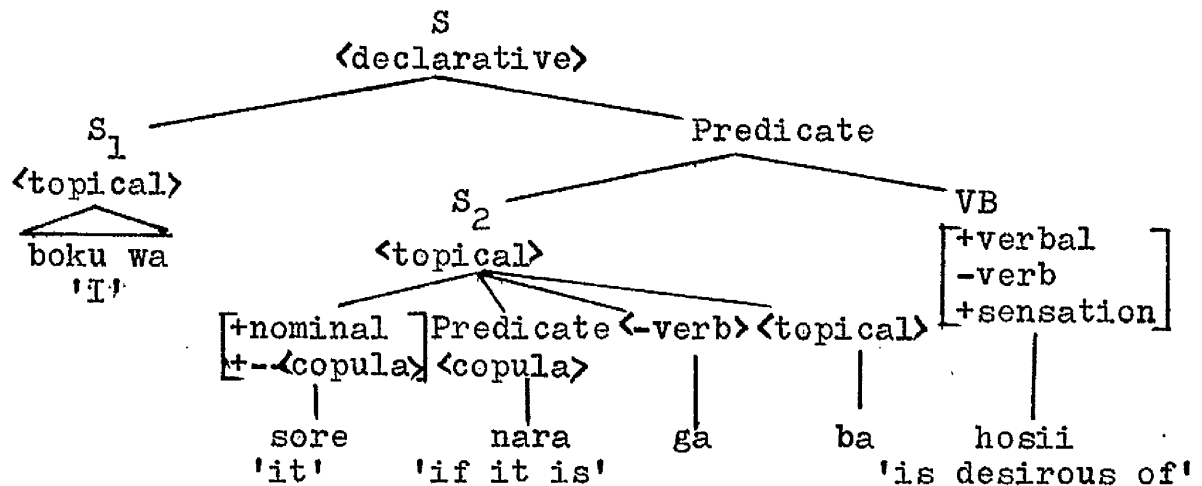
The compound case markers ga ba never occurs in Japanese, so
either one of them must be deleted.   In the case of ba-deletion,
the ga-object nominal in 62 will develop from this structure
after the obligatory deletion of its copula verb,
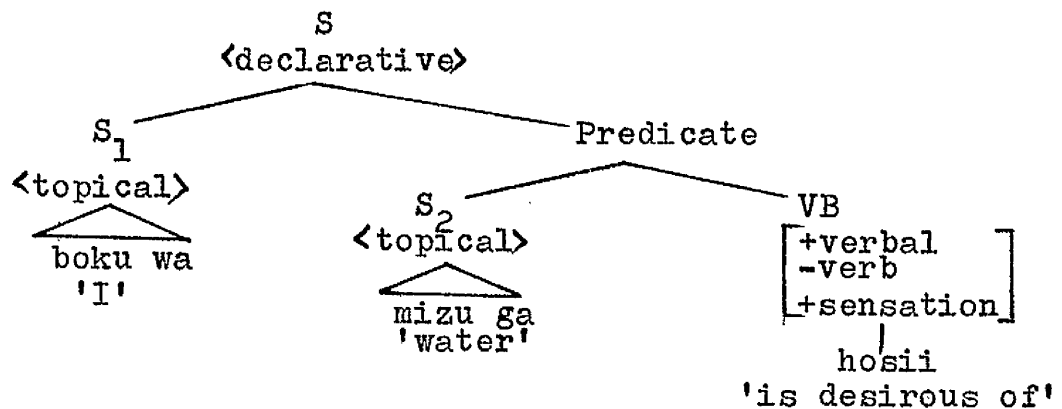
If the case marker _ga_ is deleted instead of _ba_, the
full sentence form object marked by _ba_ will arise from the
underlying structure (p.115).   After the optional deletion
of the copula verb and the morphophonemic change of _ba_ into
_wa_, the _wa_-object nominal in 62.1 is further developed from
the same underlying structure.

```
                        S
                   <declarative>
        S₁                            Predicate
     <topical>            S₂                      VB
      boku wa         <topical>              ⎡+verbal   ⎤
       'I'                                   ⎪-verb     ⎪
                       mizu wa               ⎣+sensation⎦
                       'water'                   │
                                              hosii
                                          'is desirous of'
```
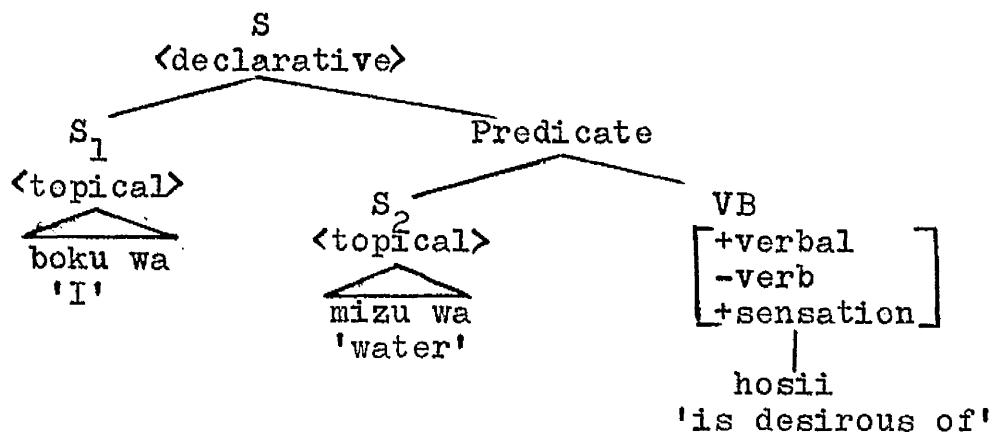
6.5.   The procedures of case assignment to the
object nominal of a compound verb phrase are essentially the
same as those developed in 6.3 and 6.4.   The case assignment
rules are said to apply cyclically (p.103), and I will show
how they actually work in the compound predicate verb phrase.
Suppose sentence 62 contains the compound verb phrase
consisting of the verb stem _nom_ 'drink', the desiderative
auxiliary _tai_ 'is desirous of doing something', and the

verbalizer auxiliary <u>garu</u> 'want to do something' such as,

62.3 boku wa mizu <u>o</u> nomi-ta-garu 'I want to drink water'

Assuming that the formation of the compound verb phrase has

already taken place, I will postulate the following intermediate

structure of 62.3,

```
                             S
                        <declarative>
                       /            \
                      /              \
              S₁                    Predicate
          <topical>              /          \
          /|\               Predicate        VB
       boku wa            /        \      ⎡+S--    ⎤
        'I'          Predicate      VB    ⎢+verbal ⎥
                    /      \    ⎡+S--  ⎤  ⎣+verb   ⎦
                 S₂        VB   ⎢+verbal⎥
             <topical>  ⎡+verbal⎤ -verb ⎥
            /      \    ⎣+verb  ⎦+sensation
    ⎡+nominal ⎤ Predicate<topical>
    ⎣+-<copula>⎦ <copula>
        |        |        |       |      |        |
      mizu      nara      ba     nom    tai     garu
     'water'  'if it is'       'drink' 'desirous of' 'want'
```
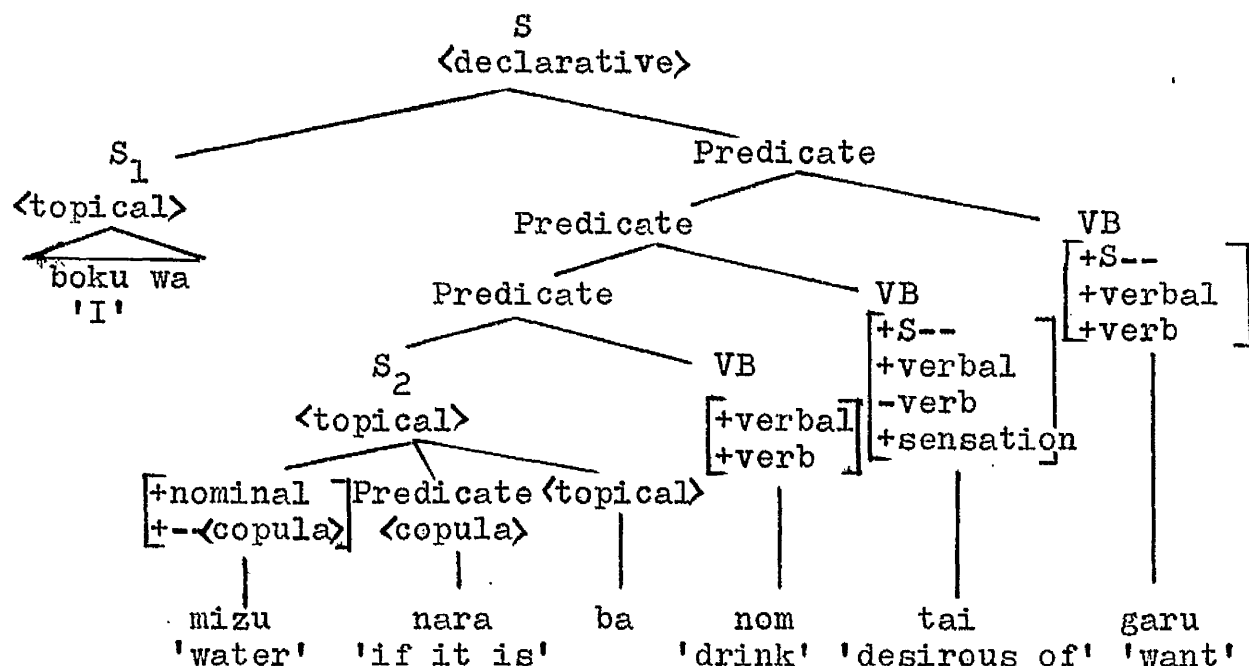
At the first cycle of the object case assignment, the feauture

<+verb> of the most deeply embedded verb is identified as

case-governing, and it is subsequently copied at the position

immediately following the copula verb.

At the next cycle, the next higher verb which is an

auxiliary is examined for the case-governing feature. The

feature <-verb> is selected from the feature matrix which

represents the auxiliary _tai_ 'is desirous of doing something'

and is copied at the position filled in by <+verb>, replacing

the latter.
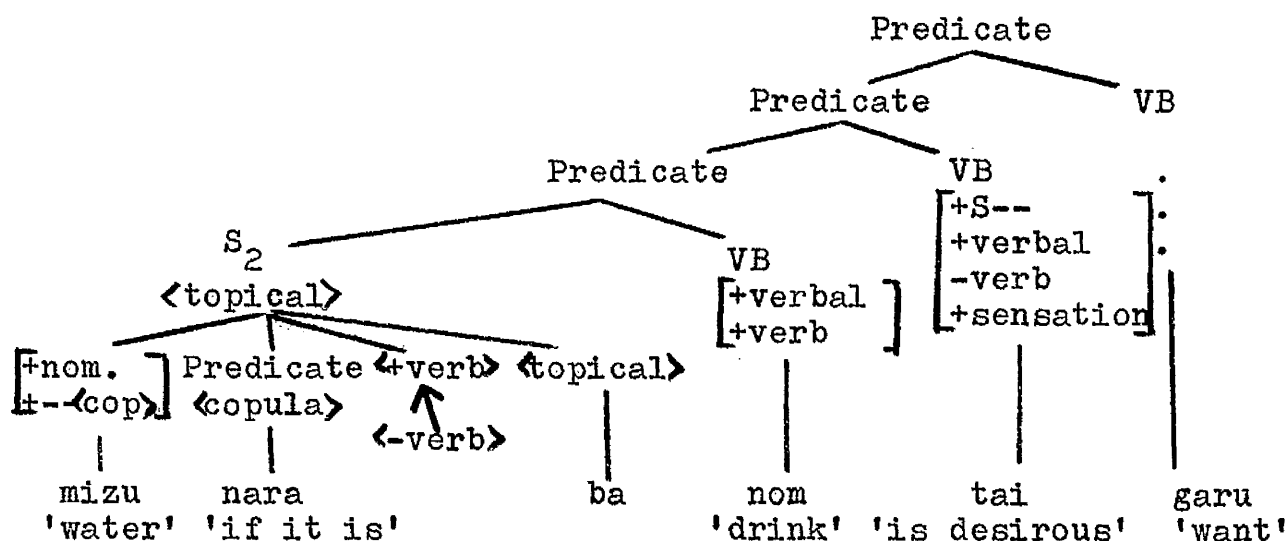
There is yet another higher verb in the predicate

structure, _garu_ 'want to do something' which is _o_-governing.

At the next cycle, the _o_-governing feature <+verb> is identified

in the feature matrix representing _garu_ and is copied at the

position where <-verb> has been introduced. The feature <-verb>

is now replaced by <+verb>. Since there is no higher verb,

the case morpheme _o_ is introduced at the position where the

feature <+verb> occurs,

```
                                    S
                               ⟨declarative⟩
          S₁                                          Predicate
     ⟨topical⟩                              Predicate              VB
      boku wa                      Predicate        VB          ⎡+S--    ⎤
       'I'                                        ⎡+S--  ⎤      ⎢+verbal ⎥
                           S₂              VB     ⎢+verbal⎥      ⎣+verb   ⎦
                      ⟨topical⟩        ⎡+verbal⎤  ⎢-verb  ⎥
                                       ⎣+verb  ⎦  ⎢+sensation⎥
            mizu⟨copula⟩⟨+verb⟩⟨topical⟩
           'water'        │       │        │          │         │          │
                        nara      o       ba         nom        tai       garu
                      'if it is'                    'drink' 'is desirous' 'want'
```
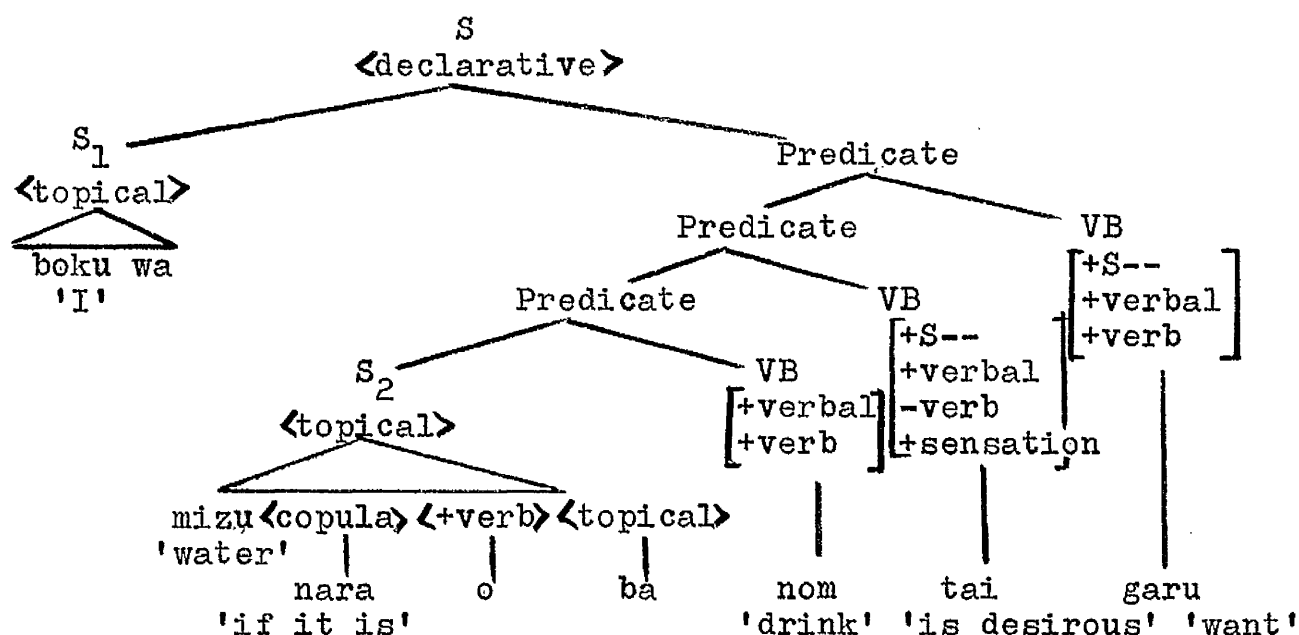
If the case marker <u>o</u> is deleted, the structure will give rise
to either the <u>ba</u>-sentence object or the <u>wa</u>-case nominal as has
been explained in 6.3.   If <u>ba</u> is deleted, the object case marker
<u>o</u> will result.   After the copula deletion and the morphophonemic
adjustment of the verbal endings, sentence 62.3 is derived,

```
                               S
                          ⟨declarative⟩
          S₁                               Predicate
     ⟨topical⟩                                              VB        VB
      boku wa              S₂          VB
       'I'            ⟨topical⟩
                     mizu o            nomi      ta          garu
                    'water'           'want to drink'
```
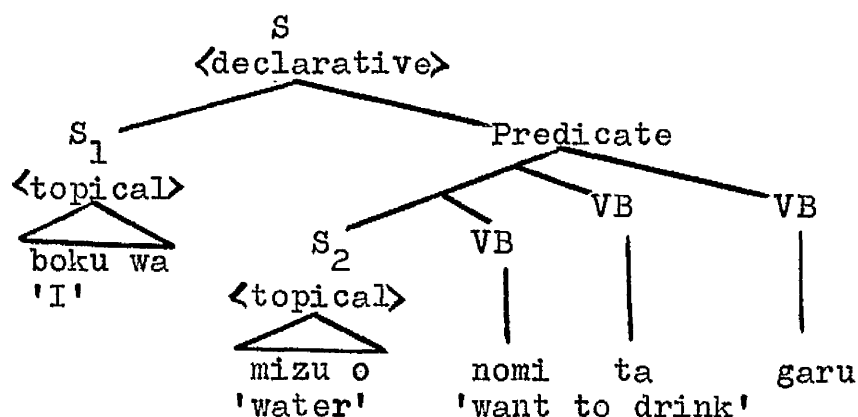
6.6.   Verb stems can be marked by the <u>wa</u>-case such

as,

64.   boku wa tegami o kaku   'I will write a letter'

64.1 boku wa tegami o kaki <u>wa</u> suru   'I will do the writing of
                                             a letter (i.e. I will write
                                             a letter)'

65.   tegami wa nagai   'the letter is long'

65.1 tegami wa nagaku <u>wa</u> aru   'the letter is in the state
                                        of being long (i.e. the letter
                                        is long)'

66.   sigoto wa kantan da   'the job is easy'

66.1 sogoto wa kantan de <u>wa</u> aru   'the job is in the state of
                                           being easy (i.e. the job is
                                           easy)'

Superficially these <u>wa</u>-marked verb stems may look quite different

from the other <u>wa</u>-nominals which have been discussed so far.

Yet these verb stems all appear in the nominalized form and

moreover, they occur with the auxiliary verbs which are

apparently in agreement with the inherent features of the verb

stems such as the auxiliary <u>suru</u> 'do something' occurs with the

verb stem which is specified by the feature ⟨+verb⟩ (i.e.

transitive and intransitive verbs) and <u>aru</u> 'is in the state of'

with the verb stem which is specified by ⟨-verb⟩(i.e. adjectives,

nominal verbs, true verbs etc.).   These verb stems must acquire

the nominal characteristics through nominalization, and they,

in fact, function like the nominals with the auxiliary

verbs functioning like their predicate verbs.   Then, there

is no reason why the wa-marked verb stem cannot be accounted

for as just another instance of wa-nominals.   Using sentences

64.1 as an example,

64.1 boku wa tegami o kaki wa suru   'I will do the writing of
                                       a letter'

I will show that its wa-verb stem is derived in essentially

the same manner as the other wa-nominals are.   The following

intermediate structure is postulated for 64.1,
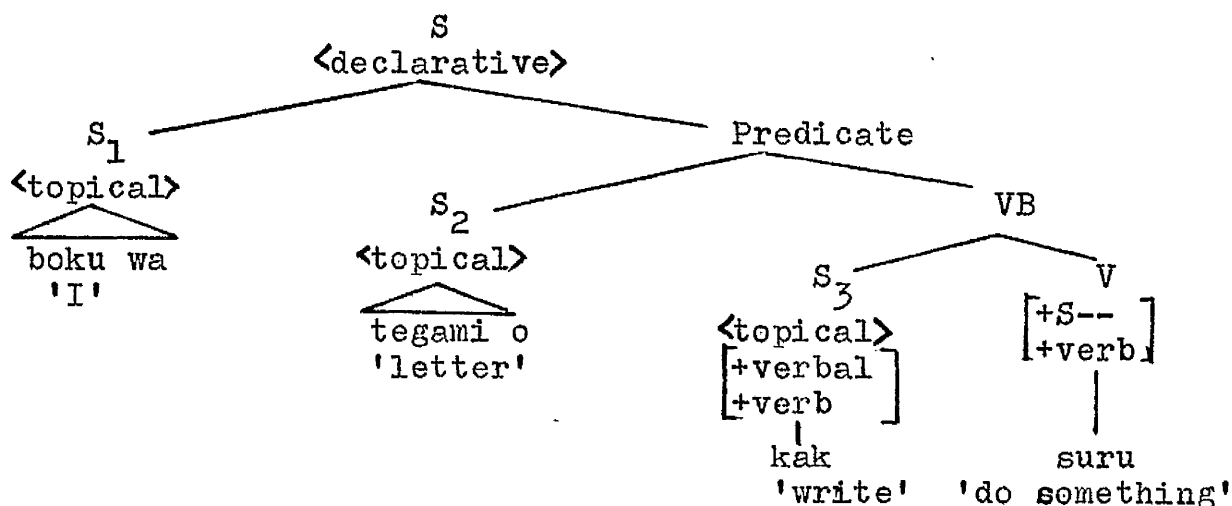
where the wa-subject and o-object are assumed to have been

developed already.   Notice that the verb stem kak 'write' is

introduced into the sentence frame marked by ⟨topical⟩
which is embedded within the verb phrase in the predicate
structure. The placement of the underlying structure of
wa-nominals is important as it determines in what positions
they occur and what syntactic functions are automatically
assigned to them in the surface structure.

The development of the verb stem kak 'write' into a
sentence structure differs from that of the nominal in the
following way. Being inherently ⟨+verbal⟩, it does not
have the feature ⟨+-- ⟨copula⟩⟩ , therefore no feature copy of
⟨copula⟩ will take place. Instead, with the ⟨pro⟩-subject
it forms a sentence structure which constitutes the sentence
complement of a copula auxiliary.
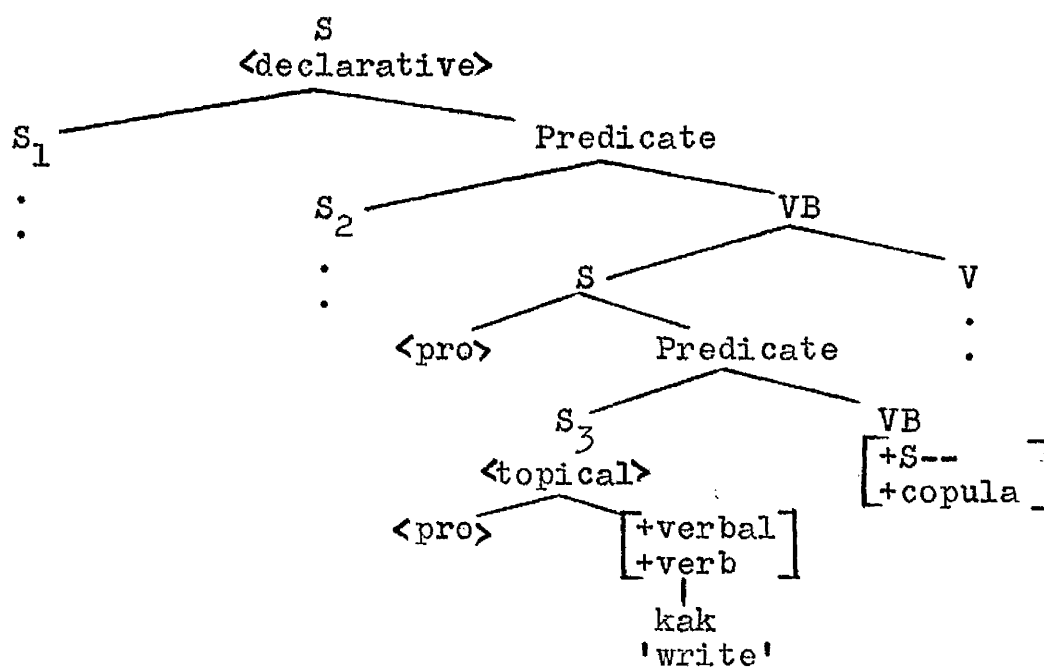
Then the sentence complement is nominalized by the
copula auxiliary. Although the copula auxiliary is
not grammatically realized in the surface structure of
the wa-verb stem, its nominalizing effect is visible not only
in the morphophonemic change which converts the verb stem
form kak 'write' into kak-i 'writing' but in the subsequent
wa-case assignment to it. To indicate that the nominalization
has applied to the relevant verb stem I will postulate a
derived feature <NOML> (which stands for nominalization)
and assign it to the feature matrix representing the verb
stem. In fact, unless information is carried by the relevant
verb stem specified by <NOML> that it is a derived nominal,
we may lose an important generalization that the wa-case
is related to the sentence connective ba for the following
reason.

At the next stage of syntactic development of the
wa-verb stem, the sentence feature <topical> is copied
at the final position of S_3 where the connective ba is
introduced. The intermediate structure of 64.1 now roughly
looks like,

```
                          S
                    〈declarative〉
              _____/_____
             /                             \
           S₁                            Predicate
           .                    _____/_____
           .                   /                        \
                             S₂                          VB
                             .              _____/\_____
                             .             /                   \
                                          S                     V
                                 _____/_____             .
                                /                  \            .
                            〈pro〉              Predicate
                                            _____/_____
                                           /                 \
                                         S₃                   VB
                                    〈topical〉            ⎡+S--      ⎤
                          _____/_____          ⎣+copula  ⎦
                         /                     \
                    〈pro〉  ⎡+verbal⎤       〈topical〉
                           ⎢+verb   ⎥           |
                           ⎣+NOML   ⎦           |
                               |                |
                             kaki               ba
                            'write'
```
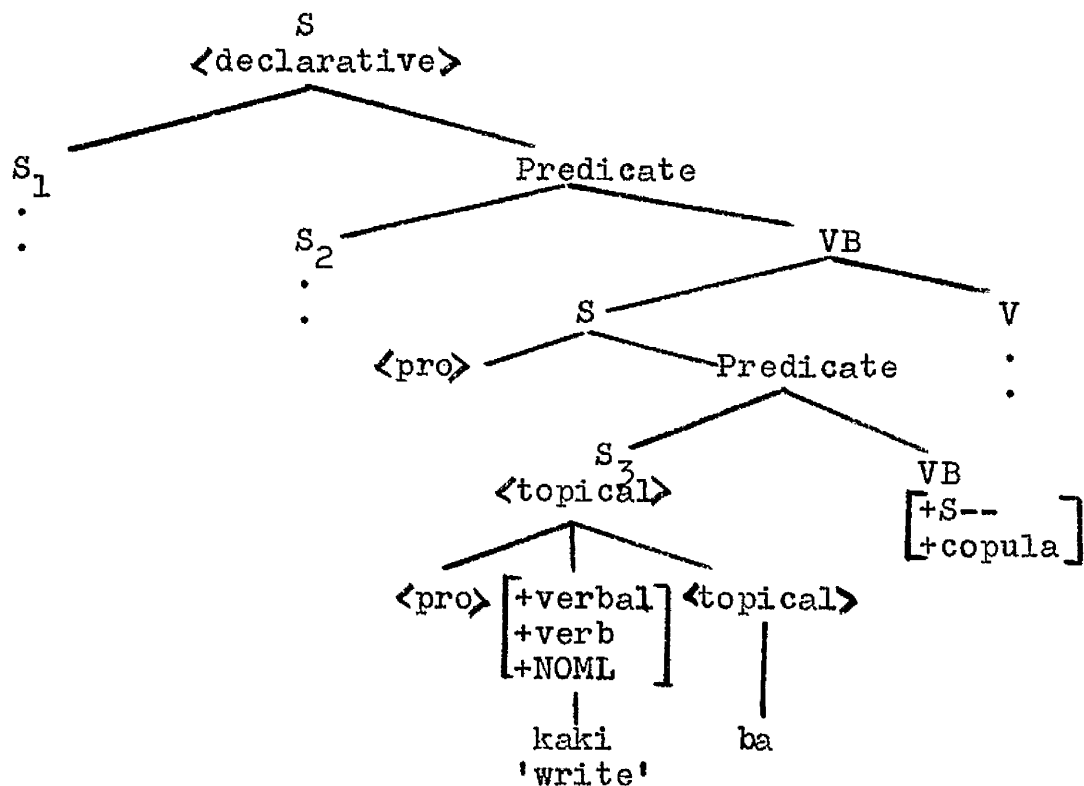
A series of deletions apply to this structure, removing the copula auxiliary, the sentence complement subject which is identical to the matrix subject, and the matrix subject itself owing to its feature 〈pro〉. As a consequence of these deletions, the above structure is much reduced to the following description,

```
                        S
                   〈declarative〉
          _____/          _____
      S₁                            Predicate
      .                    _____/        _____
      .                 S₂                           VB
      .                  .                   _____/    _____
                         .               S₃                    V
                                      〈topical〉             [+S--  ]
                                    ___/    \___            [+verb ]
                            ┌+verbal┐  〈topical〉               │
                            │+verb  │       │                   │
                            └+NOML  ┘       │                   │
                                │           │                   │
                              kaki          ba                suru
                            'writing'                   'do something'
```
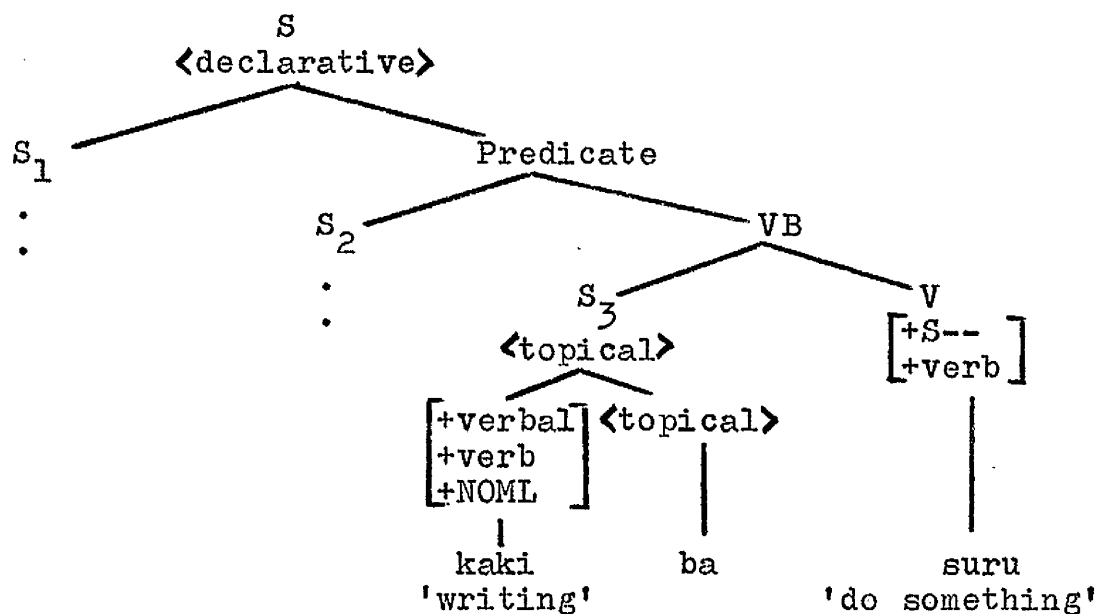
Recall that the sentence connective <u>ba</u> is morphophonemically
changed to <u>wa</u> and acquires the function of nominal case
marker only if <u>ba</u> immediately follows a single noun phrase
(p.60, Section 2). The verb stem <u>kaki</u> 'writing' satisfies
the condition of being a single nominal because it is now
marked by the feature 〈NOML〉, indicating it is a derived
nominal. Then <u>ba</u> in the above structure is changed to <u>wa</u>,
and as a result sentence 64.1 is derived with the following
surface description,

```
                              S
                          ⟨declarative⟩
              S₁                            Predicate
          ⟨topical⟩           S₂                        VB
          boku wa         ⟨topical⟩          S₃                  V
            'I'           tegami o       ⟨topical⟩           ⎡+S-- ⎤
                          'letter'        kaki wa           ⎣+verb⎦
                                          'writing'            suru
                                                         'do something'
```
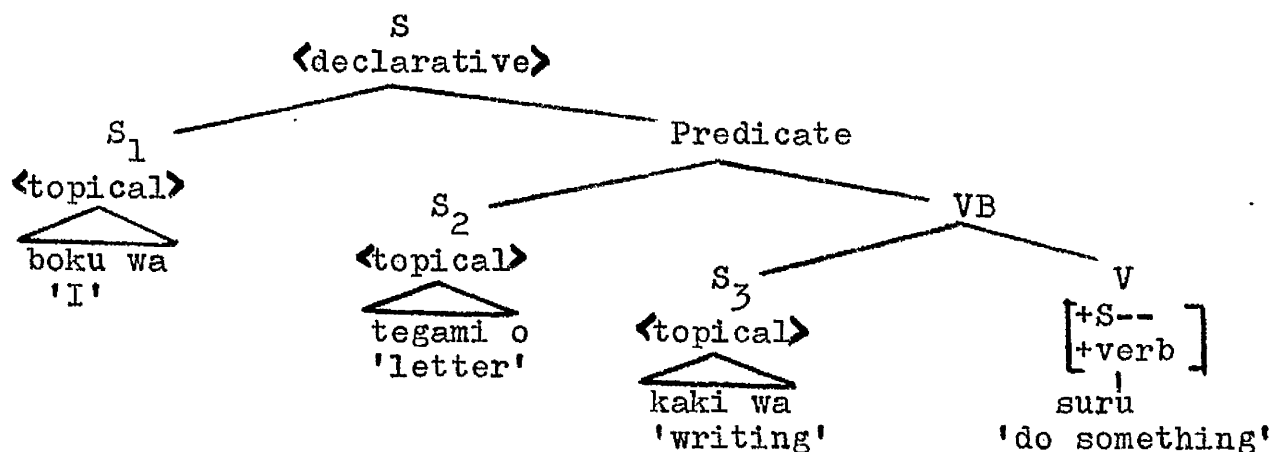
Superficially diverse occurrences of wa-, o- and
ga-object nominals and wa-verb stem have been investigated
and they have turned out to be all specific instances of
the basic wa-nominal. Their derivations have been shown
through essentially the same processes of wa-nominal formation
as developed in Section 2 with some additional syntactic
devices such as the verb feature copy to account for the
verb-governed object case distributions. In the following
section, yet another instance of the wa-nominal will be
discussed.

Section 7.   Wa-case and prepositional phrases
_____

7.1.   As has been seen in Section 6, the object
function of nominals is indicated by the wa-, ga-, and o-
cases.   Other functions of nominals with respect to verbs
such as indirect object, object complement, object of preposi-
tion, direction, location, instrument, manner etc. are
expressed by six basic prepositions in Japanese:[16]ni, de_1,
de_2, kara, made, and to.   In this section, I will first
discuss the meanings of these prepositions in the different
semantic contexts.   I will then refer to various theories
of prepositional phrases and will question   their
independent status in the grammar on the grounds that in the
underlying structures they are quite similar to the object
noun phrases in Japanese.   Furthermore, based on the previous
investigation on the wa-object nominals I will account for
the wa-marked prepositional phrases as primarily a specific
type of the former.

7.2.   The following are the six basic prepositions
occurring in the different semantic contexts,

_____

[16]Other prepositions are regarded as either their
synonyms or allomorphs.

67. hikooki wa Tokyo _ni_ iku   'the plane is going _to_ Tokyo'

68. boku wa tomodati _ni_ denwa-sita   'I telephoned _to_ my friend'

69. kare wa taisi _ni_ natta   'he has become an ambassador'

70. minna wa hikooki _de_ itta   'all have gone _by_ airplane'

71. kore wa nylon _de_ dekite-iru   'this is made _of_ nylon'

72. boku wa koko _de_ umareta   'I was born _in_ this place'

73. hasami _de_ kami o kire   'cut the paper _with_ scissors'

74. Nihon wa sima _kara_ naru   'Japan consists _of_ the isles'

75. kore wa nylon _kara_ dekite-iru   'this is made _from_ nylon'

76. kare wa asita _kara_ yasumi da   'he is on holidays _from_ tomorrow'

77. hune wa asoko _kara_ deru   'the boat is leaving _from_ there'

78. news wa kare _kara_ deta   'the news came _from_ him'

79. yasumi wa haru _made_ da   'the vacation is _until_ spring'

80. kare wa soko _made_ itta   'he went _as far as_ there'

81. mizu wa kisi _made_ aru   'the water reached the bank'

82. boku wa tomodati _to_ itta   'I went _with_ a friend'

83. kare wa sensei _to_ hanasite-iru   'he is talking _with_ the teacher'

84. boku wa kare _to_ kenka-sita   'I quarrelled _with_ him'

Varied as their interpretations may be, each preposition can be abstracted into a single meaning.

Ni represents the directional relations. The
direction may be towards some locatibn, some person or some
thing etc. Also it may be towards some resulting state
(sentence 69).

Homophonous de_1 and de_2 have either non-directional
or instrumental interpretations. The sentence like "they
saw a tree in the garden" is ambiguous in English, because
its interpretation may be that they saw a tree "which is
in the garden" or "when they are in the garden". While
the locative "in" is either directional or non-directional
in English, Japanese de is strictly non-directional and is
in contrast with the directional ni. Thus the above sentence
may be expressed in two distinct ways in Japanese,

i.   hito wa ki o niwa de mita   'they saw a tree at the garden
                                    (implying that they were also
                                    in the garden)'

ii. hito wa ki o niwa ni mita   'they saw a tree towards the
                                    garden (implying they were not
                                    in the garden)'

The instrumental de may mean either the use of tools
to do something or the use of material to make something
with it. The interpretation of instrumental de is in
contrast with kara when they occur in homo-morphemic sentences,

i. kore wa nylon <u>de</u> dekite-iru   'this is made <u>of</u> nylon'

ii. kore wa nylon <u>kara</u> dekite-iru   'this is made <u>from</u> nylon'

The speaker's focus on the material in its resultative state
is represented by <u>de</u> and as a source by <u>kara</u>.

If <u>ni</u> represents the direction towards something,
<u>kara</u> represents the direction from something.

i.   soko <u>ni</u> ike   'go to that place'

ii.   soko <u>kara</u> ike   'go from that place'

iii. ringo wa ki <u>ni</u> naru   'apples grow on the tree'

iv.   ringo wa ki <u>kara</u> toreru   'apples are harvested from the trees'

For another example, compare the following sentences,

v. boku wa kare <u>ni</u> news o kiita   'I asked him about the news'

vi. boku wa kare <u>kara</u> news o kiita   'I heard the news from him'

Essentially the same verb <u>kik</u> 'to get information' is assigned
different meanings: "to ask" in co-occurrence with <u>ni</u>, and
"to hear" in co-occurrence with <u>kara</u>. If a speaker is
turning to someone for information, such relation is specified
by the "directional" <u>ni</u>, while if he is receiving information
from someone, this relation is represented by the "source"
<u>kara</u>.

The preposition <u>made</u> sets the goal or extent depending

on the semantic content of the co-occurring noun.   With the

locational or the temporal nominals, <u>made</u> is interpretable

as 'as far as, as late as, as long as' etc.; otherwise it

marks the limit of extent such as 'as many as, as much as' etc.

Where two things are interacting upon each other such

as in exchanging, mistaking one thing for another, comparing,

competing, mixing, colliding, matching, and so on, the nominal

on the patient side is marked by <u>to</u>,

i.   boku wa kare <u>to</u> kenka-sita   'I had quarrel <u>with</u> him'

ii.   kuruma wa basu <u>to</u> butukatta   'the car collided <u>with</u> a bus'

iii. sio wa mizu <u>to</u> mazaru   'salt can be mixed <u>with</u> water'

If <u>to</u> is substituted by <u>ni</u>, for example,

*i.1   boku wa kare <u>ni</u> kenka-sita

ii.1   kuruma wa bus <u>ni</u> butukatta   'the car collided into a bus'

iii.1   sio wa mizu <u>ni</u> mazaru   'salt is soluble in the water'

these sentences either become senseless or aquire the new

meanings.   Apparently, the directional <u>ni</u> lacks in the

bi-directional sense, therefore the action like quarrelling,

competing etc. which presupposes the simultaneous participation

of at least two parties cannot be marked by ni.

Based on these observations, the meanings of the six basic prepositions may be generalized as ni (to-directional), de$_1$ (non-directional), de$_2$ (instrumental), kara (from-directional), made (extent), and to (simultaneous).

7.3. Whether prepositions are to be introduced as constituents or as features of noun phrases in the deep structure is still a controversial issue. Traditionally prepositional phrases have been considered to be among the basic constituents of a sentence. In accordance with this tradition, earlier transformational grammar has introduced them as the deep structure categories either in free association or in close construction with predicate verbs.

The constituent analysis of prepositional phrases with selectional restrictions (Chomsky 1965) has been criticised mainly on two grounds. Fillmore (1968, 1970) has thought that "prepositional phrase" is essentially a categorical notion which may not accomodate in any natural way the semantic functions of prepositional phrases which designate such relations as "temporary", "locative", "instrumental" etc. which hold between a verb and co-occurring nominal expressions.

Secondly, there is some evidence that in the deep structure, prepositional phrases are noun phrases with prepositions which may or may not be superficially realized. In sentence generation, the underlying prepositions are often revealed (Jacobs, Rosenbaum, 1968).   In nominalization, for example, the patient nominals acquire "of" such as,

i.   the army destroyed the fortress

ii. the army's destruction <u>of</u> the fortress

Likewise, the agent nominals, when they become oblique object in passivization, are introduced by the preposition "by",

i.   a carpenter hit the nail

ii. the nail was hit <u>by</u> a carpenter

Furthermore, it has been observed (Fillmore 1970, Langendoen 1970) that some prepositions correspond closely to the semantic roles played by the nominal expressions with respect to the predicate verbs.   "By" often introduces the agent; "of" or "to" the patient; "with" the instrument, "into" the results and so on.   These prepositions are to be deleted just in case the nominal expressions are syntactically reaasigned the subject or direct object functions.   Thus,

i. the janitor will open the door <u>with this key</u>

ii. <u>this key</u> will open the door

These observations have given result in a proposal that each sentence has a prepositional core which consists of a predicate verb and one or more "actants" or cases such as object, dative, locative etc. In the lexicon, a verb is specified for its inherent features and the case environment in which it can occur. Each "actant" is subsequently rewritten into a preposition and a nominal, thereby rendering the distinction between noun phrase and prepositional phrase unnecessary.

The deep structure existence of prepositional phrases has been questioned on yet another ground (Lakoff 1968b) that such assumption destroys an important generalization. Instrumental adverbs (in the form of prepositional phrase), for example, are paraphrasable as,

i. Seymour sliced the salami <u>with a knife</u>

ii. Seymour <u>used a knife</u> to slice the salami

where the object of "with" and the direct object of the verb "used" are the same. If prepositional phrases are assumed to exist in the deep structure, i. must be analyzed as a

simple sentence containing a subject, transitive verb, direct object and an instrumental adverb. While on the other hand, ii. is a complex sentence containing a subject, transitive verb, direct object and a verbal complement. Despite their synonymous interpretations, i. and ii. are thus assigned completely different structural descriptions.

On the basis of syntactic evidence of various sorts, Lakoff has concluded that i. and ii. share essentially the same deep structure from which instrumental adverbs are transformationally derived. In the deep structure, ii. contains two verbs and two sentences. Then although i. is a simple sentence superficially, it must have two occurrences of sentences in its deep structure. Furthermore, if i. contains only one verb "sliced" in the surface structure which corresponds to one of the two verbs of ii, then the other verb "use" in ii. must also appear in the deep structure of i, and must subsequently be deleted. The object of "with" in i. is the direct object of the verb "use" in ii. Then in the deep structure of i. it must also be the direct object of "use". It follows that the object nominal "knife" cannot be part of an instrumental adverb constituent, and such constituent does not exist in the deep structure.

7.4.   I will also consider that "prepositional
phrase" is an irrelevant notion and at least in the
underlying structure prepositional phrases are not
differentiated from object noun phrases in Japanese.
That these noun phrases are realized as object noun phrases
or prepositional phrases seems to be only a surface structure
phenomenon.

Recall that we have investigated in Section 5 that
the o- or ga-cases of the object nominal are determined by
the particular features of the predicate verbs.   Here I am
only concerned with the prepositional phrases which are in
close association with the verbs.   If there is any evidence
that prepositions are also selected by the particular verbs,
the prepositions and the object case markers o and ga may
be accounted for on some common syntactic basis.

In fact, the distinction between the prepositional
nominal (i.e. nominals which are the object of prepositions)
and the object nominal is irrelevant to their semantic inter-
pretations.   Remember that there was a class of o-verbs
specified by the feature <+motion> (p.99) which occur with
the o-case object nominal such as,

i. boku wa miti o aruku   'I am walking the street, (i.e. I am walking in the street'

ii. hito wa hasi o wataru   'people are crossing the bridge, (i.e. people are crossing over the bridge)'

The semantic role of these o-object nominals is clearly locative, which is further evidenced by the fact that they never occur with locative prepositions,

*i.1 boku wa miti de aruku

*ii.1 hito wa hasi ni wataru

Then the selection of the o-case has nothing to do with the given nominal being syntactically a direct object of the verb or an object of the locational preposition.

There are other motion verbs which also occur with the locational nominals, but they assign to them the prepositions ni 'to' or kara 'from',

i. hikooki ga London ni tuita   'airplane has arrived in London'

ii. hikooki ga London kara tuita   'airplane has arrived from London'

iii. boku wa heya ni hairu   'I will go into the room'

There is yet a third class of motion verbs which require either the o-case or one of the directional prepositions,

i.	boku wa yama o noboru	'I am climbing up the mountain'
ii.	boku wa yama ni noboru	'I am climbing onto the mountain, (i.e. I climb the mountain)'
iii.	boku wa heya o deru	'I am leaving the room'
iv.	boku wa heya kara deru	'I am going out of the room'

The stative verbs select ni 'to' with the resultative nominals,

i.	kare wa isha ni naru	'he will become a doctor'
ii.	boku wa kono kikoo ni nareta	'I have accustomed to this climate'
iii.	kisetu wa natu ni kawatta	'the season has changed to the summer'
iv.	kare wa minna ni maketa	'he was defeated by all others'
v.	sore wa ki ni naru	'it grows on the tree'

The resultative verbs govern the instrumental de 'by means of',

i.	kutu ga doro de yogoreta	'the shoes got dirty with mud'
ii.	mado ga kaze de kowareta	'the window has been broken by the wind'
iii.	sore wa kinu de dekiru	'it is made of silk'

But if the resultative verbs refer to the source, the directional kara 'from, out of' is selected,

i.   sore wa kinu kara dekiru   'it is made from silk'

ii. Nihon wa sima kara naru   'Japan consists of the islands'

The verbs with simultaneous participants acting upon each other are to-governing 'with',

i.   karera wa teki to tatakau   'they are fighting with the enemies'.

ii. boku wa otooto to kawaru   'I am replacing my younger brother'

Thus prepositions appear to be selected by the particular inherent features of the verbs in exactly the same way as the o- or ga-cases are.

7.5.   Moreover, the prepositional nominals may be marked by wa, whereby they acquire the "topical" interpretation.

85. koko kara kin ga deru   'gold is produced from here'

85.1 koko kara wa kin ga deru   'as for from this place, gold is produced,(i.e. gold is produced here)'

86. boku wa kare ni atta   'I have met him'

86.1 boku wa kare ni wa atta   'as for him, I have met'

87. kurasi wa koko de raku da   'life is easy here'

87.1 kurasi wa koko de wa raku da 'as for in this place, life is easy,(i.e. life is easy here)

Furthermore, these wa-marked prepositional phrases have the
synonymous occurrences in the form of ba-sentences,

85.1 koko kara wa kin ga deru

'as for this place, gold
85.2 koko kara nara ba, kin ga deru   is produced'

86.1 boku wa kare ni wa atta

'as for him, I have met'
86.2 boku wa kare ni nara ba, atta

87.1 kurasi wa koko de wa raku da

'as for this place, life
87.1 kurasi wa koko de nara ba, raku da   is easy here'

    The prepositional nominal and the object nominal are
thus similar in two respects that (i) their occurrences are
governed by the particualr verbs and (ii) they can occur in
the form of either ba-sentence or wa-marked phrase.   These
similarities seem to provide sufficient evidence to consider
that they are syntactically related.   In Section 6 I have
postulated that the object case markers o and ga are added
to the underlying structure of the basic wa-nominal which will
become a syntactic object in the surface structure.   Based
on this, I will consider that the wa-marked prepositional
nominal is the basic form, and the particular prepositions
are selected by the governing verbs and are added to the
underlying structure of them.

Using sentences 86 and 86.1 for illustrative examples,

86. boku wa <u>kare</u> <u>ni</u> atta   'I have met him'

86.1 boku wa <u>kare</u> <u>ni</u> <u>wa</u> atta   'as for him, I have met'

I will show the derivations of the plain and the <u>wa</u>-marked

prepositional nominals. Most of the rules developed in

Section 6 to account for the object nominal formation are

applicable in their formations. The underlying structure

similar to that of the object nominals such as on p.109 is

postulated,

$$
\begin{array}{c}
\text{S}\\
\langle\text{declarative}\rangle
\end{array}
$$

$$
\begin{array}{ccc}
\text{S}_1 & & \text{Predicate}\\
\langle\text{topical}\rangle & \text{S}_2 & \text{VB}\\
\text{boku wa} & \langle\text{topical}\rangle & \begin{bmatrix}\text{+verbal}\\\text{+verb}\\\text{+to-directional}\\\text{+}\langle\text{animate}\rangle\text{--}\\\text{etc.}\end{bmatrix}\\
\text{'I'} & \begin{bmatrix}\text{+nominal}\\\text{+--}\langle\text{cop}\rangle\\\text{+animate}\\\text{etc.}\end{bmatrix}\\
& \text{kare} & \text{atta}\\
& \text{'he'} & \text{'met'}
\end{array}
$$
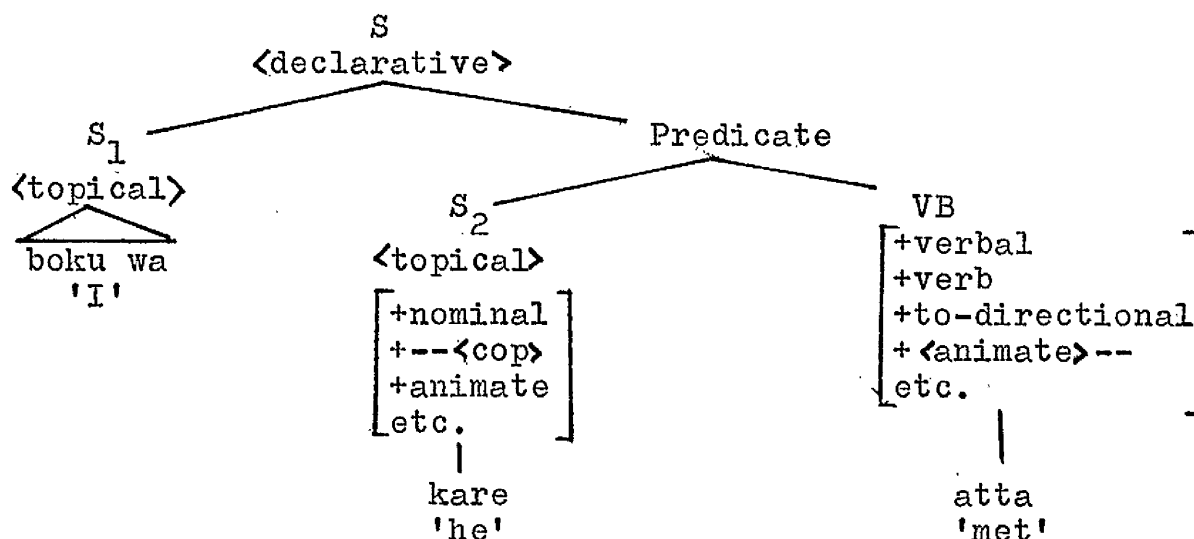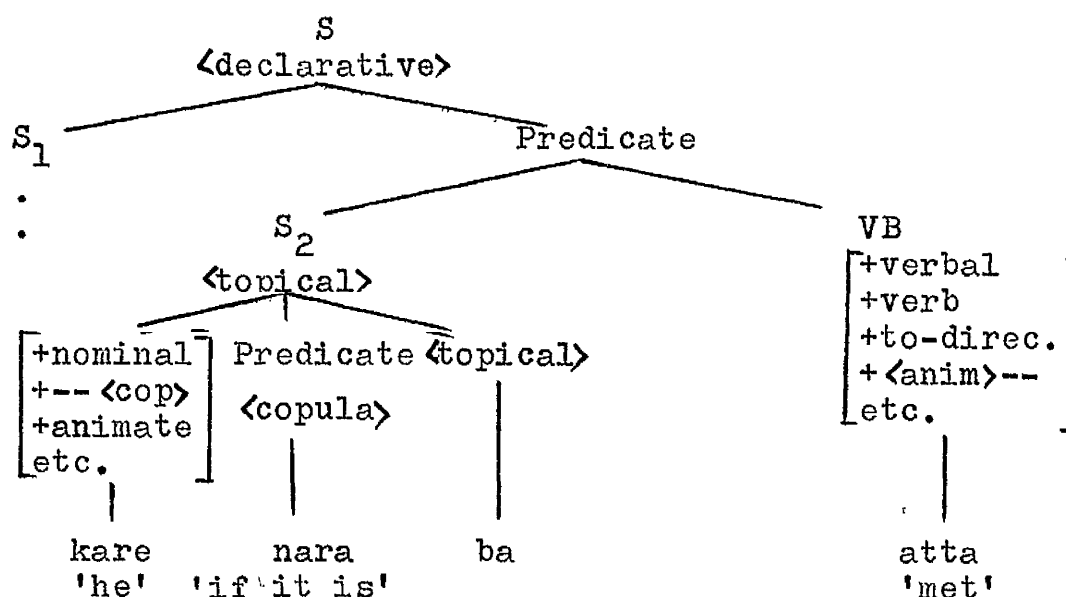
where the <u>wa</u>-subject nominal is assumed to have already been

developed. The nominal which is introduced into the

sentence frame specified by .⟨topical⟩ will be developed into

a prepositional phrase.   Notice that the position of its

embedding is within the predicate structure which is

exactly the same as in the case of the object nominal.

The nominal kare 'he' is now developed into the sentence

structure which will directly underlie the ba-sentence.

The feature ⟨copula⟩ is selected from the nominal feature

matrix and is copied at the predicate position in S_2 immediately

following kare 'he'.   On the other hand, the sentence feature

⟨topical⟩ is also copied at the final position of S_2 where the

sentence connective ba is introduced.

```
                        S
                  ⟨declarative⟩
      S₁ _____/        _____ Predicate
      .                       ___/              \___
      .              S₂ _____/                      \ VB
                  ⟨topical⟩                          ⎡+verbal  ⎤
          _____/   |   _____                    ⎢+verb    ⎥
    ⎡+nominal⎤  Predicate  ⟨topical⟩                  ⎢+to-direc.⎥
    ⎢+-- ⟨cop⟩⎥  ⟨copula⟩                             ⎢+⟨anim⟩--⎥
    ⎢+animate ⎥     |          |                       ⎣etc.     ⎦
    ⎣etc.    ⎦      |          |                          |
        |           |          |                          |
       kare        nara        ba                        atta
       'he'      'if it is'                              'met'
```

At the next stage, the nominal in the predicate structure

must be assigned a specific case marker or preposition by the

governing verb.   The feature ⟨+to-directional⟩ contained

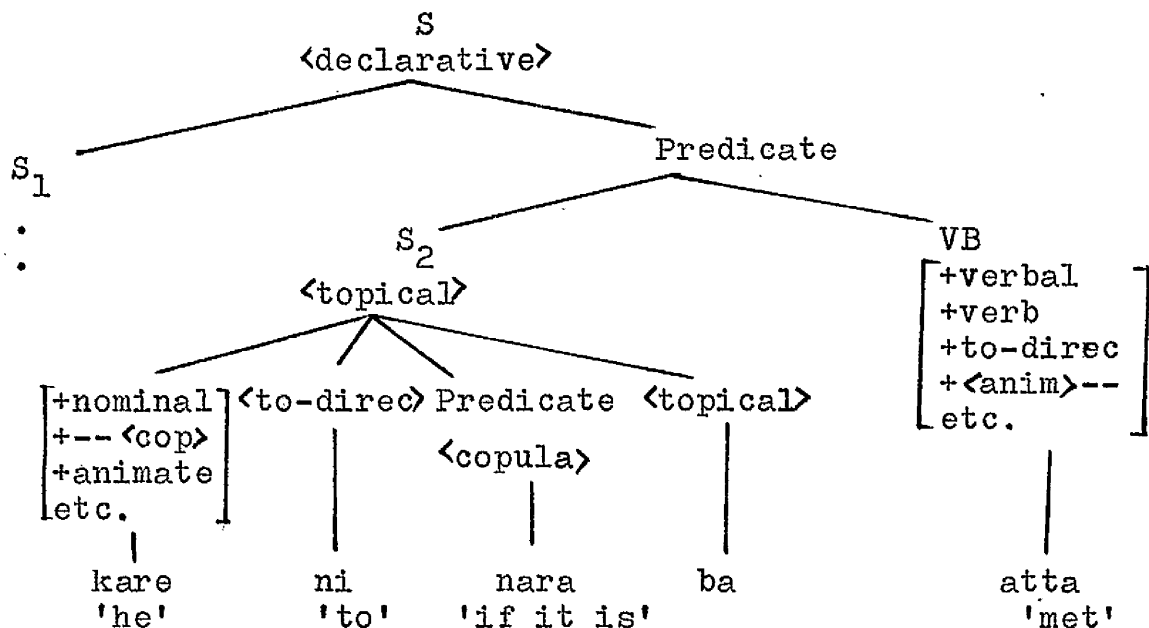in the predicate verb feature matrix represents that the

verb governs directional prepositions.   If this feature

is absent, the predicate verb will be indicated as an

o-governing transitive verb by ⟨+verb⟩, and the nominal <u>kare</u>

'he' will be marked by the o-case.   When the feature

⟨+to-directional⟩ is copied at the position immediately

preceding the sentence connective and the preposition <u>ni</u> is

subsequently introduced, a compound marker <u>ni</u> <u>ba</u> is formed.

```
                         S
                  ⟨declarative⟩
          S₁                         Predicate
      ⟨topical⟩
      /\                   S₂                    VB
   boku wa                             ⎡+verbal ⎤
     'I'              ⟨topical⟩        ⎢+verb   ⎥
                                       ⎢+to-direc.⎥
   ⎡+nominal ⎤  Predicate ⟨to-direc⟩ ⟨topical⟩  ⎢+⟨anim⟩ --⎥
   ⎢+--⟨cop⟩ ⎥  ⟨copula⟩                         ⎣etc.     ⎦
   ⎢+animate ⎥
   ⎣etc.     ⎦
     |            |        |        |              |
    kare        nara      ni       ba            atta
    'he'      'if it is'  'to'                   'met'
```
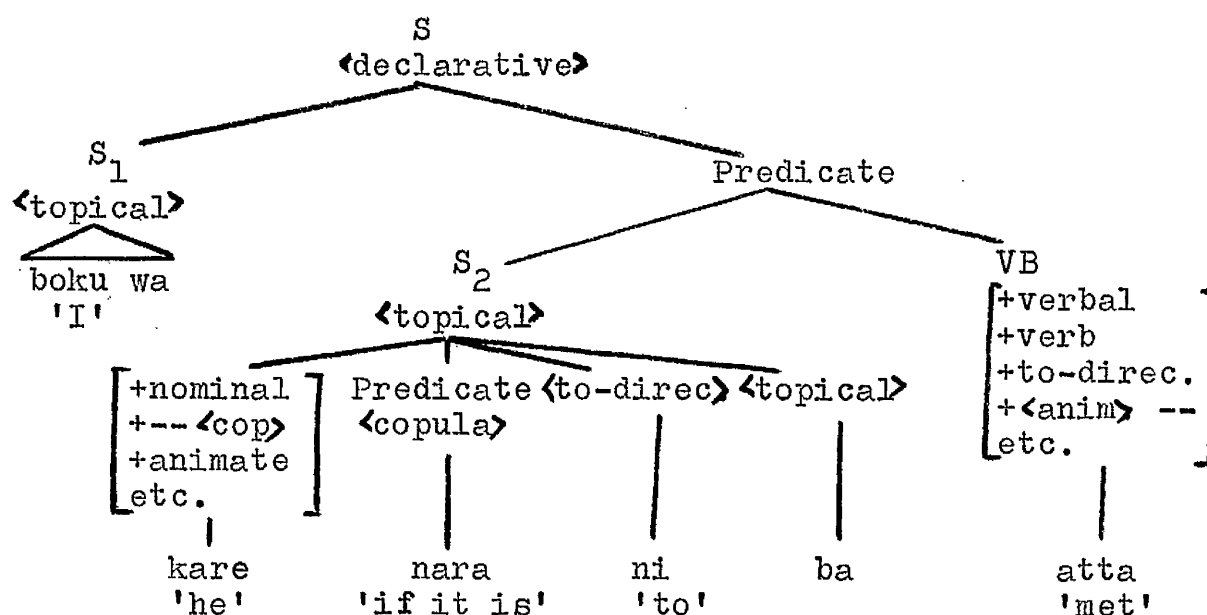
The sentence structure is now fully developed and it

directly underlies the <u>ba</u>-sentence form and the <u>wa</u>-marked

prepositional phrases.   The processes to derive their surface

structures slightly differ from those of the object noun
phrase formation. Either the optional (i) permutation or
(ii) copula deletion must first apply to the underlying
structure (p. 143).   Since ni and wa do not occur consecutively
in the surface structure of ba-marked prepositional phrases,
by (i), the preposition ni 'to' must be moved next to the
nominal, replacing the copula,

```
                         S
                    <declarative>
                _____
              /                              \
           S                                 Predicate
           1                          _____
           •                        /                          \
           •                       S                            VB
                                   2                      ⎡+verbal    ⎤
                                <topical>                 |+verb       |
                    _____      |+to-direc  |
                  /        |         |          \         |+<anim>--  |
        ⎡+nominal⎤ <to-direc> Predicate  <topical>        ⎣etc.       ⎦
        |+-- <cop>|    |      <copula>       |
        |+animate |    |         |           |                 |
        ⎣etc.     ⎦    |         |           |                 |
             |         |         |           |                 |
           kare       ni       nara         ba              atta
           'he'       'to'    'if it is'                    'met'
```

This structure will give rise to the ba-sentence form
prepositional phrase in 86.2,

86.2 boku wa kare hi nara ba, atta   'as for him, I have met'

The permutation rule of (i) must be optional, otherwise the copula will no longer occur immediately following a single noun phrase (p.60, Section 2), thereby no copula-deletion will take place, and consequently no wa-marked prepositional phrases will arise.

By (ii), the copula verb is optionally removed from the underlying structure (p. 143),
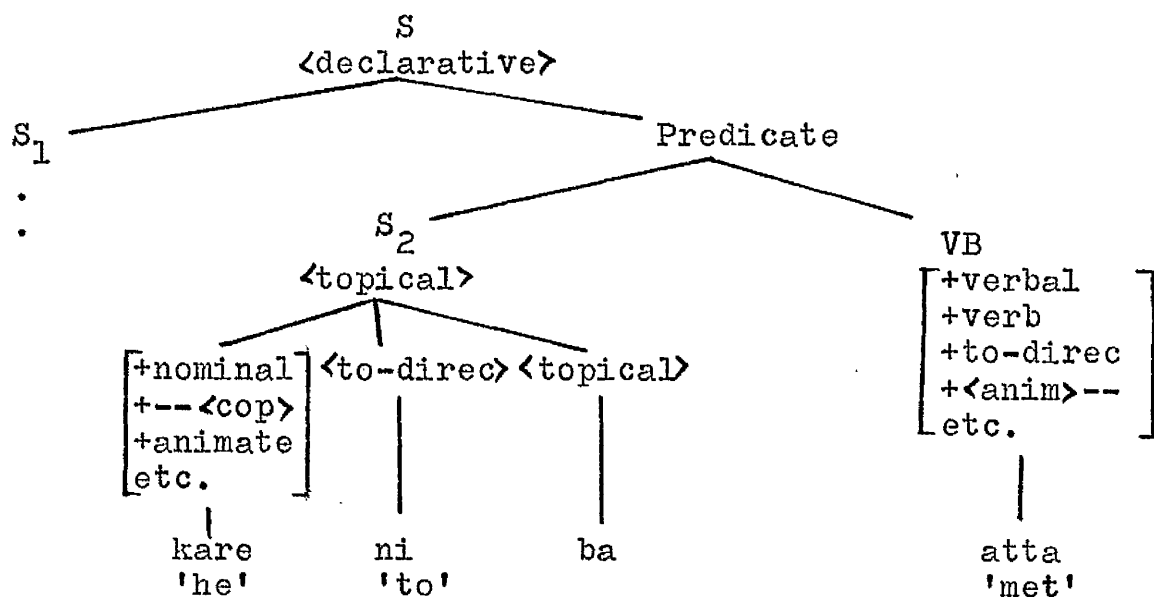
from which the wa-marked prepositional phrase in 86.1 will develop after the connective ba is morphophonemically changed to wa,

86.1 boku wa kare ni wa atta   'as for him, I have met'

In the given syntactic context, the relevant morphophonemic
rule developed earlier (p.60, Section 2) need be modified
such as the morpheme ba is changed into wa following a
single nominal but with an interrupting preposition.

Subsequently, the wa-case marker is optionally deleted
from the sentence structure of 86.1 and the plain prepositional
phrase in 86 will be obtained,

86. boku wa kare ni atta   'I have met him'

The syntactic distinction between the prepositional
nominal and the object nominal is rendered irrelevant as
both are basically a specific type of the wa-case nominal
in the underlying structure. The derivations of some
prepositional phrases have been shown through application
of primarily the same set of rules developed to account for
the object nominals in Section 6, with slight modification.

Section 8.   Summery and further theoretical implications
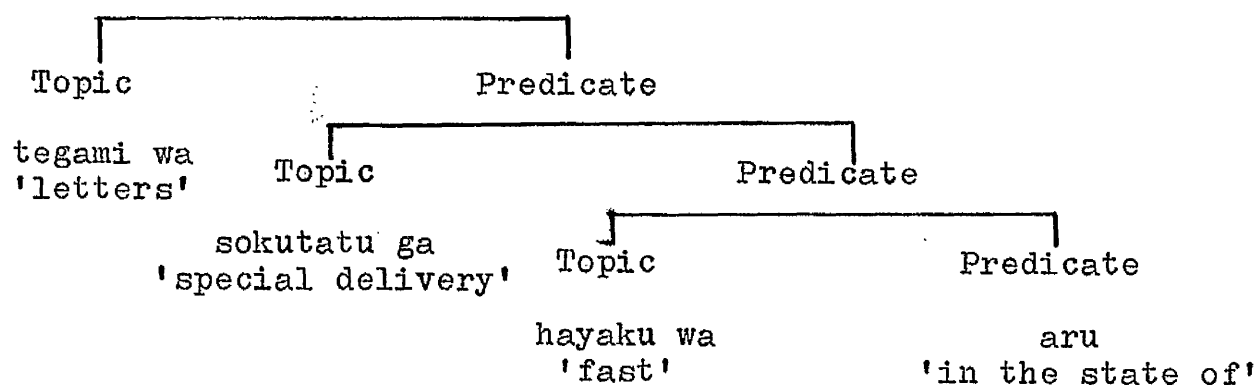
of wa and ga

8.1.   The unique characteristics of the wa- and ga-
cases have become evident in that they define neither syntactic
functions nor deep semantic roles of the co-occurring nominals,
but add the "topical" or "contrastive" sense to these nominals.
The primary concern of this chapter has been to explain how
the case markers wa and ga come to manifest such functions
and the sources from which they are derived.   Their over-all
derivational processes will be briefly reviewed.

8.2.   Earlier the sentence formational processes in
Japanese were roughly outlined (2.9 Section 2, Chapter One).
I have postulated that at some pre-syntactic stage, the basic
information on the meaning of a surface sentence is given by
a set of propositions.   As a linguistic approximation, these
propositions are stated by a logically compatible set of
terms with full semantic and, more narrowly, lexical specifica-
tions.   In accordance with their semantic properties, such
as being <nominal> or being <verbal>, these terms are brought
into a general semantic relation which is variously referred to
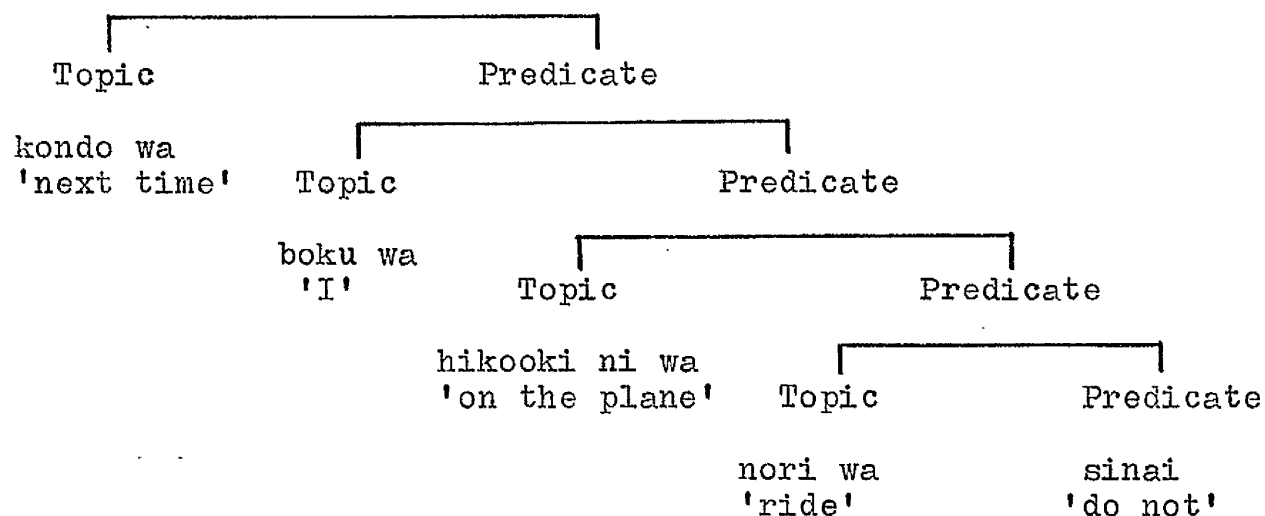as "argument-predicate", "topic-comment", "topic-predicate",

and so on.   I will assume this relation is fundamental to the
semantic structure of a Japanese sentence which consists
of a noun which names something as a topic and a verb
which is the predicate of the topic.   This, in fact, provides
a convenient semantic basis to account for the wa-and ga-marked
nominals.

8.3.   Observe that the following sentences are
analyzable in terms of two semantic units "topic" and
"predicate".

88. tegami wa sokutatu ga hayaku wa aru
        'as for letters, special delivery is fast'

```
        ┌────────────────────┐
     Topic               Predicate
   tegami wa        ┌──────────────────────┐
   'letters'     Topic                 Predicate
              sokutatu ga        ┌──────────────────┐
           'special delivery'  Topic            Predicate
                            hayaku wa              aru
                              'fast'         'in the state of'
```

89. kondo wa boku wa hikooki ni wa nori wa sinai
        'as for the next time, as for me, as for the
        plane, as for riding (on it), I will not do so,
        (i.e. next time, I will not take the plane)'

```
      ┌──────────────────────────┐
   Topic                      Predicate
 kondo wa          ┌──────────────────────┐
'next time'     Topic                  Predicate
                boku wa     ┌──────────────────────┐
                  'I'     Topic                  Predicate
                      hikooki ni wa     ┌──────────────────┐
                      'on the plane'  Topic            Predicate
                                      nori wa           sinai
                                      'ride'           'do not'
```

The semantic role relationships among the nominals (excluding
the derived_nominals from the present discussion) in 88 and
89 are quite diverse.   In 88 which presupposes a number
of underlying prepositions like "someone sends a letter";
"a letter goes by special delivery"; "special delivery is
fast" etc., the semantic role of _tegami_ 'letters' is inferred
as "patient", and that of _sokutatu_ 'special delivery' as
"instrument" (in a very wide sense).   Likewise in 89,
kondo 'next time' is "time"; _boku_ 'I' is "agent", and
hikooki ni 'on the plane' is a means of transportation.   Yet
all the nominals are topicalized by either _wa_ or _ga_ with no
apparent relation to their semantic roles.   Then a very
general principle of topicalization is postulated: that any

nominals which constitute the unit of "topic" are assigned either the wa- or ga-cases through the following processes.

A given nominal is independently developed into a sentence structure with a copula verb to which the connective ba or ga is added either freely or under certain syntactic constraints. A nominal developed into the sentence structure which is embedded in the predicate construction will be assigned ga if the predicate verb has <-verb> (6.4, Section 6). These ba- and ga-marked sentence structures are subsequently reduced by a seires of deletions and yield a single noun phrase. As a result, the sentence connectives ba and ga which now mark the nominal acquire the function of case marker.

8.4. The present wa-and ga-case analysis requires modifications of the syntax-oriented grammars such as the earlier TG (Aspects) and offers further evidence which will support the criticisms against it which have already bean raised (Lakoff 1968a, 1969, Lakoff and Ross 1968, McCawley 1968a, 1968b, Postal 1970). The "deep structure" of a Japanese sentence, for example, is no longer stated in terms of constituent relations with selectional restrictions, but

may have much more complex form such as consisting of a
number of propositions which can accomodate any degree of
complexity of meaning through compounding and embedding.
The structural description of such "deep structure" may
be regarded as directly containing the semantic representation
of a sentence.   The non-lexical, abstract meaning of such
notions as topic, focus, presupposition etc. constitutes part
of the semantic representation of a sentence and is given
the corresponding structural description.   The "topical"
or "contrastive" sense associated with the wa- and ga-cases,
for example, is captured in terms of the grammatical relation
between the wa- and ga-marked noun phrases and their corres-
ponding ba- and ga-marked sentences (Sections 2 and 3, p.95
Section 4).   In fact, there seems to be no such level as
"deep structure" in the sense of Aspects which is a stage
of sentence derivation following the application of all
lexical insertions and prior to the application of the syntactic
transformations.   Evidence is abundant that lexical insertions
can occur post-transformationally such as the introduction of
the connectives, ba and ga, after the transformational copy
of the corresponding sentence features (Sections 2 and 3).

For another example, the object case markers o or ga are

introduced into the appropriate context of a sentence,

following the transformational copy of the governing

features of the predicate verb (Section 6).   Consequently,

the meaning of a surface sentence may not be given by the

meanings of the lexical items in the "deep structure".

Then the information for the semantic interpretation of a

sentence must be sought for at any level of its semantic

representation.   The functional meaning of wa or ga, for

example, is not given by their lexical meanings, but is

determined by the surface structure configuration; that they

mark the nominals instead of the full sentences (p. 61, Section 2).

Furthermore, there are such instances as the topicalization is

applicable to the relevant nominal based on the information

of its earlier semantic representation.   I will give one such

example to conclude this section.

8.5.   Generally topicalization can apply to the

nominals which have already been realized in other cases.

But the genitive-case nominals may or may not be topicalized

and, if topicalized, there are different results depending

on what kind of structural description they were earlier

associated with.   Recall sentence 88,

88. tegami wa <u>sokutatu ga</u> hayaku wa aru 'as for letters, special
                                                   delivery is fast'

The meaning of this sentence has an interpretation based

on a number of underlying propositions such as,

i. tegami wa sokutatu da   'letters are by special delivery'

ii. <u>sokutatu no</u> tegami wa hayai 'special delivery letters are
                                             fast'

<u>Hayaku wa aru</u> 'is fast' is predicated not only of <u>tegami</u>

'letters' or of <u>sokutatu</u> 'special delivery', but of

<u>sokutatu no tegami</u> 'special delivery letters'.   Then the

<u>ga</u>-case nominal <u>sokutatu ga</u> 'special delivery' in sentence 88

functions as a noun phrase modifier in the underlying

structure.   Since the nominal functioning as a modifier

is marked by the genitive case <u>no</u>, the <u>ga</u>-nominal in 88

must also appear in the genitive case in the underlying

structure such as,

88.1 <u>sokutatu no</u> tegami wa hayaku wa aru 'special delivery letters
                                                     are fast'

Syntactically the genitive-case marker <u>no</u> is considered as

transformationally derived from the base copula verb <u>da</u> 'is'

through the following processes,

[tegami wa sokutatu da]$_S$ tegami wa hayai $\longrightarrow$

        sokutatu no   tegami wa hayai

Subsequently, the structural description of the underlying

structure of 88 is roughly representable as,
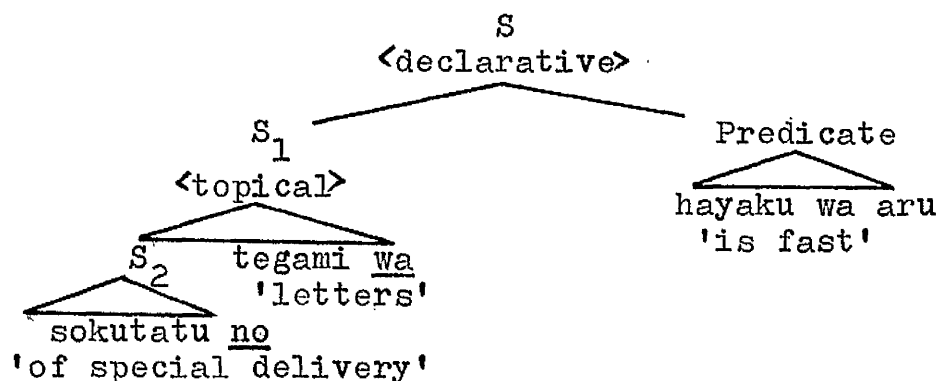
When the ga-topicalization applies to the genitive-case nominal

sokutatu no 'of special delivery' in S_2, the constituent

relationships are changed as follows,
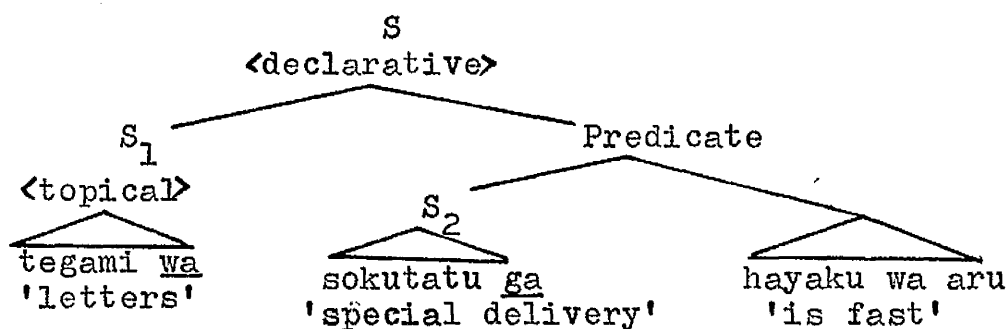
The topicalized genitive-case nominal sokutatu ga 'special delivery'

is brought out of the sentence structure S_1 and assigned to the

predicate structure as an independent constituent which
might be referred to as a predicate subject.

For further examples, the following genitive-case
nominals undergo the same structural change in topicalization,

Group I:

90. hikooki no tabi wa raku da   'travel by air is convenient'

90.1 tabi wa hikooki ga raku da   'as for travel, airplane
                                        is convenient'

91. migi no te ga itai   'the right arm hurts'

91.1 te ga migi ga itai   'my arm, the right one, hurts'

Not all the genitive-case nominals, however, are
assigned to the new syntactic position when they are
topicalized.   Observe the following examples,

Group II:

92. kawa no nagare wa hayai   'flow of the river is fast,
                                        (i.e. the river flows fast)'

92.1 kawa wa nagare wa hayai   'as for the river, its flow
                                        is fast'

93. boku no gakkoo wa Tokyo da   'my school is in Tokyo'

93.1 boku wa gakkoo wa Tokyo da   'as for me, my school is in
                                        Tokyo'

Apparently the topicalization has no effect on the constituent
relationships of these sentences.   Then the question is

what causes these differences when the topicalization applies

to the genitive-case nominals in Group I and II which are

superficially alike in that they both play the syntactic

role of noun phrase modifier and are marked by the identical

genitive-case marker no.

Actually, the genitive-case nominals in Group I and

II are slightly different in their semantic functions which

can be captured in terms of their different underlying

structures.   It has been explained that the genitive-case

nominals arise from the copula verb construction (pp. 153-4).

But this is true of only those in Group I such as,

90. [tabi wa hikooki da]$_S$ tabi wa raku da --->
    'travel is by air'   'travel is convenient'
             hikooki no   tabi wa raku da

91. [te ga migi da]$_S$ te ga itai --->
    'it is right arm'   'arm hurts'
           migi no   te ga itai

*92. [nagare wa kawa da]$_S$ nagare wa hayai
     *'flow is the river'   'flow is fast'

*93. [gakkoo wa boku da]$_S$ gakkoo wa Tokyo da
     *'school is I'   'school is in Tokyo'

Apparently the genitive-case nominals in Group II are not

related to the copula verb construction in the underlying
structure.

Now the meanings of these genitive-case nominals
in Group I and II are compared. The genitive-case no in
Group I could be said to represent an unmarked semantic
relation. There is a qualifying relation between the terms,
but, since the modifying element always precedes the modified
in the surface structure of a Japanese sentence, this is
probably the function of nominal word order, and no is
redundant. In fact, the no-connected nominals in Group I
are syntactically permutable with a contrast in meaning as
illustrated by the following examples,

90. hikooki no tabi wa...   'air travel...'

90.i tabi no hikooki wa...   'travelling airplane, (i.e. airplane
                               for travel)...'

91. migi no te ga...   'the right arm...'

91.i te no migi ga...   'the side to the right of arm...'

Such semantic characteristics of the genitive-case no
coincides with the meaning of the underlying copula verb
which also represents the most unmarked of all verbal relations
such as merely linking two objects together.

On the other hand, the genitive-case nominals in

Group II do not occur in the copula verb construction. Nor

are the no-connected nominals in this group transposable.

Then the semantic relation represented by the case no in

Group II must be quite a different one. In sentence 92,

92. kawa no nagare wa hayai   'flow of the river is fast';

nagare 'flow' is inherently associated with the waters in

motion such as river. Likewise in 93,

93. boku no gakkoo wa Tokyo da   'my school is in Tokyo';

gakkoo 'school' refers to an educational institution which is

an integral part of the life of boku 'I'. It appears that

"possession" of some quality is referred to by these

occurrences of the genitive-case no. As a matter of fact,

the meanings of these genitive-case nominals can be represented

in terms of the existential verb construction,

92. kawa no nagare wa...	'flow of the river...'
92.i nagare wa kawa ni aru	'there exists flow in the river'
93. boku no gakkoo wa...	'my school...'
93.i gakkoo wa boku ni aru	'there exists a school to me'

I will consider that the genitive-case nominals in Group II are

actually derived from the underlying existential verb construction

such as these through the following processes,

92. [nagare wa kawa <u>ni</u> <u>aru</u>]$_S$ nagare wa hayai -->
  'there exists flow in the river' 'flow is fast'
         kawa <u>no</u>   nagare wa hayai

93. [gakkoo wa boku <u>ni</u> <u>aru</u>]$_S$ gakkoo wa Tokyo da -->
  'there exists a school to me'   'school is in Tokyo'
         boku <u>no</u>   gakkoo wa Tokyo da

Then the superficially identical genitive-case markers <u>no</u> in Group I and II are not identical in the underlying structures, and I will conclude that the topicalization applies differently to the genitive-case nominals depending on their earlier semantic representations in terms of either the copula verb or existential verb constructions.

There is yet another group of genitive-case nominals to which the topicalization does not apply at all.

Group III:

94. otoko <u>no</u> ko ga kuru   'a male child is coming'

*94.1 otoko <u>wa</u> ka ga kuru   *'as for a male, a child is coming'

95. yasumi <u>no</u> hi wa sukunai 'days of rest (i.e. holidays) are
                           not many'

*95.1 yasumi <u>wa</u> hi wa sukunai *'as for rest, days are not many'

These genitive-case nominals represent what might be called

"appositive" relationship between the nominals.   Although

details of their derivations are not known at present, it

is suspected that the "appositional" nominal derivation

itself might constrain the application of topicalization.

CHAPTER III

Ka-case

Introduction

Besides the wa- and ga-cases, there is a widely-
distributed ka-case which can also mark subject, object,
adverbs and prepositional phrases. Furthermore, there
occur not only homophonous sentence connective ka, but
also question-marker ka. In this chapter, I will investigate
each instance of ka for its semantic and syntactic character-
istics. Then I will show first that the question-marker ka
is in fact syntactically related to the sentence connective
ka. Then, by the extension of the general assumption on
the underlying relationship between the case marker and the
corresponding sentence connective, I will postulate that
the case marker ka is also related to the sentence connective
ka and show that it is actually the case. Thus, I will
account for the superficially separate occurrences of ka
by essentially a single grammatical scheme.

Then, I will show the formational processes of the

ka-marked nominals and point out some resemblance to those

of the wa- and ga-nominals in essential aspects.   It will

become clear that my initial hypothesis of the relationship

between the case-marked nominals and their underlying sentences

also holds for the ka-case nominal.

Section 1.   Case-marker <u>ka</u>

1.1.   In the following, two diverse occurrences
of the case-marker <u>ka</u> and the sentence connective <u>ka</u> are
compared.

1. dare <u>ka</u> kuru	'someone is coming'
2. boku wa nani <u>ka</u> tabetai	'I am desirous of eating something, (i.e. I want to eat something)'
3. boku <u>ka</u> kimi <u>ka</u> hataraku	'I or you will work'
4. ame <u>ka</u> yuki <u>ka</u> hururasii	'it looks that rain or snow may fall'
5. boku ga iku <u>ka</u> kimi ga iku	'either I will go or you will go'
6. boku wa sanpo suru <u>ka</u> eiga o miru	'I will go for a walk or will see a film'

Superficially these occurrencés of <u>ka</u> may appear unrelated
because of their diverse syntactic functions.   But when
their meanings are compared, they clearly share some sense
in common--what might be described as "uncertainty".   This
sense of "uncertainty" associated with <u>ka</u> is further
manifested by the question-marker <u>ka</u>, by representing a basic
element of inquiry that is "uncertainty".

7. kimi wa dare ni au <u>ka</u>	'whom are you going to see'
8. minna wa kaetta <u>ka</u>	'has everyone gone'

1.2.   Earlier (1.4, Chapter One) it was mentioned that "wh"-pronouns, indefinite pronouns, and restrictive pronouns consist of the same primitive morphemes and are, furthermore, differentiated in their meanings only by means of the different case markers.

i.   dare _ga_   'who'

ii.   dare _o_   'whom'

iii. dare _mo_   'nobody'

iv.   dare _ka_   'someone'

v.   dare _ka_ _o_   'someone, (object case)'

vi.   dare _ka_ _ni_   'to someone'

etc.

Suppose the pronoun _dare_ in these examples refer to a class of "ones" (or "persons").   Remarkably when it is marked by the _ka_-case, it acquires the sense of "some one", referring to "this or that or any one, but at least one".   This sense of indeterminacy of the _ka_-case pronouns is reflected in such discourse situation as follows.

If someone asks the question,

i. dare _ga_ kita ka   'who came'

in which the "wh"-subject nominal is _ga_-marked to exclusively identify the particular person in question (p. 50, Section 1,

Chapter Two), the answerer will normally introduce the

subject nominal by the ga-case,

ii.   x ga kita   'x came'

Only if he wishes to hide the identity of the person corres-

ponding to the one in question, he may use the ka-case,

iii. dare ka kita   'someone came'

or

iv.   x ka y ka kita   'either x or y came'

      Furthermore, ka-case nominals, except the ka-marked

indefinite pronouns (p. 164), never occur singly, which is

confirmed by the syntactic fact that the topicalization

does not apply to them singly.

9.   boku wa kore ka are ka kowasita   'I have broken this or
                                             that'

9.1   boku wa kore ka are ka wa kowasita 'as for this or that, I
                                             have broken, (i.e. trans-
                                             latable similarly to 9 in
                                             English)'

*9.1   boku wa are ka wa kore ka wa kowasita

10.   umi ka yama ka mieru   'the sea or the mountain
                                             can be seen'

10.1   umi ka yama ka ga mieru   'the sea or the mountain
                                             (but nothing else under
                                             consideration) can be
                                             seen'

*10.2 umi ka ga yama ka ga mieru

This seems to have some connection with the inherent
sense of "uncertainty" of the ka-case.   The co-occurring
ka-nominals in sentence 9 and 10 have the following interpreta-
tions: "I broke either this or that, but not necessarily both";
"either the sea or the mountain, or both, can be seen".   The
sense of "uncertainty" may be generated by the presence of
two nominals in either the exclusive or non-exclusive
disjunctions, and the primary function of the ka-case may be
identified as marking the disjunctive relation.

The ka-marked indefinite pronouns, however, occur
singly (p. 165) in the surface structure.   Yet a further
analysis of their meaning seems to reveal the underlying
presence of more than one nominals.   Consider that if the
indefinite pronoun dare ka 'someone', for example, names
any one member of a class, then it may be inferred that there
are some other members which belong to the class.   As a
linguistic consequence of this inference, the ⟨pro⟩ element
can be postulated in the underlying structure of the
ka-indefinite pronoun which stands for all the members of
the class other than the one identified by the ka-case.
Then we may generalize that the ka-case which marks the
indefinite pronoun also marks the disjunctive relation.

Section 2. Sentence connective <u>ka</u> and question-marker <u>ka</u>

2.1. Essentially the same relation is observed between the <u>ka</u>-connected sentences.

11. boku wa kaeru <u>ka</u> nokoru   '(I am not certain whether) I will leave or remain'

12. kaze ga huku <u>ka</u> ame ga huru   '(I am not certain whether) it will blow or rain'

In sentence 11, it is either "I will leave or remain", but not both; while in 12, it is either "the wind will blow or the rain will fall", or can be both. Furthermore, there is a sense of "uncertainty" between the sentences in that although it is either "I will leave" or "I will remain"; "it will blow" or "it will rain", or both, which one will occur is undetermined. In fact, this semantic implication is formally captured in the paraphrases of 11 and 12,

11.1 boku wa   kaeru <u>ka</u> nokoru <u>ka</u> $\begin{Bmatrix} \text{wakaranai} \\ \text{kimeteinai} \\ \text{etc.} \end{Bmatrix}$

'I $\begin{Bmatrix} \text{do not know} \\ \text{have not decided} \end{Bmatrix}$ whether I will leave or remain'

12.1 boku wa   kaze ga huku <u>ka</u> ame ga huru <u>ka</u> $\begin{Bmatrix} \text{siranai} \\ \text{wakaranai} \\ \text{etc.} \end{Bmatrix}$

'I $\begin{Bmatrix} \text{do not know} \\ \text{have no idea} \end{Bmatrix}$ whether it will blow or rain'

Moreover, it seems that sentence 11 and 12 are actually
derivable from the underlying structure with a description
similar to that of 11.1 or of 12.1.   Based on the initial
observation of the ka-connected sentences such as 11 and 12,
it is generalized that they may have the underlying structure
which is roughly representable as,
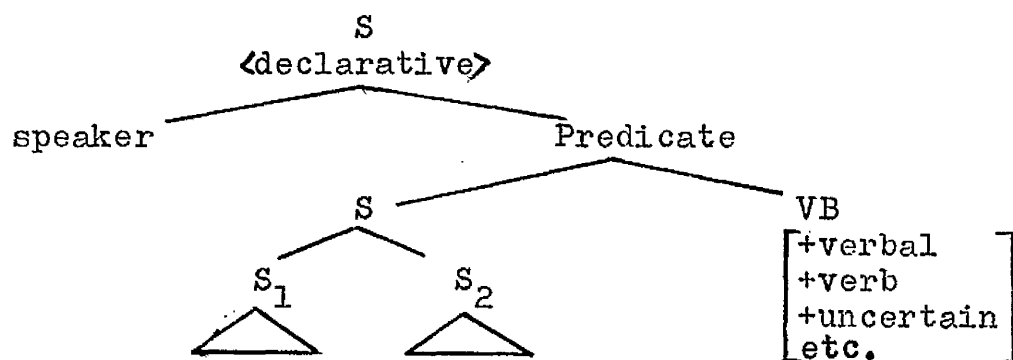
The embedded structures S_1 and S_2 in the predicate construction
at the position of object to the predicate verb will eventually
develop into the ka-connected sentences.   The predicate verb
feature matrix contains the feature ⟨uncertain⟩ which will
provide the syntactic source for the connective ka.   Since
the "either-or" object of a class of "uncertain" verbs is always
marked by ka in contrast with other types of object such as,

i. boku wa kore ka are ka wakaranai   'I do not know either this
or that, (i.e. I do not
know whether it is this or
that)'

ii. boku wa kore _ga_ wakaranai   'I do not know this'

iii. boku wa yakusoku ga kinoo _ka_   'I forgot whether the
     kyoo _ka_ wasureta   appointment is today or
                                        yesterday'

iv. boku wa yakusoku ga kyoo no   'I forgot that the appoint-
     koto _o_ wasureta   ment is today'

I will consider that the connective _ka_ is selected and

introduced into the sentence structure by the verbal feature

⟨uncertain⟩. Using sentence 11 as an example of _ka_-sentences,

I will show its derivation based on the following underlying

structure,

$$
\begin{array}{c}
\text{S} \\
\text{⟨declarative⟩}
\end{array}
$$

speaker   Predicate

                    S   VB
                                        $\begin{bmatrix} +\text{verbal} \\ +\text{verb} \\ +\text{uncertain} \\ \text{etc.} \end{bmatrix}$

        S_1 S_2

     S   kaeru   S   nokoru
  ⟨topical⟩   ⟨topical⟩

   boku wa   boku wa
  'I will leave'   'I will stay'
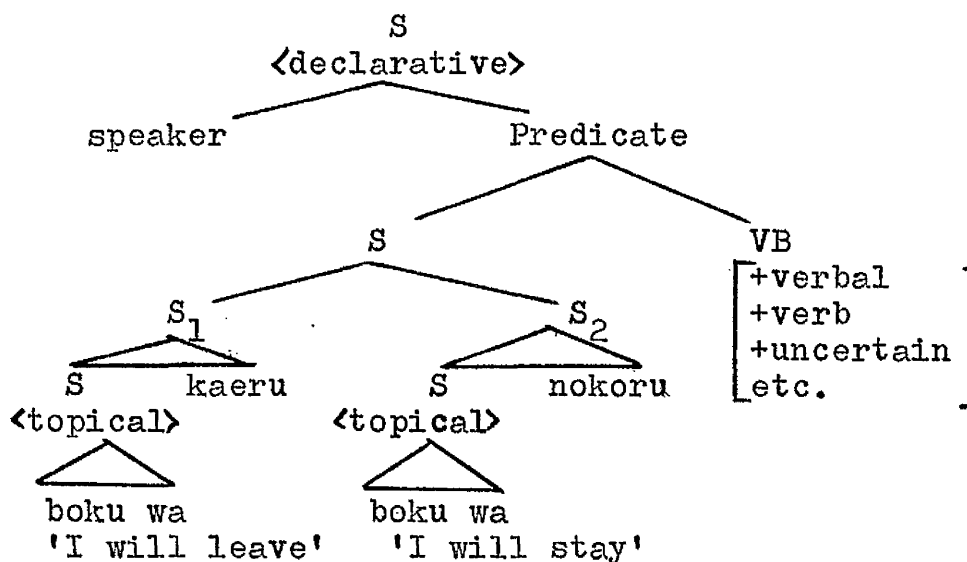
Since my main concern is the syntactic derivation of the

connective _ka_, I will simply assume that S_1 and S_2 have been

developed into the appropriate sentence structures by this

stage.   Now the semantic relation between S_1 and S_2 must

be grammatically represented by some sentence connective.

I have already postulated that the "uncertain" predicate

verb governs the connective ka of its object (p. 169).

Then the feature <uncertain> is selected from the predicate

verb feature complex and is copied at the final position of

both S_1 and of S_2 where the connectives ka are introduced

respectively.
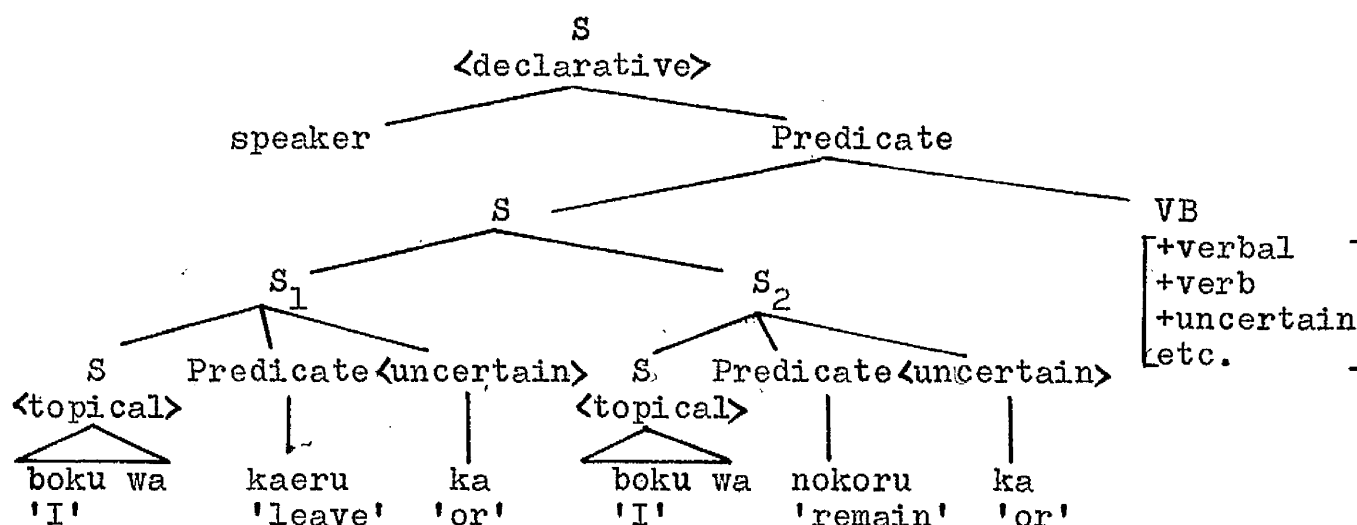
The main sentence subject-speaker and the "uncertain" verb are

not superficially realized in sentence 11, but if they are,

a sentence like 11.1 will develop from the above structure,

11.1.i boku wa boku wa kaeru ka nokoru ka wakaranai
                'I do not know whether I will leave or remain'

At the next stage, a series of deletions apply to this structure to convert it into the surface structure of sentence 11. The "speaker" and the "uncertain" predicate verb are deleted from the main sentence frame. The deletion of the latter has the effect of removing one of the connectives ka which is at the final position of S_2 immediately preceding the predicate verb. Furthermore, the subject of S_2 which is identical to that of S_1 may also be deleted by a general identical-subject deletion rule. As a result, the surface structure of sentence 11 is developed,
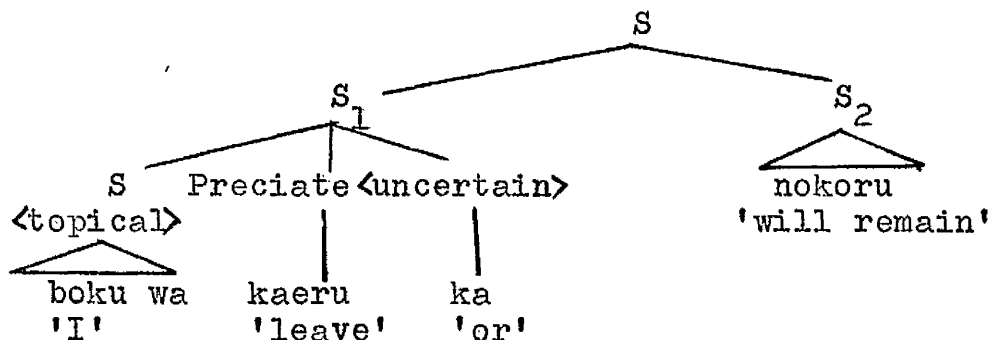
2.2. The present hypothesis on the ka-sentence derivation has an interesting consequence. The object of a class of "question" verbs in interrogative sentences in Japanese is also marked by ka,

13. kare wa boku wa kaeru <u>ka</u> nokoru <u>ka</u> $\begin{Bmatrix} \text{kiku} \\ \text{tazuneru} \\ \text{etc.} \end{Bmatrix}$

   'he $\begin{Bmatrix} \text{asks} \\ \text{inquires} \end{Bmatrix}$ whether I will leave or remain'

14. boku wa ame ga huru <u>ka</u> huranai <u>ka</u> $\begin{Bmatrix} \text{kiku} \\ \text{tazuneru} \\ \text{etc.} \end{Bmatrix}$

   'I $\begin{Bmatrix} \text{ask} \\ \text{inquire} \end{Bmatrix}$ whether it will rain or not'

When the main sentence subject and the predicate verb are
optionally deleted, the non-embedded whether-or question
sentence will arise,

13.1 boku wa kaeru <u>ka</u> nokoru <u>ka</u>   'whether I will leave or remain,
   (i.e. will I leave or remain)'

14.1 ame ga huru <u>ka</u> huranai <u>ka</u>   'whether it will rain or not,
   (i.e. will it rain or not)'

These question sentences have the striking structural
resemblance to the <u>ka</u>-sentences discussed in 2.1. It is
not possible, however, that they both develop from the
common underlying structure, since the former has the "question"
predicate verb in the underlying structure and the latter
"uncertain" predicate verb. Considering the fact that all
question sentences have the sense of "uncertainty", while
not all <u>ka</u>-sentences are interrogative, I will postulate the

following underlying structure for the whether-or question
sentence,

```
                          S
                    <interrogative>
          ┌──────────────┴──────────────┐
       speaker                        Predicate
                              ┌──────────┴──────────┐
                              S                    VB
                      ┌───────┴───────┐        ┌      ┐
                   speaker         Predicate   │+verbal│
                              ┌────────┴────┐  │+verb  │
                              S            VB  │+question│
                        ┌─────┴─────┐      ┌      ┐  │etc.  │
                       S₁          S₂     │+verbal│  └      ┘
                      /─\         /─\      │+verb  │
                     /───\       /───\     │+uncertain│
                                          │etc.  │
                                          └      ┘
```
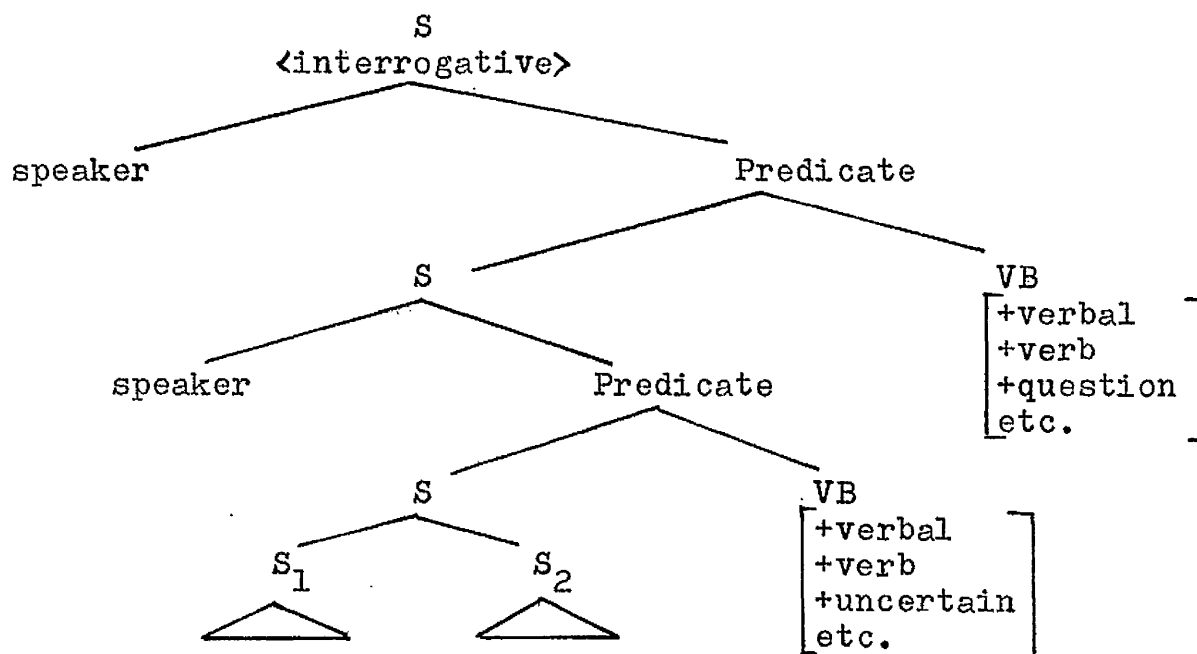
in which the underlying structure of the _ka_-sentence is
embedded at the object position of the "question" verb.
By virtue of its underlying presence, every interrogative
sentence comes to be associated with the sense of "uncertainty"
through its syntactic development.   From the above structure
a full interrogative sentence with a whether-or question
object such as sentence 13 will arise,

13. kare wa boku wa kaeru _ka_ nokoru _ka_ kiku 'he asks whether I
                                                  will leave or remain'

I will not account for its earlier syntactic development since it mainly involves the ka-sentence formation which has been discussed in 2.1, and I will directly introduce the intermediate structure of sentence 13 in which each node is assumed to dominate a fully developed structure.
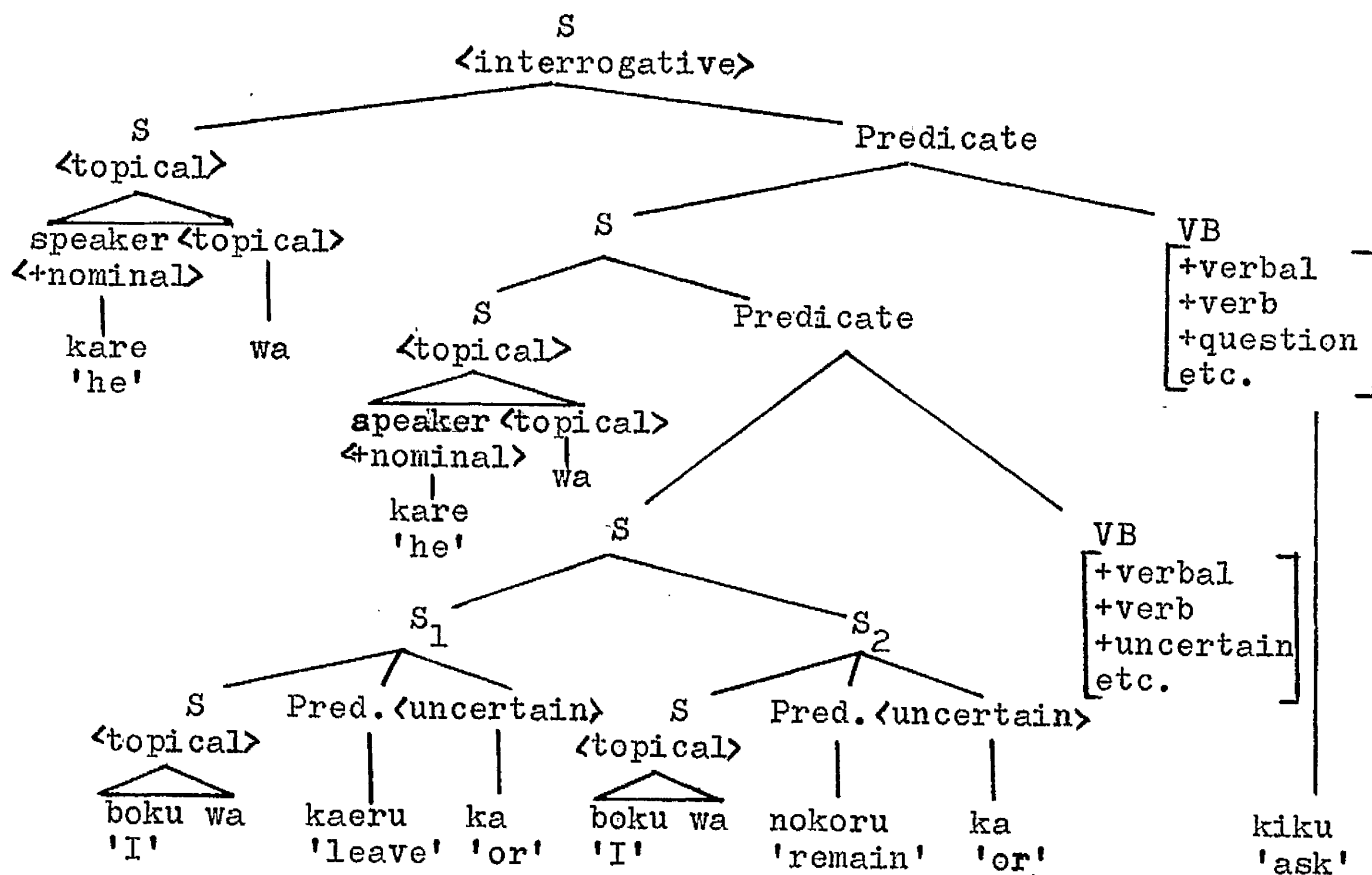
Now a series of deletions start to apply to convert it into the surface structure. Obviously the presence of the "question" verb in the interrogative sentence structure

constrains the deletion rules quite differently. Unlike
what we have seen in the ka-sentence formation, the
underlying speaker and the "uncertain" predicate verb,
for example, must obligatorily be deleted. The connective
ka which occurs immediately preceding the "uncertain" verb,
however, is not deleted with the latter (refer to p. 171).
The deletion applies next to the subject of S_2 which is
identical to that of S_1. Then sentence 13 will develop into
the following surface structure,

```
                              S
                        ⟨interrogative⟩

        S                                           Predicate
   ⟨topical⟩

speaker  ⟨topical⟩             S                              VB
⟨+nominal⟩                                             ⎡+verbal  ⎤
                       S₁              S₂              ⎢+verb    ⎥
   kare      wa                                        ⎢+question⎥
   'he'                                                ⎣etc.     ⎦
               S    Pred.⟨uncertain⟩ Pred.⟨uncertain⟩
           ⟨topical⟩

            boku wa   kaeru   ka    nokoru    ka        kiku
            'I'       'leave' 'or'  'remain'  'or'      'ask'
```
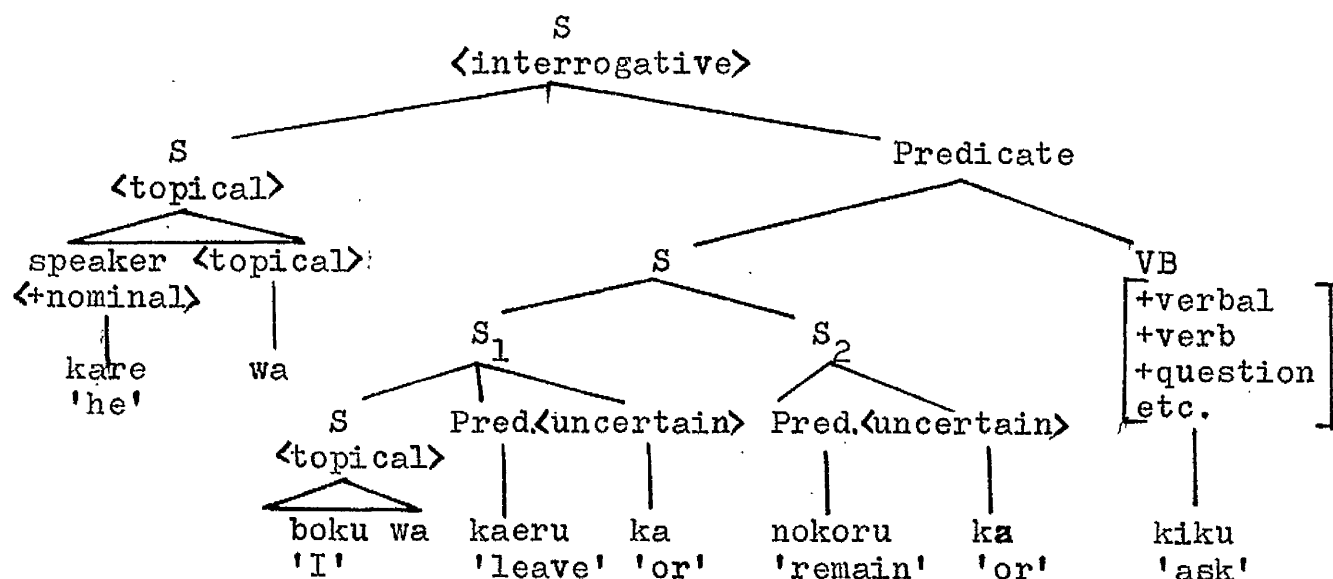
The speaker-subject and the "question" verb in the
above structure may be further optionally deleted, which will

give rise to the non-embedded whether-or question sentence

13.1,

13.1 boku wa kaeru ka nokoru ka   'will I leave or remain'

Thus the ka-sentence which is developed in the interrogative

sentence frame results in the whether-or question.

Moreover, the whether-or question such as 13.1 may

be further deleted to give rise to yes-no questions.   If

the subject nominal which has been removed from S_2 earlier

is recovered, and either one of the ka-connected sentences

is optionally deleted, then we will obtain,

13.1.i   boku wa kaeru ka   'will I leave'

13.1.ii boku wa nokoru ka   'will I remain'

2.3.   "Wh"-questions are also derived through

essentially the same formational processes.   Since they

differ from the other interrogative sentences only in that

they contain at least one "wh"-pronoun such as,

15. dare ga kaeru ka nokoru ka   'who will leave or remain'

16. kare wa boku wa nani o nomu ka   'he asks what I will drink
    taberu ka kiku   or eat'

their underlying structure must differ accordingly.   Take

sentence 15, for example, I will explain how it is derived

based on the underlying structure such as follows,

```
                          S
                    ⟨interrogative⟩
             _____/        _____
        speaker                              Predicate
                           S _____
                    _____/    _____                   \
               speaker            Predicate                VB
                             _____/      \_____          ⎡+verbal  ⎤
                           S                   \         ⎢+verb    ⎥
                    _____/ _____             VB       ⎢+question⎥
                  /                \          ⎡+verbal ⎤  ⎣etc.     ⎦
                S₁                  S₂        ⎢+verb   ⎥
            ____/ \____          ___/ \___    ⎢+uncertain⎥
          /            \        /         \   ⎣etc.     ⎦
         S          Predicate  S        Predicate
    ⟨contrastive⟩       |   ⟨contrastive⟩    |
     /‾‾‾‾‾‾\           |    /‾‾‾‾‾‾\        |
    dare ga           kaeru  dare ga       nokoru
    'who'            'leave'  'who'        'remain'
```
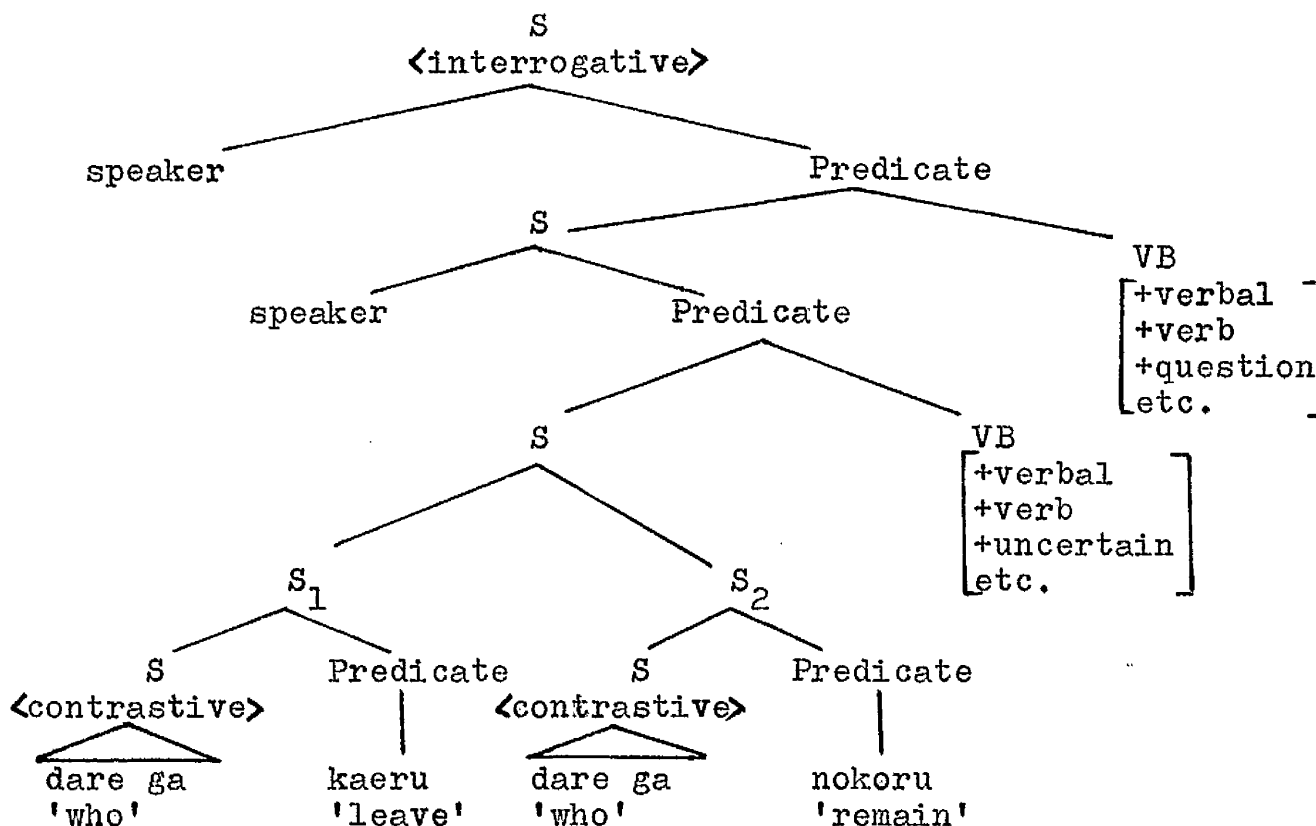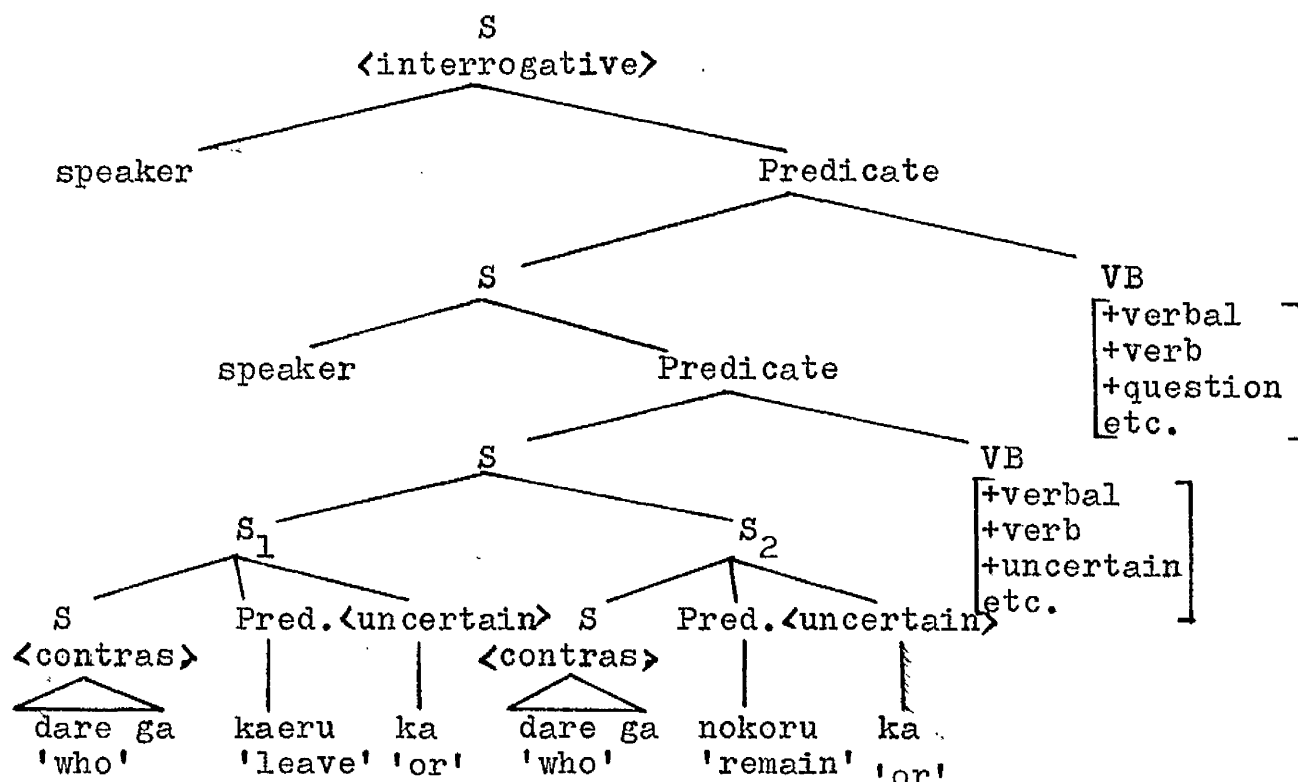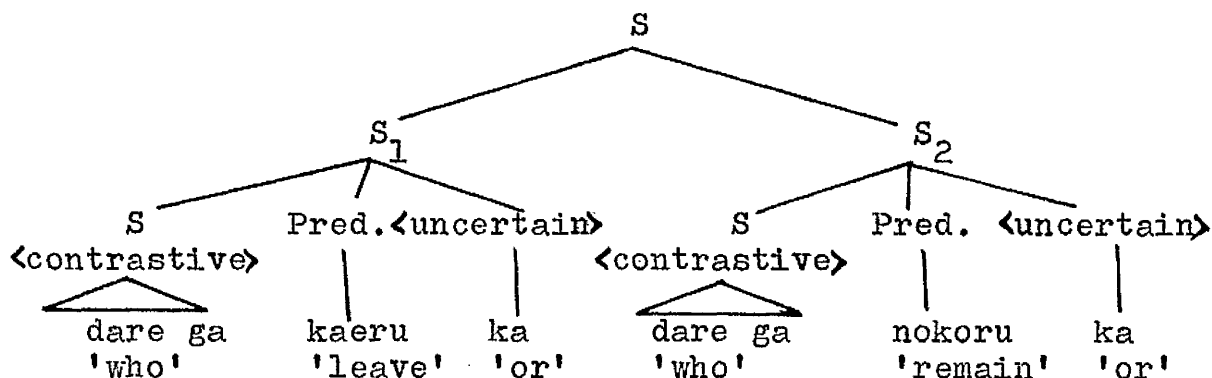
I will assume that the <u>ga</u>-marked "wh"-nominals have already
been formed at the subject positions of S_1 and S_2. The
sentence structures S_1 and S_2 are now subjected to the
general <u>ka</u>-connected sentence development. The verb feature
⟨uncertain⟩ which governs the connective <u>ka</u> is copied from the
predicate verb feature matrix at the final positions of S_1 and
S_2 where the connectives <u>ka</u> are introduced.

```
                              S
                        〈interrogative〉

        speaker                                Predicate

                    S                                        VB
                                                        ┌+verbal  ┐
           speaker              Predicate               │+verb    │
                                                        │+question│
                    S                      VB           └etc.     ┘
              S₁                S₂
                                                        ┌+verbal  ┐
        S     Pred.〈uncertain〉 S   Pred.〈uncertain〉    │+verb    │
     〈contras〉                 〈contras〉               │+uncertain│
                                                        └etc.     ┘
      dare ga   kaeru    ka   dare ga  nokoru   ka
      'who'    'leave'  'or'  'who'   'remain'  'or'
```

In accordance with the deletion conditions on the
interrogative sentence structure (p. 175), the "speaker"
and the "uncertain" predicate verb are obligatorily deleted
from the underlying structure of the ka-sentence. Then
the main sentence constituents: "speaker" and the "question"
verb may be optionally deleted. As a result, the structure
which directly underlies sentence 15 will arise,

```
                                    S
                        _____
                       /                        \
                     S₁                          S₂
             _____/ _____          _____/ _____
            /                 \        /                 \
           S            Pred.<uncertain>   S         Pred. <uncertain>
     <contrastive>         |        |   <contrastive>    |         |
        /\                 |        |      /\            |         |
       /__\                |        |     /__\           |         |
     dare ga            kaeru     ka    dare ga        nokoru      ka
     'who'              'leave'   'or'  'who'          'remain'    'or'
```

Since the subject of S_2 is identical to that of S_1, the former is optionally deleted by a general identical-subject deletion rule, thereby sentence 15 is derived,

15. dare ga kaeru ka nokoru ka   'whether who will leave or remain, (i.e. who will leave or remain)'

The "wh"-whether-or question sentence such as 15 may be structurally reduced to yield the simple "wh"-questions just as the whether-or question sentences may be reduced to give rise to the yes-no questions (p. 177).

15.1 dare ga kaeru ka   'who will leave'

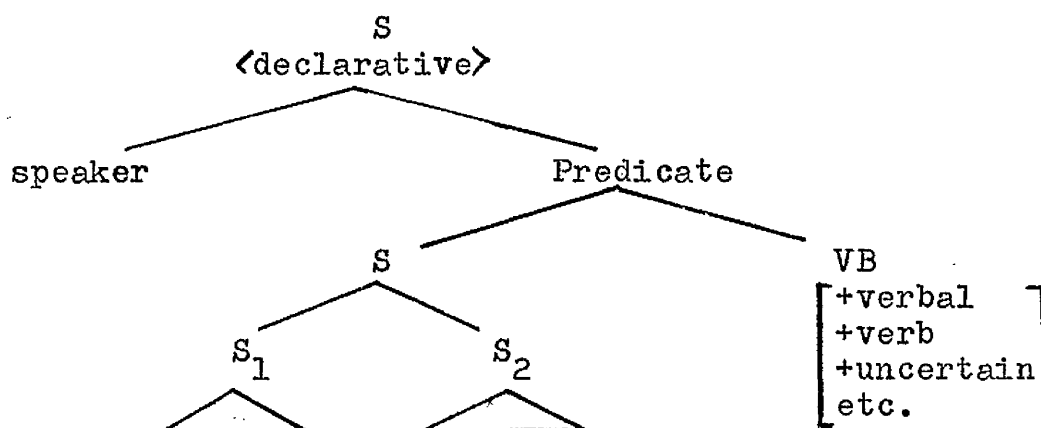15.2 dare ga nokoru ka   'who will remain'

The underlying relationships between the ka-marked and the interrogative sentences have been established.

The relationships will explain such linguistic irregularities as; why the sense of question is present in one instance of _ka_-sentence and is absent in another; and why the connective _ka_ is subject to different deletion conditions (p. 171, p. 175). Above all, the importance of their relationships is that they reveal the common origin of superficially diverse occurrences of the sentence connective _ka_ and the question-marker _ka_.

Section 3.   Ka-case nominal derivation

3.1.   Earlier we have observed that the sense of
"uncertainty" is shared by ka-connected sentences, ka-marked
nominals, and interrogative sentences (1.1, Chapter Three).
Now that the sense of "uncertainty" associated with
interrogative sentences has been explained as owing to the
underlying presence of the ka-sentence structure in its
underlying form, we may further generalize that ka-marked
nominals too come to be associated with the sense of
"uncertainty" through their underlying relationships with
ka-connected sentences.   Since there are such instances as
the wa- and ga-nominals the interpretations of which are
determined by their syntactic development from the underlying
structuresoóf the ba- and ga-marked sentences, the possible
relationship between ka-marked sentences and ka-marked
nominals is by no means an isolated linguistic phenomenon
in Japanese.   On these grounds, I will assume that the
ka-connected sentences are the syntactic base of the ka-marked
nominals.

3.2.   Recall the underlying structure postulated
for ka-connected sentences in general (p. 168).

$$
\begin{array}{c}
\text{S} \\
\langle \text{declarative} \rangle
\end{array}
$$

speaker ——— Predicate

S ——— S_1 S_2

VB
$\begin{bmatrix} \text{+verbal} \\ \text{+verb} \\ \text{+uncertain} \\ \text{etc.} \end{bmatrix}$

where S_1 and S_2 are developed into the full sentence

structures in the ka-sentence formation.   In the ka-nominal

formation, since S_1 and S_2 are realized as single noun

phrases in the surface structure, their underlying structures

must consist of a nominal and some deletable elements.   The

structure which has the description closest to this require-

ment is found in the underlying structures of wa- and ga-

marked nominals.   In brief review of their syntactic

development, a given nominal is first assigned to a

particular sentence frame, whereupon its expansion into a

sentence structure starts.as follows.   The copula verb

is introduced at the predicate position marked by the

feature ⟨copula⟩ which has been transformationally copied

from the feature matrix of the nominal.   Subsequently,

the sentence feature is copied at the final position of
the sentence structure where the corresponding sentence
connective is introduced.   The copula verb is later deleted
optionally, leaving the sentence connective at the position
immediately following the nominal.   As a result of this
structural change, the sentence connective comes to function
as a case marker.   I will consider that the structural
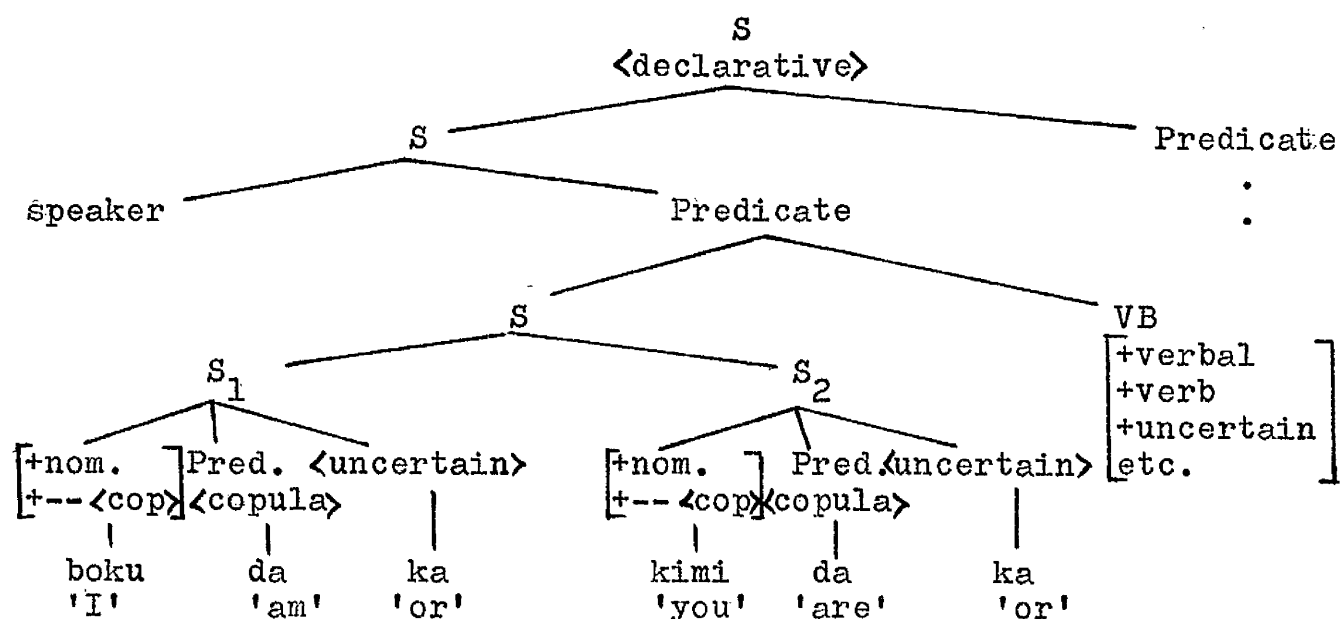development of the ka-marked nominal is similar to this.

Using sentence 3 from 1.1 (p. 163),

3. boku ka kimi ka hataraku   'I or you will work'

I will show a sample ka-nominal derivation.   The underlying
structure of sentence 3 is roughly described as,
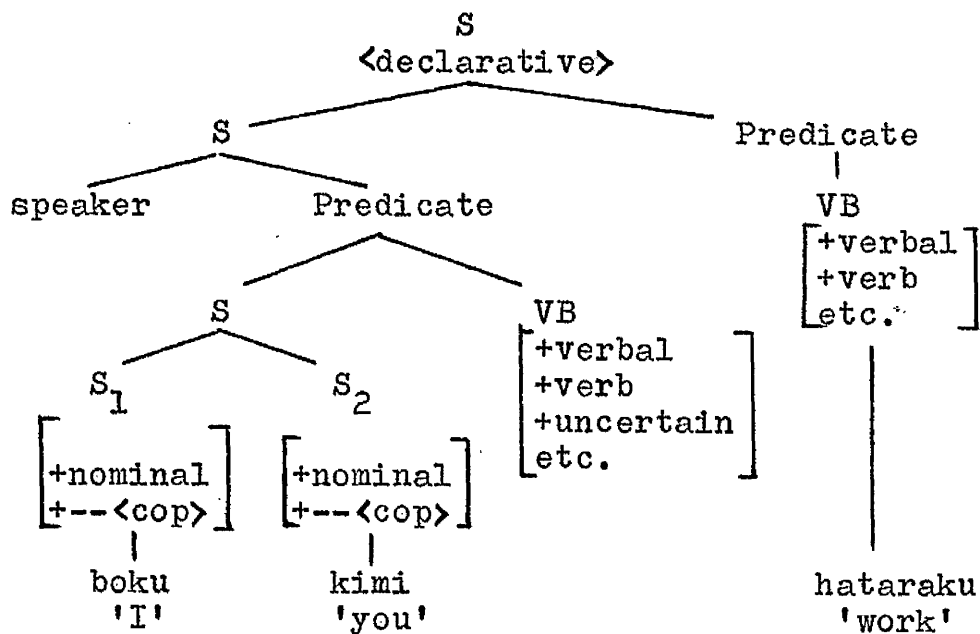
Observe that the relevant nominals are introduced
into the unmarked sentence frames S_1 and S_2. The sentence
features are postulated in this grammar primarily to account
for the distributions of the sentence connectives with respect
to the specific sentence types. Since it has already been
decided that the sentence connective <u>ka</u> is selected by the
verb feature ⟨uncertain⟩ (2.1), the sentence features of
S_1 and S_2 are not of my immediate concern. Therefore, they
are left unmarked.

S_1 and S_2 are now developed into the sentence structures
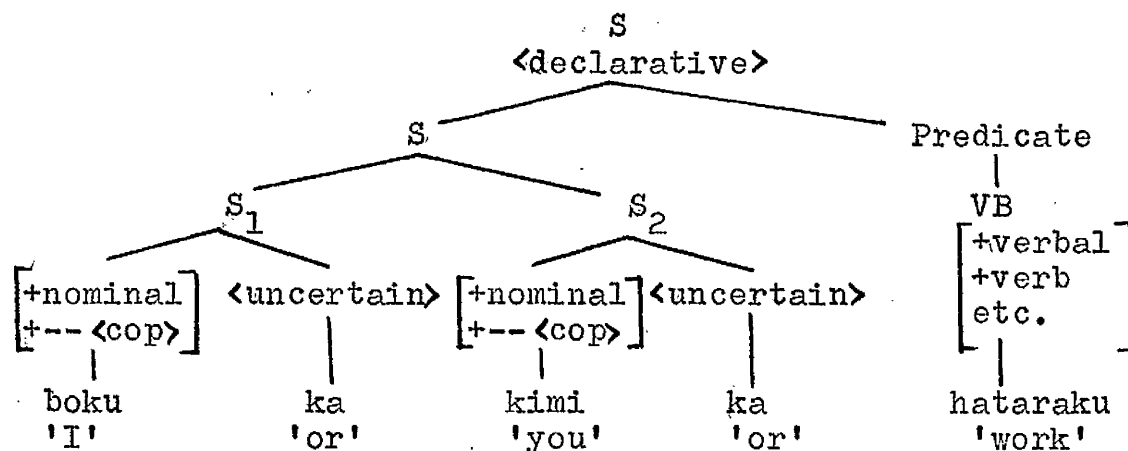roughly represented as follows,

```
                              S
                         ⟨declarative⟩
              S  ─────────────────────────── Predicate
   speaker ───────────── Predicate                 .
                    S ──────────── VB              .
           S₁ ────────── S₂      ⎡+verbal ⎤
                                 ⎢+verb   ⎥
  ⎡+nom. ⎤Pred. ⟨uncertain⟩  ⎡+nom. ⎤ Pred⟨uncertain⟩ ⎢+uncertain⎥
  ⎣+--⟨cop⟩⟨copula⟩          ⎣+-- ⟨cop⟩⟨copula⟩  ⎣etc.      ⎦
     boku    da      ka      kimi    da      ka
     'I'     'am'    'or'    'you'   'are'   'or'
```

In accordance with the general case-marked nominal formation, the feature ⟨copula⟩ is selected from the nominal feature matrix and is copied at the predicate position immediately following the nominal. At the next stage, the ka-nominal formation is slightly different from either the wa- or ga-nominal formations in the following respects. The predicate verb feature ⟨uncertain⟩ is selected, instead of the sentence feature, and is copied at the final position of S_1 and S_2, instead of just S_1. Consequently, the corresponding sentence connectives ka are introduced into both S_1 and S_2 sentence structures.

The fully developed sentence structures of S_1 and of S_2 are now subjected to a series of deletions which will assign them the appropriate surface structures. The copula verbs are optionally removed from S_1 and S_2, which brings the nominal and the sentence connective ka into a new constituent relationship. As a result, the sentence connective ka acquires the function of case marker. On the other hand, the "speaker" and the "uncertain" predicate verb in the main sentence frame are deleted, since they are not superficially realized in sentence 3. Recall that the deletion of the "uncertain" predicate verb in the surface ka-sentence formation

has the effect of removing the immediately preceding
connective ka (p. 171). Obviously, such connective ka-
deletion does not apply in the ka-nominal formation. Nor
does it apply to the embedded ka-sentence structure in
the interrogative sentence formation (p. 175). In the
latter two cases, the deleted "uncertain" verbs are not
structurally the highest. In the underlying structure of
an interrogative sentence, the "question" verb is the
highest verb; in the underlying structure of a ka-nominal,
whatever verb which happens to be its predicate verb is
the highest verb. The application of the connective ka-
deletion appears to depend on this structural fact. Then
the condition of ka-deletion (p. 171) must be restated as
follows: only if the "uncertain" verb which is deleted
is the highest verb in the entire sentence structure, the
connective ka which immediately precedes the "uncertain"
verb is also deleted.

Now the underlying structure of sentence 3 has
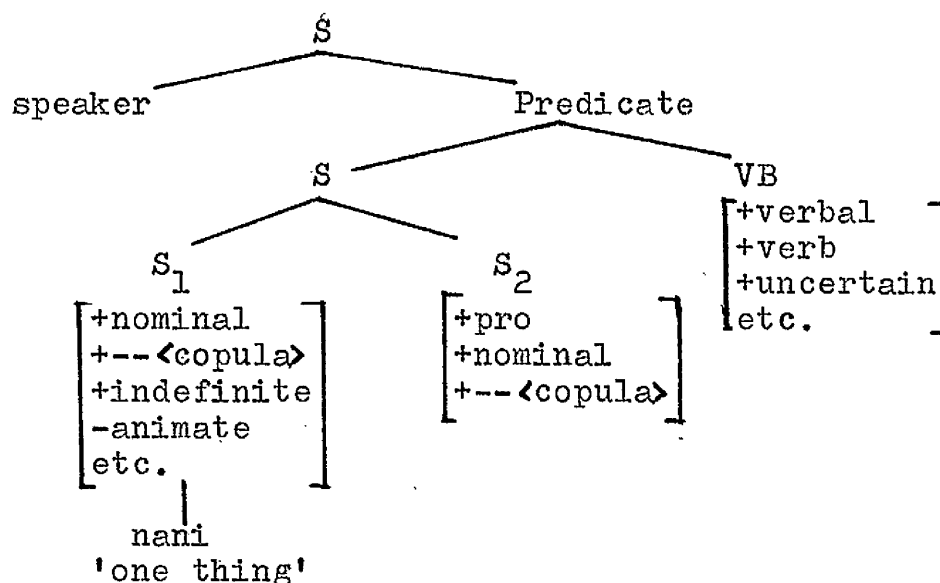the description such as,

```
                        S
                  <declarative>
            S                          Predicate
       S₁              S₂                 |
                                          VB
  ⌈+nominal⌉ <uncertain> ⌈+nominal⌉<uncertain>  ⌈+verbal⌉
  ⌊+--<cop>⌋            ⌊+--<cop>⌋              |+verb  |
     |          |          |         |          ⌊etc.   ⌋
    boku       ka        kimi       ka            |
    'I'        'or'      'you'      'or'       hataraku
                                               'work'
```
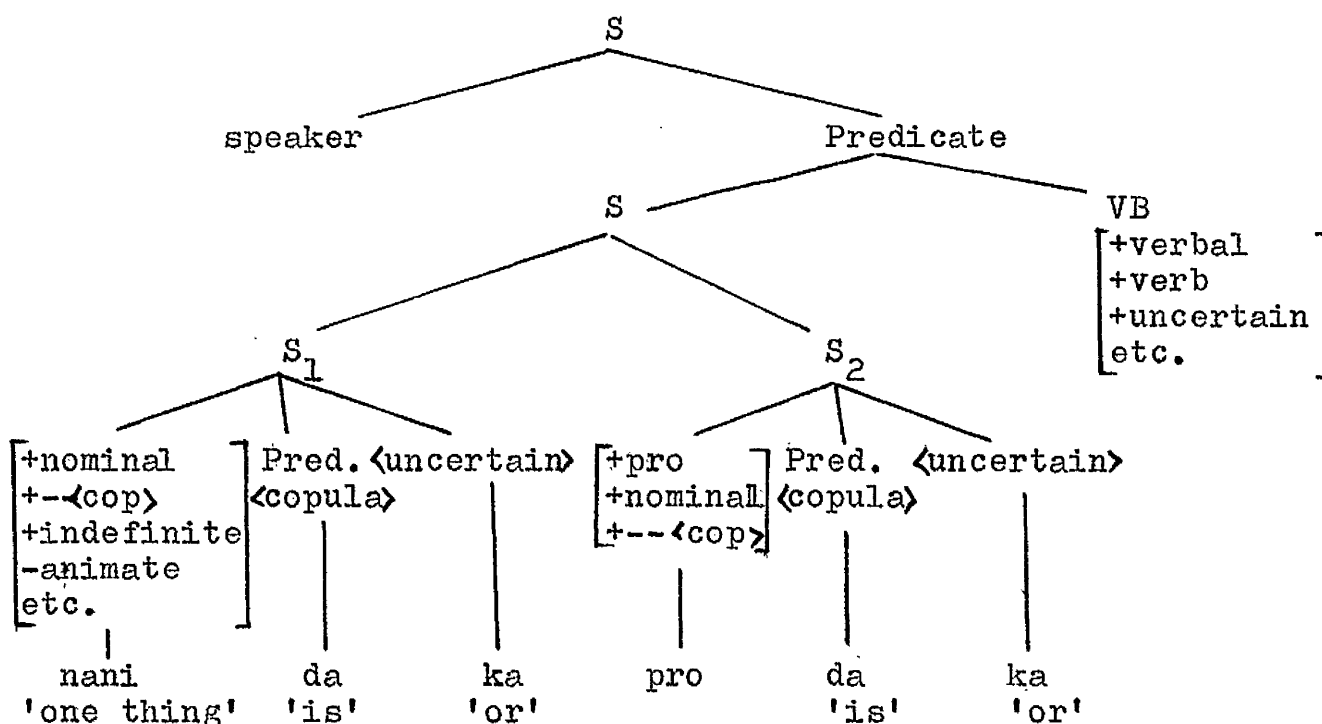
from which sentence 3 will directly develop.

3.3.   Ka-marked indefinite pronouns such as
dare ka 'someone', doko ka 'somewhere', itu ka 'some day',
and so on superficially differ from the other ka-nominals
in that they always occur singly.   Yet, they share the
same sense of "uncertainty" with any other ka-nominals.
I have earlier attributed this to the underlying presence
of the <pro> element which refers to any members of a
class in contrast with the "one" marked by ka (p. 166).
If it is postulated that the ka-indefinite pronouns
do occur with the <pro>-nominal in the underlying structure,
my hypothesis that the ka-nominals are derived from the
underlying ka-connected sentence structure (p. 181) can be

extended to account for the ka-indefinite pronouns.

Take a ka-indefinite pronoun such as nani ka 'something' for example.   It is considered to have essentially the same underlying structure as that of any ka-nominal such as:
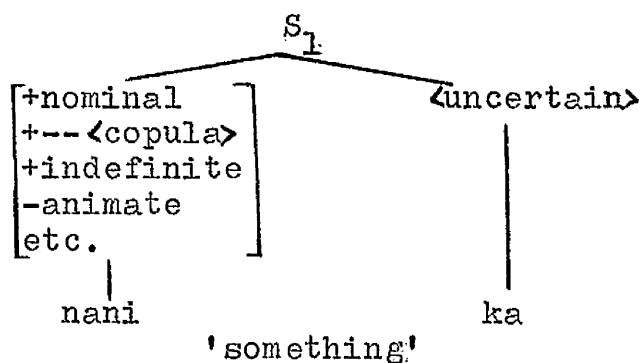
$$
\begin{array}{c}
S \\
\diagup\quad\diagdown \\
\text{speaker}\qquad\text{Predicate}
\end{array}
$$

S
  speaker   Predicate
        S   VB
                              ⎡ +verbal ⎤
    S₁   S₂ | +verb |
  ⎡+nominal ⎤ ⎡+pro   ⎤ | +uncertain|
  |+--⟨copula⟩| |+nominal | ⎣ etc.   ⎦
  |+indefinite| |+--⟨copula⟩|
  |-animate |
  ⎣etc.   ⎦
      |
    nani
  'one thing'

There is only one new element.   That is the feature ⟨pro⟩ which is introduced into the nominal feature complex assigned to S_2. S_1 and S_2 are subsequently developed into the full sentence structures through the same formational processes as those of the other ka-nominals (refer to pp. 181-4). They are roughly representable as,

```
                              S
                 ┌────────────┴────────────┐
              speaker                   Predicate
                          ┌────────────────┴──────────┐
                          S                           VB
                 ┌────────┴────────┐              ┌─+verbal  ─┐
                S₁                 S₂             │+verb      │
                                                  │+uncertain │
                                                  └etc.       ┘
```

S_1:

```
┌+nominal  ┐  Pred.⟨uncertain⟩
│+--⟨cop⟩  │  ⟨copula⟩
│+indefinite│
│-animate  │
└etc.      ┘
   │           │           │
  nani         da          ka
'one thing'   'is'        'or'
```

S_2:

```
┌+pro      ┐  Pred. ⟨uncertain⟩
│+nominal  │  ⟨copula⟩
└+--⟨cop⟩  ┘
   │           │           │
  pro          da          ka
              'is'        'or'
```

In accordance with the copula-deletion from the underlying structure of the <u>ka</u>-nominal (p. 185), the copula verbs are removed from S_1 and S_2. Furthermore, the universally deletable ⟨pro⟩-element is eliminated from S_2. Then the "speaker" and the "uncertain" predicate verb in the main sentence frame are deleted. Since the latter is the highest verb in the given structure, by the <u>ka</u>-deletion rule (p. 186) the connective <u>ka</u> which immediately precedes the "uncertain" predicate verb is also deleted. As a result, the <u>ka</u>-marked indefinite pronoun, <u>nani ka</u> 'something',

will be associated with the following surface structure,

$$
\begin{array}{c}
S_1
\end{array}
$$

```
                    S₁
         ┌───────────┴──────────┐
    ⎡+nominal  ⎤           <uncertain>
    ⎢+--<copula>⎥                │
    ⎢+indefinite⎥                │
    ⎢-animate  ⎥                 │
    ⎣etc.      ⎦                 │
         │                      ka
       nani
     'something'
```

The ka-case nominal is similar to the wa- and ga-case

nominals not only in the derivational processes but also

in other respects.   It appears that the occurrences of

the ka-case are quite independent of the semantic roles of

the co-occurring nominals.   Nor is it inherently related to

any particular syntactic functions.   The ka-case can mark

nominals in any functions such as subject, object, preposition-

al object etc.   Just as the wa- and ga-cases give

topicalizing effect to the co-occurring nominals, the ka-case

seems to add the sense of "uncertainty".   I have explained

that this function of the ka-case is related to the syntactic

development of the <u>ka</u>-marked nominal itself. Based on

the initial hypothesis that the case-marked nominals have

the corresponding underlying sentences (p. 40, Chapter One),

I have postulated the underlying relationship between the

<u>ka</u>-marked nominals and the <u>ka</u>-connected sentences and have

shown the syntactic processes through which the sentence

connective <u>ka</u> comes to function as a case marker.

CHAPTER IV

Sentence Connectives

Introduction

In the preceding chapters, the syntactic development of the various case-marked nominals has been investigated. During the investigation, it has become evident that what functions as a case marker superficially is in fact a sentence connective in the underlying structure.

In this section, sentence connectives will be investigated from a more general viewpoint. I will first point out co-occurrence restrictions between certain connectives and different types of sentences and will postulate that the connectives are governed by the specific sentence features. I will then discuss the syntactic devices by which their government relationships are accounted for in grammatical terms.

Next I will show there also exists the similar government relationships between the sentence connectives and

the particular sentence constituent elements such as the
modal aspects of the verb phrases which I will be particularly
concerned with.   In order to explain some irregular
correspondences between certain modal aspects and the co-
occurring sentence connectives, I will investigate if these
irregularities are due to the underlying presence of what
appears to be the most basic connective "and" in the compound
sentences.   Subsequently I will postulate that the connective
"and" is contained in the underlying structure of all the
compound sentences in Japanese.   Based on this postulate,
irregular correspondences between modals and sentence
connectives can be explained systematically.

Section 1.   Derivation of sentence connectives

1.1.   Occurrences of some sentence connectives appear to be governed by the content of the conjoined sentences.   If we compare,

1.   boku wa hataraku ka, yasumu   'I work or rest'

2.   boku wa hataraku tame, yasumu   'I rest in order to work'

3.   boku wa hataraku sosite, yasumu   'I work and work'

*4. boku wa hataraku toki, yasumu   *'when I work, I rest'

the sentence connective toki 'when' in sentence 4 is obviously violating the contextual constraints.   Exclusive actions "working" and "resting" are incompatible with the inherent function of toki 'when' which relates any simultaneous actions or events, since "working" and "resting" cannot take place simultaneously.

Suppose we change the content of the sentences,

*1.1 boku wa hataraku ka, hataraku   *'I work or work'

*2.1 boku wa hataraku tame, hataraku *'I work in order to work'

3.1 boku wa hataraku sosite, hataraku 'I work and work'

*4.1 boku wa hataraku toki, hataraku *'when I work, I work'

Only 3.1 makes sense, and only if the repetition of the identical action is interpreted as emphatic, such as "I work and work".

For want of more comprehensive analysis, I will
postulate that various sentence contexts are representable
in terms of a single or a complex of such features as
$\langle$ topical$\rangle$, $\langle$ contrastive$\rangle$, $\langle$ conditional$\rangle$, etc.   The use
of these sentence features are similar to the labelling of
the sentence or clause types in the traditional grammars
such as "declarative", "interrogative", "imperative",
"passive", "conditional", and so on in that they provide
some conceptual framework in which the sentence elements are
put together, and they indicate such over-all sentential
features as the speaker's mood, judgements, choice of
aspect and speech register, and so on.   Moreover, when these
labels dominate complex or compound sentences, they indicate
in what relations these constituent sentences are combined
by means of particular connectives.

The selection of the connectives by the different
sentences can be simply formalized by first identifying the
sentence feature which governs the particular connective
and copying it at the position in a given sentence structure
where the connective normally occurs in a surface sentence.
Subsequently, the actual connective morpheme is introduced

there from the lexicon by virtue of its possessing the same feature.   In order to perform these operations, I have added to the grammar a transformational device of feature copying.   Although the feature copying is motivated by the need to account for the complex distributions of the connectives with respect to co-occurring sentence types or particular sentence elements, the device itself is not entirely dissimilar to the rule called "segment structure" transformation which has been in use in some branches of TG (e.g. Jacobs and Rosenbaum, 1969), but, as far as I know, the device has never been used in introducing the sentence feature into the desired position of a sentence or for the purpose of specifying the selectional restrictions which hold between various sentence constituents.

1.2.   Recall the transformational processes by which the sentence connectives are introduced into the underlying structures of the wa- and ga-case nominals (Section 2 and 3, Chapter Two).   When a given nominal is developed into an independent sentence structure specified by a feature ⟨topical⟩ or ⟨contrastive⟩, the same feature is copied at the sentence connective position where the

corresponding connective morpheme _ba_ or _ga_ is introduced

as in the following examples of the underlying structures

of the _wa-_ and _ga_-nominals.

```
                              S
                 S                          Predicate
              <topical>
    ┌+nom.   ┐   Pred.    <topical>
    └+--<cop>┘ <copula>
                               │
                              ba
```

```
                         S
                 S                    Predicate
            <contrastive>
        S₁                    S₂
  ┌+nom.  ┐  Pred.   ┌+nom.  ┐  Pred.      <contrastive>
  └+--<cop>┘<copula> └+--<cop>┘  <copula>  VB
                                        ┌+verbal┐
                                        │-verb  │      │
                                        └+neg.  ┘      ga
```
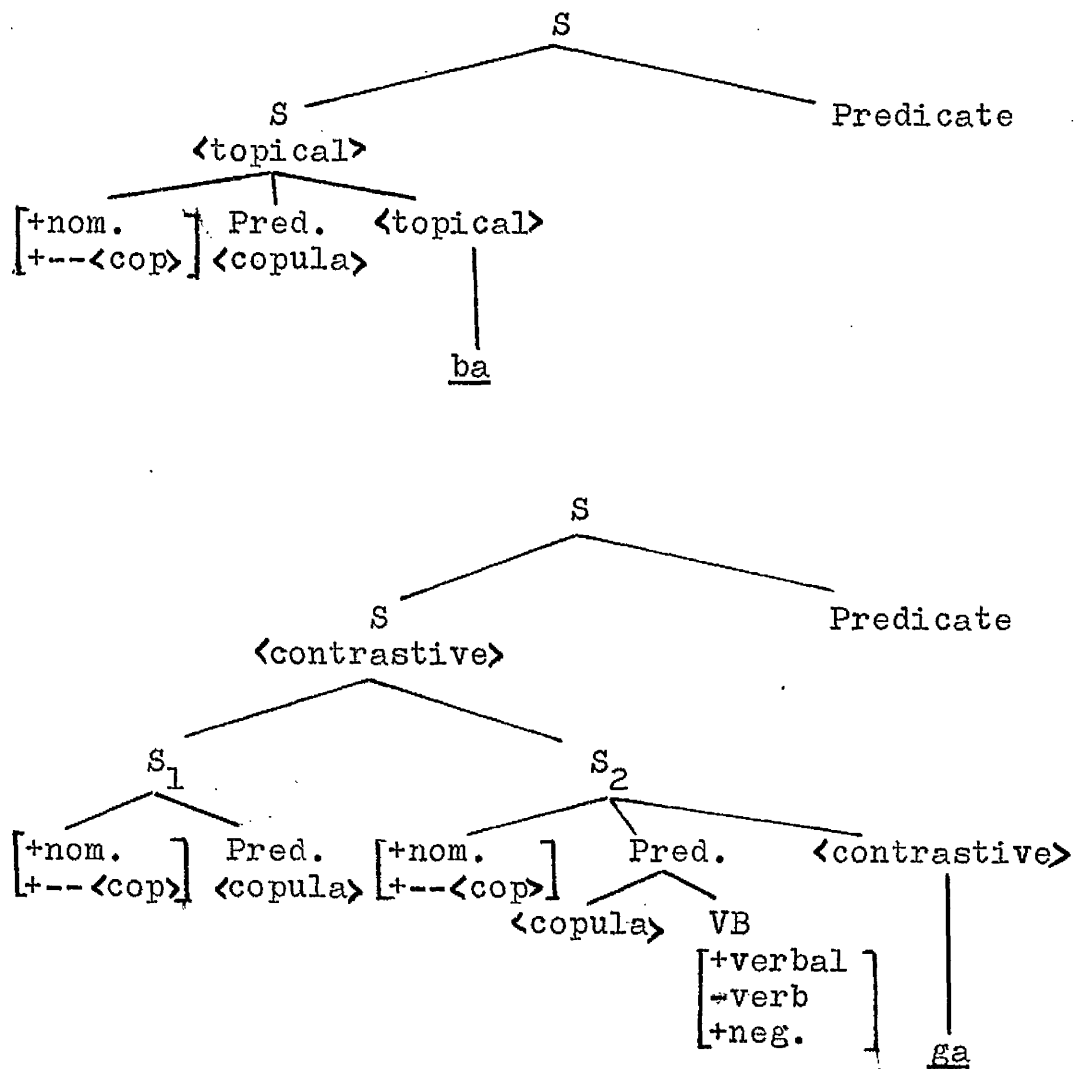
Underlying these sentence connective derivations is

a consideration of various co-occurrence restrictions which

hold between the semantic contexts of the sentences and the
particular sentence connectives. Ba, for example, is
associated with the sentences which distinguish something
as a topic, and make some assertion about it. Ga, on the
other hand, occurs with the sentences which assert something
about the topic in contrast with something else. The
sentence features ⟨topical⟩ and ⟨contrastive⟩ are meant
to indicate the contexts such as above with which the
connectives ba and ga are associated respectively. In
syntactic representation of these co-occurrence restrictions
between the specific sentence types and the connectives,
the sentence feature ⟨topical⟩ or ⟨contrastive⟩ is transforma-
tionally copied at the position where the corresponding
connective ba or ga is introduced by virtue of its possessing
the same feature. The feature copy shows not only that an
adequate connective is selected, but also that it is introduced
in the appropriate position in a sentence.

A completely opposite postulate on the sentence
connective derivation may also be possible. Instead of
the sentences, the sentence connectives may select and
combine the proper set of sentences in accordance with their
inherent semantic features. My preference of the former

is that the complex meanings of ba and ga can be more
simply accounted for. Since ba and ga function as
sentence connectives as well as case markers depending
on the particular syntactic contexts, their functional
meanings are assignable by interpretation of a given
context in which they occur. Otherwise, every context
associated with a separate occurrence of ba or ga must
be selected and accounted for independently.

1.3. It has been explained that various sentence
features are used mainly to account for the distributions
of sentence connectives with respect to the co-occurring
sentence types. There is yet another reason for the
present uses of features. The co-occurrence relationships
hold not only between the sentence connectives and the
sentence types but also between the sentence connectives
and various governing elements of the sentences such as
predicate verbs and modal aspects of verb phrases etc.
The sentence connective ka '(either)...or', for example,
is selected and introduced into the sentence structure by
the "uncertain" predicate verb (Section 2, Chapter Two).
This will explain why ka-marked sentences are generally
associated with the sense of uncertainty. The sense of

uncertainty, however, reflects the speaker's state of mind about the content of ka-marked sentences, and it is not necessarily that the content itself is uncertain. The scope of sense of this sort seems to be more appropriately representable by the features than in any other forms of grammatical representation such as categories, dummy symbols (e.g. Katz and Postal, 1964), deep structure phrase-markers (e.g. Lakoff, 1969; Ross, 1970), and so on. The features can be assigned either to the sentence as a whole or to any of its constituents depending on how extensive the scope is. In the underlying structure of the ka-sentence, for example, the feature <uncertain> is assigned to the predicate verb, so that the sense of uncertainty is added to the manner of the speaker's asserting something, while the ka-sentence itself remains essentially a normal declarative sentence. In contrast with the ka-marked sentences, since the sense of question of the interrogative sentence, for example, appears to be associated with the entire sentence, the feature <interrogative> is directly assigned to the sentence. It may be suggested that some rules of semantic interpretation (e.g. Hasegawa, 1972) can also assign the desired sense to the relevant

elements in the surface sentence. Yet the scope of sense is closely related to the selectional restrictions between the particular sentence or sentence element and the sentence connective, which semantic interpretations do not account for. The scope of sense, on the other hand, is automatically accounted for by the uses of features and feature copy devices which can identify the particular governing feature and introduce it at the syntactic position where the corresponding sentence connective actually occurs in the surface structure.

1.4. Now we turn to the co-occurrence relations which exist between the modal aspects of verb phrases and the particular sentence connectives. Among the subordinate sentence connectives, some are in regular correspondences with either the non-perfect modal u or the perfect modal ta, regardless of the verbal tense of the main sentence. For example,

5. boku wa dekakeru mae, kimi ni denwa suru
   'before I leave, I will call you on the phone'

6. boku wa dekakeru mae, kimi ni denwa sita
   'before I left, I called you on the phone'

7. kare wa hon o yonda ato, suteru
   'after he has read the book, he will throw it away'

8. kare wa hon o yonda ato, suteta
   'after he had read the book, he threw it away'

When the two connectives happen to be homophonous, unambiguous interpretations of their functions seem to depend on their co-occurring modals such as in the following examples.

9. boku wa soko ni iku tame, isoida
   'in order to get there, I was in a hurry'

10. boku wa soko ni itta tame, okureru daroo
    'because I went there, I may be late'

In that the primary function of these connectives is to combine the semantically compatible set of sentences in such relations as "prior to", "subsequent of", "cause-effect", "goal-achievement" etc., the selection of particular modal must be in agreement with the sense of these relations. In the above examples, the event prior to another, for example, is marked by the non-perfect aspect u; the event which is the cause to another by the perfect aspect ta.

The homophonous connectives, kara 'because' and kara 'after', however, show quite different relations to the

co-occurring modals.   In accordance with their meanings,

both are expected to occur with the perfect modal ta, but

in reality,

11. boku wa kare ni atta kara, okureta
    'because I met him, I was late'

12. boku wa kare ni atte kara, okureta
    'after I met him, I was late'

an irregular modal form te occurs with kara which has the

interpretation of 'after'.   Probably, the occurrence of

te is to resolve the possible ambiguity which might develop

between such as 11 and 12.

Exactly what the semantic source for all these

connectives is, is uncertain, yet some of them can be

introduced into the sentence in the same manner as ka

'(either)...or', ba 'if', and ga 'but'.   The connectives

tame in sentence 9 and 10, for example, can be considered as

being governed by the sentence specified by the feature

<cause>, since sentence 9 is also interpretable as 'for the

reason of my going there, I was in a hurry'.   Furthermore,

their meanings are differentiated by the co-occurring modals

u '(non-perfect)' or ta '(perfect)'.   Then a complex of the

governing features <cause, non-perfect> or <cause, perfect>
are copied at the sentence connective position where
the corresponding connective morphemes <u>tame</u> 'in order to'
or <u>tame</u> 'because' will be introduced.

Section 2.   Sentence connective <u>sosite</u> 'and'

2.1.   The only sentence connective which seems
to occur freely in sentences of any contexts with any
modals is <u>sosite</u> 'and'.

13. boku wa to o aker<u>u</u> <u>sosite</u>, deru
    'I open the door and go out'

14. kare wa waru<u>i</u> <u>sosite</u>, baka na yatu da
    'he is a wicked and foolish fellow'

15. boku wa are o ut<u>ta</u> <u>sosite</u>, kore o kau
    'I sold that and will buy this'

Although the interpretation of <u>sosite</u> 'and' may vary from
progression, enumeration, contrast, and possibly in many more
ways, it seems to be totally dependent on the particular
context of the sentences and not on the semantic meaning of
<u>sosite</u> 'and'.

As a matter of fact, any sentence connectives can
occur in combination with <u>sosite</u> 'and' without change in
their meanings.   For example,

16. hi ga nobor<u>u</u> <u>sosuru</u> <u>toki</u>, boku wa okiru
    'when the sun rises (and) I wake up'

17. hi ga nobor<u>u</u> <u>sosuru</u> <u>kara</u>, boku wa okiru
    'because the sun rises (amd) I wake up'

18. hi ga noboru̱ sosuru̱ mae, boku wa okiru
    'before the sun rises (and) I wake up'

19. hi ga noboru̱ sosuru̱ node, boku wa okiru
    'because the sun rises (and) I wake up'

20. hi ga noboru̱ sosuru̱ ga, boku wa okinai
    'the sun is rising (and) but I do not wake up'

21. hi ga nobotta̱ sosita̱ ga, boku wa okinai
    'the sun has risen (and) but I do not wake up'

22. hi ga nobotta̱ sosita̱ tame, boku wa okiru
    'because the sun has risen (and) I wake up'

23. hi ga nobotta̱ sosita̱ ato, boku wa okiru
    'after the sun has risen (and) I wake up'

24. hi ga nobotta̱ sosite̱ kara, boku wa okiru
    'after the sun has risen (and) I wake up'

25. hi ga noboru̱ sosure̱ ba, boku wa okiru
    'if the sun rises (and) I will wake up'

etc.

Moreover, not only is the connective sosite 'and'
unrestricted with respect to the perfect or the non-perfect
modals, but it can also occur with what appear to be
modal allomorphs.

26. boku wa to o ake<u>te</u> <u>sosite</u>, deru

26.1 boku wa to o <u>ake</u> <u>sosite</u>, deru
     'I open the door and go out'

27. kare wa waruku<u>te</u> <u>sosite</u>, baka na yatu da

27.1 kare wa <u>waruku</u> <u>sosite</u>, baka na yatu da
     'he is a wicked and foolish fellow'

28. boku wa are o ut<u>te</u> <u>sosite</u>, kore o katta

28.1 boku wa are o <u>uri</u> <u>sosite</u>, kore o katta
     'I sold that and bought this'

        Furthermore, <u>sosite</u> 'and' may be completely
eliminated to yield,

26.2 boku wa to o akete, deru

26.3 boku wa to o ake, deru
     'I open the door and go out'

27.2 kare wa warukute, baka na yatu da

27.3 kare wa waruku, baka na yatu da
     'he is a wicked and foolish fellow'

28.2 boku wa are o utte, kore o katta

28.3 boku wa are o uri, kore o katta
     'I sold that and bought this'

Apparently, presence or absence of the connective <u>sosite</u> 'and'
makes no difference as to the meaning of the <u>sosite</u>-connected

sentences.

These peculiarities of the connective _sosite_ 'and'
may be attributable to its unmarked characteristics that
it expresses the weakest kind of relation; a mere
co-existence of a set of sentences in a system. Notice
also that the connective _sosite_ 'and' has a number of
allomorphic realizations such as _sosuru_, _sosita_, _sosite_,
and _sosure_ (sentences 16-25, pp. 205-6). Apparently,
the endings of the first two are in agreement with the
non-perfect modal _u_ and the perfect modal _ta_ of the
preceding verb phrases respectively. In fact, their modal
agreement seems to reveal that the connective 'and' in
Japanese is actually derived from the full underlying
sentence consisting of three constituents: _so_ 'so', _sur_
'to do', and a modal morpheme. On the other hand, the
irregular endings of _sosite_ and _sosure_ may be due to the
idiosyncratic characteristics of the connectives such as
kara 'after' and _ba_ 'if' which happen to require the modal
allomorphs _te_ or _e_ of the co-occurring connective 'and'.
These facts lead me to suspect that the sentence connective
'and' can occur not only with any sentence connectives in

the surface structure but in the underlying structure of
every compound sentence in Japanese. In fact, based on
the assumption of the underlying presence of 'and',
irregular correspondences between the modals and the
particular sentence connectives such as between *te* and
kara in sentence 12 (p. 203),

12. boku wa kare ni at*te* *kara*, okureta
    'after I met him, I was late'.

or between *e* and *ba* 'if',

29. boku wa kare ni a*e* *ba*, okureru
    'if I run into him, I will be late'

can be systematically accounted for as will be shown later
in 2.3.

    2.2. I will now show the formations of various
'and' allomorphs by a set of rules. I will first postulate
the base form of 'and' as *sosur*.

i. Modal aspect of the base form of 'and' is specified by
the non-perfect *u* or perfect *ta* in accordance with the modal
aspect of the preceding verb phrase.

    By this rule, the base form *sosur* is converted
into *sosuru* or *sosita* such as,

> hi ga noboru sosur --> hi ga noboru sosuru
>
> 'the sun rises and...'
>
> hi ga nobotta sosur --> hi ga nobotta sosita
>
> 'the sun rose and...'

ii. If sosita is followed by the connective kara 'after',
optionally change the modal ending to te.

> hi ga nobotta sosita kara --> hi ga nobotta sosite kara
>
> 'the sun rose and after (that)...'

iii. If sosuru is followed by ba 'if', change the modal ending
to e.

> hi ga noboru sosuru ba --> hi ga noboru sosure ba
>
> 'if the sun rises and...'

iv. If sosuru or sosita is followed by no other connectives,
change the modal ending to te.

> This rule will assign the form sosite to a single
>
> occurrence of 'and'. An additional morphophonemic
>
> rule is needed to adjust the phonetic shape of
>
> sosurte as sosite.

At this stage, all the allomorphs of 'and' are specified
by these rules.

2.3.   Now I will consider what is the syntactic source

of the irregular modal allomorphs te and e which seem to be

governed by such connectives as kara 'after' and ba 'if'.

At this stage, these connectives form a compound with the

underlying 'and' such as,

30. hi ga nobotta sosite kara, boku wa kaetta   By Rule ii.
      'after the sun had risen (and) I went home'

31. kare ga kuru sosure ba, boku wa komaru   by Rule iii.
      'if he comes (and) I will be in trouble'

The underlying 'and' will be optionally deleted by the later

rules, and sentence 30 and 31 will result in the following

surface forms,

30.1 hi ga nobotte kara, boku wa kaetta

31.1 kare ga kure ba, boku wa komaru

It is immediately noticed that the surface verb modals are

identical to the modal forms of the underlying 'and'.   Then

it is conjectured that the modals in the verb phrases of 30

and 31 are replaced by the modals of sosite and sosure

respectively, and subsequently these underlying 'and' are

deleted from the surface structures, yielding 30.1 and 31.1.

These processes are formulatable in the following rule which consists of two parts.

v.1 Optionally delete the modal in the verb phrase and replace it by the modal of the following connective, if it is either <u>sosite</u> or <u>sosure</u>.

> hi ga nobo<u>ru</u> sos<u>ite</u> --> hi ga nobo<u>tte</u> sos<u>ite</u>
> 'the sun rises and...'

> hi ga nobo<u>tta</u> sos<u>ite</u> kara --> hi ga nobo<u>tte</u> sos<u>ite</u> kara
> 'after the sun had risen (and)...'

> kare ga kur<u>u</u> sos<u>ure</u> ba --> kare ga kur<u>e</u> sos<u>ure</u> ba
> 'if he comes (and)...'

v.2 Then delete <u>sosite</u> or <u>sosure</u>, if they are followed by another connective.

> This rule is so formulated that (i) it will not delete the single occurrence of 'and' from the compound sentence and that (ii) only the output of v.1, but not that of either Rule ii or of iii,undergoes the following changes.

> hi ga nobo<u>tte</u> <u>sosite</u> <u>kara</u> --> hi ga nobo<u>tte</u> <u>kara</u>
> 'after the sun had risen (and)...'

> kare ga kur<u>e</u> <u>sosure</u> <u>ba</u> --> kare ga kur<u>e</u> <u>ba</u>
> 'if he comes (and)...'

> 2.4. Now I turn to the co-occurrence relations between the verb modals and the sentence connective 'and'.

Earlier, 'and' is assigned the form <u>sosite</u> by Rule iv. (p. 210) in co-occurrence with either the non-perfect modal <u>u</u> or the perfect modal <u>ta</u>.

> 32. hi ga nobot<u>ta</u> <u>sosite</u>, bokura wa dekaketa
>   'the sun rose and we set out'

> 33. kare ga kur<u>u</u> <u>sosite</u>, bokura wa hanasu
>   'he comes and we talk'

Subsequently, Rule v.1 may optionally convert the verb phrase modals into the modal allomorphs <u>te</u>.

> 32.1 hi ga nobot<u>te</u> <u>sosite</u>, bokura wa dekaketa
>   'the sun rose and we set out'

> 33.1 kare ga k<u>ite</u> <u>sosite</u>, bokura wa hanasu
>   'he comes and we talk'

Rule v.2 does not apply to the single occurrences of 'and' such as above.

Unlike other sentence connectives, 'and' can occur with various modal allomorphs besides <u>te</u> (p. 207). For a simpler account, I will obtain the verb stem first by the following rule.

vi. Optionally delete the modal from the verb phrase, if it is immediately followed by <u>sosite</u> and by no other connectives.

This rule applies to the output of either Rule iv.

or Rule v.1.

hi ga nobor<u>u</u> <u>sosite</u>, boku wa kaeru --->   by Rule iv.
'the sun rises and I will go home'

hi ga nobor <u>sosite</u>, boku wa kaeru

hi ga nobot<u>te</u> <u>sosite</u>, boku wa kaeru --->   by Rule v.1.
'the sun rises and I will go home'

hi ga nobor <u>sosite</u>, boku wa kaeru

Then a number of morphophonemic rules (not discussed

in this grammar) will introduce the appropriate

ending of a given verb stem according to its

classification such as consonant-base verb, vowel-base

verb, adjective, copula, and so on.

vii. Optionally delete 'and' elsewhere.

So far we have been concerned with the varied occurrences

of 'and' in a single form as well as in a compound

with some other connectives. Recall that 'and'

may also be absent from the surface structure without

changing the meaning. By this rule, 'and' will be

removed from any surface compound sentences.

The close relation between modal aspects and
sentence connectives has been investigated. There
seem to be fairly consistent correspondences between
the non-perfect and the perfect modals and the meanings
of the co-occurring connectives. What appeared to be
the irregular correspondences between the connectives
such as ba 'if' and kara 'after' and the modal allomorphs
e and te have been systematically explained based on the
initial hypothesis (p. 209) that the underlying structure
of a compound sentence in Japanese contains the most
basic connective 'and'.

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