A STUDY OF JAPANESE VERB PHRASE EMBEDDING CONSTRUCTIONS

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INTRODUCTION

This study is an attempt to present a transformational analysis of Japanese Verb Phrase Embedding Constructions. The study is primarily concerned with the required correlation between embedding and embedded structures.

Several attempts have been made to describe the generation of certain Japanese Verb Phrases by applying simple surface transformations to kernel sentences or to structures derived from kernel sentences.

The grammars by Richard E. Smith[1] and Charles T. Tang[2] display some defects in not being able to explain the generation of all the possible sentences having the same structure. Though both of them are neatly presented, they involve quite a few defects in the choice of examples and in the arrangement of the rules. Kinsuke Hasegawa[3] showed a more powerful model in his grammar but there are several parts which are old-fashioned from today's point of view. Kazuko Inoue's grammar[4] is very inclusive and perhaps more powerful than any that has been presented in public in extending the idea of embed-

1. Smith, Richard E., "A Transformational Sketch of Japanese." Unpublished Master's thesis, the University of Texas, 1962.
2. Tang, Charles T., "A Transformational Analysis of Japanese Verbs and Verb Phrases." Unpublished Master's thesis, The University of Texas, 1964.
3. Hasegawa, Kinsuke, "Nihongo Bunpoo Siron (An Attempt in Japanese Grammar)", Gengo-bunka (Language Culture) No. 1 (1964), pp. 3–46.
4. Inoue, Kazuko, "Syntax of Japanese." Doctoral Dissertation, University of Michigan, 1965.

ding transformation first introduced by Charles J. Fillmore.[5] Without such important notions as deep structure, subcategorization rules and selectional features as recently presented by Noam Chomsky in his *Aspects of the Theory of Syntax*,[6] her grammar seems to us to be incomplete. Akiko Ueda's grammar[7] suffers from the same kinds of defects as Inoue's, though hers exclusively deals with the analysis of Noun Modification Patterns in Japanese. Kuroda's studies starting from *Gengo no Kizyutu (Description of Language)*[8] have demonstrated some of the greatest insights into Japanese grammar. His papers "Causative Forms in Japanese"[9] and "Ga, O oyobi Ni ni tuite (About *ga, o* and *ni*)"[10] deal with significant points in Verb Phrase embedding transformations in Japanese and they actually gave the author the basic ideas of the present study.

Beside the above mentioned authors, Bernard Bloch's name should be mentioned as the pioneer of modern structural Japanese grammar. Though some of his concepts have become outdated and inadequate from our point of view, his basic ideas are still prerequisite to any serious study of Japanese grammar.

The author also owes much to Akira Mikami's works dealing with Japanese Noun Phrase and Verb Phrase Constructions. He quite often stimulated the author to create new speculations by presenting disagreeable opinions about various topics in Japanese grammar. In the present study, many examples are also borrowed from his works.[11]

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5. Fillmore, Charles J., "The position of embedding transformation in a grammar", *Word* XIX, 2 (1963), pp. 208–231.

6. Chomsky, Noam, *Aspects of the Theory of Syntax*, Cambridge; M.I.T. Press; 1965.

7. Ueda, Akiko, "The Adnominal Modification in Japanese." Doctoral dissertation, the University of Texas, 1965.

8. Kuroda, Sigeyuki, *Gengo no Kizyutu (Describtion of Language)*, Tokyo; Kenkusya; 1960.

9. ——, "Causative Forms in Japanese," *Foundation of Language*, Vol. I, No. 1, 30–50.

10. ——, "Ga, O oyobi Ni ni tuite (About *ga o* and *ni*)" *Kokugogaku (Studies in Japanese Language)*, Vol. 63, Dec. 1965.

11. Mikami, Akira, *Nihongo no Ronri (Logic of Japanese)* Tokyo; Kurosio Publishing Co., 1963.

In Chapter I, the Phrase Structure Rules, Lexicon, Transformational Rules relevant to the present study are presented with some examples of structures provided by the PS Rules for Verb Phrase. In Chapter II, the Rules introduced in the previous chapter are illustrated with specific verbs together with necessary discussions and comments. Finally in Chapter III, some Noun Phrase Complementation Types are briefly discussed in comparison with the Verb Phrase Complementation Types.

CHAPTER I
BASIC GRAMMATICAL RULES FOR EMBEDDING CONSTRUCTIONS

I. Phrase Structure Rules and Lexicon

Before presenting the proposed analysis, it is necessary to provide the development of those phrase structure rules that give the essential background of the coming analysis.

The set of phrase structure rules introduced below contains only those basic rules which are descriptive of the structures dealt with in this study.

(I) Phrase Structure Rules

   1. #S# → NP + VP
   2. VP → (NP) (S) V + Aux
   3. NP → (Det) (S) N + Part (Topic)
   S: Sentence
   NP: Noun Phrase
   VP: Verb Phrase
   V: Verb
   Aux: Auxiliary
   Det: Determiner
   Part: Particle

(II) Lexicon

The sample lexicon accompanying the above grammar includes the

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11. ———, *Nihongo no Koobun (Constructions of Japanese)* Tokyo; Kurosio Publishing Co., 1963.

following items. The lexical items are listed according to their grammatical category, and in each group they are arranged in alphabetical order. Information on rule government is provided, informally, among the features associated with each item.

hon ('book') $[+N, -Animate, ...]$

koto, no ('fact') $[+N, +S\_\_\_:$ Exceptions to the relative clause Noun Matching Rule]

osiri ('backside') $[+N, ...]$

saru ('monkey') $[+N, +Animate, -Human ...]$

Taroo ('boy's name') $[+N, +Human, +Proper Noun, ...]$

watasi ('I') $[+N, +First Person Singular, ...]$

   ⋮

ar ('to be') $[+V, +S\_\_\_, -Animate Subject\_\_\_, ...:$ requires T Ib, : Statal]

ana ('not') $[+V, +Adj, +S\_\_\_:$ requires T Ib, T III: Negation]

age ('do') $[+V, +S\_\_\_, :$ requires T Ib: Benefactive]

hazime ('to start') $[+V, +S\_\_\_, :$ requires T Ib, T III: Incipient]

hosi ('to wish') $[+V, +Adj, +S\_\_\_, :$ requires T Ia: subject to T IV]

i ('to be ∼ing') $[+V, +S\_\_\_, ...:$ requires T Ib: Statal]

ik ('to go') $[+V, -S\_\_\_, ...]$

ita ('to want') $[+V, +Adj, +S\_\_\_, ...:$ requires T Ib, T III: subject to T IV]

kure ('to do') $[+V, +S\_\_\_, ...: -First Person Subject\_\_\_, ...:$ requires T Ib: Benefactive]

mi ('to try') $[+V, +S\_\_\_, ...:$ requires T Ib: Trial]

mise ('to be resolved') $[+V, +S\_\_\_, ...:$ requires T Ib: Resolution]

moraw ('to have somebody do ...') $[+V, +NP⌢S\_\_\_, ...:$ requires T Ia: Assistance, Passive]

nar ('to become') $[+V, +^s[X Cop Y]^s\_\_\_, ...:$ requires T Ib, T IIc]

niku ('to be hard to') $[+V, +Adj, +S\_\_\_, ...:$ requires T Ib, T III: subject to T IV: Difficulty]

oe, owa ('to finish') $[+V, +S\_\_\_, ...:$ requires T Ib, T III: Terminate]

(ra)re ('to be able to ...') $[+V, +S\_\_\_, ...:$ requires T Ib, T III: Potential]

rare ('to be ...en') $[+V, +S\_\_\_, ...:$ requires T Ia, T IIa, T III: Passive]

sase ('to make somebody (do) ...') $[+V, +NP\frown S\_\_\_, ...:$ requires
T Ib, T IIb, T III : Causative]

sur ('to make somebody ...') $[+V, +NP\frown S\_\_\_, +^S[X$ Cop $Y]^S\_\_\_,$
...: requires T Ib, T IIc]

tabe ('to eat) $[+V, +NP\_\_\_, ...]$

tagar ('to want to ...') $[+V, +S\_\_\_, ...:$ requires T Ib, T III :
Desiderative]

yasu ('to be easy ...') $[+V, +Adj, +S\_\_\_, ...:$ requires T Ib, T III :
subject to T IV : Ease, Tendency]

yom ('to read') $[+V, +NP\_\_\_, ...]$
 ⋮

i $[+Aux, +Adj\_\_\_, +Non\text{-}Past, ...]$

katta $[+Aux, +Adj\_\_\_, +Past, ...]$

ru $[+Aux, +V\_\_\_, +Non\text{-}Past, ... -V\_\_\_V]$

ta $[+Aux, +V\_\_\_, +Past, ... -V\_\_\_V]$

te $[+Aux, +V\_\_\_V, +Gerundive, ...*]$
 ⋮

de $[+Part, +N\_\_\_, +\_\_\_Cop, ...]$

e $[+Part, +N\_\_\_, +Direction, ...]$

ga $[+Part, +N\_\_\_, +Subject, ...]$

o $[+Part, +N\_\_\_, +Object, ...]$

to $[+Part, +koto\_\_\_V, +Indirect \ Quotation]$

wa $[+Part, +N\_\_\_, +Topic]$

II. Transformational Rules

T Ia (Passive Embedding Deletion Rule)

$$SD: \frac{X}{1} \ \frac{N}{2} \ \frac{ga}{3} \ \frac{N}{4} \ \frac{ga}{5} \ \frac{N}{6} \ \frac{o}{} \ \frac{X \ V+Y}{7}$$

SC : 1-2-3-4-5-6-7 $\Rightarrow$ 1-2-3-4-ø-ø-7
if 2=5

T Ib (General Embedding Deletion Rule)

$$SD: \frac{X}{1} \ \frac{N}{2} \ \frac{\begin{bmatrix} ga \\ o \end{bmatrix}}{3} \ \frac{N}{4} \ \frac{ga}{5} \ \frac{Y \ V+Z}{6}$$

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* The local transformational character of strict subcategorization features is
violated in this one instance. The gerund suffix is provided as the auxiliary
of any sentence embedded directly before V.

SC: 1–2–3–4–5–6 ⇨ 1–2–3–ø–ø–6
if 2=4

T IIa (Particle Replacement Rule I)

$$\text{SD}: \frac{X-[N \ ga - X]^s . Z}{1 \qquad 2 \qquad 3}$$

SC: 1–2–3 ⇨ 1–ni–3

T IIb (Particle Replacement Rule II)

$$\text{SD}: \frac{N \quad o}{1 \quad 2} \frac{\left[\left[{}_N \ S \ X\right]^s \ o \ X\right]^s \ Y}{3}$$

$$\text{SC}: 1\text{–}2\text{–}3 \Rightarrow \begin{bmatrix} 1 \ ni \ 3 \ (\text{optional}) \\ 1 \ ni \ 3 \ (\text{obligatory}) \end{bmatrix}$$

T IIc (Particle Replacement and Copula Deletion Rule)

$$\text{SD}: \frac{X \left[Y \quad N \quad de \quad ar \ Z \right]^s \begin{bmatrix} nar \\ sur \end{bmatrix}}{1 \quad 2 \quad 3 \quad 4 \qquad 5}$$

SC: 1–2–3–4–5 ⇨ 1–2–ni–ø 5

T III (Auxiliary Deletion Rule)

$$\text{SD}: \frac{X [Y \quad Aux]^s \quad V+Z}{1 \quad 2 \qquad 3}$$

SC: 1–2–3 ⇨ 1–ø–3

T IV (Topicalization Rule)

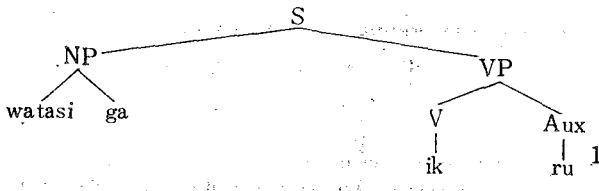$$\text{SD}: \frac{X - N+PART+Top - W}{1 \qquad 2 \qquad 3}$$

SC: 1–2–3 ⇨ 2–1–3

III. Presentation of Basic Verbal Complementation Types
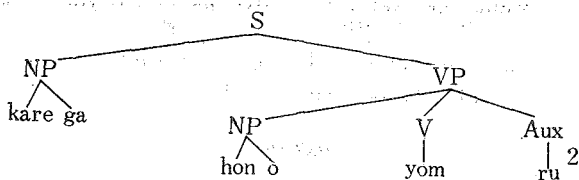(I) Simple Verb Phrases
1. VP → V

Diagram 1

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1. ik+ru → iku.

ex : $\dfrac{\text{watashi ga}}{\text{NP}}$ $\dfrac{\text{iku.}}{\text{V}}$ 'I go.'

2. VP → NP V

ex : $\dfrac{\text{kare ga}}{\text{NP}}$ $\dfrac{\text{hon o}}{\text{NP}}$ $\dfrac{\text{yomu.}}{\text{V}}$ 'He reads a book.'

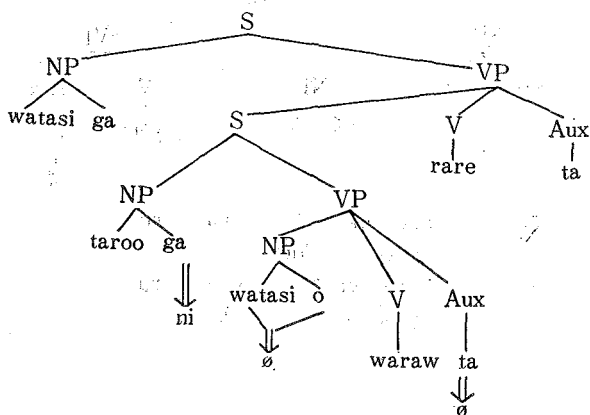*Diagram 2*

(II) Verbal Complementation Types

1. VP → S V

ex : $\dfrac{\text{watasi ga}}{\text{NP}}$ $\dfrac{\text{[taroo ga watasi o waraw]}}{\text{S}}$ $\dfrac{\text{rareta.[3]}}{\text{V}}$

watasi ga taroo ni warawareta.[4]

'I was laughed at by Taroo.'

Diagram 3

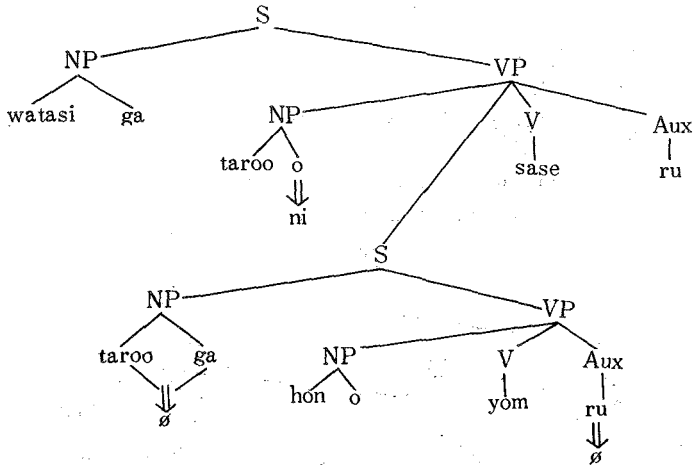
2. yom+ru → yomu.
3. *cf.* T Ia, T III.
4. waraw+rare+ta → warawareta.

Note: watasi ga —(S)— rare +ta.
'I was ...en (Passive).'
taroo ga watasi o waraw +ta.[5]
'Taroo laughed at me.'

2. VP → NP S V

ex: $\underset{NP}{\underline{\text{watasi ga}}}$ $\underset{NP}{\underline{\text{taroo o}}}$ $\underset{S}{\underline{\text{[taroo ga hon o yom]}}}$ $\underset{V}{\underline{\text{saseru.}}}$[6]

watasi ga taroo ni hon o yomaseru.[7]
'I make Taroo read a book.'

Diagram 4

Note: watasi ga —(S)— sase +ru.
'I make ... (do)...'
'Taroo ga hon o yom +ru.
'Taroo reads a book.'

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5. waraw+ta → waratta.
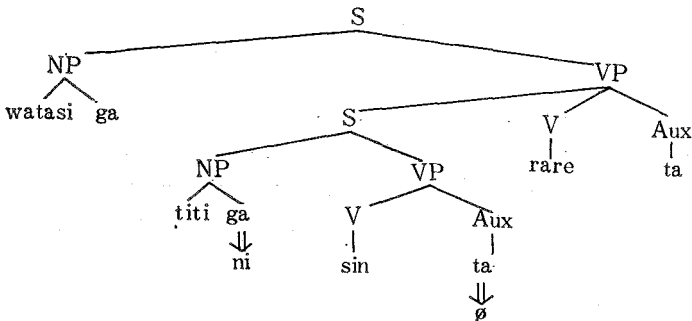6. *cf.* T. Ib, T III, T IIb.
7. yom+sase+ru → yomaseru.

CHAPTER II
ILLUSTRATION OF THE RULES WITH SPECIFIC VERBS

1. rare (Passive)

In our first example of uses of the passive embedding verb 'rare', the verb of the embedded sentence is intransitive.

      watasi ga −(S)− rare +ta. ⎯⎯⎯⎯⎯⎯

      'I was ...en.'

      titi ga sin +ta. ⎯⎯⎯⎯⎯⎯⎯⎯⎯→[1]

      'My father died.'

            watasi ga titi ni sinareta.[2]

            'I was left alone by the death of my father.'

Diagram 5

In the next example the embedded sentence contains a transitive verb phrase the object of which is distinctive from the subject of the matrix.

        hanako ga −(S)− rare +ta. ⎯⎯⎯⎯⎯⎯

        'Hanako was ...en.'

        okaasan ga osiri o but +ta. ⎯⎯⎯⎯⎯⎯⎯→

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1. ⎯▷→ shows that the sentence given in the lower level is embedded in the sentence in the upper level in the position identified by (S). In all of the illustratsons of embedded sentences in this and in succeeding chapters, a tense auxiliary if chosen rather than the gerundive suffix required by the lexicon. This is done for the sake of providing translations for the embedded sentences.

2. sin+rare+ta → sinareta.

'Mother spanked (her) on the backside.'
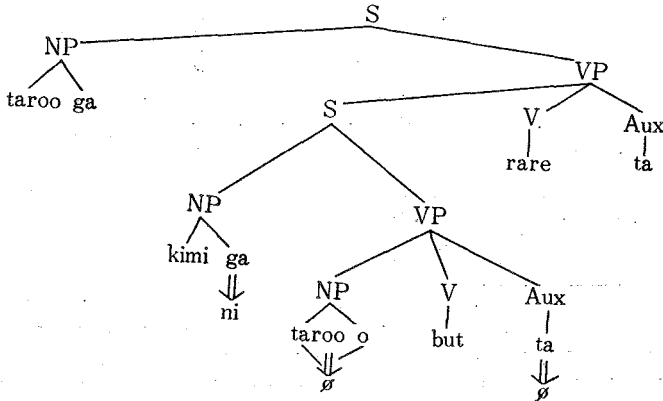> hanako ga okaasan ni osiri o butareta.[3]
> 'Hanako was spanked on the backside by Mother.'

Diagram 6
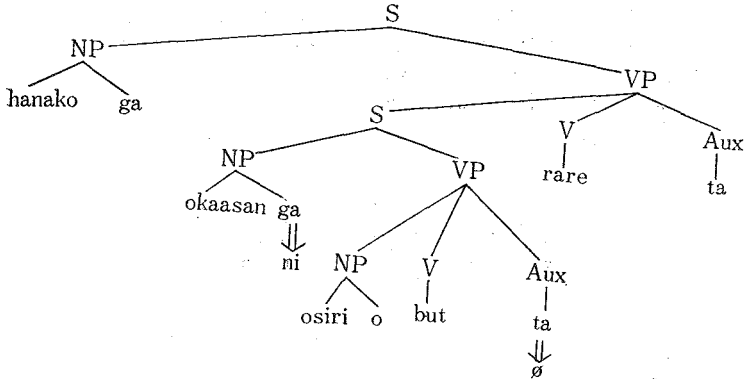
For the third example of the passive construction, an embedded sentence is chosen in which the direct object of its verb phrase is identical with the subjebt of the matrix sentence. The repreated noun

Diagram 7

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3. but+rare+ta → butareta.

phrase is deleted by rule T Ia.

    taroo ga —(S)— rare +ta.

    'Taroo was ...en.'

    kimi ga taroo o tatak +ta.

    'You beat Taroo.'

        taroo ga kimi ni tatakareta.[4]

        'Taroo was beaten by you.'

2. sase (Causative)

Causative embedding verbs take direct objects and require the subject of the sentences embedded to them to be identical to the direct object of the matrix sentence. The first example of causative constructions with 'sase' shows an embedded sentence with an intransitive verb phrase.

    watasi ga taroo o —(S)— sase +ru.
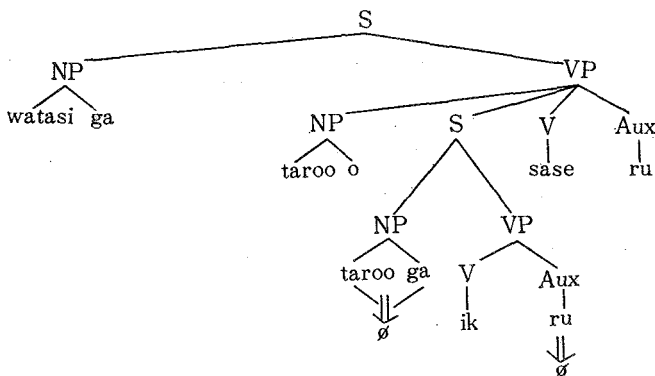
    'I make Taroo (do) ...'

    taroo ga ik +ru.

    'Taroo goes.'

        watasi ga taroo o ikaseru.[5]

        'I make Taroo go.'

Diagram 8

The second example of a causative construction with the verb

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4. tatak+rare+ta → tatakareta.

5. ik+sase+ru → ikaseru.

'sase' shows an embedded sentence with a transitive verb.

kare ga watasi o —(S)— sase +ta. ⎯⎯⎯⎯⎯⎯⎯⎯
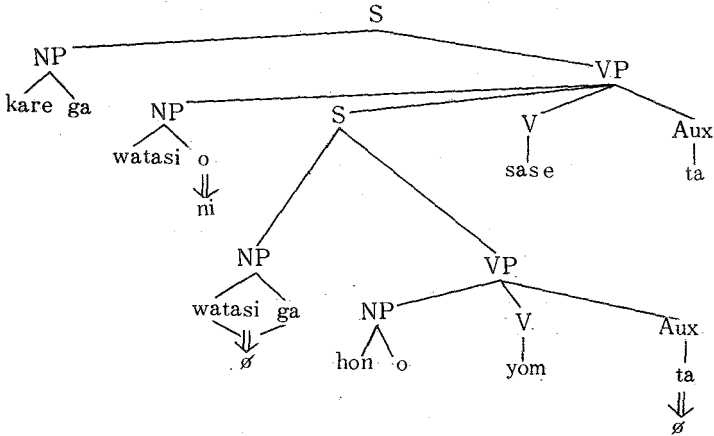'He made me (do) ...'
watasi ga hon o yom +ta. ⎯⎯⎯⎯⎯⎯⎯ ⟶
'I read the book.'

kare ga watasi ni hon o yomaseta.[6]
'He made me read the book.'

Diagram 9

3. Combination of sase and rare (Passive of Causative)

In order to generate this construction, we have to consider two levels of the underlying structures under the Verb Phrase of the matrix sentence.

watasi ga —(S)+ rare +ta. ⎯⎯⎯⎯⎯⎯
'I was ...en.'
kare ga watasi o —(S)— sase +ta. ⎯⎯ ⟶
'He made me (do) ...'
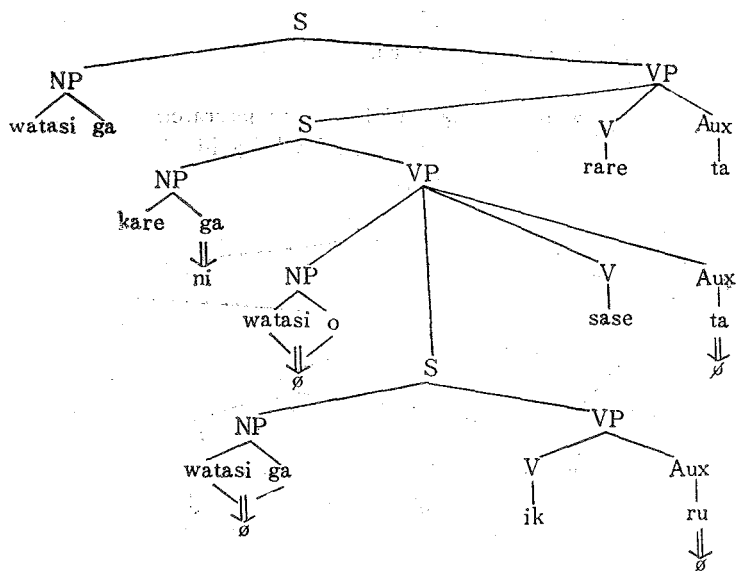watasi ga ik +ru. ⎯⎯⎯⎯⎯⎯⎯
'I go.'

watasi ga kare ni ikaserareta.[7]

_____

6. yom+sase+ta → yomaseta.
7. ik+sase+rare+ta → ikaserareta.

'I was made to go by him.'

Diagram 10

Starting from the lower level, we have 'watasi ga iku "I go"' embedded in the Causative matrix 'kare ga ... saseta "He made me (do) ..."' Applying T Ib and T III, we delete the Subject NP and Aux of the lowest level. Thus we get 'kare ga watasi o ikaseta "He made me go."'

Next, this structure is embedded in the Passive matrix 'watasi ga ... rareta "I was ...en"', where by T IIa the Particle 'ga' of the Subject NP of the obtained Causative construction is converted to 'ni', i.e. 'kare ga' ⇨ kare ni.' Then, by T Ia, we delete the NP which is the immediate constituent of VP of the embedded structure, i.e. watasi o ⇨ ø. Finally by deleting the Aux of the embedded VP by T III, we obtain 'watasi ga kare ni ikaserareta.'

Next, let us discuss the case when the Verb of the embedded sentence in the lowest level is transitive.

watasi ga —(S)— rare +ta.
'I was ...en.'
kare ga watasi o —(S)— sase +ta.
'He made me (do) ... '
watasi ga hon o yom +ru.
'I read the book.'

watasi ga kare ni hon o yomaserareta.[8]
'I was made read the book by him.'

Diagram 11
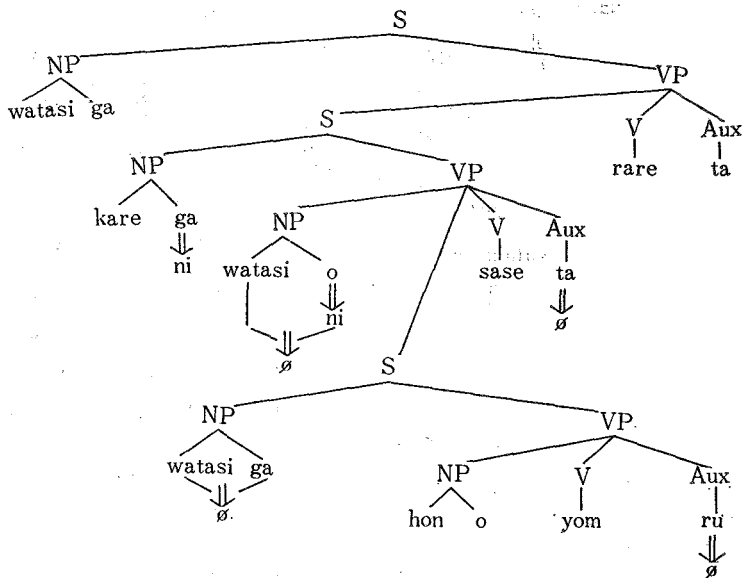
Starting from the lower level embedding, we have 'watasi ga hon o yomu "I read the book"' embedded in the Causative matrix 'kare ga watasi o ... saseta "He made me (do) ...."' By T IIb, we delete the Subject NP and T III the Aux of the embedded sentence. Thus we obtain '*kare ga watasi o hon o yomaseta.'** As the next step,

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8. yom+sase+rare+ta → yomaserareta.

** Asterisks (*) are used to indicate ungrammatical sequences or non-valid structures.

we have to replace the Particle ' o ' of the second NP to ' ni ', i.e. ' watasi o' ⇨ 'watasi ni,' by applying T IIb. Then we get 'kare ga watasi ni hon o yomaseta " He made me read the book." ' Next, this structure is embedded in the Passive matrix ' watasi ga ... rareta " I was ...en." ' By T Ib we delete ' watasi ni (formerly ' watasi o ') of the embedded sentence, and by T IIa, we replace the Particle of the Subject NP of the embedded sentence, i.e. 'kare ga' ⇨ 'kare ni,' and by T III we erase the Aux of the embedded sentence. Thus we can obtain ' watasi ga kare ni hon o yomaserareta.'

4. Combination of rare and sase (Causative of Passive)

Causative of Passive exists only when the Verb of the embedded structure in the lowest level is transitive.

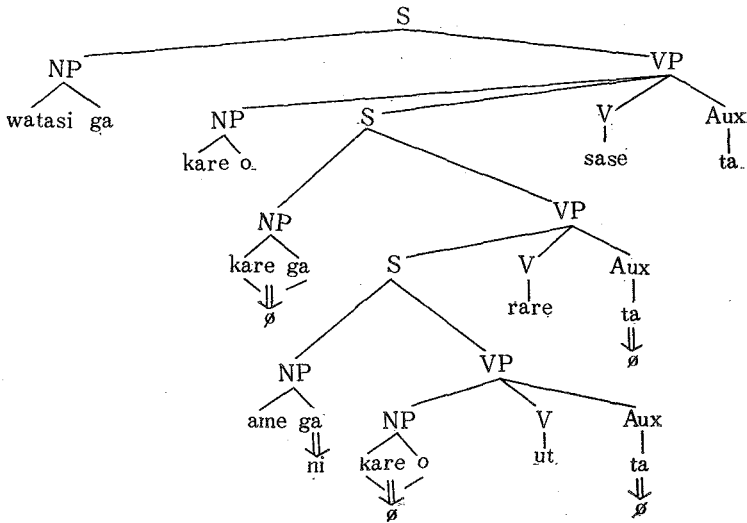watasi ga kare o — (S) — sase +ta.
' I made him (do) ... '
kare ga — (S) — rare +ta.
' He was ...en.'
ame ga kare o ut +ta.
' The rain struck him.'

Diagram 12

watasi ga kare o ame ni utaresaseta.[9]
'I made him be struck by the rain.'

Starting from the lowest level, we have 'ame ga kare o utta "The rain struck him"' embedded in the Passive matrix 'kere ga ... rareta "He was ...en"' generating 'kare ga ame ni utareta "He was struck by the rain"' as the result of the application of T Ia, T IIa, T III. Then this passive structure is embedded in the Causative matrix 'watasi ga kare o ... saseta "I made him (do) ..."' By applying T Ib and T III we can obtain 'watasi ga kare o ame ni utaresaseta "I made him struck in the rain."'

5. (ra)re (Potential)

The potential embedding verb, in one of its variants, is superficially similar to the passive verb. An important distinction is that while the passive verb requires identity between the subject of the matrix and the direct object of the embedded sentence, the potential verb requires identity of the subject of the matrix with the subject of the embedded sentence.

kono kuruma ga $-$(S)$-$ re $+$ru.
'This car is able to ...'
kono kuruma ga saka o nobor $+$ru.
'This car climbs up the slope.'

Diagram 13

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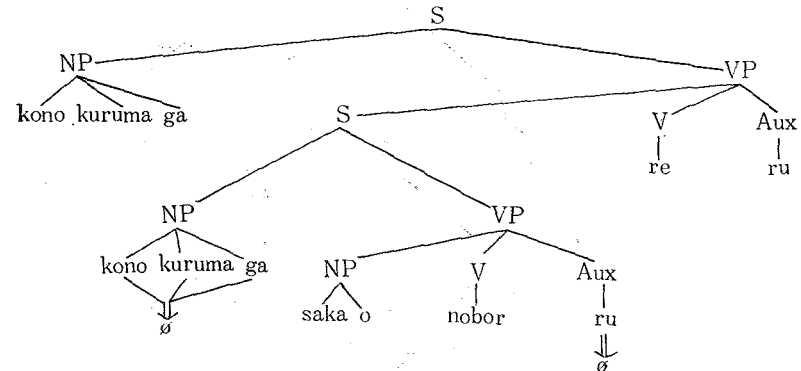
9. ut$+$rare$+$sase$+$ta $\rightarrow$ utaresaseta.

kono kuruma ga saka o noboreru.[10]
'This car is able to climb up the slope.'

6. sur (Object Status Shift)

The embedding verb 'sur' is similar in effect to the causative verb 'sase', in that it takes a direct object, requires this object to be the same as the subject of the embedded sentence, and has a causative meaning. An important difference is that sentences embedded to 'sur' must be copula sentences.
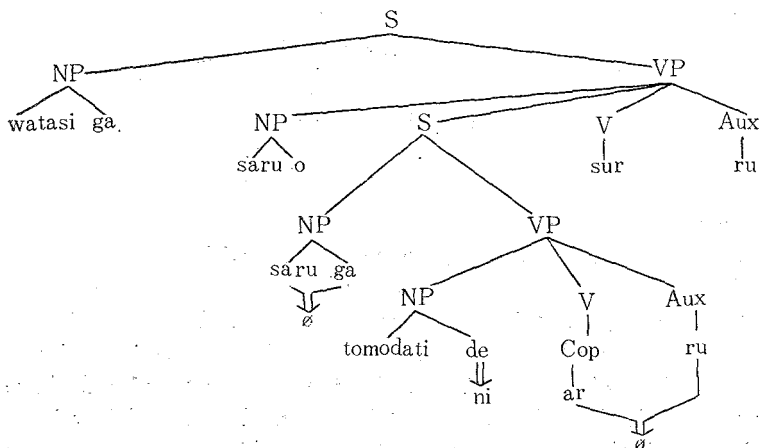
watasi ga saru o — (S)— sur +ru.
'I made the monkey ...'
saru ga tomodati de are +ru.
'The monkey is a friend.'

   watasi ga saru o tomodati ni suru.[11]
   'I made the monkey a friend.'

Diagram 14

7. nar (Subject Status Shift)

The embedding verb 'nar' is the intransitive counterpart of the embedding verb 'sur', requiring an identity between the subjects of
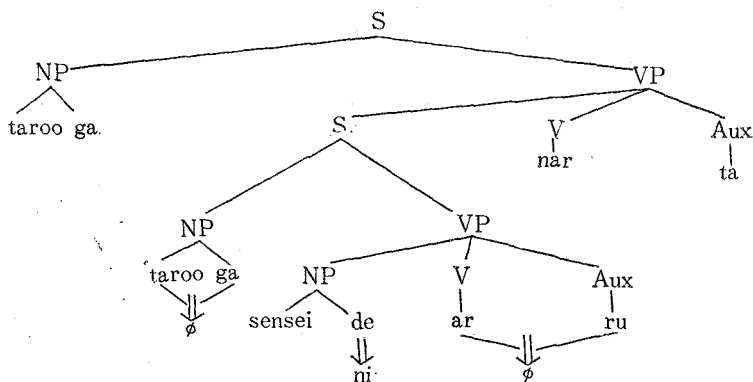
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10. nobor+re+ru → noboreru.
11. sur+ru → suru.

the matrix and embedded sentences. Like 'sur', it requires the embedded sentence to be of the copula sentence type.

taroo ga $-$(S)$-$ nar $+$ta. ─────────────
'Taroo became ... '
taroo ga sensei de ar $+$ru.─────────────────
'Taroo is a teacher.'

taroo ga sensei ni natta.[12]
'Taroo became a teacher.'

Diagram 15

8. age, kure (Benefactive)

The benefactive embedding verbs are intransitive verbs requiring identity between the subjects of matrix and embedded sentence. They preserve the gerund ending on the embedded verb. The semantic effect is that the action identified by the embedded sentence is performed for somebody else's benefit. The difference between 'age' and 'kure' is a part of the honorific system of Japanese. The beneficiary is the 'social superior' (loosely interpreted) of the subject in the case of age; the relationship is the reverse in the case of 'kure.'

watasi ga $-$(S)$-$ age $+$ru. ──────────────
'I will (do) ... for the benefit of ... '
watasi ga hon o yom $+$ru.───────────────
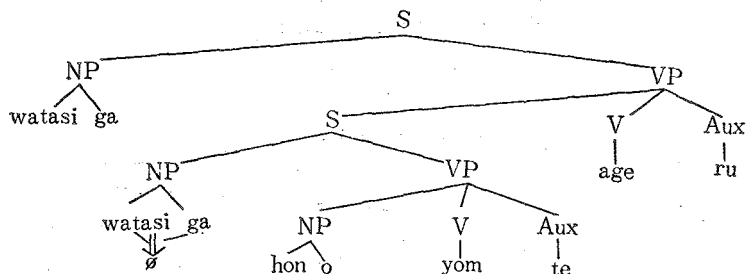
12. nar$+$ta → natta.

'I read the book (for you).'

      watasi ga hon o yondeageru.[13]

      'I will read the book for the benefit of you.'

Diagram 16

kare ga —(S)— kure +ta. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯
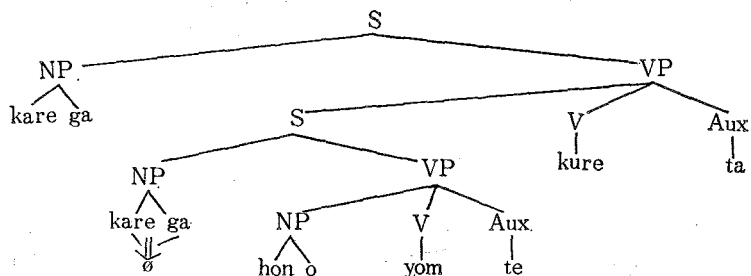
'He did ... (for me).'

kare ga hon o yom +ta. ⎯⎯⎯⎯⎯⎯⎯⎯ ⟶

'He read the book.'

      kare ga hon o yondekureta.[13]

      'He read the book for me.'

Diagram 17

9. mi (Trial)

The verbs illustrated here and in the next section are intransitive embedding verbs which preserve the gerund form.

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13. yom+te → yonde.

watasi ga —(S)— mi + ru.
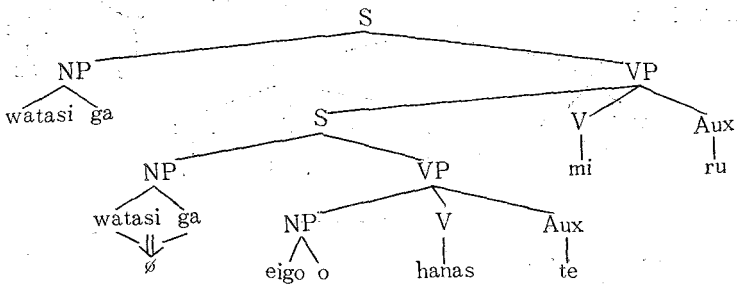'I will try to ...'
watasi ga eigo o hanas +ru.
'I speak English.'
    watasi ga eigo o hanasitemiru.[14]
    'I will try to speak English.'

Diagram 18

10. mise (Resolution)
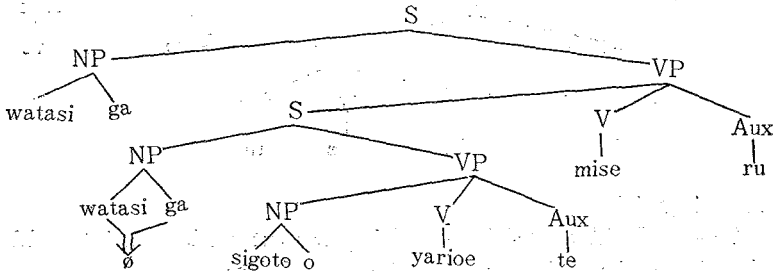   watasi ga —(S)— mise +ru.
    'I am resolved to ...'
    watasi ga sigoto o yarioe +ru.
        watasi ga sigoto o yarioetemiseru.
        'I am resolved to finish the work.'

Diagram 19

---

14. hanas+te → hanasite.

11. moraw (Obligation)

The verb 'moraw' is similar in meaning and in its strict subcategorization features to the causative verb 'sase'; it takes a direct object and it requires that object to match the subject of the embedded sentence. It differs from 'sase' in preserving the gerund form of the embedded auxiliary.
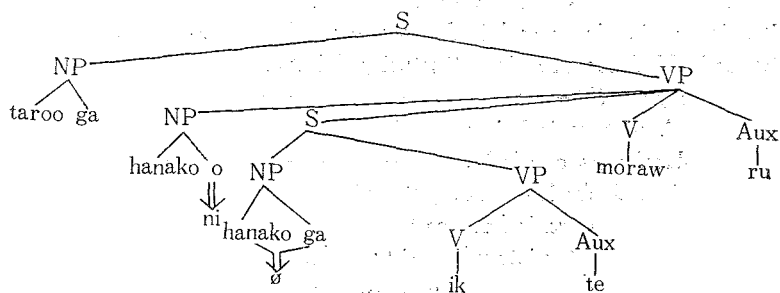
taroo ga —(S)— moraw +ta. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯
'Taroo had ... to ...'
hanako ga ik +ru. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⟶

taroo ga hanako ni ittemorau.[15]
'Taroo had Hanako go.'

Diagram 20

12. i, ar (State)

The statal verbs 'i' and 'ar' are both intransitive embedding verbs which preserve the gerund suffix in the embedded sentence. The verb 'i' requires the subject of the matrix sentence to be matched by the subject of the embedded sentence; the verb 'ar' requires a transitive verb phrase in the embedded sentence and requires its subject to match the object of the embedded sentence.

kare ga —(S)— i +ru. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯
'He is ... ing.'
kare ga hon o yom +ru. ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⟶
'He reads the book.'

kare ga hon o yondeiru.

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15. ik+te+moraw+ru → ittemorau.

'He is reading the book.'

Diagram 21
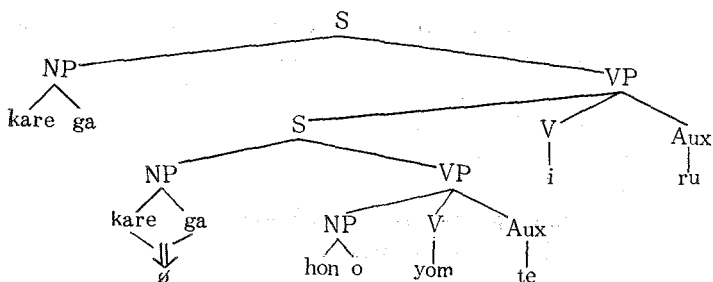
When the verb 'ar' is used as an embedding verb, we encounter a situation which is unexplainable by our rules in that the subject of the embedded sentence is obligatorily deleted.

e ga —(S)— ar +ru.
'A picture is being ...en.'
dareka ga e o kake +ta.
'Somebody hang the picture.'
            e ga kaketearu.[16]
        'A picture is being hung.'

Diagram 22

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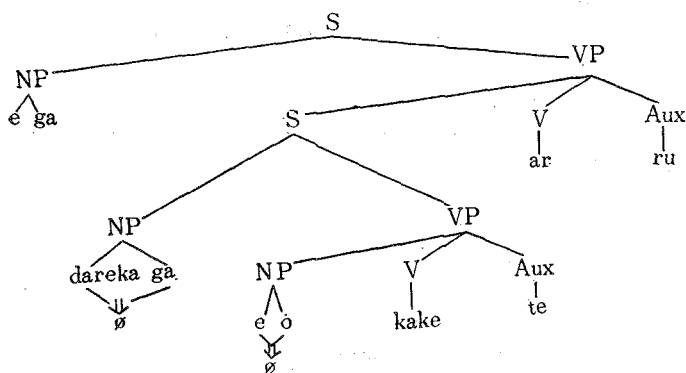
16. ar+ru → aru.

In the following example the embedded verb is the intransitive counterpart of 'kakeru'.

e ga —(S)— i +ru.
'A picture is ...ing.'
e ga kakar +ru.
'A picture hangs.'
e ga kakatteiru.[17]
'A picture is hanging.'

Diagram 23

13. hazime, das (Incipient)

This section and the following two sections present examples of embedding verbs requiring deletion of the auxiliary of the embedded sentence.

Diagram 24

17. kakar+te+i+ru → kakatteiru.

kodomo ga —(S)— hazime +ru.
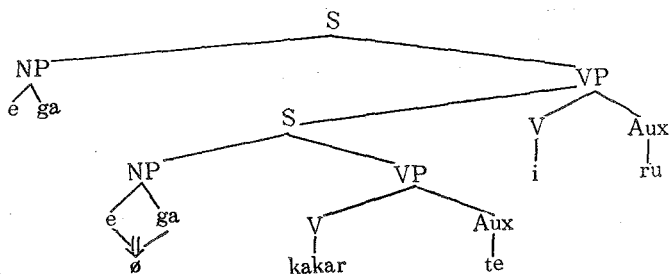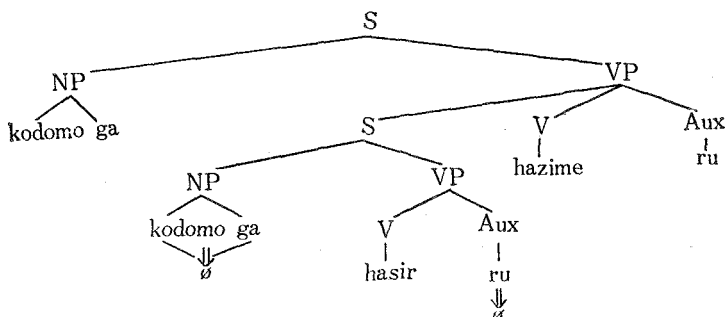'Children begin to ...'
kodomo ga hasir +ru.
'Children run.'

      kodomo ga hasirihazimeru.[18]
      'Children begin to run.'

14. owa, oe, yame (Terminate)
    watasi ga —(S)— owa +ta.
    'I finished ...ing.'
    watasi ga gohan o tabe +ta.

      watasi ga gohan o tabe +ta.[19]
      'I finished eating the meal.'

Diagram 25
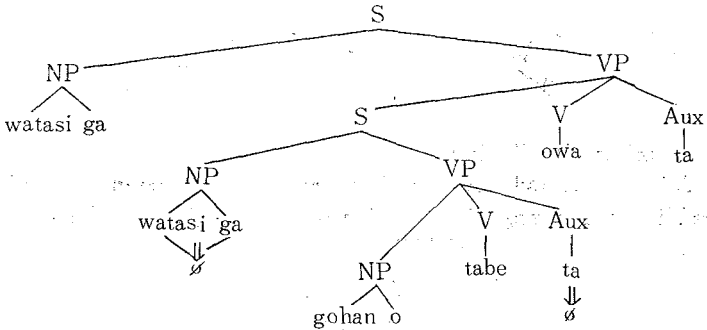
15. tagar (Desiderative)
    inu ga —(S)— tagar +ru.
    'The dog wants to ...'
    inu ga asob + ru.
    'The dog plays.'

      inu ga asobitagaru.[20]
      'The dog wants to play.'

---

18. hasir+hazime+ru → hasirihazimeru.
19. tabe+owa+ta → tabeowatta.
20. asob+tagar+ru → asobitagaru.

Diagram 26

16. ita (Desiderative)

All of the examples which follow are examples of adjectival embedding constructions.

watasi ga —(S)— ita +i.
'I want to ...'
watasi ga hon o yom +ru.
'I read a book.'

watasi ga hon o yomitai.
'I want to read a book.'

Diagram 27
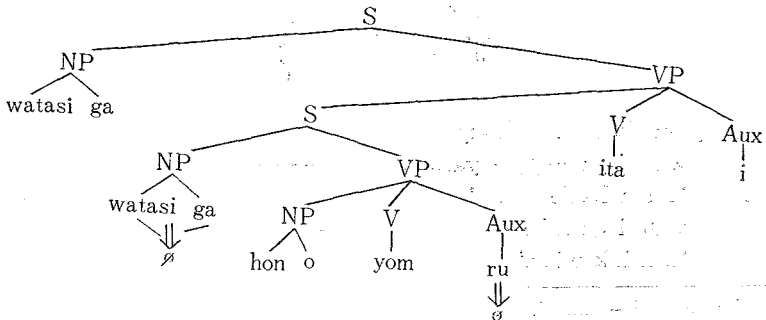
17. ana (Negative)
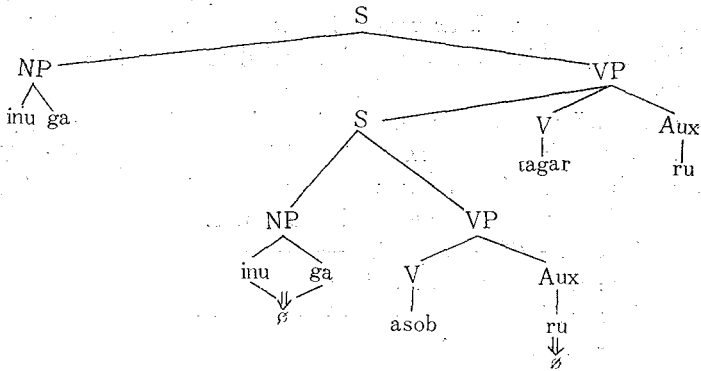
The formation of negative sentences in Japanese is by means of adjectival embedding. This results in the somewhat unusual situation in which the negative equivalent of a verbal sentence is an adjectival sentence.

Certain differences between negation of verbal sentences and adjectival sentences have not been considered in the present study. These involve such observations as that a negated verb is a single word, while a negated adjective is a sequence of two words.

kisya ga —(S)— ana +i. ───────
'The train ... not ... ...'
kisya ga ku +ru.───────────
'The train comes.'

        kisya ga konai.'[21]
        'The train does not come.'

Diagram 28
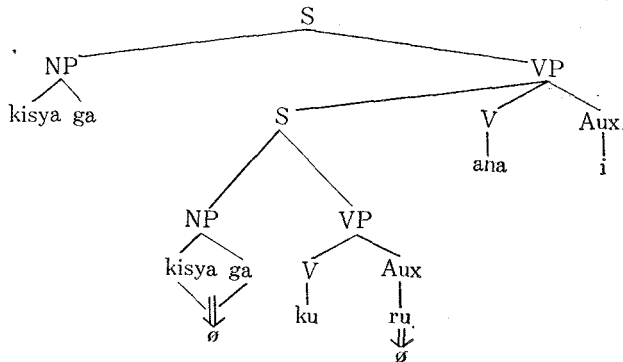
18. yasu (Ease, Tendency)
    watasi ga —(S)— yasu +i.───────
    'I am liable to ...'
    watasi ga sake o nom +ru. ───────
    'I drink wine.'

---

21. ku+ana+i → konai.

watasi ga sake o nomiyasui.[22]
'I am liable to drink wine.'

Diagram 29
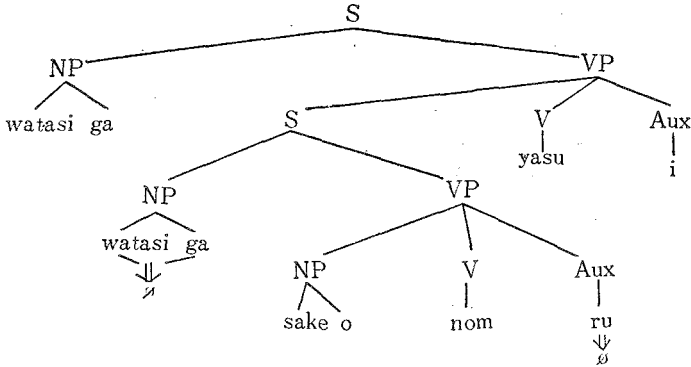
However, if the Subject Noun of the matrix sentence matches the Object Noun of the embedded sentence, we have a different situation. Namely, the Object NP of the embedded sentence is deleted by T Ib and the Subject NP of the embedded sentence is topicalized optionally and it is transposed to the head of the sentence.

sake ga —(S)— yasu +i.
'Wine is easy ...'
watasi ga sake o nom +ru.

Diagram 30

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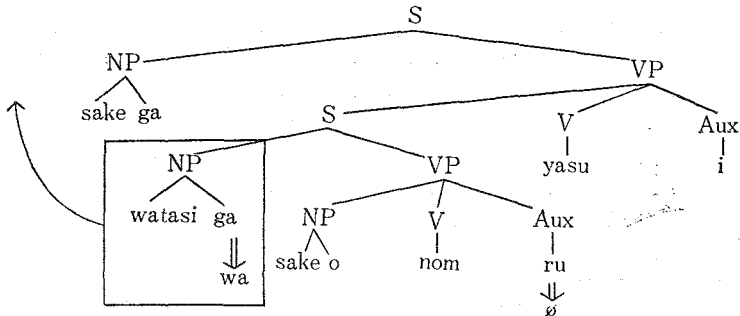
22. nom+yasu+i → nomiyasui.

'I drink wine.'

watasi wa sake ga nomiyasui.[23]

'It is easy for me to drink wine.'

19. niku (Difficulty)

watasi ga —(S)— niku +i.

'It is difficult for me ...'

watasi ga kono hon o yom +ru.

'I read this book.'

watasi ga kono hon o yominikui.[24]

'It is difficult for me to read this book.'

Diagram 31
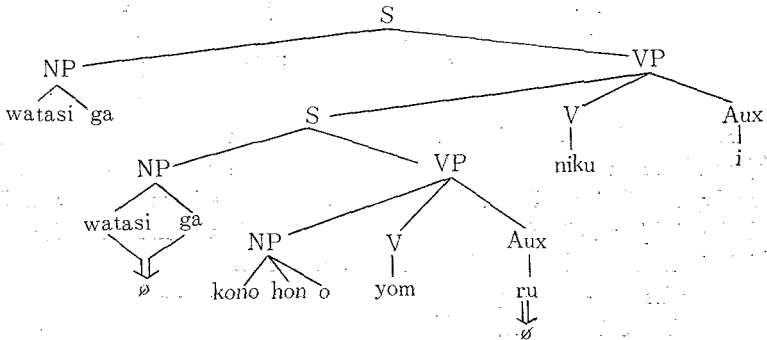
The same situation as we had in the case of 'yasu' again takes place here. Namely, if we have different NPs for the Subject both in the embedding and embedded structures and if the Object Noun of the embedded structure matches the Subject Noun of the embedding structure, the grammatical change illustrated in the following example is required.

kono hon ga —(S)— niku +i.

'This book is hard ...'

watasi ga kono hon o yom +ru.

'I read this book.'

---

23. sake ga watasi ga nomiyasui → sake ga watasi wa nomiyasui → watasi wa sake ga nomiyasui.

24. yom+niku+i → yominikui.

watasi wa kono hon ga yominikui.[25]
'This book is hard for me to read.'

Diagram 32
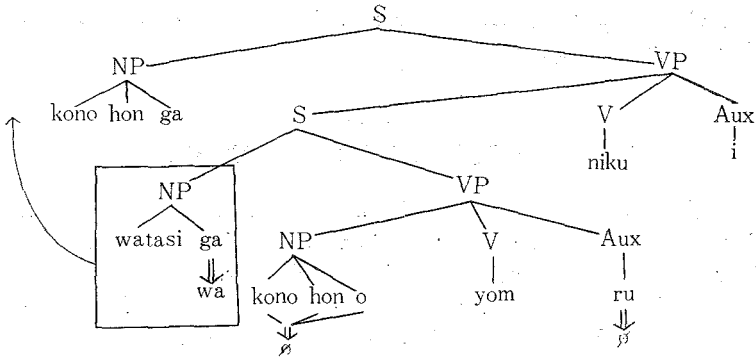
20. hosi (Wish)

watasi ga —(S)— hosi katta.
'I wished to ...'
kimi ga tegami o kak +ta.
'You wrote a letter.'

Diagram 33

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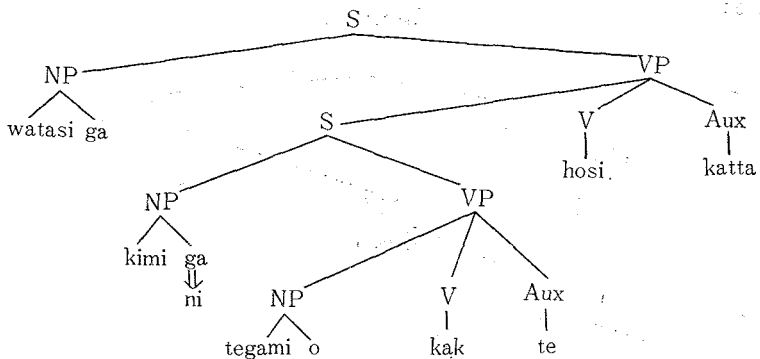
25. kono hon ga watasi ga yominikui → kono hon ga watasi wa yominikui
→ watasi wa kono hon ga yominikui.'

watasi wa kimi ni tegami o kaitehosikatta.

'I wished you to write a letter (for me).'

This embedding verb 'hosi' requires a different Subject Noun in the embedded sentence. The transformation procedure is almost identical to 'rare' except for the fact that this 'hosi' requires the embedded verb to have gerundive form.

CHAPTER III
NOUN PHRASE COMPLEMENTION

In Japanese, there are some instances of Noun Phrase Complementation that resemble Verb Phrase Complementation. I would like to briefly discuss those pseudo types in this chapter.

One of those pseudo forms has the NP consisting of a sentence, the noun 'koto', and the particle 'to.' For example,

watasi wa <u>kare ga iku koto to</u> <u>omou.</u>

      NP   V

'I think that he will go.'

In spite of its resemblance to some of the Verb Phrase Complementation types which we have studied in the preceding chapters, this is not generated as the result of a Verb Phrase embedding.

The above structure might be assigned the following Phrase Structure:

Diagram 34
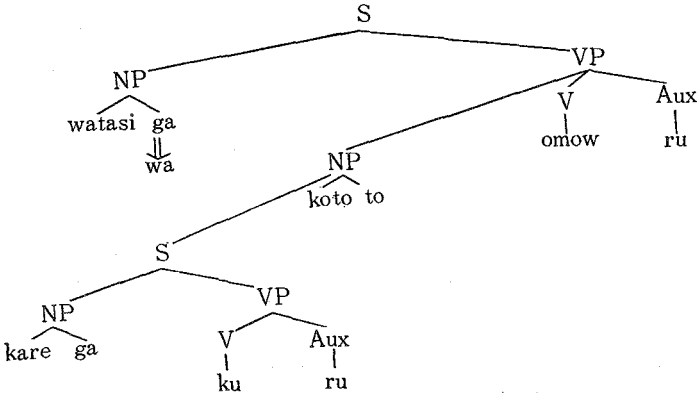
Namely, 'S+koto' is supposed to be an example of Noun Modification. However, unlike other Noun Modification Patterns, the noun 'koto' in the matrix sentence does not require a matching noun in the embedded sentence. Looking at the above diagram, we can distinctly observe the essential difference between NP Complementation type in question and the VP Complementation types we have discussed so far in their underlying structures. The following is another typical example having 'koto' -

watasi wa iku koto ga dekiru.
      NP   V

'I am able to go.'

The reason that we cannot regard the above structure as a VP Complementation is simply that we can neither explain where 'koto' came from as a constituent nor consider that it is a part of the Verb 'dekiru' (if it is ever an embedding verb), because of the Particle 'ga' which intervenes between 'koto' and 'dekiru.'

It seems that it is much easier and more adequate to describe this structure as an NP Complementation type having the following underlying structure.

Diagram 35
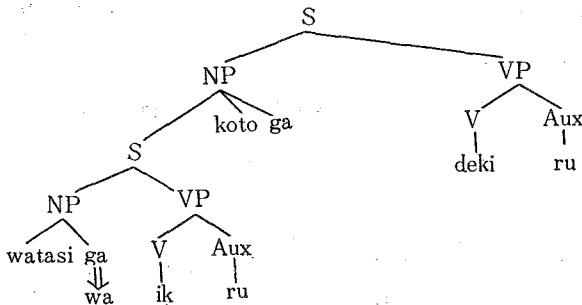
One more case is the NP Complementation Construction with 'no.' The sentence

watasi wa tomato ga kirai da.

'I dislike tomatoes.'

resembles some of the VP Complementation types we have studied in

its outlook. We might guess that this was derived somehow from the verbal structure

> watasi ga tomato o kirau.
> 'I dislike tomatoes.'

and some embedding structure. However, at present it is impossible for me to present any convincing and adequate set of rules to generate the above by means of VP Complementation procedure. It appears that the only possible solution that I can present now is to explain it as an NP Complementation form. Namely, I propose to assign the following structure to the sentence in question.

Diagram 36

Although I am not able to present any proper rules to handle the conversion

> kiraw + ru + no → kirai

and

> de + ar + ru → da

at present, it seems that it is more convincing to analyze this construction as an NP Complementation Construction as shown above.

If we could add 'beki "(necessity)"' 'tumori "(intention)"' etc. to the same Noun category as 'koto' and 'no', then we could easily explain such constructions as:

> kare ga hon o yomubekida.
> 'It is necessary for him to read the book.'

watasi wa gakkoo e ikutumorida.
'I intend to go to school.'
as Noun Phrase Complementation types.

CONCLUSION

The main parts of the the grammar the author has dealt with in this paper introduce some new ideas on the generation of Verb Phrase Constructions in Japanese by means of embedding.

I argued that Japanese Verb Phrase Complementation is best explained by embedding, because as it has been introduced here, a handful of rules can take care of all the variety of Verbal Complementation Types which have been described both by traditional and some generative linguists in intolerably complicated ways.

In fact, many forms which I have chosen for discussion here have been analyzed by other linguists using other procedures in such a way that the analysis of Auxiliaries still play the most important role in their grammars. Smith's and Tang's are typical examples having the defect. Inoue's also partly suffers from the same trouble. Actually, the greatest difference between my approach and theirs lies in the fact that I started my description on the premise that Japanese has only two kinds of Auxiliaries, namely Auxiliaries of Time and Politeness. Though I was not concerned with Politeness Auxiliaries in this study, by simplifying the Auxiliary system in such a way that 'ru (Non-Past)', 'ta (Past)', 'te (Gerundive)' are the only forms relevant to syntactic description, my grammar had a merit that it has become far simpler than others'. Especially, by considering that 'te' is the base form for an embedded Verb Phrase, I discovered that other embedded form 'base+ø' could easily be derived from it.

So far as I know, nobody has ever argued that in Japanese an adjective is essentially a verb. Nobody has ever doubted the traditional way of dividing the noun-modifying form-classes into adjectives and verbs. However, I argue that it is not necessary to set a distinction between adjectives and verbs within these two form-classes from a syntactic and morphological point of view. Comparing Japanese relative clause constructions in which these two form-classes are used, we

can easily notice that they actually share many common features. In carrying out the present analysis, this notion was reinforced in me by the fact that the embedding adjectives function exactly like embedding verbs. In fact, by treating some 'adjetives' as embedding verbs, I was able to simplify my grammar to a great extent.

As I briefly stated in Chapter III, some Noun Phrase Complementation Constructions are superficially similar to Verb Phrase Complementation Constructions. Although I gave some information as to the two complementation types in attempting to differentiate them from each other, the fact still remains that a Verb Phrase Complementation type and a Noun Phrase Complementation type share much of the same ground in many respects. On this basis, we may argue that there is a possibility that they can be handled as one complementation type in a more economical grammar. In this point it may be proper to say that Japanese shares this feature with many other languages in the world.

If we pursue our analysis with these facts about the verb-adjective relationship and the similarity of Verb-Noun Phrase system in Japanese in mind, the grammar of the language can be simplified still further. Not only from the point of view of economy of description and the theory of language universals, but also for the sake of a new adventure in the grammatical analysis of the language, this would present an ideal point of departure for furture study.

BIBLIOGRAPHY

Bloch, Bernard. "Studies in Colloquial Japanese, I, Inflection," *Journal of American Oriental Society*, LXVI (1946), pp. 97–109.

――――. "Studies in Colloquial Japanese, II, Syntax," *Language*, XXII, No. 3 (July-September, 1946), pp. 200–248.

Also reprinted in Martin Joos, ed. *Readings in Linguistics*, pp. 154–185.

――――. "Studies in Colloquial Japanese, III, Derivation of Inflected Words," *Journal of American Oriental Society*, LXVI (1946), pp. 304–315.

Chomsky, Noam. *Aspects of the Theory of Syntax.* Cambridge: The M. I. T. Press, 1965.

Hasegawa, Kinsuke. "Nihongo Bunpoo Siron (An Attempt in Japanese Grammar)", *Gengo-Bunka (Language Culture)* No. 1 (1964), pp. 3–46.

Inoue, Kazuko. *Syntax of Japanese.* Doctoral dissertation, The University of

Michigan, 1965.

Kuroda, Sigeyuki. *Gengo no Kizyutu (Description of Language)*, Tokyo, Ken-kyusya, 1960.

————. "Causative Forms in Japanese," *Foundation of Language*, Vol. I, No. 1, pp. 30–50.

————. "Ga, O oyobi Ni ni tuite (About *ga, o* and *ni*)", *Kokugogaku (Studies in Japanese Language)*, Vol. LXIII, No. 12, December, 1965.

Mikami, Akira. *Nihongo no Koobun (Constructions of Japanese)*, Tokyo, Kuro-sio Publishing Co., 1963.

————. *Nihongo no Ronri (Logic of Japanese)*, Tokyo, Kurosio Publishing Co., 1963.

Tang, Charles T. "A Transformational Analysis of Japanese Verbs and Verb Phrases." Unpublished Master's thesis, The University of Texas, 1965.

Ueda, Akiko. "The Adnominal Modification in Japanese." Doctoral dissertation, The University of Texas, 1965.