A COMPARATIVE STUDY OF NOUN-HEAD MODIFICATION PATTERNS IN ENGLISH AND JAPANESE

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INTRODUCTION

I have long wanted to find out the similarities and differences between English and Japanese. If they are made clear, it will save much time and labour which has been wasted in learning and teaching English. The result of such a study would be invaluable. So I have been interested in the comparative study of English and Japanese. Some time ago my attention was called to Kleinjans' study titled *COMPARATIVE STUDY OF ENGLISH & JAPANESE AND ENGLISH TEACHING*. No book had ever attracted me more than this, because it was the most systematic and logical one among the comparative studies I had read. As it was based on a definite linguistic and other scientific theory, it was logical. Then I decided to try a comparative study myself.

The aim of this paper is to make clear the noun-head modification patterns in English and Japanese and compare them from the transformational point of view.

CHAPTER I BACKGROUND OF THIS STUDY

I.1. REVIEW OF THE COMPARATIVE STUDY BETWEEN ENGLISH AND JAPANESE. It was C. C. Fries who began to emphasize the importance of comparative study between English and Japanese. He set forth a new approach to language teaching:

> The fundamental feature of this new approach to language teaching is a new basis upon which to build the teaching materials. This new approach to the selection and ordering of the materials for teaching rests upon
> (a) a scientific descriptive analysis of the language to be learned, e.g., English ;
> (b) a similar scientific descriptive analysis of the language of the learner, e.g., German ;
> (c) a systematic comparison of these two descriptive analyses in order to bring out completely the differences of structural patterning of the two language systems.[1]

Did the Japanese become aware of the need for the comparative study of English and Japanese for the first time through Fries' suggestion? No. The task of teachers of English has been to find out the similarities and differences between English and Japanese, since they began to teach the language, English. In 1940, about 10 years before the introduction of Fries' theory, the book which seems to be the first attempt at a well arranged comparative study was published.[2] It consists of three chapters; I. Comparison of parts of speech, II. Comparison of sentences, and III. Comparison of pronunciation and stress. Although its preface includes good ideas which are somewhat similar to Fries', the basis is considerably weak. Do the so-called parts of speech rest on the same foundation in English and Japanese? Are they classified from the identical point of view? Are they defined objectively?

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[1] Charles. C. Fries, *American Linguistics and the Teaching of English*, Tokyo, Taishukan, 1957, pp. 70–71.

[2] Torajiro Sawamura, *Nihongo to Eigo no Hikaku*, Tokyo, Kenkyusha, 1940.

After the introduction of the Fries theory, we can find some books of comparative study, for example, "Nichi-Ei ryoogo no Hikaku" in *Kotoba no Kyooiku*[1] and *Bara to Sakura*.[2] These books, however, do not follow Fries' theory. The next statement serves as a suitable criticism of these books.

> Good teachers of a foreign language have often, from their experience, hit upon many of the special difficulties of their students. But such good results from practical teaching experience alone are unsystematic and uneven because they are not related to any principle which would provide a thorough and consistent check of the complete language material itself and reveal the essential nature of the difficulties.[3]

Unfortunately, a comparative study which has its basis in linguistic theory cannot be found in Japan. Everett Kleinjans' contribution in 1956 seems to be the first.

I.2. SOURCE OF THIS STUDY. The fruit of Kleinjans' study is the book, *A Descriptive-Comparative Study Predicting Interference for Japanese in Learning English Noun-Head Modification Patterns*.[4] As the title shows, this study has not only a comparison but also a prediction of interference in view. He set up the procedure according to *Linguistics across Cultures*[5] by Robert Lado. He used *The Modification of Substantive Head Construction in Present Day English*, University of Michigan Doctoral Dissertation No. 2128. 1944, for the English material. As for the Japanese structure, he analysed it by himself, based on Fries' approach. After the comparison, he tested some Japanese students in order to check the validity of the points of interference and the levels of interference which were indicated by the comparison. Then he succeeded in giving the proof:

> The amount of interference that a Japanese student learning English noun modification patterns will encounter is a function of the differences between the two languages.[6]

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[1] Edited by Yoshimoto Endo, Tokyo, Nakayama Shoten, 1958, pp. 236–263.

[2] Minoru Umegaki, Tokyo, Taishukan, 1961.

[3] Fries, *op. cit.*, p. 71.

[4] Tokyo, Taishukan, 1959.

[5] Tokyo, Taishukan, 1959, translated by Akiko Ueda.

[6] Kleinjans, *op. cit.*, p. 288.

According to Kleinjans' suggestion in the preface of his book, I could have chosen some other problems, such as the comparison of verb-head modification patterns or distribution of adverbs. The reason why I chose to compare the same structure again in this paper is that the linguistic theory on which Kleinjans' study is based has become somewhat weak now. So I intend to try a new approach on the modification structure with noun head which was shown to be a very significant part of English syntax.[1]

I.3. THEORY ON WHICH THIS STUDY IS BASED. What I called " a new approach " above is the one based on the theory of generative grammar. This theory is said to be the result of the last thirty years' study in descriptive linguistics. Its founders are Zellig Harris and Noam Chomsky. They consider the grammar of some language to be a device that generates all the grammatical sequences of the language and none of the ungrammatical ones. According to Chomsky, it consists of phrase structure, transformational structure, and morphophonemic structure. He says:

> We can greatly simplify the description of English and gain new and important insight into its formal structure if we limit the direct description in terms of phrase structure to a kernel of basic sentences (simple, declarative, active, with no complex verb or noun phrases), deriving all other sentences from these (more properly, from the strings that underlie them) by transformation, possibly repeated. . . .
> We consequently view grammars as having a tripartite structure. A grammar has a sequence of rules from which phrase structure can be reconstructed and a sequence of morphophonemic rules that convert strings of morphemes into strings of phonemes. Connecting these sequences, there is a sequence of transformational rules that carry strings with phrase structure into strings to which the morphophonemic rules can apply.[2]

Among these three structures, phrase structure and morphophonemic structure have, though they are more precise and systematic, the substantial equivalents in the earlier approach. But the transformational structure is quite new. This is important because it can solve some

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[1] *Ibid.*, p. 170.

[2] Noam Chomsky, *Syntactic Structures*, The Hague, Mouton & Co., 1957, pp. 106–107.

problems which could not be well treated before. For example, it explains the case of what is called the constructional homonymity.[1]

The phrase " light house keeping " can be interpreted in two ways.

1) light / house keeping

2) light house / keeping

The difference between 1) and 2) exists in the underlying sentences of these phrases. In other words, 1) is derived from the sentence

3) house keeping is light

and 2) is from

4) they keep a light house.

As is implied in the above example, an observation of this kind is very useful for a deeper analysis of the noun-head modification patterns.

I.4. RELEVANT PARTS OF ENGLISH AND JAPANESE STRUCTURE. Before discussing the noun-head modification patterns, we must consider the structures of English and Japanese briefly. First of all, the term " noun-head modification pattern " must be made clear. It means the endocentric construction whose head is a noun. Any construction which has the same function as one or both of its ICs is endocentric and that constituent which has the same function as the whole construction is the head. So the noun-head modification pattern functions in the same way as a noun. There arises a question, " what is a noun? " This question is so big that it cannot be answered here. The traditional definition based on the lexical meaning has no value. Nor is one like Fries' acceptable.

As for the parts of speech, his idea is shown in the following statements:

> We have assumed here that all words that could occupy the same " set of positions " in the patterns of English single free utterances must belong to the same part of speech. We assumed then that if we took first our minimum free utterances as test forms we could find all the words from our materials that would fit into each significant position without *a change of the structural meaning*.[2] (the italics are mine)

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[1] H. A. Gleason, Jr., *An Introduction to Descriptive Linguistics*, Rev. ed., New York, Holt, Rinehart and Winston, Inc., 1961, p. 136.

[2] C. C. Fries, *The Structure of English*, New York, Harcourt, Brace & Company, 1952, p. 74.

But how can we tell " a change of the structural meaning "? Without an explanation to this question, his way of definining parts of speech is inadequate.

After his classification of parts of speech, he cited the following instances as one of the modification structures and its contrast.

5) A <u>burning</u> <u>fire</u> is in the fireplace.
      2-ng   1

6) A <u>fire</u> <u>burns</u> in the fireplace.[1]
    1   2

Comparing these two sentences, he says the following:

> . . . the forms of a Class 2 word connected with a Class 1 word by the structure of " modification " differ from those of a Class 2 word connected with a Class 1 word to make a sentence. In the structure of modification the Class 2 words are either of —ing form or of —ed form and occupy " positions " other than that of the Class 2 word to make the structure of a sentence.[2]

This statement is not so different from the sentence, " Participles, (1) in —ing, (2) formed in various other ways, may in some respects be considered adjectives."[3]

How can we describe the fact that " burns " and " burning " belong to one class and function in different ways? Some observations on a deeper level are required for this. In short, the transformational analysis will serve here. The sentences citied above are different because one has undergone the transformation and the other has not. Sentence 5) is made from two sentences, "A fire burns " and "A fire is in the fireplace." When "A fire burns " is nominalized, we get "A burning fire " and it is inserted into a sentence "A fire is in the fireplace " instead of "A fire." In this way, we can explain the proper reason why " burns " and " burning " are considered as belonging to the same part of speech.

It is true that the classification of parts of speech is done easily by native speakers without precise definition. The contention that the grammar should be able to describe objectively the feeling and intuition

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[1] *Ibid.*, p. 208.

[2] *Ibid.*, pp. 207–208.

[3] O. Jespersen, *A Modern English Grammar on Historical Principles*, Part VII, London, George Allen and Unwin Ltd., 1949, p. 45.

of native speakers is desirable. For this purpose, linguists must describe the grammar tentatively, having their eyes on the final truth. The definition of parts of speech must be made near the end of the description of the grammar. So I begin this paper without any definition which might be comparable to what has been done before. From now on I shall write English and Japanese phrase structure rules,[1] though tentatively, in order to show how I consider the kernel sentences. It can be a new kind of definition. That is, every symbol is defined by the rules which follow it.

I.4.1. ENGLISH PHRASE STRUCTURE.[2]

1. Sentence $\longrightarrow$ NP + VP

2. VP $\longrightarrow$ Aux + MV

3. MV $\longrightarrow \left\{ \begin{array}{c} \text{be} + \text{Pred} \\ \text{V} \end{array} \right\}$ (Adv$_1$) (Adv$_t$)

4. V $\longrightarrow \left\{ \begin{array}{c} \text{Vt} + \text{NP} \\ \text{Vi} \end{array} \right\}$ (Adv$_m$)

5. V$_t$ $\longrightarrow \left\{ \begin{array}{l} \text{V}_c + \text{Comp} \\ \text{Vx} + \text{P} \\ \text{Vtr} \end{array} \right\}$

6. NP $\longrightarrow \left\{ \begin{array}{l} \text{NP}_1 \\ \text{PP (Pl)} \\ \text{NPr} \end{array} \right\}$

7. NP$_1$ $\longrightarrow$ (Tp) T $\left\{ \begin{array}{l} \text{Nc (Pl)} \\ \text{Nu} \end{array} \right\}$

8. Aux $\longrightarrow$ Tns (M) (have + en) (be + ing)

9. Tns $\longrightarrow$ Present, Past

10. M $\longrightarrow$ will, can, shall, etc.

11. Npr $\longrightarrow$ Robert, Jacqueline, etc.

12. PP $\longrightarrow$ he, you, I, etc.

13. Nu $\longrightarrow$ milk, kindness, etc.

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[1] I want to convey my thought about the basic structures of English and Japanese here. So I write the brief phrase structure rules only and omit the detailed transformational and morphophonemic rules.

[2] Kinsuke Hasegawa, " Henkei bunseki ", *Hitotsubashi Ronso*, No. 5, Vol. 49.

14.	Vi	$\longrightarrow$	go, walk, etc.
15.	Vtr	$\longrightarrow$	strike, take, etc.
16.	P	$\longrightarrow$	in, out, up, away, etc.
17.	Vx	$\longrightarrow$	object, etc.
18.	Vc	$\longrightarrow$	make, consider, etc.
19.	T	$\longrightarrow$	the, a/an, etc.
20.	Tp	$\longrightarrow$	some of, all of, one of, etc.
21.	Nc	$\longrightarrow$	boy, house, animals, etc.
22.	Adv_1	$\longrightarrow$	there, here, etc.
23.	Adv_t	$\longrightarrow$	yesterday, now, etc.
24.	Adv_m	$\longrightarrow$	happily, hastily, etc.

I.4.2. JAPANESE PHRASE STRUCTURE.[1]

1.	Sentence	$\longrightarrow$	Pred + PM
2.	Pred	$\longrightarrow$	(Rph) Nuc
3.	Nuc	$\longrightarrow$	$\begin{Bmatrix} (VP) \\ (AP) \\ (CP) \end{Bmatrix}$
4.	Rph	$\longrightarrow$	NP + P
5.	VP	$\longrightarrow$	(Adv) V
6.	AP	$\longrightarrow$	(Adva) A
7.	CP	$\longrightarrow$	NP + D
8.	NP	$\longrightarrow$	$\begin{Bmatrix} (Td) \ Nc \\ Na \\ Nadv \\ KSAD \end{Bmatrix}$
9.	Nc	$\longrightarrow$	hon, inu, etc.
10.	Na	$\longrightarrow$	kirei, sizuka, etc.
11.	Nadv	$\longrightarrow$	kyoo, hitotu, etc.
12.	KSAD	$\longrightarrow$	kore, sore, are, etc.
13.	PM	$\longrightarrow$	(T) U
14.	V	$\longrightarrow$	yoM, hikaR, etc.
15.	A	$\longrightarrow$	samuK, hayaK, etc.

[1] *Ibid.*

16. Adv	$\longrightarrow$	dondon, hayaku, etc.
17. Adva	$\longrightarrow$	totemo, etc.
18. P	$\longrightarrow$	ga, wa, mo, etc.
19. Td	$\longrightarrow$	aru, waga, etc.

I.5. PROCEDURE. First, I will collect what seem to be a noun-head modification structures and then classify them according to their constitutent structures. Next, I will consider the underlying sentences of the data and re-classify them by the transformational procedure. After that, I will compare the English and Japanese noun-head modification patterns. The sources of my data are as follows: ˋ

William L. Clark, *Spoken American English* advanced course, Tokyo: Kenkyusha, 1957.

O. Henry, *After Twenty Years*, Tokyo: Kenkyusha, 1957.

Dora Jane Hamblin, " Mrs. Kennedy's Decisions Shaped All the Solemn Pageantry " in *LIFE*, John F. Kennedy Memorial Edition, 1963.

Kyosuke Kindaiti, *et al.*, *Kokugo* 6th grade book I, Tokyo: Sanseidoo, 1960.

Naoya Shiga, *Manazuru*, Tokyo: Iwanami, 1947.

Anonymous, " Nageki no Jacqueline Miboozin " in *Syukan Asahi*, vol. 2326, pp. 18–19, December, 1963.

The reason I chose these is that they seem to provide good samples of present-day English[1] and Japanese.

CHAPTER II ENGLISH NOUN-HEAD MODIFICATION PATTERNS

II.1. As briefly suggested in chapter I., I.2., most of the noun-head modification structures both in English and Japanese, are constructed by transformation. It is what we call nominalization. It changes a sentence into a nominal phrase. The following series of expressions[2] shows the process of this kind of change.

1) A dog is barking.

2) a dog which is barking

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[1] In this case, I used American materials only.

[2] R. B. Lees, " The Constituent Structure of Noun Phrases," *American Speech*, vol. 36, pp. 159–168, 1961.

3) a dog barking

4) a barking dog

Any speaker of English knows that these nominal expressions have a close relationship to each other. Not only is this known by intuition, but there is also a formal ground for it. We never say

5)* The dog is scattering

and neither

6)* the dog which is scattering

7)* the dog scattering

8)* the scattering dog.

The restrictions on 5) is carried on to 6), 7), and 8). Similarly, we realize that 2), 3), and 4) are derived from 1). So it is better to treat 1)–4) together as well as 5)–8).

Japanese has similar examples.

9) sensei ga hon o motte iru   先生が本を持っている

10) sensei ga motte iru hon   先生が持っている本

11) sensei no motte iru hon   先生の持っている本

When we substitute " kite " for " motte," the results are all ungrammatical.

12)* sensei ga hon o kite iru   先生が本を着ている

13)* sensei ga kite iru hon   先生が着ている本

14)* sensei no kite iru hon   先生の着ている本

Through these examples, we understand that Japanese has a like process in nominal phrase formation.

In this chapter, I will investigate the regularities which seem to underly the English noun-head modification patterns, and treats Japanese in the next chapter.

II.2. I collected all the noun-head modification structures from the materials above mentioned and got 1157 examples. Most of them can be described as the transforms from sentences. I classified them according to their constituent structure. The constituent structure types are as follows.[1]

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[1] *Noun* is the head of the structure.

1) *Noun* + Clause   2) *Noun* + Phrase

3) V$\frac{-ed}{-ing}$ + *Noun*   4) Adjective + *Noun*

5) Noun's + *Noun*   6) Pronoun + *Noun*

7) Noun + *Noun*   8) Exceptions

Following the order listed above, I will explain each of them.

II.2.1. *Noun* + Clause (57)[1] The following subdivisions are found possible for this type.

(1) a *famous short story which* whets the reader's curiosity (S)[2]

(2) The *people that* go to visit zoos (S)

(3) the *man who* had come a thousand miles (A)

(4) an *Irish Guard funeral drill* he had seen (L)

(5) the *catafalque upon which* the coffin would lie (L)

(6) a *place where* the student can live (S)

(7) *Tuesday evening when* the crowds had gone (L)

(8) the *fact that* kindness is a fine virtue (S)

(9) *Robert Kennedy, who* hardly left her side (L)

These are all transforms but there are some differences as shown above. Their differences exist on several levels. On the transformational level, (8) is different from the others. This is made from two sentences and underwent nominalization twice. The sentence

(10) kindness is a fine virtue

is nominalized by the addition of *that* and then inserted into the matrix sentence,

(11) the fact is X

instead of X. In consequence of this transformation, we get the sentence

(12) the fact is that kindness is a fine virtue.

If we nominalize (12), we get

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[1] This means the number of the examples which belong to this type.

[2] (S) is the example from *Spoken American English*, (A) is from *After Twenty Years*, and (L) is from *LIFE*. Among these examples, there are many phrases which underwent several transformation such as, passive transformation, or conjunction. But I neglect the order of these transformations, and deal wth the nominalization only.

(13) the fact which is that kindness is a fine virtue.

After the deletion of " which is " from (13), the phrase (8) is aquired.

As is indicated above, given a structure X + NP + Y (X and Y can stand for anything, including null), we can nominalize it by changing it into NP + WH + X + Y. Considering the case of (1), the given sentence is:

$$(14) \quad \underbrace{\text{a famous short story}}_{\text{NP}} \underbrace{\text{whets the reader's curiosity.}}_{\text{Y}} \quad X = \text{null}$$

WH is replaced by *which* or *who*, in compliance with the kind of NP. When NP is human, WH is *who,* otherwise, *which.* WH is reducible to *that* or zero. Examples (1), (2), (3), (4) are different because of what is chosen for WH. The underlying structures of (2), (3), (4) are considered as follows:

(15) The people go to visit zoos

(16) the man had come a thousand miles

(17) he had seen an Irish Guard funeral drill

(9) is the case of " non-restrictive " modifier. It is known by a comma which represents the phonological separation. In this case, WH cannot be reduced to *that* or zero. Besides, proper nouns can be modified only in this case, for we have no structure like

(18)* Robert Kennedy who hardly left her side.

The underlying structure of (9) is:

(19) Robert Kennedy hardly left her side.

Examples (5), (6), (7) are a case in which the preceding element of NP in the underlying structure is a preposition. In this case, we can nominalize the structure X + P + NP + Y by changing it into NP + P + WH + X + Y. After this transformation we can change P + WH into *when* or *where* according to the character of NP. For example, the underlying structure of (5) is:

$$(20) \quad \underbrace{\text{the coffin would lie}}_{\text{X}} \underbrace{\text{upon}}_{\text{P}} \underbrace{\text{the catafalque.}}_{\text{NP}} \quad Y = \text{null}$$

Structure (20) is changed into (5) by the rule mentioned above. The example in the data is (5), but this can also be:

(21) the catafalque where the coffin would lie.

(6) and (7) are derived in the following way.

(6): the student can live in a place $\longrightarrow$

a place in which the student can live $\longrightarrow$

a place where the student can live

(7): the crowds had gone on Tuesday evening $\longrightarrow$

Tuesday evening on which the crowd had gone

Tuesday evening when the crowd had gone

About this type, *Noun* + Clause, Kleinjans cites four structures, *NJV*, *NJN-V*, *NN-V* and *NFJN-V*.[1] However, according to the method which I demonstrated, we need not divide them as he does. We can sum up the transformational rules which generate this type of noun-head modification patterns as follows.[2]

1. $X + NP + Y \longrightarrow NP + (,)WH + X + Y$

2. $X + P + NP + Y \longrightarrow NP + P + WH + X + Y$

3. $X + NP + WH + be + that + Y \longrightarrow X + NP + that + Y$

II.2.2. *Noun* + Phrase (246) Here we have seven subdivisions such as:

1)	$N + P(T)N$	(203 examples)
2)	$N + Adv$	(2)
3)	$N + (,)NP$	(4)
4)	$N + AP$	(3)
5)	$N + V—ing$	(11)
6)	$N + V—ed$	(15)
7)	$N + to\ V$	(8)

Most of them are made through the same procedure, but four exceptional examples are among them. Two of the exceptions have the constituent structure $N + P(T)N$ and the other two are $N + V—ing$ and $N + to\ V$ respectively. They are

(22) a *face with* keen eyes (A)

(23) in *the door of* the hardware store (A)

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[1] J=WH, F=P.

[2] These rules show only the brief change of structures. See p. 68.

(24) *names consisting* of several Greek letters (S)

(25) the *only person to have* had his finger bitten off by a rabbit (S)

(22) and (23) are the result of the optional reduction of the structure $N_1 + WH + have + NP_2$. The reduction of (22) is somewhat simpler than that of (23). The reduction rule of (22) is

4. $X + NP_1 + WH + have + NP_2 + Y \longrightarrow$
$$X + NP_1 + with + NP_2 + Y.$$

That is, (22) has the underlying structure as follows:

(26) a face has keen eyes.

This is nominalized by rule 1 as below:

(27) a face which has keen eyes.

Then (27) is changed to (22) by rule 4. In the case of (23), the underlying structure is:

(28) the hardware store has the door.

This is nominalized by rule 1 to

(29) the hardware store which has the door.

The change from (29) to (23) contains two processes. First, (29) is changed into

(30) the hardware store's door

by the rule

5. $NP_1 + WH + have + NP_2 \longrightarrow NP_1 + Gen + NP_2.$

Then, when NP_1 is inanimate, it must be shifted into a following prepositional phrase with *of*. The rule of this shift is

6. $X + NPin + Gen + NP_2 + Y \longrightarrow X + NP_2 + of + NPin + Y.$[1]

By the application of rule 6, (30) is obligatorily altered to (22).

Example (24) is a case where the following element of WH is a non-activity verb. These kind of verbs do not have any so-called " progres-

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[1] The reason why rule 5 and 6 are arranged in this order is that the rule 6 can be available in the other respects. For example, on the nominal construction " the machine's humming," derived from " the machine hums," the rule 6 can be applied and we get " the humming of the machines." Transformational rules must be as general as possible. c.f. R. B. Lees, *The Grammar of English nominalizations*, The Hague, Mouton & Co., 1963, pp. 104–105.

sive " forms.[1] In this case, WH + Vna[2] can be altered by the deletion of WH and the addition of Ing to Vna. The optional rule for this is:

7. X + NP + WH + Vna + Y $\longrightarrow$

$$X + NP + Vna + Ing + Y.$$

The underlying structure of (24) is:

(31) names consist of several Greek letters.

By the application of rule 1, we can change this into

(32) $\dfrac{\text{names}}{\text{NP}}$ $\dfrac{\text{which}}{\text{WH}}$ $\dfrac{\text{consist}}{\text{Vna}}$ $\dfrac{\text{of several Greek ltters.}}{\text{Y}}$ X = null

So if we apply rule 7, we can get (24).

Example (25) is very exceptional. This is the only example in the data where to + V is used to state the action that really happened. The word " only " brings forth this expression. No other word makes such a nominal. So, here, I only describe the fact that the peculiarity of " only " causes this exception.

Excluding the four exceptions mentioned above, the rest can all be considered to pass through the same process. It is the deletion of WH + be, rule 3 as suggested in II.2.1. We can generalize it to

9. X + NP + WH + be + Y $\longrightarrow$ X + NP + Y.

I will next cite some examples based on the constituent structure. As for the structure 1) N + P(T)N, twelve kinds of prepositions are found in the data. So I will write twelve examples for this structure and then one for the other structures 2), 3), 4), 5), 6), 7), respectively. The underlying structures are shown with examples.

(33) a *tall man* in a long overcoat (A)   —— N + in + T + N
a tall man who is in a long overcoat
a tall man is in a long overcoat

(34) the *feature about* zoos (S)   —— N + about + N
the feature which is about zoos
the feature is about zoos

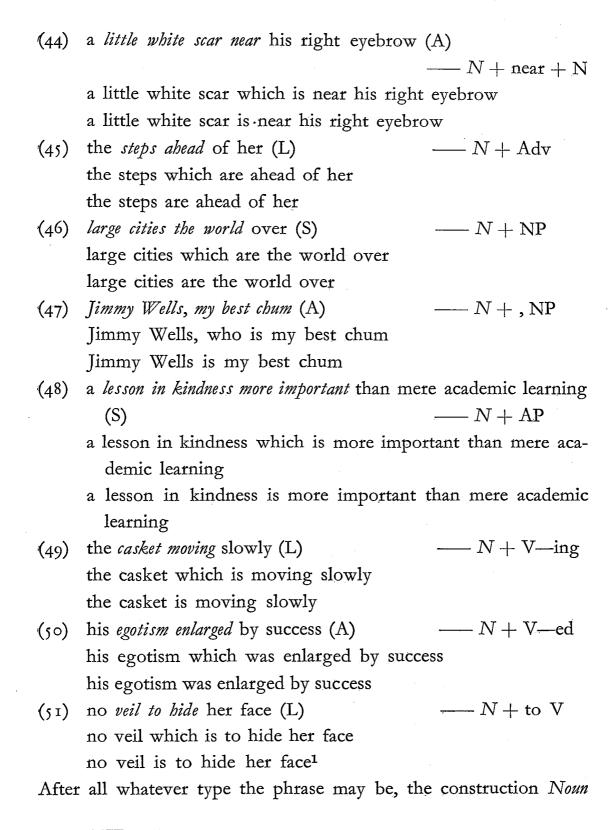(35) her *plans for* the next day (L)   —— N + for + T + N

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[1] Some non-activity verbs as " seem " must be eliminated. Because we have no utterance like "A man seeming wise."

[2] Nna = non-activity verb.

her plans which are for the next day

her plans are for the next day

(36) the *casket on* the first lap of

       its last journey (L) —— $N + on + T + N$

    the casket which is on the first

       lap of its last journey

    the casket is on the first lap of

       its last journey

(37) the *man from* the West (A) —— $N + from + T + N$

    the man who is from the West

    the man is from the West

(38) *signs to* the contrary (S) —— $N + to + T + N$

    signs which are to the contrary

    signs are to the contrary

(39) a *row of chairs beside* the grave (L) —— $N + beside + T + N$

    a row of chairs which is beside the grave

    a row of chairs is beside the grave

(40) a *long time between* meets (A) —— $N + between + N$

    a long time which was between meets

    a long time was between meets

(41) no *hand at* her shoulder (L) —— $N + at + N$

    no hand which was at her shoulder

    no hand was at her shoulder

(42) the *church behind* the cross (L) —— $N + behind + T + N$

    the church which is behind the cross

    the church is behind the cross

(43) the *statue of* the founder (S)[1] —— $N + of + T + N$

    the statue which is of the founder

    the statue is of the founder

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[1] The preposition *of* indicates several meanings. When its meaning is possession, we can distinguish it by the underlying sentence and the rule 6. As for other meanings, however, we cannot think of suitable underlying structures which indicate their difference. So, very tentatively, I will deal with the other cases as they have underlying sentence with *be*.

(44) a *little white scar near* his right eyebrow (A)

$$\text{---} N + near + N$$

a little white scar which is near his right eyebrow

a little white scar is ·near his right eyebrow

(45) the *steps ahead* of her (L) $\text{---} N + Adv$

the steps which are ahead of her

the steps are ahead of her

(46) *large cities the world* over (S) $\text{---} N + NP$

large cities which are the world over

large cities are the world over

(47) *Jimmy Wells, my best chum* (A) $\text{---} N + , NP$

Jimmy Wells, who is my best chum

Jimmy Wells is my best chum

(48) a *lesson in kindness more important* than mere academic learning

(S) $\text{---} N + AP$

a lesson in kindness which is more important than mere academic learning

a lesson in kindness is more important than mere academic learning

(49) the *casket moving* slowly (L) $\text{---} N + V\text{---}ing$

the casket which is moving slowly

the casket is moving slowly

(50) his *egotism enlarged* by success (A) $\text{---} N + V\text{---}ed$

his egotism which was enlarged by success

his egotism was enlarged by success

(51) no *veil to hide* her face (L) $\text{---} N + to\ V$

no veil which is to hide her face

no veil is to hide her face[1]

After all whatever type the phrase may be, the construction *Noun*

---

[1] This sentence should be considered as the result of some transformation. It is generated by the following process:

No veil is for it.   }→No veil is for someone to hide her face.
The veil hides her face.

               →No veil is to hide her face.

$+$ Phrase is the consequence of some deletion from the structure *Noun* $+$ Clause.

II.2.3. $V_{-ing}^{-ed} +$ *Noun*. (24) When we change the position of V_{-ing}^{-ed} in $N + V_{-ing}^{-ed}$, we get this type. In this case, V—ing must be what is generated not by rule 7 but rule 9. If V_{-ing}^{-ed} have some modifiers except manner adverbs which end with —ly, their position can not be changed. For example, (49) can be reduced to

(52) the slowly moving caskt

but (50) cannot be reduced to

(53)* the enlarged egotism by success.

Among the 24 examples, 14 belong to V—ed type and 10 to V—ing type. I will write some of them with their processes of reduction.

(54) The *waiting man* (A)

The man waiting

The man who is waiting

The man is waiting

(55) The *following dialogue* (S)

the dialogue following

the dialogue which is following

the dialogue is following.[1]

(56) a *waiting limousine* (L)

a limousine waiting

a limousine which is waiting

a limousine is waiting

(57) *pocketed hands* (A)

hands pocketed

hands which are pocketed

hands are pocketed

(58) the *other distinguished visitors* (L)

the other visitors distinguished

---

[1] This sentence is a variation of " the dialogue follows " which is more common.

the other visitors who were distinguished

the other visitors were distinguished

(59)   their *conquered foes* (S)

their foes conquered

their foes which were conquered

their foes were conquered

The rule of the transformation for this type is:

10. $X + NP + Vx + Y \longrightarrow X + Vx + NP + Y$

where $Vx = V$—ing or V—ed, obtained by the rule 9.

II.2.4.   Adjective + *Noun*. (408)   The formation of this structure is just the same as that of V^{-ed}_{-ing} + *Noun*.   In this case, except when the NP is *something, anything, nothing,* or *everything* and adjectives have post-modification, all the adjectives must be shifted to pre-nominal position. That is to say, the rule:

11. $X + NP + A + Y \longrightarrow X + A + NP + Y$

where NP $\neq$ something, etc.

Y does not include any modifier of A.[1]

is obligatory.   A case of adjectives with post-modification is shown in (48).   Some examples are indicated with their underlying sentences below.

(60)   the *gentle virtue* (S)

the virtue gentle

the virtue which is gentle

the virtue is gentle

(61)   the *poor man* (S)

the man poor

the man who is poor

the man is poor

(62)   a *handsome watch* (A)

---

[1] The modifiers with *to* are exceptions.   Because we have the expressions "A man more anxious to go " and "A more anxious man to go."   At first glance, the example (25), p. 48, seems to be the same case.   But it remains to be unique, for we don't have " the person only to have had his finger bitten off by a rabbit."

a watch handsome

a watch which is handsome

a watch is handsome

(63) *electric lights* (A)

lights electric

lights which are electric

lights are electric

(64) the *harsh sound* (L)

the sound harsh

the sound which is harsh

the sound is harsh

(65) the *eternal flame* (L)

the flame eternal

the flame which is eternal

the flame is eternal

II.2.5. Noun's + *Noun*. (28) They are made by rule 5. Some of the examples are shown below.[1]

(66) a *man's nose* (A)

(67) *'Big Joe' Brady's restaurant* (A)

(68) *her husband's effects* (L)

(69) *Jacqueline Kennedy's public duties* (L)

The underlying sentences of these examples are respectively as below:

(70) a man has a nose

(72) 'Big Joe' Brady has a restaurant

(72) her husband has effects

---

[1] There are some examples which cannot be regarded as the result of rule 5. For example, " Dallas' second assassination " cannot be considered as the reduction of " Dallas has the second assassination." As for the ambiguity of N's *N* structure, Kleinjans cites two examples, " Picasso's picture " and " a woman's handkerchief." Besides the meaning of possession which can be dealt by rule 5, they have meaning of possession which can be dealt by rule 5, they have meanings " a picture by Piccaso " and " a handkerchief for women." The meaning of " Dallas' second assassination " is " the second assassination in Dallas." Considering these examples, I think there is a possibility of setting up a rule:

$$X + NP_1 + P + NP_2 + Y \longrightarrow X + NP_2 + Gen + NP_1 + Y,$$

although this rule needs to be checked by a native speaker.

(73)   Jacqueline Kennedy has public duties.

By rule 1, these sentences are respectively altered to

(74)   a man who has a nose

(75)   ' Big Joe ' Brady who has a restaurant

(76)   her husband who has effects

(77)   Jacqueline Kennedy who has public duties.[1]

When we apply rule 5 to these phrases, we get (66), (67), (68), and (69).

II.2.6.   Pronoun + *Noun*.   (155)   This is the case that pronouns take the place of a genetive noun in N's + N.   So, the rule to apply is 5 and the reductuion process is just the same as that of N's + N. Some of the examples and their underlying structures are as below:

(78)   *her job* (S)

       she has a job

(79)   *our friends* (S)

       we have friends

(80)   *my fortune* (A)

       I have a fortune

(81)   *your cigar* (A)

       you have a cigar

(82)   *its residents* (L)

       it has residents

(83)   *Their mother* (L)

       They have a mother

II.2.7.   Noun + *Noun*.   (102)   This type is so complicated that we cannot account for it by simple transformations.   Kleinjans treats this type very briefly and many problems are still left unsolved.   Even transformational analyses do not seem to be adequate enough to clarify this great problem at this time.   It requires much deeper study.   So I can only describe some of the examples here.

(84)   the *circus train* (S)

(85)   *college life* (S)

---

[1] The phrases (74) (75) (76) (77) do not actually exist.   They are nothing but one process of the formation of (66) (67) (68) (69).

(86) *cigar store* (A)

(87) the *restaurant door* (A)

(88) *coat collars* (A)

(89) *Saturday morning* (L)

(90) the *television audience* (L)

(91) The *night air* (L)

II.2.8.   Exceptions.   Here I will mention some idioms and the struc-
tures whose heads are derivative nouns.   Of course I could have classified
them into the groups above shown, according to their constituent
structures.   But they are too different from others to do that.   First,
I will mention what I call idioms.

(92)   tons of (S), a host of (S)

(93)   one of (S, etc.), some of (A), much of (L), all of (L), many of
(S), each of (A)

Examples listed in (92) are considered to be a kind of determiner,
and those in (93) are pre-determiner which I described in Phrase Struc-
ture rules as Tp.[1]   The reason for arranging them in this way is that
none of their constituents can be considered separately.   For example,
we cannot think of the underlying structure of " Tons of canvas " to be
"*Tons are of canvas."   This fact is common to all these examples.
So I treated them as elements of the kernel sentence.   18 examples
belong to these types.

Next, I will take up derivative nouns.   I said in chapter I that defin-
ing nouns is very difficult.   This is due to the nature of nouns.   It is
true that derivative nouns have the function of nouns, but it is also true
that they have many peculiarities.   When I collected examples, I did
not notice their peculiarities.   But trying to classify them, I could not
neglect their uniqueness.   Most of their modification structures are the
result of the nominalization by the derivative nouns.   For example,
" her husband's wishes " is the consequence of the nominalization of
wish in " her husband wishes."   If I want to describe all these examples,
I must digress from the noun-head modification structure and consider

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[1]

all kinds of nominalizations. For this reason, I only state in the present paper the fact that some of the noun-head modifications are the result of some other nominalization. 48 examples belong to this type and I will show seven of them.

(94) *his telling about* an Irish Guard funeral (L)
he told her about an Irish Guard funeral

(95) *most ungracious of me* (L)
I am most ungracious .

(96) *her return from the grave* (L)
she returned from the grave

(97) *their presence* (L)
they are present

(98) *dwellers of the ⌐arth* (S)
they dwell on the earth

(99) *their wearers* (S)
they wear them

(100) *a visit to a fortuneteller* (S)
they visit a fortuneteller

CHAPTER II JAPANESE NOUN-HEAD
MODIFICATION PATTERNS

III. I also collected all the noun-head modification structures from my materials in Japanese and got 600 examples. Just like in English, most of them are the transforms from some sentences. The constituent structure types which I classified are as follows:

1) Verb + *Noun*   2) Adjective + *Noun*

3) Copula + *Noun*   4) Noun no + *Noun*

5) KSAD + *Noun*   6) Exceptions

As is shown above, all the structures are pre-modifications.[1] The transformational rules for these structures are far simpler than that of

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[1] We have the construction which seems to be post-modification like " studio zen-tai " (K) (スタジオ全体), "Americazin ippan " (S) (アメリカ人一般). But these are single pause-groups. So I omit them from the modification structure. .

English. According to the order written above, I will describe each type.

III.1.   Verb + *Noun*.   (143)   We can set up the following rule for this type:

1. $X + NP + P + Y + VP + PM \longrightarrow$
$$X + Y + VP + PM + NP^1$$

In short, when we shift NP + P after the VP + PM and delete P, we can nominalize verbal expressions.   Six kinds of particles to be deleted, which are *ga*, *wa*,[2] *o*, *de*, *ni*, and *e*, appeared in the data.   I will indicate each type below with their underlying sentences.

(1)   mado kara sasu lamp no hikari (M)[3]   窓からさすランプの光

lamp no hikari *ga* mado kara sasu   ランプの光が窓からさす

(2)   kokoro no naka de waratte iru tomodati (K)   心の中で笑っている友だち

tomodati *ga* kokoro no naka de waratte iru   友だちが心の中で笑っている

(3)   soosiki o sisai sita Cushing suukikei (S)   葬式を司祭した カシング枢機卿

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[1] This rule is very brief.   See p. 69.

[2] The difference in the particles *wa* and *ga* is too complex to describe.   I could not find any books which distinguish them perfectly.   It is usually said that *wa* has a meaning to separate the preceding noun from others.   But *ga* has the similar meaning.   " Watasi *ga* Taroo desu " is different from " Watasi *wa* Taroo desu," for the former has the meaning " I am Taro, whose name you know well " and the latter is a simple statement whose meaning is " I am Taro."   This problem must be studied deeply, but I tentatively describe that all the kernel sentences have *ga* for verb phrase predicates and *wa* for adjective and copula phrase predicates, in order to make subject phrases.   If we substitute *wa* for *ga*, or *ga* for *wa*, we add some meaning to the sentence.   The only exceptional case is that the predicate ends with " —to iu " which indicates quotation.   Though where quotation is a verb phrase predicate, *wa* is usually used.

[3] (M) indicates that the example was taken from *Manazuru*, (K) from *Kokugo* and (S) from *Syukan Asahi*.   In the case of Japanese, there are many phrases which already underwent several transformations among these examples, too.   For example " lamp no hikari " in the example (1) and " nigiyaka na mati " in the example (2), are the result of nominalization which I am going to discuss, but I consider them as NP here.

<div style="text-align: right">

Cushing suukikei *ga* soosiki o   カシング枢機卿が

sisai sita   葬式を司祭した

</div>

(4)   koo iu monku (M)   こういう文句

monku *wa* koo iu[1]   文句はこういう

(5)   braun-kan to iu sinkuu-kan (K)   ブラウン管という真空管

sinkuu-kan *wa* braun-kan to iu   真空管はブラウン管という

(6)   hostess to iu taiyaku (S)   ホステスという大役

taiyaku *wa* hostess to iu   大役はホステスという

(7)   radio ni tukau denpa (K)   ラジオに使う電波

denpa *o* radio ni tukau   電波をラジオに使う

(8)   massiroku nutta ude (M)   真白く塗った腕

ude *o* massiroku nutta   腕を真白く塗った

(9)   matukazari no dekita   松かざりのできた

nigiyaka na mati (M)   にぎやかな町

nigiyaka na mati *ni*   にぎやかな町に

matukazari ga dekita   松かざりができた

(10)   taiyaki o narabeta hako (K)   たい焼きをならべた箱

hako *ni* taiyaki o narabeta   箱にたい焼きをならべた

(11)   kan o mitumete iru sugata (S)   棺を見つめている姿

aru sugata *de* kan o mitumete   ある姿で棺を見つめている

iru[2]

(12)   kare no kayotte iru   彼の通っている小学校

syoogakko (M)

kare ga syoogakko *e*   彼が小学校へ通っている

kayotte iru

As is shown above, all the particles following the NPs in under-

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[1] I consider this sentence as the result of the transformation which makes quotation. There are some nouns which very often occur with quotation. For example, the noun *ki* (気) frequently happens with quotation. The phrase " dameda to iu ki " (M) (だめだという気) is derived from " ki wa dameda to iu." Sometimes the quotation is deleted in the process of nominalization and we get the example like " nakidasisoo na ki " (M) (泣き出しそうな気). This phrase is derived from " ki wa nakidasisoo da to iu." When this sentence is nominalized, we get " nakidasisoo da to iu ki." Then after the deletion of " to iu," we get " nakidasisoo na ki."

[2] Some of the NPs have a determiner *aru* in the underlying sentence and in the process of nominalization, it is deleted.

lying sentences are deleted. This fact is one of the reasons why nominal phrases are ambiguous. For example, we have nominal phrase " sagasite iru hito " (さがしている人), but it is ambiguous. Because we think of two underlying sentences whose difference is in the particles. They are " hito *ga* sagasite iru " and " hito *o* sagasite iru."

Some of the verbs have a very unique character. Their progressive expression with "—iru " in underlying sentences are altered into "—ta " by nominalization. For example, the underlying sentences of

(13)	kasureta koe (K)	かすれた声
(14)	kibi-kibi-sita zyoobahuku- sugata (S)	きびきびした乗馬服姿

are respectively

(15)	koe ga kasurete iru	声がかすれている
(16)	zyoobahuku-sugata ga kibi- kibi-site iru.	乗馬服姿がきびきびしている

The verbs which belong to this type have the meaning to express some state. Other examples are *hikaru* (光る), *komu* (混む), *kagayaku* (輝く), *sumu* (澄む), *hareru* (晴れる), *kumoru* (曇る), etc.

III.2. Adjective + *Noun*. (45) The rule for this type is almost the same as 1.

2. $X + NP + P + Y + AP + PM \longrightarrow$
$$X + Y + AP + PM + NP$$

Some of the examples are shown below with their underlying sentences.

(17)	kore hodo ni iro no siroi onna (M)	これ程に色の白い女
	onna wa kore hodo ni iro ga siroi	女はこれ程に色が白い
(18)	kewasii metuki (M)	けわしい目つき
	metuki wa kewasii	目つきはけわしい
(19)	kiiroi hata (K)	黄色い旗
	hata wa kiiroi	旗は黄色い
(20)	akarui syoomei (K)	明るい照明
	syoomei wa akarui	照明は明るい
(21)	hagesii syokumu (S)	はげしい職務

	syokumu wa hagesii	職務ははげしい
(22)	nagai tabi (S)	長い旅
	tabi wa nagai	旅は長い

This type has a regular change, and it is easy to describe. Only one exception is the existence of the words " ookina " and " tiisana." We cannot find the difference of the usage between " ookii " and " ookina," and " tiisai " and " tiisana." So I describe this fact as free variation. That is to say, according to the speaker's choise, " ookii " and " tiisai " are altered to " ookina " and " tiisana." I will show two examples.

(23)	ookina tutumi (K)	大きな包み
	tutumi wa ookii	包みは大きい
(24)	tiisana gakko	小さな学校
	gakko wa tiisai	学校は小さい

Although it is not the peculiarity of this type, the alternation of *ga* and *no* between the underlying sentence and the nominalized sentence appears in example (17). Example (9) is also the same type. This is an optional change because we have both phrases like:

(25)	korehodo ni iro *ga* siroi onna	これ程に色が白い女
(26)	matukazari *ga* dekita	松かざりができた
	nigiyaka na mati	にぎやかな町

III.3. Copula+*Noun*. (52) I found it difficult to classify the examples of this type. K. Okutu's study[1] on this type was a great help to me but there still are some points I cannot agree with. He treated all the nominal phrases whose structure is $X+\begin{Bmatrix} na \\ no \end{Bmatrix}+NP$ as transforms derived from copula sentences. For example, he says that the underlying sentences of " watasi no zidoosya " (私の自動車) is " ano zidoosya wa watasi da " (あの自動車は私だ). He ascribes the ambiguity of the particle *no* to the ambiguity of the copula *da*. The reason why I cannot agree is that his idea leaves the ambiguity in the kernel sentences and he thinks this problem cannot be solved on the level of grammar. If it is true, the

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[1] Keiitiro Okutu, " Nominalization of Japanese Sentences Ending with da—A Transformational Approach to Japanese Grammar " in *Studies in the Japanese Language*, No. 56, March, 1964, written in Japanese.

transformational theory is not so strong as I expected. It seems to me however that, this problem should be clarified by transformation. So I don't deal with the sentence " Boku wa unagi da " (ぼくはウナギだ) which means ' I want to eat an eel " as a kernel sentence. I only admit the structures Na+D, the so-called *keiyoodoosi* in traditional Japanese grammar, and NP+D whose meaning is equality or existence as the kernel sentences of copula predicate. I recognize the sentences like " Boku wa unagi da " as the result of some transformation.[1]

The rule for this type is

3. $X+NP+P+Y+Na+da \longrightarrow X+Y+Na+na+NP$

4. $X+NP_1+P+NP_2+da \longrightarrow X+Y+NP_2+no+NP_1$

      where *da* means equality or existence.

Some examples are as follows:

(27) siro-tirimen no otoko-obi (M)   白ちりめんの男おび
       otoko-obi wa siro-tirimen da   男おびは白ちりめんだ

(28) sizuka na namioto (M)   静かな波音
       namioto wa sizuka da   波音は静かだ

(29) Nara no ki (K)   ナラの木
       ki wa Nara da   木はナラだ

(30) genki na koe (K)   元気な声
       koe wa genki da   声は元気だ

(31) siro no yakai-huku-sugata (S)   白の夜会服姿
       yakai-huku-sugata wa siro da   夜会服姿は白だ

(32) idai na daitooryoo (S)   偉大な大統領
       daitooryoo wa idai da   大統領は偉大だ

III.4. Noun no+*Noun*. (198) The reason why I set up this type was mentioned in III.3. The rule for this type is somewhat different from

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[1] As we have no structural critieria to distinguish NP+D as a kernel from NP+D as a transform, this problem is considerably difficult. I have *tentatively set up* Da-transformation. The rule of this transformation is as follows:

      $X+NP+P+Nuc+PM \longrightarrow X+NP+da$

For example, the ambiguity of " ani wa gaka da " (兄は画家だ) can be explained by the difference of *its underlying sentence*. Where X=ani wa, NP=gaka, P=ni, Nuc =naritak, PM=U, the underlying sentence is " ani wa gaka ni naritai." Similarly, " ani wa gaka ga sukida " can be its underlying sentence.

the others.   This rule is applied to the result of rule 1.

Then the rule for this type is:

6. $X+NP_1+P+Y+VP+PM+NP_2 \longrightarrow X+NP_1+no+NP_2$[1]

The example listed in III.1. can be reduced by this rule.   The results
are as follows:

(33)	mado no lamp no hikari	窓のランプの光
(34)	kokoro no naka no tomodati[2]	心の中の友だち
(35)	soosiki no Cushing suukikei	葬式のカシング枢機卿
(36)	konna monku[3]	こんな文句
(37)	braun-kan no sinkuu-kan	ブラウン管の真空管
(38)	hostess no taiyaku	ホステスの大役
(39)	radio no denpa	ラジオの電波
(40)	matukazari no nigiyaka na mati	松かざりのにぎやかな町
(41)	taiyaki no hako	たい焼きの箱
(42)	kan no sugata	棺の姿
(43)	kare no syoogakko	彼の小学校

As the example (8) does not have the constituent structure shown in
rule 5, it is omitted.

Most deletable VPs are *aru, zokusu, iru,* and *motu.*

For examples:

(44)	otooto no te (M)	弟の手
(45)	rokunen itikumi no minasan (K)	六年一組のみなさん
(46)	America no first lady (S)	アメリカのファーストレディー
(47)	zibun no kokoro (K)	自分の心

are respectively considered as derived from

(48)	otooto ni aru te	弟にある手
	otooto ni te ga aru	弟に手がある
(49)	rokunen itikumi ni zokusu minasan	六年一組に属すみなさん

---

[1] If we can establish Da-transformation, all the construction, N no *N* can be treated
as derived from what underwent Da-transformation, by rule 4.   If so, the restriction
on rule 4 is not needed.   Anyway this approach is very tentative.

[2] This phrase may seem to be strange, but it can be in the context that " not the
friend whose face is smiling but the one smiling in his heart."

[3] This is the result of morphophonemic change.   It will be considered in III. 5.

minasan ga rokunen itikumi ni zokusu	みなさんが六年一組に属す
(50) America ni iru first lady	アメリカにいるファーストレディー
first lady ga America ni iru	ファーストレディーがアメリカにいる
(51) zibun no motu kokoro	自分の持つ心
kokoro o zibun ga motu	心を自分が持つ

So when we hear the structure $NP_1+no+NP_2$ only, we are apt to consider its meaning as existence or possession. But the next examples show the posibility of the other VPs' deletion. This fact gives the property to the examples (33)–(43).

(52) koto ya gekkin no oto (M)	琴や月琴の音
koto ya gekkin no *dasu* oto	琴や月琴の出す音
koto ya gekkin ga oto o dasu	琴や月琴が音を出す
(53) ima no kissya (M)	今の汽車
ima *toota* kissya[1]	今通った汽車
kissya ga ima tootta	汽車が今通った
(54) taiyaki no ekanban (K)	たい焼きの絵かんばん
taiyaki *o simesu* ekanban	たい焼きを示す絵かんばん
ekanban ga taiyaki o simesu	絵かんばんがたい焼きを示す
(55) " hitotu 5-en " no huda (K)	「一つ五円」の札
" hitotu 5-en " *to kaita* huda	「一つ五円」と書いた札
huda ni " hitotu 5-en " to kaita	札に「一つ五円」と書いた
(56) hinsi no kizu (S)	瀕死の傷
hinsi *ni naru* kizu	瀕死になる傷
kizu de hinsi ni naru	傷で瀕死になる
(57) huzin no syasin (S)	夫人の写真
huzin *o utusita* syasin	夫人を写した写真
huzin o syasin ni utusita	夫人を写真に写した

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[1] As is shown in Chapter I, we have Nadv which functions as a relational phrase (Rph) without particles.

By the transformational rule 5, we can explain the ambiguity of the particle *no* in this way.

III.5. KSAD+*Noun*. (52) K. Okutu's study on so-called KSAD is very systematically presented.[1] He classifies them into four groups. They are:

	kore	sore	are	dore
1st group	koko	soko	asoko	doko
	etc.	etc.	etc.	etc.
2nd group	koo	soo	aa	doo
3rd group	konna	sonna	anna	donna
(4th group)	kono	sono	ano	dono

First three groups belong to noun because they all appear before the copula. The difference in these three groups exists in their morpho-phonemic change after the nominalization. The fourth group is the results of the nominalization of NP+P+(kore, sore, are, dore)+da. That is, of course, we have the expression " kore no " but we also have " kono " as the equivalent. The second group is nominalized into the same structure as the third group. The process of their nominalization is:

$$\text{hanasi wa koo da} \xrightarrow{\text{nomT}} \text{koo na hanasi} \longrightarrow \text{konna hanasi}$$

The example of the third group's nominalization is:

$$\text{hanasi wa konna da} \xrightarrow{\text{nomT}} \text{konna na hanasi} \longrightarrow \text{konna hanasi}$$

I will show some of the examples from my data.

(58) konna koto (M)　　　　　　　こんな事

　　　koto wa koo da　　　　　　　事はこうだ

(59) sono syoozyo (m)　　　　　　その少女

　　　syoozyo wa sore da　　　　　少女はそれだ

(60) kono hue (K)　　　　　　　　この笛

　　　hue wa kore da　　　　　　　笛はこれだ

(61) kono itazura (K)　　　　　　このいたずら

　　　itazura wa koreda　　　　　いたずらはこれだ

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[1] K. Okutu, *op. cit.*, p. 83.

The rule for this type is the same as rule 4. In this case, $NP_2 = KSAD$.

Now, we must take up the case which is the same as III.3., though the examples which belong to this are very few. In short, we have the type KSAD+no+NP, as the result of the deletion of a verbal phrase. The only example in my data is:

(62) sono hoo   その方

   sore *no aru* hoo   それのある方

   aru[1] hoo ni sore ga aru   ある方にそれがある

III.6. Exceptions. I will discuss peculiar nouns and determiners in this section. What I call peculiar nouns are:

(a) what always requires a modifier

(b) the results of the nominalization of some other parts of speech

(c) what seems to be suffixes.

The nouns which belong to the type (a) are:

naka (中) *mae* (前) *sita* (下) *soba* (側) *ue* (上) *kawari* (代り) *hoka* (他) *ato* (後) *hitori* (一人) *mukoo* (向こう) etc.

These nouns have a nature which always requires a modifier, besides having the common nature of a noun. 39 examples belong to this type. Some of them are as below:

(63) usugure no naka (M)   うすぐれの中

(64) mesiya no mae (M)   飯屋の前

(65) henzi o suru kawari (M)   返事をする代り

(66) kengaku suru mae (K)   見学する前

(67) tyooseisitu no hoka (K)   調整室の他

(68) kemuri no mukoo (S)   煙の向こう

(69) Johnson-si no soba (S)   ジョンソン氏のそば

As the modifiers of these nouns are indispensable elements, they must be described in kernel sentences with this subclass of a noun.

(b) type nouns are:

kanasimi (悲しみ) *isamasisa* (勇ましさ) *kaeri* (帰り) *kaori* (香り) *tutumi* (包み) *sizukesa* (静けさ) etc.

25 examples occur in my data. In order to clarify the modification of

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[1] This is a determiner, whose meaning is " certain."

this type, we must pay attention to the category by which this type is made. So, I will only suggest here that we have this kind of noun in Japanese.

(c) type nouns may be called nominalizers. They are:

yoo (様), *koto* (事), *mono* (物), *huu* (風), *ten* (点), etc.

First, I regard them as nouns, but they are, in a way, more like suffixes than nouns. Their function is to nominalize word of other parts of speech. 37 examples of this type are found in my data. Some of them are:

(70)	hikikomarete iku *yoo* (M)	引き込まれていくよう
(71)	tatiagatte kuru *koto* (M)	立ち上ってくる事
(72)	odoroita *huu* (K)	おどろいた風
(73)	oto o tutaeru *ten* (K)	音を伝える点
(74)	hoosoo suru *mono* (K)	放送するもの
(75)	nozokikomu *yoo* (S)	のぞき込むよう

Determiners are the optional element of a kernel sentence. Most of them are what is called *rentaisi* in the traditional grammar. Consulting a dictionary,[1] I found the following examples.

kono hon (この本) and other examples with KSAD, kano hito (かの人), waga kuni (わが国) arayuru kotoba (あらゆる言葉), iwayuru gengo-kateisetu (いわゆる言語過程説), saru tokoro (さる所), aru hi (ある日), toaru ie (とある家), honno hitotu (ほんの一つ), wazuka san-bon (わずか三本), tatta hitori (たった一人), taisita zinbutu (たいした人物), tonda meiwaku (とんだ迷惑), bakageta hanasi (ばかげた話), etc.

Except KSAD, they all belong to the determiner class. They function only to modify nouns. 7 examples of this type occur in my data.

CHAPTER IV   COMPARISON

IV.1.   In order to compare English and Japanese noun-head modification patterns, I here sum up the rules which I explained in the preceding chapters.

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[1] Tuneaki Egoyama and Akira Matumura, *Nihon Bunpoo Ziten*, written in Japanese, Tokyo, Meizisyoin, 1958, pp. 388-389.

ENGLISH RULE	CONSTITUENT STRUCTURE	NUMBER OF EXS.	SUBDIVISION
1. $X+NP+Y$ $Z+(P)+NP'+W$ $\Big\}^1 \longrightarrow$ $X+NP(,)+(P)+WH+$ $Z+W+Y$ where $NP=NP'$	$N+WH$	55	WH= zero 14 who 11 which 9 that 7 where 5 , who 4 when 2 , which 2 upon which 1
2. $X+NP_1+WH+have+$ $NP_2+Y \longrightarrow X+NP_1+$ $with+NP_2+Y$	$N+$ with N	3	
3. $X+NP_1+WH+NP_2+$ $have+Y \longrightarrow X+NP_2+$ $Gen+NP_1+Y$	$N's+N$ $Pron+N$	28 155	
4.*2 $X+NPin+Gen+NP_1$ $+Y \longrightarrow NP_1+of+NPin$ $+Y$	$N+of\ N$	66	
5. $X+NP+WH+Vna+Y$ $\longrightarrow X+NP+Vna+$ $Ing+Y$	$N+V-ing$	2	
6. $X+NP+WH+be+Y$ $\longrightarrow X+NP+Y$	$N+P+N$ $N+V-ed$ $N+V-ing$ $N+to\ V$ $N+(,)NP$ $N+AP$ $N+Adv$ $N+that$	134 15 9 8 4 3 2 2	P= of 62 in 28 on 8 from 7 at 7 for 6 to 4 about 3 with 3 behind 2 between 2 beside 1 near 1
7.* $X+NP+A+Y \longrightarrow$ $X+A+NP+Y$ where Y does not in- clude any modifier of A	$A+N$	408	

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1 As nominalization is generalized transformation, we need the presentation like this. By this rule, the altered strings can be defined as NP.

2 The rules marked with* are obligatory.

8. $X+NP+Vx+Adv.m.^1+$ $Y \longrightarrow X+Adv.m.+$ $Vx+NP+Y$ where $Vx=V-ing$ or $V-ed$, Y does not include any modifier of Vx	$V-ed+N$ $V-ing+N$	14 10		

JAPANESE RULES				
9. $X+NP+Y$ $Z+NP'+P+W+Nuc+$ $\left.\begin{array}{c}\\PM\end{array}\right\} \longrightarrow X+Z+W+$ $Ncu+PM+NP+Y$ where $NP=NP'$	$V+N$ $A+N$	143 45	deleted $P=$ ga wa o de ni e	78 24 16 14 9 2
10.* $X+Na+D+PM+NP$ $\longrightarrow X+Na+na+NP$	Na na$+N$ KSAD na$+N$	33 7		
11.* $X+Y+D+PM+NP$ $\longrightarrow X+Y+no+NP$	N no$+N^2$ KSAD no$+N$	19 45		
12. $X+NP_1+P_1+Y+Nuc+$ $PM+NP_2 \longrightarrow X+NP_1+$ $no+NP_2$	N no$+N$	198		

In case of English, the list shows that all the modifications have the construction $N+WH$ as their base and some are derived from them by optional transformations (in some cases, obligatory). For example, let us consider the following five sentences:

(1) the man has a book

(2) the book is red

(3) the book has a jacket

(4) the man is walking

(5) the book was torn

These are all nominalized by rule 1 as below:

(6) the man who has a book $\left.\begin{array}{c}\\\end{array}\right\}$ (1)

(7) the book which the man has

(8) the book which is red (2)

---

[1] Adv. m. means manner adverb which ends with -ly.

[2] I treated this type and the result of rule 10 as Copula $+N$ in chapter III.

(9) the book which has a jacket } (3)
(10) a jacket which the book has }

(11) the man who is walking   (4)

(12) the book which was torn   (5)

After all, in order to make English noun modifications, it is enough for us to know rule 1. However, considering the fact that only five per cent of all the modification patterns are the result of this rule in my data, we cannot be content with rule 1 only. So rules 2–8 must be learned. When we apply the remaining rules in the proper order we can get all the patterns. By rule 2, (1) and (3) are made simpler as follows:

(13) the man with a book

(14) the book with a jacket

When we apply rule 3 to (7) and (10) we get:

(15) the man's book

(16)* the book's jacket.

As we have no utterance like (16), the obligatory rule 4 alters it to:

(17) the jacket of the book.

Then by rule 5, (6) is changed to:

(18) the man having a book.

Rule 6 alters (11) and (12) respectively to

(19) the man walking

(20) the book torn.

These are transformed by rule 8 as below:

(21) the walking man

(22) the torn book.

And (8) is changed by rule 6 and 7 to:

(23) the red book.

In case of Japanese, let us consider the following five sentences which seem to have a similar meaning to the English examples.

(24) otoko ga hon o motte iru

(25) hon wa akai

(26) hon ni jacket ga aru

(27) otoko ga aruite iru

(28) hon wa yaburete iru

These sentences are all nominalized by rule 9 as below:

(29)	hon o motte iru otoko	} (24)
(30)	otoko no motte iru hon	
(31)	akai hon	(25)
(32)	jacket no aru hon	} (26)
(33)	hon ni aru jacket	
(34)	aruite iru otoko	(27)
(35)	yaburete iru hon	(28)

(29), (30), (32), and (33) are further changed by rule 11 into:

(36) hon no otoko

(37) otoko no hon ,

(38) jacket no hon

(39) hon no jacket

IV.2. When we compare two different languages, we are in danger of mixing linguistic levels. Most of the comparisons between English and Japanese which were made before are vague because of this. Usually they compared the two on the semantic level and concluded with grammatical terms, or vice versa. For example, they say:

Japanese is a verb-centered language and English is noun-centered. So Japanese has many adverbs. One of them expresses sounds. This is because Japanese is an emotional language.[1]

The comparison of vocabulary is so important that we should study it hard, but study on the grammatical level is no less important than the other. I shall limit the comparison on the syntactic level here. Constitutents of the structure and the order of their arrangements will be discussed.

As is shown in IV.1., English transformations which make noun-head modification patterns are much more complicated than Japanese. The number of the Japanese rules is half of that of English. Therefore, when we look for the similar parts of English and Japanese, we had better try to find the Japanese-like rules among the English ones.

The most characteristic property of Japanese noun modifications is

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[1] Y. Endo, et al., op. cit., p. 241–242 (Translation mine).

that they are pre-modifications. In English, three rules make pre-modifications. They are rules 3, 7, and 8. This fact shows the primary syntactic difference between English and Japanese noun modifications. Post-modifications made by rules 1, 2, 4, 5, and 6 are the unique modification patterns of English.

The constitutent structures of Japanese pre-modifications are " V $+N$," "A$+N$," " Copula$+N$," " N no$+N$," and " KSAD$+N$," while the English ones are " V$\frac{-\text{ed}}{-\text{ing}}+N$," "A$+N$," and " N's$+N$.[1]" Comparing them, we find that " Copula$+N$ " and " KSAD$+N$ " are peculiar to Japanese, for English does not have the construction whose constitutents are similar to them. However, " Copula$+N$ " which is obtained by rule 10, that is " Na$+$na$+N$," seems to be the exceptional case. Although this is not a problem on the syntactic level, its function is almost similar to that of "A$+N$ " in Japanese. Therefore I have kept it apart from the Japanese unique patterns above indicated.

After all English and Japanese noun modifications have three similar patterns. Now let us examine each of the three.

IV.2.1. N's$+N$ & N no$+N$. These are constructed by the noun-head and a preceding noun plus 's or *no*. We cannot say that they are identical but it is very easy for us to recognize them as the same patterns. Besides they have similar meanings. That is to say, 's and *no* both function to indicate various similar relations between two nouns. In most cases, they indicate that its preceding noun is the owner of the following one. Rule 3 shows this fact. I took up this aspect of Japanese on p. 63. In other cases, they represent so many relations that sometimes these constructions are ambiguous. I cited the example " Picasso's picture " before.[2] When we say " Picasso no e," its meaning can be " Picasso no kaita e " (a picture by Picasso), " Picasso o kaita e " (a picture of Picasso), or " Picasso no motu e " (a picture owned by Picasso). As for the ambiguity of this English structure, I tentatively made the following rule:

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[1] Here I consider pronouns as one kind of nouns.
[2] See the footnote on p. 54.

$$X + NP_1 + P + NP_2 + Y \longrightarrow X + NP_2 + Gen + NP_1 + Y$$

Let us compare rule 9 and this. When we know the process which made the structure $X + NP_1 + P + NP_2 + Y$, we can easily understand the reason for their similarity. They both delete some elements of the predicates and add '*s* for English and *no* for Japanese, instead of the deleted elements

In spite of these similarities, these two structures differ from each other. Considering their difference, we must pay attention to the obligatory rule 4. By this rule, the structure " N's$+N$ " must be changed into the post-modification, " $N+$ of N." In short, the nouns used in the structure N's$+N$ are restricted. They have to be animate nouns, though the Japanese structure N no $+N$ has no such restriction. This difference is considerably great.

What I wrote above is all indicated in the rules listed at the beginning of this chapter. In other words, they are all described by means of rules. This was not done before. For example, Kleinjans explains these facts putting an annotation on each example. He says:

> In addition to these restrictions is the fact that the English N's N construction is not used with all nouns. There are certain combinations that use the periphrastic genetive rather than the inflected one. For example, in writer's dialect
> *door of the room* occurs, but **the room's door*
> does not
> *top of the table* occurs, but **the table's top*
> does not
> *roof of the house* occurs, but **the house's roof*
> does not
> *sole of my foot* occurs, but **my foot's sole*
> does not[1]

By setting up rules, problems like this can be avoided.

IV.2.2. $A+N$ & $A+N$. There are no other noun modification structures whose constituents are identical in English and in Japanese. Then, this type is the most similar structure in English and Japanese. If we treat $Na+na+N$ as the same structure as $A+N$, the processes of the rules which make them, that is, rule 7, 9, and 10, are very similar. But we must notice that rule 7 is applied obligatorily only after the

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[1] E. Kleinjans, *op. cit.*, p. 227.

optional rules 1 and 6 are applied. In addition to this fact, the adjective to which rule 7 can be applied must not be followed by its modifiers. Considering these restrictions, it cannot easily be said that these structures are completely the same.

IV.2.3. $V\frac{-ed}{-ing}+N$ & $V+N$. As for these structures, there are more differences than similarities. The difference can be found when we look at rule 6. It shows that the English structures of this kind are all derived from the progressive sentences or passive ones. In case of Japanese, V has no restrictions like this. Some of them may be passive or progressive, but most of them are not. Therefore, in spite of their similar constituent structures, they in most cases differ from each other.

IV.3. In consequence of the comparison, we understood that English has five rules which make unique patterns, while Japanese has two, and the three common patterns are somewhat different in English and Japanese. When we think of the fact that nominal expressions are derived from kernel sentences, it is quite natural that they carry on the differences existing in the kernel sentences of English and Japanese.

By focusing my attention only on syntactic problems, I have thus attempted to make a systematic comparison of noun modification structures.

CONCLUSION

I have investigated English and Japanese noun-head modification patterns in terms of generative grammar, and I was able to classify most of them by setting up rules listed in chapter IV. As for the comparison, I reached similar conclusions to those given by Kleinjans and I left some points unsolved. However, I made the effort in order to grasp the grammatical facts as systematically as possible. The transformational approach enabled me to understand some unique modification patterns which were not distinguished by IC analysis. The structure $N+of+N$ is the case. It was regarded as a member of $N+P+N$ before. Considering its underlying structure, we could find its uniqueness. More-

over as is shown in chapter IV, some aspects of the description about noun modifications were simplified. This improvement should be noticed. I want to emphasize here that from this point of view, we can neatly classify what has been explained only item by item. I believe this is the very aim of grammatical description and analysis.

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