

A METHOD OF THE CONTRASTIVE ANALYSIS OF ENGLISH AND JAPANESE

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INTRODUCTION

The generative-transformational grammar has broadened the scope of contrastive linguistics. Unlike the contrastive linguistics within the framework of the structural linguistics whose task has been the clarification and quantification of the superficial differences between two languages and the utilization of the results of the analysis in the foreign language teaching,¹ the contrastive linguistics within the framework of the generative-transformational grammar attempts to discover the similarities among languages, that is, linguistic universals, as well as to clarify the differences.

In order to discover the similarities, a contrastive linguist is required to do two things. First, he must contrast two languages not only at the surface structure level but also at the deep structure level. Secondly, he has to have a wider range of view. Even when he is analyzing a specific transformation such as relativization or passive transformation, he is suggested to take into account the whole English or Japanese grammar and the universal grammar. For example, it is a fact that there is no relative pronoun in Japanese. In order to explain this fact, he must refer to other grammatical phenomena or the language type of Japanese and the characteristics of the type.

This paper is an introduction to a method of contrastive linguistics within the framework of the generative-transformational grammar. I

1. A typical example is Everett Kleinjans' *A Descriptive-Comparative Study Predicting Interference for Japanese in Learning English Noun-Head Modification Patterns* (Tokyo: Taishukan Publishing Company, c1959).

will put special emphasis on Greenberg's *universals* because they are of great help to the contrastive analysis of English and Japanese.

The paper consists of three sections. Section I is the introduction of the method to find out that a specific transformation exists both in English and Japanese. I will illustrate the procedure by using the nominalizing transformation of verbs as the example. Section II is an interpretation of Greenberg's *universals* from the generative-transformational point of view. From the re-analysis of the *universals*, I will suggest four hypotheses which will be of great help in the contrastive analysis of English and Japanese. Section III is the illustration of the utilization of the four hypotheses in the actual contrastive analysis of a transformation.

I

With the present knowledge of English and Japanese transformational grammars, it is impossible for us to contrast the whole structures of the two languages. What can be done at present is the contrast of a specific transformation. This section is the illustration of the first stage of such a contrastive analysis.

Generally speaking, a contrastive analysis proceeds through three or four stages:

- (i) The proof of the existence of a specific transformation in English and Japanese
- (ii) The description of the transformation in English and Japanese
- (iii) The contrast of the transformations
- (iv) The presentation of a hypothesis based on the conclusions reached in (iii)

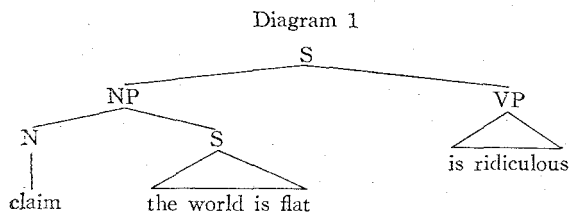
I will illustrate the first stage of the contrastive analysis by using the nominalization of verbs as the example.

First, see the following examples:

- (1) *The claim that the world is flat* is ridiculous.
- (2) They scouted *the allegation that the boy had stolen the camera*.
- (3) *My belief that my father is living* is strong.
- (4) I have reached *the conclusion that Japan should be blamed*.

These are called appositive construction in the traditional grammar,

and NP complement construction by Jacobs and Rosenbaum.² The appositive construction is introduced by such a phrase structure rule as $NP \rightarrow NS$ in the *English Transformational Grammar*. The deep structure of (1) is supposed to be something like this:



I have suspected that such kind of nouns as *claim*, *belief*, *conclusion*, etc. are not introduced by the rule $NP \rightarrow NS$ but that they are derived from their related verbs by a nominalization, because there are close relationships between such nouns and verbs. Let us enumerate some of them.

1. To both the noun and the verb the extraposition transformation is applied:

- {(5) He claimed ((it)_N(that the world was round)_S)_{NP} strongly.
- {(6) He claimed (it)_N(strongly)_{ADV}(that the world was round)_S
- {(7) His claim (that the world was round)_S proved to be right.
- {(8) His claim proved to be right (that the world was round)_S

2. The following two are both unacceptable:

- (9) *Columbus assumed that I am going to die.³
- (10) *Columbus' assumption that I am going to die....

3. When a question sentence is embedded as a complement, both the verb and the noun take *whether*-clause:

- (11) The teacher questioned *whether* he would come.
- (12) The teacher's question *whether* he would come....

4. The same restriction is applicable to the occurrence of a sentence adverb:

2. Roderick A. Jacobs and Peter S. Rosenbaum, *English Transformational Grammar* (Waltham, Massachusetts: Blaisdell Publishing Company, c1968), pp. 163ff.

3. Columbus=the discoverer of America.

- (13) *They rumor that *frankly*, our secretary is incompetent.
 (14) *The rumor that *frankly*, our secretary is incompetent is true.⁴
 5. The subject of the verb and the possessive form correspond:
 (15) *He* claims that the world is flat.
 (16) *His* claim that the world is flat is ridiculous.
 Robin Lakoff, too, observes these correspondences:

Embedded complement sentences function as noun phrases in sentences, either as subjects or direct objects of verbs. They may also function as subjects or objects of nouns that are nominalizations of verbs that take abstract subjects or objects. Thus, we find both of the following:

- (6a) I believed that John was a werewolf.
 (6b) My belief that John was a werewolf.⁵

The hypothesis that can explain the correspondences listed above is that the appositive construction should be transformationally derived. That is, (17) is derived from (18) by a nominalizing transformation.

- (17) Columbus' claim that the world was round
 (18) Columbus claimed that the world was round.

The following table is a collection of such verbs and nouns:

allege	: allegation	object	: objection
announce	: announcement	observe	: observation
assert	: assertion	order	: order
assume	: assumption	presume	: presumption
believe	: belief	promise	: promise
claim	: claim	propose	: proposal (proposition)
contend	: contention	prove	: proof
desire	: desire	realize	: realization
discover	: discovery	recognize	: recognition
expect	: expectation	remark	: remark
fancy	: fancy	report	: report
fear	: fear	request	: request
feel	: feeling	represent	: representation
guarantee	: guarantee	rumor	: rumor
guess	: guess	say	: saying

4. (14) is taken from Masaru Kajita, *A Generative-Transformational Study of Semi-Auxiliaries in Present-Day American English* (Tokyo: Sanseido Company Ltd., c1967), p. 46.

5. Robin T. Lakoff, *Abstract Syntax and Latin Complementation* (Cambridge, Massachusetts: The M.I.T. Press, c1968), p. 15.

hope	: hope	state	: statement
imply	: implication	suggest	: suggestion
indicate	: indication	suppose	: supposition
insinuate	: insinuation	think	: thought
notice	: notice	understand	: understanding

A similar hypothesis can be built up for Japanese appositive construction. Let us compare the following pairs of examples.

1. Like in English, the subject and the possessive form correspond :

- (19) *Tanaka wa Satoo wa baka da to keturon-sita.*
 'Tanaka concluded that Sato was a fool.'

- (20) *Tanaka no Satoo wa baka da to $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ keturon.*
Satoo wa baka da to $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ Tanaka no keturon.
 'Tanaka's conclusion that Sato was a fool.'

2. An imperative sentence is quoted both in (21) and (22) :

- (21) *yosan o huyase to syakai-too ga yookyuu-suru.*
 'The Socialist Party claims that the budget be increased.'

- (22) *yosan o huyase to $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ syakai-too no yookyuu.*
 'The Socialist Party's claim that the budget be increased.'

3. Notice *no de wa nai ka* in both the examples :

- (23) *hannin wa yama no naka ni nigeta (no de wa nai ka) to suiri-suru.*
 'We infer that the criminal fled into the mountain.'

- (24) *hannin wa yama no naka ni nigeta (no de wa nai ka) to $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ suiri.*
 'the inference that the criminal fled into the mountain.'

4. Of course, the following are both unacceptable :

- (25) **Columbus ga watasi ni sine to meirei-sita.*
 'Columbus ordered me to kill myself.'

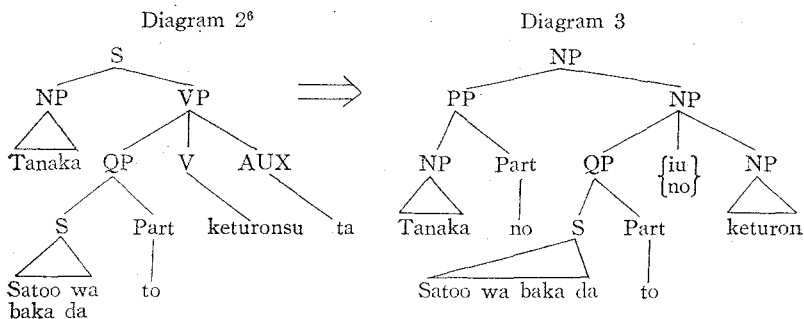
- (26) **Columbus no watasi e no sine to $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ meirei.*
 'Columbus' order to me that I should kill myself.'

5. Sentence-ending particles (*syuu-zyosi*) can be used :

- (27) *sonna koto wa siranai wa yo to kanozyo ga hatugen-sita.*
 'She said that she did not know such a thing.'

(28) sonna koto wa siranai *wa yo to* $\left\{ \begin{smallmatrix} \text{iu} \\ \text{no} \end{smallmatrix} \right\}$ kanozyo no hatugen.

The derivation of (20) from (19) is supposed to be like the following:



The illustration of the first stage is over. The next stage is the formulation and the contrast of the transformational rules. Let us, then, proceed to the next section.

II

In this section, I will, from the generative-transformational point of view, interpret the *universals* proposed by Greenberg,⁷ and then suggest four hypotheses which will be of great significance in the contrastive analysis of English and Japanese.

Greenberg claims that all the languages of the world are divided into three major types according to the relative order of subject, verb, and object:)

Type I: VSO (Berber, Hebrew, Maori, Masai, Welsh, Zapotec, etc.)

6. Part=Particle. PP=Postpositional Phrase. QP=Quotational Phrase.

What comes before the particle *to* is quotation. At present, I don't know how to introduce quotations in the deep structure. Tentatively, I adopt the following rule: QP→S Part.

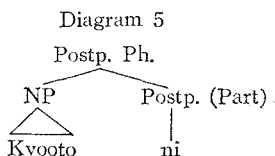
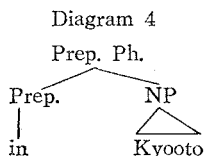
7. Joseph H. Greenberg, "Some Universals of Grammar with Particular Reference to the Order of Meaningful Elements," *Universals of Language* (2nd ed.; Cambridge, Massachusetts: The M.I.T. Press, c1963, 1966), pp. 73-113.

Type II: SVO (Finnish, Fulani, Greek, Italian, Malay, etc.)
 Type III: SOV (Basque, Burmese, Japanese, Nubian, Turkish, etc.)
 He studied the characteristics of each type of languages and offered the results as 45 *universals*. Chomsky says these *universals* are merely “statistical tendencies,”⁸ and I know that Greenberg induced the *universals* from the observation of the surface structures of the languages. But it seems that the *universals* are also valid at the deep level, and there is an evidence which suggests that the direction of a transformation has to do with the word order.⁹

Of the 45 *universals*, I will explain and discuss only thirteen *universals*, which are chiefly at the phrase structure level. The example of SOV type is Japanese, and the example of VSO type is English. Though English is an SVO language at the surface level, it is possible to regard English as a VSO language, because English shares many properties with VSO languages. Indeed, it has been argued that English is a VSO language at the deep level.¹⁰ (From the generative-transformational point of view, there is no SVO language at the deep level. All of the languages of the world are either VSO or SOV at the deep level.) First, the *universals* are re-stated, and then the explanations and discussions from the generative-transformational point of view follow.

“*Universal 3*. Languages with dominant VSO order are always prepositional.” (*Universals of Language*, p. 78)

“*Universal 4*. With overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional.” (p. 79)



8. Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, Massachusetts: The M.I.T. Press, c1965), p. 118.

9. John R. Ross, “Gapping and the Order of Constituents,” *Progress in Linguistics*, eds. Manfred Bierwisch and Karl Erich Heidolph (The Hague: Mouton and Co., 1970), pp. 249-59.

10. James D. McCawley, “English as a VSO language,” *Language*, XLVI (1970), 286-99.

“*Universal 2*. In languages with prepositions, the genitive almost always follows the governing noun, while in languages with postpositions it almost always precedes.” (p. 78)

(29) the book of the teacher
 N Genitive

(30) sensei no hon (Genitive+N)¹¹

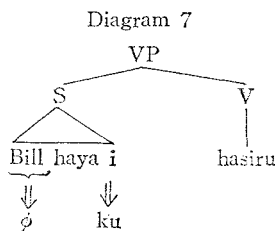
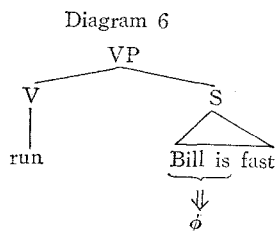
Such an example as *Bill's book* is not an exception to the *universal*, because the genitive construction is derived from the relative construction by a transformation. It is derived from such structure as *the book which Bill has* through *the book of Bill*, where the genitive follows the noun. Since the genitives come from various sources, *universal 2* is a superficial phenomenon.

“*Universal 7*. If in a language with dominant SOV order, there is no alternative basic order, or only OSV as the alternative, then all adverbial modifiers of the verb likewise precede the verb. (This is the rigid subtype of III.)” (p. 80)

(31) Bill runs fast. (Verb+Adverb)

(32) Bill wa hayaku hasiru. (Adverb+Verb)

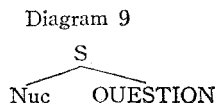
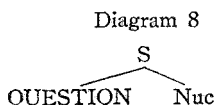
This *universal* is also a superficial phenomenon, but it is valid at the deep level, too. At the deep level, adverbials are predicates of the embedded sentence, and the embedded sentence precedes the verb in SOV languages and follows in VSO languages.



“*Universal 9*. With well more than chance frequency, when question particles or affixes are specified in position by reference to the sentence as a whole, if initial, such elements are found in prepositional languages, and, if final, in postpositional.” (p. 81)

11. The Japanese examples are translated version of the English examples.

Question particles and affixes are elements at the surface level. What exists at the deep level is an element QUESTION, which is replaced by a question particle or affix, and which triggers the question transformation (such as the movement of a *wh*-word or the inversion of the subject and auxiliary). It is at the initial position in VSO languages and at the final in SOV languages.



"*Universal 10.* Question particles or affixes, when specified in position by reference to particular word in the sentence, almost always follow that word. Such particles do not occur in languages with dominant order VSO." (p. 82)

"*Universal 11.* Inversion of statement order so that verb precedes subject occurs only in languages where the question word or phrase is normally initial. This same inversion occurs in yes-no questions only if it also occurs in interrogative word questions." (p. 83)

"*Universal 12.* If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant order SOV in declarative sentences, there is never such an invariant rule." (p. 83)

These *universals* are related to the transformational rules. The Japanese question transformation puts the particle *ka* at the end of the sentence; while the English question transformation puts the *wh*-word at the beginning of the sentence and then changes the order of the subject and the auxiliary.

(33) Bill can speak Japanese.

Can Bill speak Japanese?

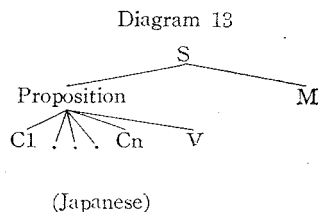
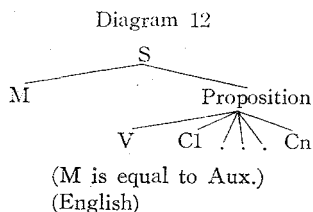
What can Bill speak?

(34) Taroo wa mizu o nomu. 'Taro drinks water.'

Taroo wa mizu o nomu ka. 'Does Taro drink water?'

Taroo wa nani o nomu ka. 'What does Taro drink?'

"*Universal 13.* If the nominal object always precedes the verb, then verb forms subordinate to the main verb also precede it." (p. 84)



"*Universal 22.* If in comparisons of superiority the only order, or one of the alternative orders, is standard-maker-adjective, then the language is postpositional. With overwhelmingly more than chance frequency if the only order is adjective-marker-standard, the language is prepositional." (p. 89)

This is a superficial phenomenon, too. The deep structure of the comparative construction is not known.

(39) Taroo is strong(er) than Ziroo. (adjective-marker-standard)

(40) Taroo wa Ziroo yori tuyoi. (standard-maker-adjective)

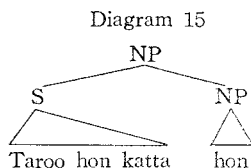
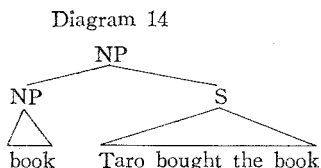
"*Universal 17.* With overwhelmingly more than chance frequency, languages with dominant order VSO have the adjective after the noun." (p. 85)

"*Universal 24.* If the relative expression precedes the noun either as the only construction or as an alternate construction, either the language is postpositional, or the adjective precedes the noun or both." (p. 91)

Universal 24 is valid both at the surface and deep levels. The surface examples are (41) and (42), and the deep structures are shown in Diagrams 14 and 15.

(41) the book which Taro bought
N Relative expression

(42) Taroo ga katta hon (Relative expression+N)



Universal 17 suggests that SOV languages have the adjective before the noun.

(43) the red book (Adjective+N)

(44) akai hon (Adjective+N)

The English example is not an exception. The example is derived by transformations in the following way:

Deep Structure : the book (the book is red)

↓ relativization

the book which is red

↓ "which is" is deleted

the book red

↓ inversion of the adjective and the noun

Surface Structure: the red book

Universal 17 is redundant because it is included in *universal 24*.

The generative-transformational re-analysis of the *universals* proposed by Greenberg enables us to suggest three hypotheses:

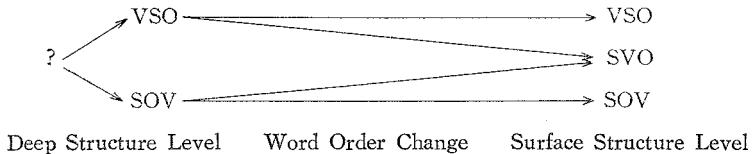
Hypothesis A: At the deep structure level, all the languages of the world are divided into two major types according to the relative order of subject, object, and verb: VSO language or SOV language.

Hypothesis B: Each type has a chain of characteristics (at the surface level and at the base and transformational levels).

Hypothesis C: A characteristic of the VSO type and the corresponding characteristic of the SOV type may be mirror image of each other.

I propose *Hypothesis A* from the study of English. English is an SVO language at the surface level, but it has many VSO characteristics and what seem to be exceptional to the *universals* can be explained in terms of transformations (such as the adjective inversion).

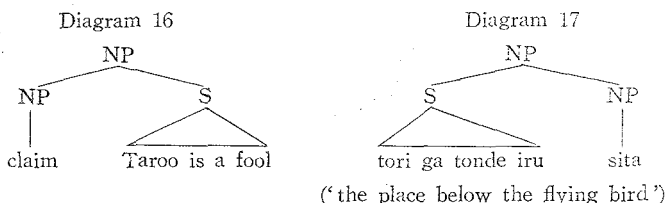
Theoretically, the following figure can be suggested:



Hypothesis B is Greenberg's argument. The illustration of the hypothesis is like the following:

If a language has the order of Subject-Object-Verb (at the deep level), then the language is postpositional, the genitive precedes the noun (at the surface level), the adverbial follows the verb, the question particle comes at the final position (at the surface level), the question and statement have the same word order, the auxiliary follows the verb, the comparative construction is standard-marker-adjective (at the surface level), and the relative clause precedes the noun.

Hypothesis C is a conclusion that I have drawn from the *universals*. Compare Diagram 4 with Diagram 5, Diagram 6 with Diagram 7, Diagram 8 with Diagram 9, Diagram 10 with Diagram 11, Diagram 12 with Diagram 13, and Diagram 14 with Diagram 15. Besides these, the appositive constructions in English and Japanese present an example of mirror image:



Hypothesis C is concerned with the characteristics at the deep structure level. There is also a possibility that a symmetrical contrast is seen between a transformational process in VSO type and the corresponding transformational process in SOV type.

Hypothesis D: A transformational rule in a VSO language and the corresponding transformational rule in an SOV language may be a mirror image rule.

Hypotheses A, B, C, and D and the hypothesis that English is a VSO language at the deep structure level though it is an SVO language at the surface structure level are of great significance in the contrastive analysis of English and Japanese. The next section is the illustration of the utilization of the hypotheses in the actual analysis of a transformation.

III

Section III is the exemplification of the utilization of the hypo-

eses presented in the preceding section. The transformation to be studied is relativization. I begin the analysis at the second stage of the contrastive analysis. It is presupposed that the existence of the relativization has been proved. Let us start with the analysis of the English relativization.

The transformational rule of the English relativization is as follows. The moved NP is replaced by a relative pronoun. The underlying structure is shown in Diagram 18, the altered structure is shown in Diagram 19, and the surface structure is shown in Diagram 20.

SD: W [NP NP [S X NP Y] S] NP Z
 1 2 3 4 5 6

SC: 1 2 3 4 5 6 \longrightarrow 1 2 4# [3 ϕ 5] S 6 (Obligatory)

Condition: 2=4

Diagram 18

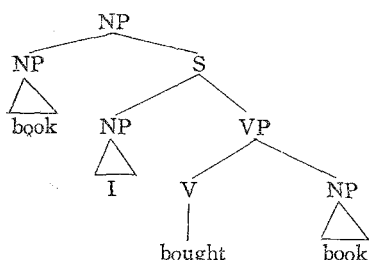


Diagram 19

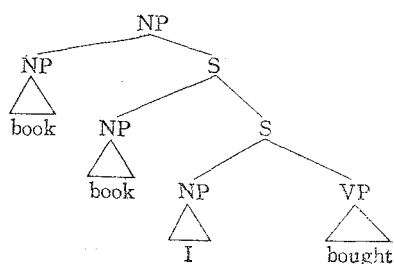
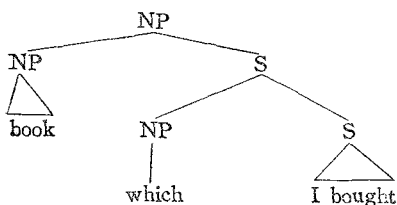


Diagram 20



Then let us analyze the Japanese relativization. The first problem to be solved is where the relative clause is posited: before or after the noun. It is often argued that the Japanese relative clause should be posited after the noun in the deep structure and then be moved before the noun by a transformation, which is characteristic of Japanese. But this view should be rejected. Remember *Hypothesis B*. It is one of the chain of characteristics of type III languages that the relative clause precedes the noun. If one posits the relative clause after the noun and moves it before the noun by a transformation, he must also explain in terms of the rule such transformations as

VSO	→	SOV
Preposition + NP	→	NP + Postposition
N + Genitive	→	Genitive + N
V + Adverbial	→	Adverbial + V
QUESTION + Nuc	→	Nuc + QUESTION
Aux + V	→	V + Aux
Adjective-marker-standard	→	Standard-marker-adjective

At present there is no rule that can explain all of these. And no one can tell which is the basic order, VSO or SOV. The relative clause should precede the noun in the deep structure.

Thus *Hypothesis B* helps to determine the position of the relative clause in Japanese. The next problem is the formulation of the relativization rule.

There are two versions of the relative clause formation rule in Japanese. One version of the rule is as follows:

(I)

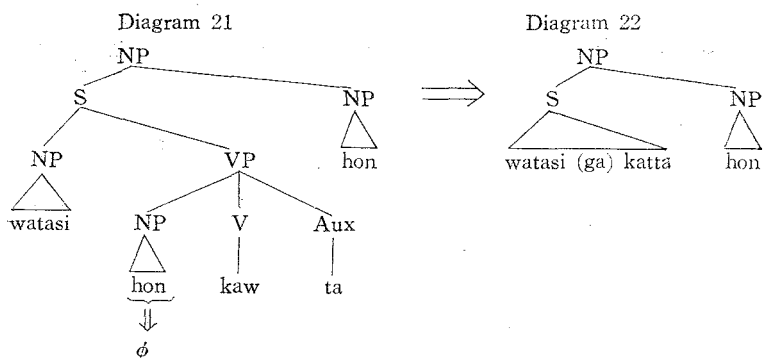
SD: W [NP [S X NP Y] S NP] NP Z

1 2 3 4 5 6

SC: 1 2 3 4 5 6 → 1 2 ϕ 4 5 6 (Obligatory)

Condition: 3=5

Diagrams 21 and 22 are the illustration of this rule:



This is a kind of identical NP deletion transformation.

The other version of the rule is as follows:

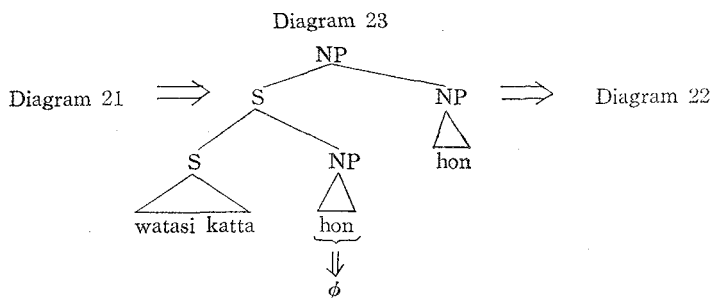
(II)

SD: =(I)

SC: 1 2 3 4 5 6 \longrightarrow 1 [2 ϕ 4]_S #3 5 6 (Obligatory)

Condition: 3=5

The moved NP is deleted. Diagram 23 is the altered structure.



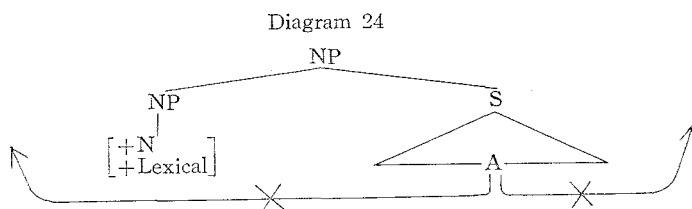
The question is which rule to choose. Let us examine the two versions. The proponents of the first version argue that since Japanese has no relative pronouns and the Complex NP Constraint, which

prohibits an item from moving, cannot be applicable in Japanese, no item moves in the Japanese relativization transformation. They maintain that the Japanese relativization is nothing but the identical NP deletion.

The Complex NP Constraint is defined as follows:

No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation.¹²

It is illustrated by the following diagram:

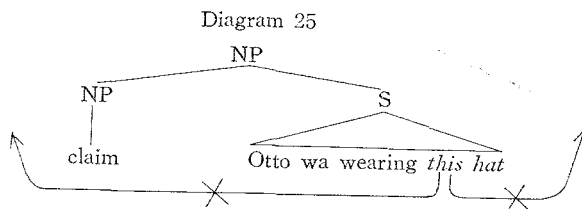


Ross gives an example to explain his viewpoint:

(45) I believed the claim that Otto was wearing this hat.

(46) *The hat which I believed the claim that Otto was wearing is red.

The example is diagrammed:



In Japanese, this constraint is argued to be inapplicable as seen

12. John R. Ross, "Constraints on Variables in Syntax," (Unpublished Doctoral Dissertation; Massachusetts Institute of Technology: 1967), pp. 127ff.

in the following example :

(47) ((Otto sono boosi o kabutte iru)_S to iu syutyoo)_{NP} o watasi
ga sinzita.

(48) ((Otto ga kabutte iru)_S to iu syutyoo)_{NP} o watasi ga sinzita boosi.

Since the constraint is argued to be universal and it is not applied to Japanese, the explanation is that in Japanese relativization no item moves.

But the arguments by the proponents of (I) are not convincing. It is true that Japanese has no relative pronouns, but if we compare English and Japanese pronominalizations carefully, we find that in Japanese, the deletion of an item serves as a kind of pronominalization. When the repeated noun is substituted by such pronouns as *he*, *she*, or *it*, in English, the repeated noun is deleted in Japanese. For example, compare the following pairs.

((49) When *Taroo* sees a movie, *Taroo* wears glasses.

((50) *Taroo* ga (*Taroo* ga eiga a miru toki ni) megane o kakeru.

((51) When *he* sees a movie, *Taroo* wears glasses.

((52) *Taroo* wa eiga o miru toki ni megane o kakeru.

It is possible to regard the deletion of the moved NP as ϕ -pronominalization.¹³

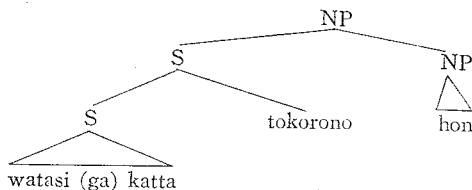
The inapplicability of the Complex NP Constraint is not convincing, either. The constraint does apply in Japanese. The following examples are unacceptable :

((53) watasi wa ((sensei ga yoku iku)_S kissaten)_{NP} de haha ni atta.
'I met my mother at the coffee shop to which my teacher often goes.'

((54) *watasi ga ((yoku iku)_S kissaten)_{NP} de haha ni atta sensei.

*((yoku iku)_S kissaten)_{NP} de watasi ga haha ni atta sensei.

13. If *tokorono* is a relative pronoun, the moved identical NP is replaced by *tokorono*.



'the teacher who I met my mother at the coffee shop to which often goes.'

- { (55) ((sono otokonoko ga kisu o sita)_S onnanoko)_{NP} o watasi ga sukida.
'I like the girl whom the boy kissed.'
(56) * ((kisu o sita)_S onnanoko)_{NP} o watasi ga sukina otokonako.¹⁴
'the boy who I like the girl whom kissed.'
(57) ((gakudoo ga kuri o hirou)_S syasin)_{NP}¹⁵ o watasi ga yabutta.
'I tore the picture of a schoolboy picking up chestnuts.'
(58) * ((gakudoo ga hirou)_S syasin)_{NP} o watasi ga yabutta kuri.
'the chestnuts which I tore the picture of a schoolboy picking up.'

It is true that we have many acceptable examples. But the acceptable examples are somewhat strange or unnatural Japanese, which we never use in everyday conversation. From these reasons, I adopt version (II) in this paper.

The next stage is the contrast of the two rules. At a glance, one notices that there is symmetry between the English and Japanese relativization rules. The NP moves from right to left in English and from left to right in Japanese. The conclusion will be:

Conclusion I: The English and Japanese relativization rules are a mirror image rule.¹⁶

SD: W $\left[\begin{array}{c} \text{NP} \text{ NP} \left[\begin{array}{c} \text{S} \text{ X NP Y} \end{array} \right]_{\text{S}} \end{array} \right]_{\text{NP}} \text{ Z}$
1 2 3 4 5 6

SC: 1 2 3 4 5 6 \longrightarrow 1 2 4# $\left[\begin{array}{c} 3 \ \phi \ 5 \end{array} \right]_{\text{S}}$ 6 (Obligatory; English)

6 5 4 3 2 1 \longrightarrow 6 $\left[\begin{array}{c} 5 \ \phi \ 3 \end{array} \right]$ #4 2 1 (Obligatory; Japanese)

Condition: 2=4

14. (56) is borrowed from Sin-Ichi Harada, "Sentence Patterns," *Journal of English Teaching*, Vol. V (1972), No. 4, p. 250. Harada argues that (56) is not unacceptable, but I think it is unacceptable.

15. The first half of (57) is borrowed from Minoru Nakau, "Nippongo ni okeru Meisi Syuusyoku Koozoo (Noun Modification Patterns in Japanese)," *Gengo (Language)*, II (1973), 111.

16. For the details of the mirror image convention, see Ronald Langacker, "Mirror Image Rules I: Syntax," *Language*, XLV (1969), 575-98.

Remember *Hypotheses C* and *D*. If the hypotheses are taken into account, the conclusion will be:

Conclusion II: The English and Japanese relativization rules are symmetrical. It is because English is a VSO language and Japanese is an SOV language.

Another conclusion, which is less justifiable, is:

Conclusion III: The relativization transformation of a VSO language and that of an SOV language are mirror image of each other.

SUMMARY

A contrastive analysis of English and Japanese proceeds through three or four stages:

- (1) The proof of the existence of a specific transformation in the two languages
- (2) The description of the transformation
- (3) The contrast of the transformations
- (4) The presentation of a hypothesis

In doing the analysis, the following hypotheses should be taken into account:

- (A) At the deep structure level, all the languages of the world are divided into two major types according to the relative order of subject, object, and verb: VSO language or SOV language.
- (B) Each type has a chain of characteristics (at the surface level and at the base and transformational levels).
- (C) A characteristic of the VSO type and the corresponding characteristic of the SOV type may be mirror image of each other.
- (D) A transformational rule in a VSO language and the corresponding transformational rule in an SOV language may be a mirror image rule.

It should also be taken into account that English is a VSO language at the deep level although it is an SVO language at the surface level and that Japanese is an SOV language at the surface and deep levels.