CONFIGURATIONALITY IN JAPANESE: HOW GRAMMATICAL FUNCTIONS ARE DETERMINED*

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1. INTRODUCTION

This paper considers configurationality in Japanese in the framework of Lexical Functional Grammar (LFG) (cf. Bresnan 2001). Configurationality in Japanese has attracted quite a few attentions within generative grammar since 1980s (cf. Hale 1980, Saito 1985, Whitman 1979, 1986 among others.)[1] However, most analyses are found within the GB/Minimalist approach, and as far as I know, there is no serious research has been made on this matter in LFG.

Japanese is systematically head-final. It has fairly free word order among argument/adjunct NPs. The flexible word order leads to the question of whether Japanese has hierarchical structure similar to English or has flat structure like Warlpiri (cf. Hale 1983). If one adopts the GB/Minimalist approach, the answer to this question is quite clear. As discussed in an influential work by Saito (1985), Japanese shows binding behavior similar to that of English. If binding is considered to show the prominence among phrase structural positions, we can conclude that Japanese has hierarchical structure like English. However, in LFG, binding facts are considered to show prominence between grammatical functions in f(unctional)-structure, which exists independent of phrase structure (i.e. c-structure). If we are to argue for the configurationality in LFG, we need to look for 'classical' diagnostics related to constituency of the clause.

In LFG, c-structure can be organized either endocentrically or lexocentrically. Configurational languages build endocentric phrase structures in accordance with the principles of X' theory, whereas nonconfigurational languages utilize non-projective, lexocentric category 'S' for clauses (Bresnan 2001). Configurational languages rely on syntactic means to define grammatical relations: word orders in these languages are more or less fixed, and permutation of argument NPs causes a sentence to convey a completely different meaning. On the other hand, nonconfigurational languages rely on morphological means to encode grammatical relations, e.g., by case markings on argument NPs (dependent-marking) or by agreement markers on a predicate (head-marking).[2] The word order in these languages tends to be fairly free, since grammatical relations are detectable from the relevant morphological markings. Note that the distinction between being configurational and being nonconfigurational is not meant to be discrete. Most languages utilize a mixture of configurational/nonconfigurational means as discussed by Nordlinger (1998). She

points out that scrambling languages such as German, Russian and Finnish use both endocentric and lexocentric means to encode grammatical functions. These languages have default or canonical word order, which is defined by endocentric phrase structure like English. However, they also utilize lexocentric or morphological means to encode information associated with grammatical functions, such as case markers, which enable to override default specification of grammatical functions. Japanese basically is a 'German' type language, but it has one interesting property with this respect. Although it utilizes morphological means like case particles to encode grammatical information, case markers alone cannot differentiate grammatical functions in certain context. For example, two NPs can be marked by the same case particle, or a case particle can be omitted in certain circumstances. When morphological means are not available, the hierarchical organization of a(rgument)-structure seems to determine appropriate association of grammatical functions with arguments. This property strongly suggests that Japanese utilizes both syntactic and morphological means for encoding grammatical information. By examining such phenomena, we will consider how syntax and morphology interact each other.

This paper is structured as follows. Section 2 considers basic property of Japanese phrase structure. Based on it, section 3 summarizes mapping relationship between c-structure to f-structure. Section 4 examines some restrictions on scrambling, and shows that syntactic requirement is necessary in Japanese grammar. Section 5 observes phenomena of particle omission, and section 6 concludes the discussion.

2. SCRAMBLING AND PHRASE STRUCTURE TYPES

In highly configurational languages like English, word order among argument NPs is relatively fixed and their grammatical functions are determined by their phrase structural positions. For example, in English, the subject normally precedes inflected form of the verb and the object normally follows the main verb. On the other hand, in Japanese, it is allowed to scramble NPs (as well as adverbs) as long as the predicate remains in the sentence final position. In examples in (1), (a) is considered to be the most neutral word order, but all six logical patterns of permutation of NPs are allowed. The scrambled versions in (b-f) basically denote the same event as (1a) does. That is, except some discourse effects, the permutation of NPs does not affect the logical meaning of the sentence.

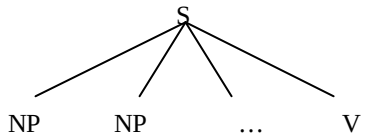
(1) a. Taroo-ga Hanako-kara tegami-o moratta.[3]
Taro-Nom Hanako-from letter-Acc received
'Taro received a letter from Hanako.'
b. Taroo-ga tegami-o Hanako-kara moratta.
c. Hanako-kara Taroo-ga tegami-o moratta.
d. Hanako-kara tegami-o Taroo-ga moratta.
e. Tegami-o Taroo-ga Hanako-kara moratta.
f. Tegami-o Hanako-kara Taroo-ga moratta.

Observing the examples in (1), it is clear that grammatical relations are (at least partially) encoded by case particles in Japanese, and not determined solely by phrase

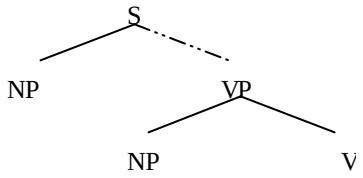
structural positions. In this type of 'dependent-marking languages', a case marker signals what kind of grammatical function is appropriate for the associated NP. For example, as Japanese is a nominative-accusative language, the nominative marker is typically associated with the subject, whereas the accusative marker is associated with the object.

Now, the word order possibilities depicted in (1) lead us to wonder whether Japanese clauses can be characterized by a flat phrase structure exemplified in (2a) or by a hierarchical structure in (2b). The flat structure in (2a) is originally proposed for capturing phenomenon of free word order in Warlpiri (Hale 1983, etc.). In nonconfigurational languages, grammatical information is traceable from a case marker or an agreement marker. Thus it is not required to distinguish NPs in terms of phrase structural positions. If a case marker specifies a grammatical function of an NP in Japanese, it might not be necessary to represent phrase structures by hierarchical organizations like (2b). However, in the discussion below, I will show that Japanese phrase structure should be characterized by a hierarchical structure in (2b) even though it utilizes morphological means to encode grammatical relations.

(2) a.



b.



Note that the crucial difference between them is the existence of VP node in (2b). In GB/Minimalist approach, arguments in favor of a VP node are based mostly on the asymmetry between subject/object NPs mainly with respect to the binding relation between them. Since binding is not dealt with in terms of c-structure in LFG, let us refer to more 'classical' constituency tests. Before going into Japanese facts, I will look at typical cases of nonconfigurational/configurational languages first.

In nonconfigurational structure in (2a), we expect that a V and its argument NP do not form a VP. Such an example is attested in Wambaya, one of the Australian Aboriginal languages discussed in Nordlinger (1998). First, the word order in Wambaya is completely free, except the requirement that the auxiliary, *gin-a* in (3), be in the second position.

(3)	Dawu	gin-a	alaji	janyi-ni.[4]
	bite	3SG.M.A-PST	boy.I(ACC)	dog.I-ERG
	'The dog bit the boy.'			

Alaji gin-a dawu janyi-ni.
Alaji gin-a janyi-ni dawu.
Dawu gin-a janyi-ni alaji.
Janyi-ni gin-a alaji dawu.
Janyi-ni gin-a dawu alaji. (Nordlinger 1998: 27-28 (1))

According to Nordlinger, there is no positive evidence supporting the existence of a VP node in Wambaya. Moreover, the examples below argue against such constituency. Interestingly, while it is possible for a complex NP to appear before the auxiliary in (4), a verb with its object cannot appear before the auxiliary in (5).

(4) Naniyawulu nagawulu baraj-bulu wurlu-n duwa.
that.DU.II.NOM female.DU.II.NOM old.person-DU(NOM) 3DU.S(NPST)-PROG get.up
'The two old women are getting up.' (Nordlinger 1998: 29 (3))

(5) a. *Daguma janji ng-a ngawurniji.
hit dog.I(ACC) 1SG.A-PST 1SG(ERG)
'I hit the dog.'
b. *Janji daguma ng-a ngawurniji.
dog.I(ACC) hit 1SG.A-PST 1SG(ERG)
(Nordlinger 1998: 29 (4))

(6) Ngaragi-nka galyurringini-nka wurl-any yarru.
drink-DAT water.I-DAT 3DU.S-PST.AWAY go
'They went to drink some water.' (Nordlinger 1998: 29 (5))

If there is a VP node, we expect a verb and its object to form a constituent. However, irrespective of the order between the verb and its object, the putative 'VP' constituent cannot appear before the auxiliary as in (5), which strongly suggest the non-existence of a VP node in Wambaya. A sort of 'VP' can appear before the auxiliary only when it is a nominalized infinitival clause as in (6). However, this example can be treated as a case of a complex NP, and it is not considered to be evidence for configurationality in Wambaya.

On the other hand, a similar fact can show that there is a VP constituent in German as discussed in Choi (1999). As shown in (7), word order in German is relatively free, and in the matrix clause, as long as the finite verb remains in the second position, other constituents can scramble relatively freely.

(7) a. DER KURIER **sollte** nachher dem Spion den Brief zustecken.
the courier(Nom) should later the spy(Dat) the note(Acc) slip
'The courier was supposed to slip the spy the note later.'
b. NACHHER **sollte** der Kurier dem Spion den Brief zustecken.
c. DEM SPION **sollte** der Kurier nachher den Brief zustecken.
d. DEN BRIEF **sollte** der Kurier nachher dem Spion zustecken.
e. ZUSTECKEN **sollte** der Kurier nachher dem Spion den Brief.
(Choi 1999: 17 (1), (2), emphasis from original)

As shown above, any constituent can fill the sentence initial position. Now, it can also be filled by a verb with its object NP as in (8a), which indicates the existence of a VP node in German. Note that as in (8b), a verb and its subject cannot occupy this sentence initial position.

(8) a. [Dem Mann geholfen] hat der Junge.
the man(Dat) help has the boy(Nom)
'The boy helped the man.'
b. *[Der Junge geholfen] hat dem Mann.
the boy(Nom) help has the man(Dat)
'The boy helped the man.' (Choi 1999: 23-24 (12))

Not only the fact that the verb with its object NP can be fronted, but the asymmetrical behavior between the object and the subject NPs clearly suggests the existence of a VP node in German. If there is a VP node, we expect there to be a certain difference between the subject and the object.

Having observed typical cases of nonconfigurational and configurational languages, let us turn our attention to Japanese. In order to examine constituency, we can use focus and pseudo-cleft examples. As in (9a), a focus particle *-sae* 'even' can be attached to the root form of a verb. Interestingly, as shown in (9b), it is possible to prepose the verb and the object argument together. This suggests the existence of a VP node.

(9) a. Hanako-wa hon-o kaki-sae sita.[5]
Hanako-Top book-Acc write-even did
'Hanako even wrote a book.'
b. [Hon-o kaki]-sae Hanako-wa sita.[6]
book-Acc write-even Hanako-Top did

The pseudo-cleft examples in (10) also indicate the existence of a VP node. Here again, the verb and its object can appear as a focus constituent (see (10b)).

(10) a. Hanako-ga atarasii fuku-o katta.
Hanako-Nom new clothes-Acc bought
'Hanako bought new clothes.'
b. Hanako-ga sita-no-wa, [atarasii fuku-o kau] koto-da.
Hanako-Nom did-Nzer-Top new clothes-Acc buy fact-Cop.Npast
'What Hanako did was to buy clothes.'

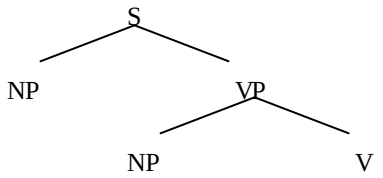
A remark is in order before proceeding further. One might say that the verb with the object is nominalized by *koto* 'fact' in (10b). Comparing it with the Wambaya example described in (6), one might argue that this does not support the assumption that there is a VP node in Japanese. However, recall that in Wambaya, the sentence initial position can be filled by any category, i.e. V or N. Thus the non-occurrence of a putative 'VP' in the sentence initial position strongly suggests the non-existence of a VP constituent in this language. Turning to the case in Japanese, the focused element preceding the copula *-da* should always be an NP, or nominal form. Thus the fact that

the 'VP' is nominalized by a particle *–no* in (11) does not cause a problem for supporting the existence of a VP node.

(11) a. [Sono hon-o kaita]-no-wa Taroo-da.
that book-Acc wrote-Nzer-Top Taro-Cop.Npast
'It is Taro who wrote that book.'
b. [Taroo-ga kaita]-no-wa sono hon-da.
Taro-Nom wrote-Nzer-Top that book-Cop.Npast
'It is that book which Taro wrote.'

Summarizing the observation above, I propose the basic structural representation of Japanese in (12). Note that no functional projection, such as I, C, or D, is assumed here. As discussed in Sells (1995), there is little evidence for assuming separate functional categories in Japanese. Information typically conveyed by 'I', such as tense, is signaled by inflectional endings, and there does not exist a group of auxiliary verbs corresponding to those in English. Also I do not assume intermediate bar-level projection here, and only use simple expansion of the projection, V to VP, N to NP, and so on.

(12)



3. ASSOCIATING C-STRUCTURE AND F-STRUCTURE

Having considered the basic phrase structure for Japanese, let us briefly summarize theoretical framework assumed in this paper, particularly the theoretical device concerning mapping relations from c-structure to f-structure. C-structure and f-structure are parallel level of representations. They are associated with each other by mapping principles. It is not the case that one is derived from the other.

First, recall that a case marker plays a crucial role in specifying a grammatical relation in Japanese. In LFG, Bresnan (2001, 111 (39a)) defines the relationship between the case marker and encoding grammatical function in the following schema.[7,8]

(13) Dependent-marking:
(? CASE) = ? ? (? GF) =?

This simply says that if a node has a particular case attribute ?, then that node should be associated with corresponding grammatical function. This schema can be considered as a summary of the set of principles. Since Japanese is a nominative/accusative language, the following principles hold. I do not consider the syntactic property of other case markers in this paper.

(14) (? CASE) = Nom ? (? SUBJ) =?
(? CASE) = Acc ? (? OBJ) =?

These principles require that a nominative marked NP be associated with the SUBJ function, and an accusative marked NP be associated with the OBJ function. Note here that a morphological item like a case particle plays a role in determining the grammatical function, which is encoded solely by the position of the NP in configurational languages.

In addition to information from case markers, Japanese makes use of the information from phrase structure for determining a default word order. Let us now turn to consider mapping principles defined in terms of phrase structure configuration. For configurational languages, Bresnan (2001, 102 (21)) proposes the following set of universal principles of endocentric structure-function association.

(15) a. C-structure heads are f-structure heads.
b. Specifiers of functional categories are the grammaticalized discourse functions (= TOP, FOC, SUBJ).
c. Complements of functional categories are f-structure co-heads.
d. Complements of lexical categories are the non-discourse argument functions (= OBJ, OBJ?, OBL?, COMPL).
e. Constituents adjoined to phrasal constituents are non-argument functions (= TOP, FOC, ADJ).

These principles license an assignment of appropriate function to the corresponding c-structure configuration. I assume that Japanese basically follows these principles. However, there is a problem with directly applying these principles to associate a function with a phrase structure configuration in Japanese. First, because functional heads are not assumed here, (15b,c) are not relevant to the current discussion. In this connection, if we do not assume functional categories, there is no principle licensing the SUBJ function, since (15b) is the principle for it. So, I propose the following set of phrase structure rules for Japanese, using the basic phrase structure in (12). Here, the SUBJ function appears as a sister of VP, and the OBJ function appears as a sister of V. For scrambling cases, I assume that a 'scrambled phrase' is adjoined to S, and a discourse function, such as TOP or FOC is associated with it.

(16) a. S ? NP VP
(? SUBJ)=? ? =?
b. VP ? NP V
(? OBJ)=? ? =?
c. S ? NP S
(? DF)=? ? =? (where DF = TOP, FOC)

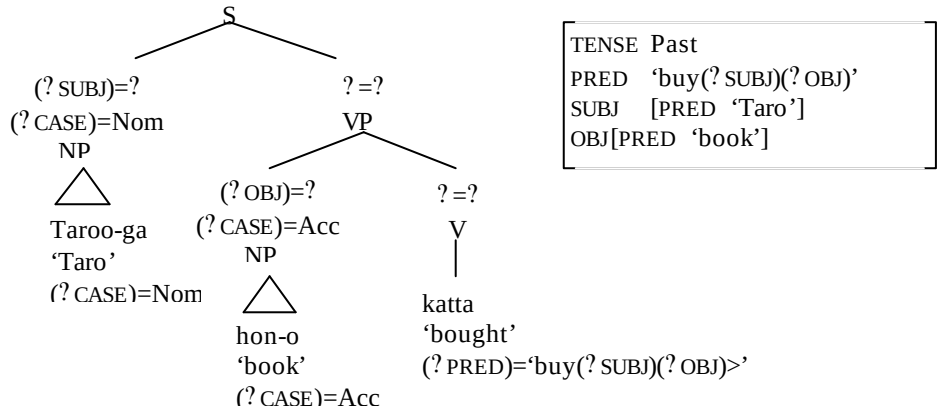
The principles in (16) license the default association of an appropriate grammatical function with a particular configuration in c-structure. What then happens when the OBJ function appears in the sentence initial position? The principle (16c) will associate the NP with a grammaticalized discourse function, such as TOP or FOC, but it still needs to be linked to the OBJ function. In order to assign an appropriated grammatical

function to the dislocated NP, we need to take into account the information carried by a case particle as well.

Now, let us take a simple example with a transitive verb and see how two types of information, one from case markers and the other from phrase structure configuration, interact each other.

(17) a. Taroo-ga hon-o katta.
Taro-Nom book-Acc bought
'Taro bought a book.'

b. c-structure f-structure

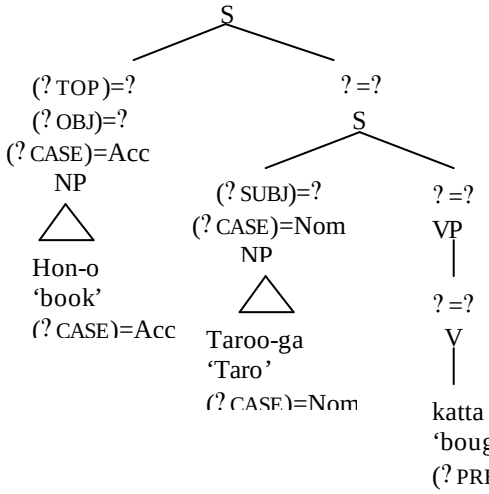


In the example (17), a predicate 'buy' takes two arguments, SUBJ and OBJ. Note that a case marker contributes to assigning an appropriate grammatical function to the node it is attached to. The nominative marked NP 'Taro' is associated with SUBJ, and the accusative marked NP 'book' is associated with OBJ. In this example, phrase structure configuration gives the identical result. From phrase structure rules in (16), we can see that the first NP 'Taro' is associated with the SUBJ function, and the second NP 'book' is associated with the OBJ function. Since the specification from case markers and the specification from phrase structure match, the resulting f-structure is well formed.

Now, (18) shows the case of the object argument being scrambled to the sentence initial position. (For a similar treatment of scrambling in Russian, see Bresnan (2001, Ch.9).)

(18) a. Hon-o Taroo-ga katta.
book-Acc Taro-Nom bought
'Taro bought a book.'

b. c-structure



f-structure

$$\begin{bmatrix} \text{TENSE} & \text{Past} \\ \text{PRED} & \text{'buy(? SUBJ)(? OBJ)'} \\ \text{SUBJ} & [\text{PRED 'Taro'}] \\ \text{OBJ} & \boxed{1} \\ \text{TOP} & \boxed{1}[\text{PRED 'book'}] \end{bmatrix}$$

First, case markers contribute to specifying grammatical functions in the same way as in (17). The accusative marked NP 'book' is mapped to OBJ, whereas the nominative marked NP 'Taro' is mapped to SUBJ. In this example, configurational structure gives different information. The second NP 'Taro' is still associated with the SUBJ function, since it appears as a sister of a VP. However, according to the principle (16c), the adjoined NP 'book' is associated with a syntactic discourse function, which is labeled here as TOP for concreteness. As shown in the f-structure representation, the TOP function is identified with the OBJ function, and they share a single value, tagged here as 1. The scrambling example exhibits that Japanese utilizes morphological means to encode grammatical relations as well as phrase structure configuration. In a way, we could regard the phrase structure rules in (16) as reflecting the hierarchical organization of argument structure. That is, the direct internal argument (i.e. object) appears internal to a VP, whereas the subject argument appears external to it. I will examine phenomena which show hierarchical organization of phrase structure in the next two sections.

4. RESTRICTIONS ON SCRAMBLING

So far, we have observed how information from phrase structure configuration and case markers interact. In this section, let us examine some restrictions on scrambling.[9] I will show that when two NPs are marked by the same case particle, the scrambling of arguments are systematically blocked.

There are certain possible cases where two NPs are marked by the same case particles. For example, some stative predicates can optionally take an object marked by a nominative particle. As summarized in Tsujimura (1996, 211), when both the subject NP and the object NP are marked by the nominative particle, it is not possible to scramble them as shown below.

(19) a. Hanako-ga suugaku-ga yoku dekiru (koto)[10]
Hanako-Nom math-Nom well can.do fact
'(the fact that) Hanako is good at math.'
b. *Suugaku-ga Hanako-ga yoku dekiru (koto)
math-Nom Hanako-Nom well can.do fact

(20) a. Taroo-ga kuruma-ga kai-tai (koto)
Taro-Nom car-Nom buy-want fact
'(the fact that) Taro wants to buy a car.'
b. *Kuruma-ga Taroo-ga kai-tai (koto)
car-Nom Taro-Nom buy-want fact

If we are forced to interpret the (b) examples, the first NP will be interpreted as the subject and the second NP will be the object. Thus, (20b) would mean 'A car wants to buy Taro', which is unacceptable in a usual circumstance. This fact seems to suggest that the word order plays a role in assigning grammatical functions. However, Tsujimura (1996, 293, footnote 7) notes that certain native speakers do not find any difference in (19) or (20). I assume that those speakers who find (b) examples grammatical are using semantic information, such as animacy hierarchy or thematic hierarchy. In these examples, the subject NP is an animate agent argument, whereas the object NP is an inanimate patient argument. Thus, even when the argument NPs are scrambled, it might be possible to link NPs to appropriate grammatical functions. However, I suppose even those speakers who do not find the difference in (19) or (20) would interpret examples in (21) differently.

(21) a. Taroo-ga Hanako-ga suki-da/(-na koto)[11]
Taro-Nom Hanako-Nom like-Cop/-Cop fact
'(the fact that) Taro likes Hanako.'
b. Hanako-ga Taroo-ga suki-da/(-na koto)
Hanako-Nom Taro-Nom like-Cop/-Cop fact
'(the fact that) Hanako likes Taro.'

As represented in English translation, in these examples, the order of the NPs differentiates their grammatical relations. Here, the first NP is linked to the subject, and the second NP is linked to the object. If we alter the order of two NPs, the interpretation changes as in a configurational language. Thus, when particles do not discern an appropriate grammatical function, positions in a phrase structure configuration determine the default grammatical function associations.

Note that the restriction on scrambling is not the property of stative predicate. Interestingly, if we change one of the nominative markers to something else, the permutation of NPs becomes possible. For example, with certain stative predicates, we can use a dative particle for the subject as in (22). Interestingly, we can scramble argument NPs in such a case.

(22) a. Hanako-ni suugaku-ga yoku dekiru (koto)
Hanako-Dat math-Nom well can.do fact
'(the fact that) Hanako is good at math.'

b. Suugaku-ga Hanako-ni yoku dekiru (koto)
math-Nom Hanako-Dat well can.do fact

Another way to differentiate case markers is to mark one of the NPs with a topic marker *–wa*. Since a topic marker appears in the matrix clause, I omit *koto* 'fact' in (23). Here, the subject NP is associated with a topic marker, and it is possible to scramble two NPs.

(23) a. Taroo-wa kono kuruma-ga kai-tai rasii.
Taro-Top this car-Nom buy-want seem
'It seems that Taro wants to buy this car.'
b. Kono kuruma-ga Taroo-wa kai-tai rasii.
this car-Nom Taro-Top buy-want seem

Let us turn to examine other cases where two NPs are marked by the same kind of case particle. In Japanese, it is possible to mark the embedded subject of an unaccusative predicate either by an accusative marker or by a nominative marker.[12]

(24) a. Taroo-ga kono ten-o juuyoo-da-to omotte iru (koto)
Taro-Nom this point-Acc important-Cop-Comp.Npast think is (fact)
'(the fact that) Taro thinks this point to be important.'
b. Taroo-ga kono ten-ga juuyoo-da-to omotte iru (koto)
Taro-Nom this point-Nom important-Cop.Npast-Comp think is (fact)
'(the fact that) Taro thinks that this point is important.'

Interestingly, it is possible to scramble the accusative marked NP to the sentence initial position as in (25a), but not the nominative marked NP as in (25b).

(25) a. Kono ten-o Taroo-ga juuyoo-da-to omotte iru (koto)
this point-Acc Taro-Nom important-Cop.Npast-Comp think is (fact)
b. *Kono ten-ga Taroo-ga juuyoo-da-to omotte iru (koto)
this point-Nom Taro-Nom important-Cop.Npast-Comp think is (fact)

Again, if we are forced to interpret the example (25b), the sentence initial NP 'this point' will be linked to the matrix subject, and the second NP 'Taro' will be linked to the embedded subject. Now, it should be stressed that this does not result from the nominative marked subject. As shown in (26), if the matrix subject is marked by a topic marker *-wa*, the scrambling of the nominative marked NP is possible as well.

(26) a. Taroo-wa kono ten-ga juuyoo-da-to omotte iru
Taro-Top this point-Nom important-Cop.Npast-Comp think is
'Taro thinks that this point is important.'
b. Kono ten-ga Taroo-wa juuyoo-da-to omotte iru
this point-Nom Taro-Top important-Cop.Npast-Comp think is

Thus, the examples (24)-(26) also support the assumption that scrambling is prohibited when two NPs are marked by an identical case particle.

Finally, let us consider the examples involving causativization. Consider the examples in (27).

(27) a. Taroo-wa Jiroo-ni hana-o Hanako-ni age-sase-ta.
Taro-Top Jiro-Dat flower-Acc Hanako-Dat give-Cs-Past
'Taro made/let Jiro give flowers to Hanako.'
b. Hana-o Taroo-wa Jiroo-ni Hanako-ni age-sase-ta.
flowers-Acc Taro-Top Jiro-Dat Hanako-Dat give-Cs-Past
c. Jiroo-ni Taroo-wa hana-o Hanako-ni age-sase-ta.
Jiro-Dat Taro-Top flowers-Acc Hanako-Dat give-Cs-Past
d. *Hanako-ni Taroo-wa hana-o Jiroo-ni age-sase-ta.
Hanako-Dat Taro-Top flowers-Acc Jiro-Dat give-Cs-Past

There are two NPs marked by *–ni* (here glossed as Dat) in (27a). One of them is the causee argument or the agent argument of the caused event (i.e. *Jiroo-ni*). The other is the goal argument of the caused event *ageru* 'give' (i.e. *Hanako-ni*). Notice that the scrambling of NPs from caused event is possible as in (27b,c). However, as pointed out in Calcagno (1993), it is not possible to prepose the goal argument of the caused event to the sentence initial position as in (27d) if one wants to retain the meaning of (27a). The most natural reading of (27d) is the one where *Hanako* is interpreted as the causee, as in 'Taro made/let Hanako give flowers to Jiro.' The interpretation where *Hanako* functions as the causee argument suggests again that argument structure information regulates the linking of NPs to grammatical functions.

Now, let us compare the examples in (27) and (28). In (28), the source argument of the caused event is marked by a particle *-kara* 'from'. In this case, any argument of the caused event can be preposed. It might sound somewhat unnatural, but the scrambling of the source argument to the sentence initial position is possible as illustrated by (28d).

(28) a. Taroo-wa Jiroo-ni hon-o Hanako-kara kari-sase-ta.
Taro-Top Jiro-Dat book-Acc Hanako-from borrow-Cs-Past
'Taro made/let Jiro borrow a book from Hanako.'
b. Hon-o Taroo-wa Jiroo-ni Hanako-kara kari-sase-ta.
book-Acc Taro-Top Jiro-Dat Hanako-from borrow-Cs-Past
c. Jiroo-ni Taroo-wa hon-o Hanako-kara kari-sase-ta.
Jiro-Dat Taro-Top book-Acc Hanako-from borrow-Cs-Past
d. Hanako-kara Taroo-wa hon-o Jiroo-ni kari-sase-ta.
Hanako-from Taro-Top book-Acc Jiro-Dat borrow-Cs-Past

The examples in (28) show that if particles can differentiate appropriate grammatical functions, the permutation of NPs is possible. If not, the default specification by argument structure forces certain interpretation as in (27).

In summary, we have observed several cases where two NPs are marked by the same case particle. In those cases, the scrambling of the NPs are systematically blocked, and information from argument structure forces a default interpretation.

5. THE OMISSION OF PARTICLES

As discussed in section 2 and 3, particles contribute to specifying grammatical relations. However, in certain contexts, it is possible to omit particles in colloquial speech. In this section, I will describe some environments where the omission of particles takes place and consider how appropriate grammatical functions are linked to corresponding NPs in such circumstances. I will propose that there are basically three types of environment where the omission of particles occurs: the omission of particles on the object argument, on a topic argument, and on referential expressions. The first two cases require syntactic accounts, whereas the last one is explainable only in terms of discourse factors. The particle omission on referential expressions will not be the focus of the discussion, but dividing it from the others will make the description of phenomena clearer.

First, let us observe the particle omission with the object argument. In colloquial speech, the object NP can appear without an accusative particle when it is adjacent to the predicate (see Kageyama 1993, 56-57, Miyagawa 1989, Ono 1996, Saito 1983, and references cited therein). Consider examples in (33).

(29) a. Hanako-ga eigo-de ronbun(-o) kaita-n dat-te.[13,14]
Hanako-Nom English-by thesis-Acc wrote-Nzer Cop-Comp
'I heard that Hanako wrote a thesis in English.'
b. Taroo-ga kuruma(-o) katta-n dat-te?
Taro-Nom car-Acc bought-Nzer Cop-Comp
'I heard that Taro bought a car?'

In the above examples, it is possible to omit the accusative marker on the object NP.

As shown below, it is possible to omit the particle on the object argument, even when it takes a nominative marker.

(30) a. Hanako-wa tyuugokugo(-ga) hanas-eru-n dat-te.
Hanako-Top Chinese-Nom speak-can-Nzer Cop-Comp
'I heard that Hanako can speak Chinese.'
b. Taroo-wa kuruma(-ga) hosii-n dat-te.
Taro-Top car-Nom want-Nzer Comp-Cop
'I heard that Taro wants a car.'

It seems that the licensing factors for the particle omission is the objecthood of an NP, but not the type of particles.

Some researchers suggest that even the subject of an unaccusative predicate allows the particle omission (cf. Tateishi 1989, Kageyama 1993). It is difficult to discern such cases from the topic marker omission which will be discussed next, but I follow their proposals and assume that the 'direct internal argument' allows the particle omission. In the examples below, the final particles provide discourse implication needed for licensing the omission of particles, such as the relation between the speaker and the hearer. Thus, in the absence of final particles, the sentence involving the particle omission might sound quite odd. Also, the example (31a) requires an

appropriate context, e.g. people are waiting at a bus stop for a bus to come, and one sees a bus approaching, and tells the others by saying this sentence.

(31) a. A, basu(-ga)/*-wa kita-yo.[15]
Ohbus-Nom/-Top came-Fp
'Oh, here comes the bus.'
(Tsutsui 1983, 213 (37), Masunaga 1988, 149 (24))

b. Zoo-wa hana(-ga)/-??wa nagai desu-ne.
elephant-Top trunk-Nom/-Top long Cop-Fp
'Elephants have long trunks, don't they?' (Tsutsui 1983, 226 (73c))

c. Kimi-ate-ni gakkoo-e tegami(-ga)/-??wa todoita-yo.
you-addressed-to school-to letter-Nom/-Top arrived-Fp
'A letter has arrived at school for you.' (Tsutsui 1983, 208 (22a))

Since the occurrence of a topic marker *–wa* is unnatural in the above examples, the omitted particles can be regarded as a nominative marker rather than a topic marker. If we include the subject of an unaccusative predicate in this type of particle omission, it might be better to describe it in terms of argument structure properties, not in terms of grammatical functions. However, I tentatively consider the phenomena of particle omission in terms of grammatical functions in this paper.

Now, in contrast to the case with the object, it is impossible to omit particles from the adjunct NP (cf. Ono 1996). Consider some examples.

(32) a. Hanako-wa ronbun-o eigo*(-de) kaita-n dat-te.
Hanako-Top thesis-Acc English-by wrote-Nzer Cop-Comp
'I heard that Hanako wrote a thesis in English.'

b. Taroo-wa happyoo-o gakkai*(-de) sitan dat-te?
Taro-Top presentation-Acc conference-at did-Nzer Cop-Comp
'I heard that Taro did a presentation at a conference?'

c. Hon-ga Amerika*(-kara) todoita-n dat-te?
book-Nom America-from arrived-Nzer Cop-Comp
'I heard that a book arrived from America?'

d. Taroo-wa eki*(-made) aruita-n dat-te.
Taro-Top station-as.far.as walked-Nzer Cop-Comp
'I heard that Taro walked to the station.'

In the examples above, the particle in question is the sole source of information of the grammatical function of the NP it is attached to. Thus, if we omit the particle, there is no other way to recover information about the adjunct NP. It is not surprising that such particles cannot be omitted even when it is adjacent to the predicate.

In relation to the distinction between arguments (i.e. subject and object) and adjuncts, it is interesting to observe the pattern of particle omission with a particle *ni*. As discussed in Sadakane and Koizumi (1995), there are various usage of *ni*, ranging from dative marker, goal marker, and so on. As pointed out in Ono (1996), depending on the usage of *ni*, its omissibility varies. Below, I show examples of a dative marker, a goal marker, and a locative marker.

(33) a. Taroo-wa eigo-o Hanako*(-ni) osieta-n dat-te. (dative)
Taro-Top English-Acc Hanako-Dat taught-Nzer Cop-Comp
'I heard that Taro taught English to Hanako.'
b. Taroo-wa ima Tookyoo*?(-ni) sunde-ru-n dat-te. (locative)[16]
Taro-Top now Tokyo-in live-be-Nzer Cop-Comp
'I heard that Taro lives in Tokyo now.'
c. Taroo-wa kinoo Oosaka(-ni) itta-n dat-te. (goal)
Taro-Top yesterday Osaka-to went-Nzer Cop-Comp
'I heard that Taro went to Osaka yesterday.'

A dative marker or a locative marker cannot be deleted, which supports the assumption that it is only the object (or a direct internal argument) which can appear without a particle. However, when *–ni* is used as a goal marker, it can be deleted as shown in (33c). I assume that the goal argument here functions as a direct internal argument. In other words, the predicate *iku* 'go' directly subcategorizes a *–ni* marked NP as a direct internal argument. Since the goal particle *–ni* does not add information, we can omit it since we can infer the role of the NP 'Osaka' without it.

Let us turn to examine the omission of particle with the subject argument of a transitive verb. Firstly, as shown in (34), the nominative marker on the subject NP cannot be omitted in the position adjacent to the predicate.

(34) Eigo-de ronbun-o Hanako*?(-ga) kaita-n datte.
English-by thesis-Acc Hanako-Nom wrote-Nzer Cop-Comp
'I heard that Hanako wrote a thesis in English.'

At first sight, it seems possible to have the subject NP without a case particle in the sentence initial position as shown in (35a). The particle omission in this case, however, shows behavior different from that with the object argument (Saito 1983, who attributes the original observation to Kuno 1973). First, consider the contrast in (35b,c). With a *wh*-word *dare*, it is possible to attach a nominative marker on it, but not a topic marker. Now, the particle omission with *dare* is not possible as in (35d). If the particle omission with the subject NP were possible, we would expect the example (35d) to be possible. The ungrammaticality of (39d) suggests that the particle omission here occurs with the topic NP, not with the subject NP.

(35) a. Taroo_ kyoo oyoida-no?
Taro today swam-Q
'Did Taro swim today?'
b. Dare-ga kyoo oyoida-no?
who-Nom today swam-Q
'Who swam today?'
c. *Dare-wa kyoo oyoida-no?
who-Top today swam-Q
d. *Dare_ kyoo oyoida-no?
who today swam-Q

In this respect, the particle omission with the object argument shows a completely different property. As shown in (36c), it is possible to omit the particle even if we replace the object NP with a *wh*-word *nani*.

(36) a. Taroo-wa kuruma-o katta-no?
Taro-Top car-Acc bought-Q
'Did Taro bought a car?'
b. Taroo-wa nani-o katta-no?
Taro-Top what-Acc bought-Q
'What did Taro bought?'
c. Taroo-wa nani_ katta-no?
Taro-Top what bought-Q

Thus, it is more appropriate to regard the particle omission with the sentence initial NP as the omission of particle with the topic NP rather than with the subject NP. There is another difference between the particle omission with the object NP and that with the topic NP. When we omit the particle on the topic NP, a slight pose after the bare NP is required, but it is not required with the particle omission with the object NP. Below, I put a comma in the case of the particle omission with a topic, in order to indicate the pose after the bare NP.

If we combine the two types of particle omission discussed above, we get an example where two NPs appear without case markers as shown in (37a). Actually, it is less natural if we leave the particle on the object NP and omit the particle with the topic NP (37b). Interestingly, it is not possible to scramble two NPs when we omit both case particles as in (37c), in contrast to the example in (37d).

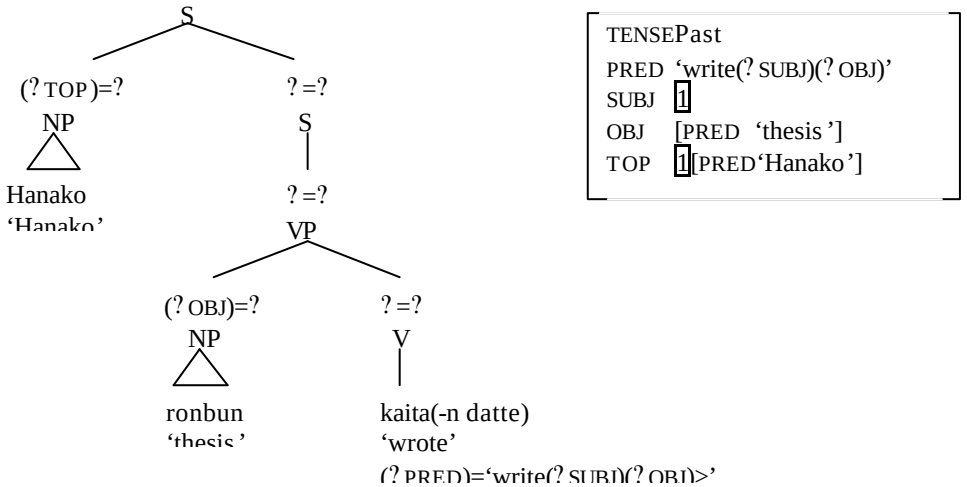
(37) a. Hanako_, eigo-de ronbun_ kaita-n datte.
Hanako English-by thesis wrote-Nzer Cop-Comp
'I heard that Hanako wrote a thesis in English.'
b. ?Hanako_, eigo-de ronbun-o kaita-n datte.
Hanako English-by thesis-Acc wrote-Nzer Cop-Comp
c. *Ronbun_, eigo-de Hanako_ kaita-n datte.
thesis English-by Hanako wrote-Nzer Cop-Comp
d. Ronbun-o, eigo-de Hanako-wa kaita-n datte.
thesis English-by Hanako-Top wrote-Nzer Cop-Comp

The ungrammaticality of (37c) can be regarded as another case where two case particles are identical. Since two NPs appear without case particles, it is not possible to discern which grammatical function is related to an NP. Or, there is another possible account for this fact. The first NP 'thesis' will be linked to the topic function in the sentence initial position, whereas the NP adjacent to the predicate 'Hanako' is linked to the object function. The grammatical function association results in an unintended reading, resulting in ungrammaticality.

Now, the following represents the mapping relationship between c-structure and f-structure of the sentence where two NPs appear without case particles.

(38) a. Hanako_, ronbun_ kaita-n datte.
Hanako thesis wrote-Nzer Cop-Comp
'I heard that Hanako wrote a thesis.'

b. c-structure f-structure



First, the NP *ronbun* 'thesis', which is adjacent to the predicate is annotated with the OBJ function in accordance with the phrase structure rule in (16b). On the other hand, the initial NP 'Hanako' is annotated with the TOP function in the sentence initial position by (16c). Now, we need to consider how to associate the SUBJ function with an appropriate NP. Since the second NP 'thesis' is linked to the OBJ function by the phrase structure rule (16b), it is incompatible with the SUBJ function. In order to satisfy the requirement by the PRED value of 'write', the value 'Hanako' must be shared among the SUBJ and the TOPIC. The TOP and SUBJ functions are compatible, thus result in a well-formed f-structure. This is a tentative approach to annotating this type of structure, and I will leave a precise treatment of such cases for further consideration.

Before closing this section, let us consider another type of particle omission. It is pointed out in the literature that referential expressions can appear without particles, and it is more lenient than particle omissions occurring with syntactic consideration discussed above (cf. Masunaga 1988, Yatabe 1996). Consider the following examples.

(39) a. A, ano musi_ ugoiteru. (cf. Masunaga 1988, 151 (33))
Oh that insect moving
'Oh, that insect is moving.'
b. Ano nimotsu_, dokete kurenai?
that parcel re move give
'Could you put the parcel out of the way?'
c. Kore-wa kimi_, yatte kure-yo. (Yatabe 1996, 225 (11))
this-Top you do give-Fp
'Could you do this?'
c'. Kore-wa Tanaka-kun yatte-yo. [17] (cf. Yatabe 1996, 237 (67))
this-Top Tanaka do-Fp
'Could you do this, Tanaka-kun?'

When both the speaker and the hearer can see the object at issue, the NP referring to it can appear without case markers as in (39a,b). Note that this type of particle omission occurs irrespective of the type of the original case particle (*-ga* in (39a) and *-o* in (39b)). Also, with referring expression *kimi* 'you' or *Tanaka-kun*, it is possible to omit the particle even when the original particle is unquestionably a nominative marker. As is clear from the examples above, this type of particle omission in discourse context occurs even with the subject argument. By separating the particle omission with the referential expression from the grammatical one, the property of particle omission becomes clearer. The particle omission with referential expressions seems to be like a vocative expression, but I do not consider the licensing process for this type of particle omission. Also, the interaction between three types of particle omission discussed in this section is an interesting issue, but I will leave the matter open here. Suffice it to point out that referential expressions can appear without a particle more easily than other types of particle omission.

In this section, we have observed various types of particle omission and considered how an appropriate grammatical function is associated with a bare NP. It is proposed that a default specification from phrase structure configuration determines the basic function associations.

6. CONCLUSION

In this paper, I have considered configurationality in Japanese from various perspectives. In particular, I have argued that Japanese has a hierarchical structure although it allows scrambling of NPs. Interestingly, it is observed that scrambling of NPs are prohibited when two NPs at issue are marked by the same case particle. In a way, when two NPs are marked by an identical case particle, hierarchical organization of a-structure becomes transparent in the phrase structure configuration. It is interesting to discuss relationships between a-structure and c-structure, and this certainly requires further consideration.

NOTES

* This paper represents a work in progress. Thanks to Norio Nasu and Hideki Kishimoto for suggestions and comments.

1 For more references on phrase structure, configurationality and scrambling, see Tsujimura (1996, 296).

2 The terms 'dependent-marking' and 'head-marking' are originally due to Nichols (1986). See discussion in Bresnan (2001) and Nordlinger (1998) for their usage in LFG.

3 The following abbreviations are used in this paper: Acc 'accusative', ADJ 'adjunct', Comp 'complementizer', COMPL 'complement', Cop 'copula', CS 'cause', Dat 'dative', DF 'discourse function', FOC 'focus', Fp 'final particle', Nom 'nominative', Npast 'nonpast tense', Nzer 'nominalizer', OBJ 'object', OBJ$_2$ 'secondary object', OBL$_2$ 'oblique', Past 'past tense', Q 'question', SUBJ 'subject', Top 'topic marker', TOP 'topic function'.

4 Abbreviations in (3)-(6) follow Nordlinger (1998), which includes: A 'transitive subject', ACC 'accusative case', AWAY 'direction away', DAT 'dative case', DU 'dual', ERG 'ergative case', F 'feminine', I 'masculine gender', II 'feminine gender', M 'masculine', NOM 'nominative case', NPST 'non-past tense', PST 'past tense', and S 'intransitive subject'.

5 In Japanese, it sounds natural if a matrix subject is marked by a topic marker *-wa*, rather than by a nominative marker *-ga*. In this paper, I will use the topic marker on the subject argument where it does not affect the discussion.

6 This kind of example is pointed out by Taisuke Nishigauchi in his lecture.

7 The symbols '?' and '?' indicate functional mapping from c-structure to f-structure. '?' designates the f-structure corresponds to its node, and '?' designates the f-structure corresponds to its mother node. Thus, ?=? indicates that the node it is associated with corresponds to an f-structure head, and (?SUBJ)=? means that the node it is associated with corresponds to the value of SUBJ of its mother's node (likewise (?OBJ)=?).

8 See Nordlinger (1998) for an alternative approach to capture the direct relationship between case markers and grammatical function information by using 'inside-out' function application.

9 For a summary of restrictions on scrambling, see Tsujimura (1996, 205-212).

10 Following the usual convention in Japanese linguistics, I add *koto* 'fact' to the examples in this section. Since addition of *koto* makes the example an embedded clause, such that 'the fact that Hanako likes math', it reduces unnaturalness arising from the *–ga* marking on the matrix subject.

11 An adjectival noun such as *suki* 'like' takes different forms of copula in the sentence final position (*-da*) and in the pre-nominal position (*-na*).

12 For a discussion of these forms, see Sells (1990).

13 Here, the morpheme *–n* is a shortened form of a nominalizer *–no*. Additionally, after an inflected form of copula *datte*, a phrase meaning 'I hear…' is implied.

14 There are several discourse conditions to be met in order for the omission of particles to be licensed (for more detailed discussions, see Tsutsui 1983, Masunaga 1988, and Yatabe 1996). Firstly, the omission of a particle is argued to be possible only when the NP is not focused or is not emphasized. It might be possible to consider this phenomenon in terms of information structure (cf. Choi 1999), but I leave the matter for a future research. Secondly, note that if we do not add sentence final expressions such as *datte*, the examples in (29) without a particle would sound quite unnatural. In this respect, 'Related Utterance Condition' proposed by Tsutsui (1983, 199 (3)) needs to be taken into consideration. It states that '[t]he more closely an utterance is related to the hearer, the more natural the ellipsis of *ga* in the utterance is.' Although the condition is proposed for the omission of the nominative particle, it seems applicable to the omission of the accusative particle as well. As suggested in Ono (1996) this condition can be satisfied by final expressions like *datte* 'I hear', *kasira* 'I wonder if', *kudasai* 'please' or interrogative forms. In the following discussion, I use such sentence final expressions or interrogative forms, in order to make the examples with the particle omission sound natural.

15 Final particles *–ne* and *–yo* in the examples (31) indicate speakers attitude toward a proposition. The particle *–sa* serves to assert a claim, implying that a speaker tries to attract the hearer's attention to the utterance. The particle *–ne* serves to invite confirmation or agreement on the part of the hearer.

16 Ono (1996) judges this type of example without a particle as grammatical, but I find it rather unnatural without a particle.

17 A suffix *–kun* implies that the hearer is in socially lower rank than the speaker is.

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