

## A Movement Approach to GA-NO Conversion in Japanese\*

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### 1. Introduction

Ga-No Conversion (GNC) is an optional alternation of the nominative case marker *ga* with the genitive case marker *no* in Japanese. GNC can take place in the relative clause (e.g., (1)), in the *koto* clause (e.g., (2)) and in the *no* clause (e.g., (3)) (cf. Harada (1971) and Shibatani (1976)). In each case, the embedded subject *John* can be followed either by *ga* or *no*.<sup>1)</sup>

(1) Kare-wa [[John-ga/-no kai-ta] [hon]]-o yon-da  
 he -T -N/-G write-ps book-A read-ps  
 'He read the book which John wrote'

(2) Kare-wa [[John-ga/-no ki-ta] [koto]]-o shittei-ta  
 he -T -N/-G come-ps thing-A know-ps  
 'He knew the fact that John came'

(3) Kare-wa [[John-ga/-no ki-ta] [no]]-o shittei-ta  
 'He knew the fact that John came'

On the other hand, GNC cannot occur in the main clause (e.g., (4)), in the *to* clause (e.g., (5)), in the *node* clause (e.g., (6)), in the appositive clause (e.g., (7)), and in the relative clause in which the object is preposed (e.g., (8)).

\* This article is based on my paper read at the First Kyung Hee International Conference on Linguistic Studies held at Kyung Hee University, Korea, on August 11, 1989. I am grateful to those who provided me with valuable comments and encouragement: among them, Takao Gunji, Akira Ikeya, K. P. Mohanan and Carl Pollard. My special thanks go to Georgia Green, Steve Leary and Jerry Morgan, who commented on the earlier version of this paper.

1) Throughout this paper, the following abbreviations are used.

T = Topic marker

N = nominative case marker

G = genitive case marker

A = accusative case marker

ps = past tense

- (4) John-ga/\*-no hon-o kai-ta  
 -N/-G book-A write-ps  
 'John wrote a book' (Harada (1971))
- (5) John-wa [[Mary-ga/\*-no ki-ta] [to]] omot-ta  
 -T -N/-G come-ps that think-ps  
 'John thought that Mary came'  
 (Inoue (1976: 228) and Shibatani (1976: 248))
- (6) [[Tomodachi-ga/\*-no kita] [node]] boku-wa benkyoo-o yame-ta  
 friend -N/-G came because I-T study-A stop-ps  
 'I stopped studying because my friend came'  
 (Shibatani (1976: 248))
- (7) [[Karera-ga/\*-no bujidat-ta toyuu] [shirase]]-ga kazoku-o  
 they -N/-G safe -ps that news -N family-A  
 genki zuke-ta  
 fine give-ps  
 'The news that they were safe made their families happy'  
 (Inoue (1976: 227-228))
- (8) [[hon-o John-ga/\*-no kat-ta] [mise]]  
 book-A -N/-G buy-ps store  
 'the store where John bought a book' (Shibatani (1975: fn.8))

In this paper, I will show how GNC is syntactically derived and how the impossibility of GNC in (4-8) is explained. More specifically, I will propose a movement analysis of GNC and argue that the embedded subject moves from the domain of the nominative Case assigner to the one of the genitive Case assigner.

In the next section, I will review some basic notions like government. In the third section, I will sketch the phrase structure and Case assignment of Japanese. In Section 4, I will propose a movement analysis of GNC. In the fifth section, I will explain why GNC cannot take place in (4-8). In Section 6, I will speculate possible solutions to the problems with my approach. Lastly, in Section 7, I will

present some advantages of my proposal.

## 2. Theoretical Assumptions

In this paper, I will assume the general framework of the government and binding theory developed by Noam Chomsky. In particular, I will follow Chomsky (1986b) and adopt the definition of government given in (9).

- (9) X governs Y iff X m-commands Y and there is no Z, Z a barrier for Y, such that Z excludes X. (Chomsky's (1986b) (18))

The notions like *m-command* and *exclude* are defined in the following way.

- (10) X m-commands Y iff X does not dominate Y and every maximal projection that dominates X dominates Y. (Chomsky (1986b: 8))

- (11) X excludes Y iff no segment of X dominates Y. (Chomsky's (1986b) (17))

*Barrier* is defined in terms of *blocking category (BC)*, whose definition is given in (5) (= Chomsky's (1986b) (25)).

- (12) Z is a barrier for Y iff (a) or (b):  
 a. Z immediately dominates W, W a BC for Y.  
 b. Z is a BC for Y, Z = IP.

- (13) Z is a BC for Y iff Z is not L-marked and Z dominates Y.

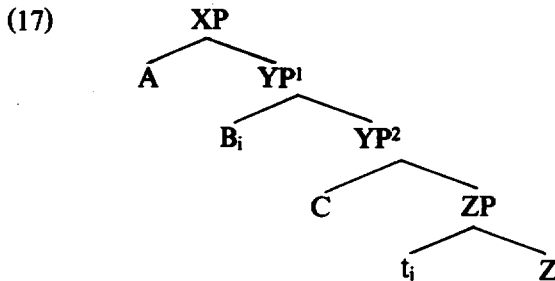
*L-marking* is in turn defined as in (6) in terms of *theta-government* and *sister*.

- (14) X L-marks Y iff X is a lexical category that theta-governs Y. (Chomsky's (1986b) (28))

- (15) X theta-governs Y iff X is a zero-level category that theta-marks Y and X, Y are sisters. (Chomsky's (1986b) (27))

- (16) X and Y are sisters if they are dominated by the same projections.  
(Chomsky's (1986b: 13))

Let us next take a look at (17). If an element B moves and adjoins to YP, we have the adjunction structure like (17).



The question is whether B is dominated by YP or not. Chomsky (1986b) assumes the definition of domination given by May (1985) and argues that the moved element B is not dominated by YP but by XP in (17).

- (18) X is dominated by Y only if it is dominated by every segment of Y.  
(May (1985))

It follows that A can govern B in (17).

### 3. Syntax of Japanese

In this section, I will review the phrase structures of the constructions in question, i.e., the relative clauses, the *koto* clause and so on, and the Case-assignment rule in Japanese.

I will basically follow Kaneko (1988) and Kuroda (1986) and assume that Japanese is a head-final and specifier-first language and, for example, the sentence like (19a) has the structure (19b).

- (19) a. John-ga hon-o kai-ta  
           -N book-A write-ps  
           'John wrote a book'

b. [<sub>CP</sub>[<sub>IP</sub> John-ga [<sub>r</sub>[<sub>VP</sub> hon-o [<sub>v</sub> kai]] [<sub>t</sub> ta]]]]

Let us now return to (1), (2), (3) and (7). Note that the relative clause, the *koto* clause, the *no* clause and the appositive clause are followed by a case marker *o* or *ga*. In Japanese whether an element is followed by a case marker or not is a diagnostic test of the NP-hood of the element in question. Therefore, it is quite possible to conclude that these clauses are nominal clauses and that they are dominated by NP. On the other hand, any case marker does not follow the *to* clause and the *node* clause, as shown in (5) and (6). This indicates that they are not nominal or dominated by NP.

First, for the relative clause constructions such as (20a), I assume (20b) as their structure.

- (20) a. [[John-ga kai-ta] [hon]]  
           -N write-ps book 'the book which John wrote'  
       b. [<sub>NP</sub> [<sub>CP</sub> O<sub>i</sub> [<sub>IP</sub> John-ga [<sub>r</sub>[<sub>VP</sub> t [<sub>v</sub> kai]] [<sub>t</sub> ta]]][<sub>NP</sub> hon]]

It is recently argued by Imai (1987) that Relativization of Japanese involves a movement of an empty relative pronoun, which is indicated as O in (20b). If we assume such a movement, we can account for the fact that Relativization obeys the Subjacency Condition in Japanese. After the empty relative pronoun moves, a rule like Predication applies and the moved pronoun and the nominal head share the same index (cf. Fukui (1988: 517)).

Third, following the suggestion by Fukui (1988), I will assume that (21c) is a structure for the *koto/no* clauses (e.g. (21a)) and the appositive clauses (e.g. (21b)).

- (21) a. [[John-ga ki-ta] [koto/no]]  
           -N come-ps thing  
           'the face that John came'  
       b. [[John-ga ki-ta to-yuu] [shirase]]  
           that news  
           'the news that John came'  
       c. [<sub>NP</sub> [<sub>CP</sub> [<sub>C</sub>[[<sub>IP</sub> John-ga [<sub>r</sub> [<sub>VP</sub> ki]]<sub>t</sub> ta]]][<sub>C</sub> toyuu]]  
           [<sub>N</sub> koto/no/shirase]]

Fourth, I will assume (22b) as a structure for the *to* and the *node* clauses, though there is a possibility that they are PP clauses rather than CP clauses (cf. Fukui (1988, fn. 7)).

- (22) a. [[John-ga ki-ta] [to/node]]  
           that/because  
           ‘that/because John came’  
       b. [<sub>CP</sub> [<sub>IP</sub> John-ga [<sub>r</sub> [<sub>VP</sub> ki [<sub>I</sub> ta]]]] [<sub>C</sub> to/node]]

Let us consider the Case assignment rule in Japanese.

In this paper, I will follow Hasegawa (1984/1985) and Shishido (1985) and assume that Case assignment is subject to government.

- (23) a. Nominative Case is assigned to NP by I.  
       b. Genitive Case is assigned to NP by N.  
       c. Accusative Case is assigned to NP by V.

However, there is a difference between nominative and genitive Case assignment and accusative Case assignment. For example, assignment of nominative and genitive Case assignment is not sensitive to theta-marking. Thus, INFL and noun assign Case to NPs which they govern, irrespective of whether they theta-mark the NPs or not. On the other hand, assignment of accusative Case is sensitive to theta-marking in the unmarked case. A verb assigns accusative Case to the NPs which it theta-marks. The existence of the multiple *ga*-phrase and *no*-phrase constructions and the non-existence of the multiple *o*-phrase constructions may be due to this difference.

Now, I want to show that CP is a barrier in the relative clause and the appositive clause. To see this, let us consider the LF-movement of *naze*.

In Japanese, the *wh*-words such as *naze* move at LF (cf. Fukui (1988), Miyagawa (1986) and Nishigauchi (1986)). Since there is no thematic relation between *naze* and the verb, the trace of *naze* must be antecedent-governed to satisfy the Empty Category Principle (ECP), whose definition is given in (24)

- (24) An empty category must be properly governed.

## (25) Proper Government

X properly governs Y iff X theta-governs Y or antecedent-governs Y.

With this in mind, let us compare (26) and (27).

(26) ?John-wa [[Bill-ga naze ki-ta] [koto/no]]-o shittei-ta no?

-T -N why come-ps thing-A know-ps Q

'\*Why did John know [the fact that Bill came t]?'

(27) a. \*John-wa [[Bill-ga naze kai-ta] [hon]]-o yon-da no?

-T -N why write-ps book-A read-ps Q

'\*Why did John read [[the book][which Bill wrote t]]?'

b. \*[[Karera-ga naze bujidat-ta to-yuu][shirase]]-ga kazoku-o

they -N why safe -ps that news -N family-A

genki zuke-ta no?

fine give-ps Q?

'\*Why did [[the news [that they were safe t]] make their family happy?'

If we assume that while *hon* and *shirase* do not L-mark CP, *koto* and *no* L-mark it, we can account for the contrast between (26) and (27) in terms of the ECP. If *koto* and *no* L-mark CP, CP is not a barrier. Since *naze* can antecedent-govern its trace in LF, the ECP is observed. On the other hand, if *hon* and *shirase* do not L-mark CP, it becomes a barrier. Hence, *naze* cannot antecedent-govern its trace, and the ECP is violated. Thus, the sentences in (27) are ungrammatical, whereas the sentence in (26) is grammatical.

## 4. Movement Analysis of GNC

In this section, I will show how GNC takes place in the relative clause, the *koto* clause and the *no* clause.

First, let us consider how GNC occurs in the relative clause.

(28) is a D-structure of the relative clause (20).

(28) [<sub>NP</sub> [<sub>CP</sub> [<sub>IP</sub> John [<sub>I</sub> [<sub>VP</sub> O [<sub>v</sub> kai]<sub>I</sub> ta]]]] [<sub>NP</sub> hon]]

If the Case assignment rule (23) applies to this structure after the empty relative pronoun moves, we have (29), where the subject *John* is followed by the nominative case marker *ga* because it is governed by INFL.

(29)  $[_{NP}[_{CP} O_i [_{IP} \text{John-ga } [r[_{VP} t_i [v \text{ kai}]_I \text{ ta}]]]]]_{NP} \text{ hon}]$

Suppose now that *John* moves from the subject position in (28) and adjoins to CP, as shown below.

(30)  $[_{NP}[_{CP} \text{John}_i [_{CP} O_j [_{IP} t_i [r[_{VP} t_j [v \text{ kai}]_I \text{ ta}]]]]]]]_{NP} \text{ hon}]$

Note here that CP is not an argument of the noun *hon*. Chomsky (1986b: 6) argues that adjunction is possible only to a maximal projection which is non-argument. Hence, *John* can adjoin to CP.

In (30), *John* is governed by the noun *hon* since it is dominated by NP rather than by CP. If the rule (23) applies to (30), we have (31), in which the subject *John* is followed by the genitive case marker *no* since it is governed by N.

(31)  $[_{NP}[_{CP} \text{John}_i\text{-no } [_{CP} O_j [_{IP} t_i [r[_{VP} t_j [v \text{ kai}]_I \text{ ta}]]]]]]]_{NP} \text{ hon}]$

This is how GNC takes place in the relative clause.

Let us next consider how GNC occurs in the *koto/no* clauses.

(32) is a D-structure for those clauses.

(32)  $[_{NP}[_{CP}[_{IP} \text{John } [r[_{VP}[v \text{ ki}]_I \text{ ta}]]]]] ]_{N} \text{ koto/no}]$

If the Case assignment rule (23) applies to (32), we have (33), in which the subject is marked with the nominative case marker *ga* since it is governed by INFL.

(33)  $[_{NP}[_{CP}[_{IP} \text{John-ga } [r[_{VP}[v \text{ ki}]_I \text{ ta}]]]]] ]_{N} \text{ koto/no}]$

Suppose that *John* moves into the CP specifier position from the subject position in (32). Then, we have the structure (34).



(34) [NP<sub>CP</sub> John<sub>i</sub> [IP t<sub>i</sub> [r[<sub>VP</sub>[v ki]<sub>I</sub> ta]]]]] [N koto/no]

Recall here that *koto* and *no* L-mark CP and remove its barrierhood. Thus, the CP specifier position can be governed by *koto* or *no*. If the rule (23) applies to (34), we have (35), where *John* is followed by the genitive case marker *no* since it is governed by N.

(35) [NP<sub>CP</sub> John<sub>i</sub>-no [IP t<sub>i</sub> [r[<sub>VP</sub>[v ki]<sub>I</sub> ta]]]]] [N koto/no]

This is how GNC takes place in the *koto/no* clauses.

### 5. Impossibility of GNC

In this section, I will show why GNC cannot take place in (4-8).

First, GNC cannot occur in the main clause. Recall now the structure of the main clause like (19b), where the subject is governed by INFL, a nominative Case assigner. Under my approach, GNC occurs only when the subject moves to the position governed by N. Therefore, GNC cannot take place in the main clause since the subject is not governed by N but by INFL.

Second, GNC cannot take place in the *to* and the *node* clauses. As we have already seen, these clauses are not nominal clauses. Thus, due to X-bar theory, their heads like *to* and *node* are not nominal, either. Since *to* and *node* are not nominal, they are not genitive Case assigners. Therefore, even if the subject NP moves into the CP specifier position, *to* and *node* fail to assign genitive Case to it. This is why GNC does not take place in these clauses.

Third, GNC cannot take place in the appositive clause. For example, the appositive clause like (7) has the structure (36).

(36) [NP<sub>CP</sub>[C<sub>IP</sub> karera [r...]]] [C toyuu]] [N shirase]

As noted before, in (36), CP is not L-marked by N. Thus, CP is a barrier. Therefore, even if the subject *karera* moves into the CP specifier position, N cannot govern it or assign genitive Case to it. It follows that GNC does not occur in the appositive clause.

Lastly, GNC cannot occur in the relative clause in which the object is preposed. It has been argued that the object is preposed by the Scrambling rule, and recently, Kuroda (1986) and Saito (1985) argue that this rule is formulated as an adjunction to IP. Thus, for example, (8) has a structure something like (37).

(37) [<sub>NP</sub>[<sub>CP</sub> O<sub>i</sub> [<sub>IP</sub> hon-O<sub>i</sub> [<sub>IP</sub> John-ga [t<sub>j</sub> t<sub>i</sub> kat][<sub>I</sub> ta]]]] [<sub>N</sub> mise]]

In the above structure, the subject is governed by INFL, not by N. Therefore, GNC cannot occur in this construction.

## 6. On Some Problems

A possible problem with my approach is that the chain created by the movement of the embedded subject violates the Chain Condition (cf. Chomsky (1986a, b)), which requires each chain to have only one Case. Under the movement approach, the moved NP receives genitive Case from a nominal head, and its trace also is in a position governed by a nominative Case assigner, i.e., INFL. This implies that the chain has two Cases: one is from N, and the other is from INFL.

In order to solve this problem, I will first assume the distinction between the Structural Case like nominative Case and genitive Case and the Lexical Case like accusative Case (cf. Kitagawa (1986)). Second, I will assume that the Structural Case is assigned at S-structure, while the Lexical Case is assigned at D-structure (cf. Chomsky (1986a)). Third, I will assume that Case is assigned to a category like NP rather than to a position.

Let us return to the problem and examine the chain which has two Case positions.

First, there is no Case conflict in this chain, since both nominative and genitive Case belong to the class of the Structural Case. Second, since Case is assigned to a category rather than to a position, the head of the chain, i.e., the moved NP, receives genitive Case, but the tail of the chain, i.e., the embedded subject position, does not receive Case even if it is governed by INFL. Thus, the chain does not have two Cases.

If the head of the chain receives genitive Case and its tail receives accusative

Case, the chain is ill-formed for the two reasons. First, Case conflict occurs in this chain since one Case is structural and the other is lexical. Second, the chain has two Cases since the moved NP has already received accusative Case at D-structure and it also receives genitive Case at S-structure. This suggests that the accusative case marker does not change to the genitive case marker. That is, there is no O-No Conversion in Japanese. The contrast in (38) shows that our prediction is correct.

- (38) [[sono hon-o/\*-no kai-ta] [hito]]  
       the book-A/-G write-ps person  
       'the person who wrote the book'

## 7. Conclusion

I have argued so far that GNC is explainable by the movement approach. The possibility and the impossibility of GNC observed in the foregoing sections have been independently observed and accounted for in the traditional generative research. However, the movement analysis can provide us with a straightforward explanation for them.

I want to present advantages of my approach here.

Before the innovation of the GB theory, GNC was explained by the GNC transformational rule like (39).

- (39) X - [<sub>NP</sub> [<sub>S</sub> Y - NP-ga -PRED] N] - W  
       1           2     3    4     5     6     7 → OPTIONAL  
       1           2     3    NO   5     6     7

(Cf. Harada (1971) and Shibatani (1976))

However, in the context of the principles-and-parameters approach assumed in the GB theory, the rule like (39) is not acceptable, because it is too specific. Once we assume the movement approach to GNC, on the other hand, we do not need to stipulate such a specific rule as (39) any longer.

Note here that the rule (39) incorrectly predicts that GNC can occur in every clause which is dominated by NP. Recall now the fact that GNC cannot take place in the appositive clause even though it is dominated by NP, as shown in

(7). In terms of the theory of barriers, however, the movement approach can account for this fact and show why GNC is possible in the *koto/no* clauses and impossible in the appositive clause, though both are dominated by NP.

Therefore, the movement approach to GNC overcomes the problem with the traditional approach as well as provides a conceptionally more natural explanation.

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