GA/NO Conversion
and the Abstract Case Assignment in Japanese[1]

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Abstract

The goal of this paper is two-fold: one is to revisit the classic topic, "Ga/No conversion" and widen the range of discussion by providing a new analysis of an apparently coinciding phenomenon, unavailability of a topic DP. The other is to defend the abstract/structural case assignment in Japanese against the morphological case theory (Aoyagi and Marantz). In doing so, I propose a purely structural case assignment system in Japanese, including a rather non-standard notion of Topic as a structural case. I will argue that this system would explain various facts regarding Ga/No conversion much better than Miyagawa's analysis. Finally I will try to defend the abstract/structural case theory and Case Filter in general against the morphological case theory. In particular, I will argue that the former can provide better explanations than the latter, for case marker ellipses, and the multiple subject constructions in Japanese.

1. Introduction/Background/Assumptions

In Japanese the subject of a clause can be either marked by GA as a nominative NP/DP or by NO as a genitive NP/DP in certain environments such as inside a relative clause or a sentential argument. This was first

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called by Harada (1971) GA/NO conversion.

(1a) Taroo-ga   katta   hon
        -NOM BOUGHT BOOK
  "book that Taroo bought"

(1b) Taroo-no   katta   hon
        -GEN BOUGHT BOOK
    "book that Taroo bought"

(1c) *Taroo-wa   katta   hon
        -TOP BOUGHT BOOK

(2a) Watashi-wa Taroo-ga kekkon shita no-o   shiranakatta.
     I-TOP   -NOM MARRIGE DID   COMP-ACC DID NOT KNOW
 "I didn't know that Taroo got married."

(2b) Watashi-wa Taroo-no kekkon shita no-o   shiranakatta.
     I-TOP   -NOM MARRIGE DID   COMP-ACC DID NOT KNOW
  "I didn't know that Taroo got married."

(2c) *Watashi-wa Taroo-wa kekkon shita no-o   shiranakatta.
     I-TOP   -TOP MARRIGE DID   COMP-ACC DID NOT KNOW

    Earlier researchers including Harada and Nakai (1980) did entertain the notion of analyzing the NP marked by NO also as nominative. However, as Case theory was developed to explain structural cases, there seemed to be a consensus among linguists including Saito (1983), Miyagawa (1989, 1992) such that the difference between (a) sentences and (b) sentences is in fact a structural one, i.e. the genitive NP resides not inside the same clause where the nominative NP/DP does, but directly under a higher projection. Although numerous proposals have been made for Case assignment or case checking throughout the development of the Minimalist program, it seems that the basic idea is that the nominative case will be assigned to the spec NP/DP by the head of IP/TP, I/T, and the accusative by the head of VP, V.

When Abney (1987) proposed a new functional category D, which takes an NP as its complement, he was seeing a parallel structure between NP like "John's destroying the spaceship" and a sentence, "John destroyed the spaceship." Here we can see also nominative/genitive conversion. He said that D is something like I (nflection) to NP. VP is a complement of I while NP is a complement of D. In other words, VP is combined with Infl/tense to become a sentence, while NP is combined with D to become a full NP with a case, which is DP. A tensed VP requires a nominative DP, therefore I assigns the nominative case to its spec DP. A DP with a case has to be in the position where it can properly receive a certain case. It is not likely that D receives a case and assigns another case to its spec DP at the same time. So if John's in (3b) is a genitive cased DP, it must be in the Spec of NP, not the spec of DP. It seems quite plausible that just as the lexical head, V assigns the accusative case to its spec DP, another lexical head N assigns the genitive case to its spec DP, as you see in (3b).

(3a) John destroyed the spaceship.   (3b) John's destroying the spaceship.
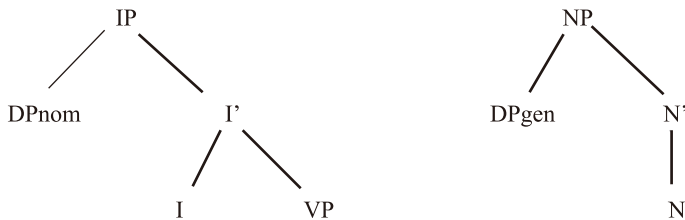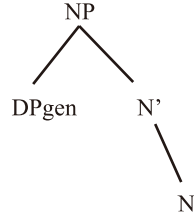

Although Japanese gerunds of transitive verbs do not seem to assign accusative case unlike English ones, we can see the same parallel for gerund of an intransitive verb as in (4).
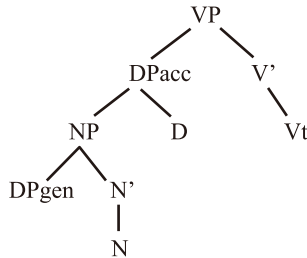
(4a) Taroo-ga aruku
　　"Taroo walks."
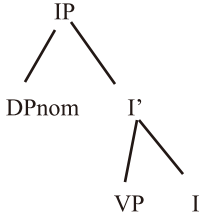
(4b) Taroo-no aruki
　　"Taroo's walking"

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        IP                              NP
       /  \                            /  \
   DPnom   I'                      DPgen   N'
           / \                              \
         VP   I                              N
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In Japanese, case is overtly marked, so (4b) is not yet a DP, but an NP. Aruki in (4b) is a gerund, and also a verbal noun. Suppose "aruki" projects a theta role walker, just like a transitive verb assigns the accusative case to its internal argument, the lexical head N probably assigns the genitive case to its spec DP. In order for this NP "Taroo no aruki" to receive a case, it has to be under the projection of DP, in other words this NP has to be the complement of D like in (5)

(5)　Taroo-no aruki-o tomeru　　　"(to) stop Taroo' walking"

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                VP
               /  \
           DPacc   V'
           /  \      \
         NP    D      Vt
        /  \
    DPgen   N'
            |
            N
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Chomsky (1993), in his Minimalist Program, says that he is considering an approach in which structural Case assignment "be recast in unified X-bar theoretic terms, presumably under the Spec-head relation." One of the core notions of Case theory is this Spec head relation. And of course the other is Case Filter which states that no NPs, now DPs are without

Case. The functional Category which dominates VP is Infl or Tense, while the functional category which dominates an NP is D, which must carry Case.

   In the following discussion, I will try to defend a purely structural case assignment such that a DP, whenever it is met by a certain structural condition, such as being at the Spec position of some head, receives from the head the case which is associated with it. With this rather old fashioned Case Theory in mind, I would like to revisit this classic topic, GA/NO conversion and widen the domain of discussion by adding one aspect which has been absent from the relevant literature: that is, an apparently coinciding phenomenon, the unavailability of a topic NP/DP. It is true that where we can observe the GA/NO conversion, a topic DP is not available as we see in (1c) and (2c). By seeking a theory which can explain both phenomena I hope to provide a more general picture of the structural case assignment in Japanese, including a rather non-standard notion of the topic as a structural case. First, I discuss in particular, two Japanese complementizers (a nominal complementizer, NO[i] and an adjectival one TO) and their Comp Phrases with respect to the distribution of the structural cases. Then, I will come back to the relative clause structure with GA/No conversion. After reviewing Miyagawa's (2013) analysis, I will argue that the structural case assignment system I propose can better account for the facts. In the later sections, I provide further arguments for the abstract case assignment in Japanese, and finally at the end, I hope to defend Abstract case theory in general, including the importance of Case Filter against the morphological case theory proposed by Aoyagi (2006).

2. Facts

I would like to point out that complementizers in Japanese do occur in a simple sentence as a sentential particle. NO and TO are not exceptions as you see in (6). TTE is understood to be a colloquial form of TO. The most incontrovertible example would be the question marker KA in (6d), which also introduces an embedded question.

(6a) Taroo-wa   moo   uchi ni kaetta   no
          -TOP ALREADY HOME TO RETURNED COMP
     "Taroo went home already."

(6b) Taroo-ga/*no   moo   uchi ni kaetta   no
          -NOM/*GEN ALREADY HOME TO RETURNED COMP
     "(It is that) Taroo went home already."

(6c) Taroo-wa   moo   uchi ni kaetta   tte
          -TOP ALREADY HOME TO RETURNED COMP
     "(Someone said that) Taroo went home already."

(6d) Taroo-wa   moo   uchi ni kaetta   ka
          -TOP ALREADY HOME TO RETURNED COMP
     "(I wonder if) Taroo went home already."

In a simple sentence, topic and nominative cases are available, but no GA/NO conversion as shown in (6b).

The CP headed by NO is to form a sentential argument as in (2). It will be case marked, GA/NO conversion can be observed and no topic DP can appear. On the other hand, the CP headed by TO serves as a complement clause to a verb like "think" (omow) or "say" (iw), and won't get case marked.

(7a) Hanako-wa Taroo-wa moo   uchi e kaeranai   to   omotta
       -TOP   -TOP ANY MORE HOME TO WON'T RETURN COMP THOUGHT
   "Hanako thought that Taroo would no longer come home."

(7b) Hanako-wa Taroo-ga moo   uchi e kaeranai   to   omotta
       -TOP   -NOM ANY MORE HOME TO WON'T RETURN COMP THOUGHT
   "Hanako thought that Taroo would no longer come home."

(7c) *Hanako-wa Taroo-no moo   uchi e kaeranai   to   omotta
       -TOP   -GEN ANY MORE HOME TO WON'T RETURN COMP THOUGHT

As the examples show in (7), the CP headed by TO, GA/NO conversion is not available, but a topic DP is. The verb "omow", however, also takes an accusative DP or an accusative DP plus a complement clause as in (8) and (9).

(8) Taroo-wa hanako-no   koto-o   omotteiru
     -TOP   -GEN FACT-ACC IS THINKING
   "Taroo is thinking about Hanako."

(9) Taroo-wa Hanako-o   busu da to   omotteiru.
     -TOP   -ACC UGLY IS COMP IS THINKING
   "Taroo thinks that Hanako is ugly."

It seems to be the case that TO comp phrase is incapable of appearing in a DP position, while No Comp phrase has to be in a DP position to receive a case. This may prove their lexical nature: NO as nominal, TO as adjectival. The only place for us to expect a nominal element to appear without a case in Japanese is the complement position of the Copula verb in the nominal predicate. Elsewhere (1992a) I argued that the nominal part of the nominal predicate in Japanese does not have a full NP status, that is DP status, hence lacks the case. NO comp phrase does indeed occur in the nominal predicate as shown in (10) and as we expect, a topic case can be licensed, and GA/NO conversion is not available.

(10a) Taroo-wa Hanako-ni   aitai   no   da.
　　　　-TOP   -DAT WANT TO SEE COMP IS
　　　"It is that Taroo wants to see Hanako."

(10b) Taroo-ga Hanako-ni   aitai   no   da.
　　　　-NOM   -DAT WANT TO SEE COMP IS
　　　"It is that TAROO wants to see Hanako."

(10c) *Taroo-no   Hanako-ni   aitai   no   da.
　　　　-GEN   -DAT   WANT TO SEE COMP IS

Japanese has also a complementizer which can be either nominal or adjectival. KA is just such a complementizer. As shown in (11), it can either a complex NP or a complement clause. The distributional pattern of the cases follows.

(11a) Watashi-wa Hanako-ni Taroo-wa itsu   uchi ni   kaeru   ka   kiita
　　　　　 -TOP   -DAT   -TOP WHEN HOME TO RETURN COMP ASKED
　　　"I asked Hanako when Taroo will come home."

(11b) Watashi-wa Hanako-ni Taroo-ga/*no itsu uchi ni   kaeru   ka   kiita
　　　　　 -TOP   -DAT -TOP/*GEN WHEN HOME TO RETURN COMP ASKED
　　　"I asked Hanako when Taroo will come home."

(11c) Watashi-wa Taroo-ga/no itsu   uchi ni   kaeru   ka-o   shiranai
　　　　　 -TOP -NOM/GEN   WHEN HOME TO RETURN COMP-ACC DON'T KNOW
　　　"I don't know when Taroo will come home."

3. Analyses

Now I turn to the analyses which might explain these facts. The facts seem to be clearly pointing to one thing: the complementizer, as far as it stays in the head of the CP, does license a topic case to its spec DP, and if it is somehow in the position where it gets a case, then it no longer licenses a topic DP, but it licenses a genitive DP.

If the complementizer in Japanese licenses a topic case to its spec DP of the CP just as Infl/T licenses a nominative DP in the spec of IP/TP, it seems to provide a very straightforward account of the facts presented so far. The structural difference between a complement clause headed by TO as in (7a) repeated here as (12a) and a sentential argument as in (2ab) repeated here as (12b) can be illustrated as in (13).
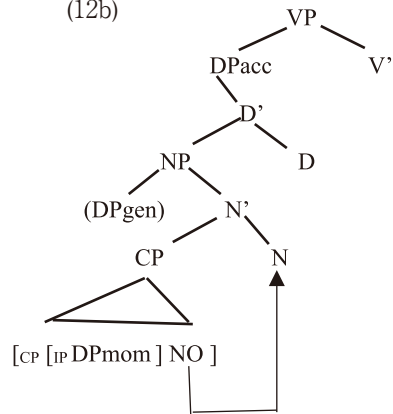
(12a) Hanako-wa Taroo-wa moo   uchi e kaeranai   to   omotta
        -TOP   -TOP ANY MORE HOME TO WON'T RETURN COMP THOUGHT
    "Hanako thought that Taroo would no longer come home."

(12b) Watashi-wa   Taroo-ga(/no) kekkon shita no-o   shiranakatta.
        I-TOP   -NOM(/-GEN) MARRIGE DID COMP-ACC DID NOT KNOW
    "I didn't know that Taroo got married."
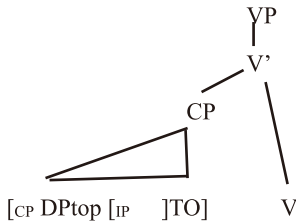
(13)   (12a)   (12b)

The complementizer TO which stays in the head position of CP is able to assign Topic case to its spec DP, while the complementizer NO which will be moved to the head of the immediately dominating NP, leaving the head of CP empty, hence no longer assigns the topic case. However, it will be capable to assign the genitive Case to its spec DP, creating a structure which accommodates a phenomena called GA/NO conversion.

Rothstein (1991) convincingly argues that the licensing of a position by Case-assignment should be distinguished from the licensing of the content of the position by theta-marking. In particular, she argues that that "the fact that V can assign Case to an NP which it does not select in any way indicates that Case-assignment is not a relation between a particular verb and a particular NP, but a relation between a head of a certain kind and a structural position." The example she draws is "They laughed John off the stage." John receives an accusative Case from the verb, but no theta role. The theta role comes from the following predicate "off the stage". What she is talking about here may just apply to a sentence like the example (9) repeated here as (14) in which the accusative case is assigned to the DP in the spec of VP by the verb, but that verb does not assign a theta role to that DP. A theta role of the accusative DP Hanako-o comes from a formation of theta chain of that DP with the co-indexed pro, or a controlled PRO, if you prefer a Control structure, in the complement clause.

(14) Taroo-wa Hanako-o$_i$ [$_{CP}$ [$_{IP}$ pro$_i$ busu da] to] omotteiru.

I mentioned before that Chomsky (1993) presumed the Case assignment as structural relation between Spec and head. However, he also said that "Case properties depend on characteristics of T and the V head of VP." In his system, Case will be assigned to an NP which holds Spec-head relation to Agr, which is adjoined by T or V to form an Agr complex. If I understand him correctly, to Chomsky, Case seems to be a matter of lexical property of the verb, or grammatical features inherent to a particular category. The same kind of thinking I find in Miyagawa's argument which I discuss later.

The structural Case assignment I propose now for Japanese is a bit of a leap from Chomsky, but less so from Rothstein.

(15) Structural Case Assignment in Japanese

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          X"
        /    \
      DP      X'
              |
              X
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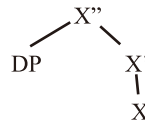
    X=V, V assigns Accusative case to its spec DP

    X=N, N assigns Genitive case to its spec DP

    X=T/Infl T/Infl assigns Nominative case to its spec DP

    X=C C assigns Topic case to its spec DP

Whenever the structural condition in (15) is met, a functional or lexical head is able to assign its associated Case to its spec DP. This system is completely independent of theta-marking, or NP licensing by theta-marking. Nominative and accusative DPs are most likely to bear a theta role projected by the verb, but that is not required. Topic DP are most likely to be non-argumental in the sense that they do not get theta-marked directly by the verb. Most importantly this system does not in any way force the spec position to be occupied.

Now how could I apply this line of analysis to relative clause constructions such as those in (1)? If the spec of CP is subject to a structural case assignment, it cannot be reserved as an escape hatch for an operator to move in. In Japanese there are no relative pronouns.[ii] It is not inconceivable, but rather congenial for a language like Japanese to choose pro strategy for the formation of the relative clause, rather than operator-variable strategy. If that is indeed the case, in the relative clause constructions a topic DP is not available just because there is no projection

of Comp. That is to say that relative clause has only a projection of Infl/T.

4. Miyagawa's Analysis

Miyagawa (2011, 2013) proposes two different relative clause structures to account for GA/NO conversions: for Nominative subject, a full CP, and for Genitive subject, a TP. In particular, he pays attention to three alleged restrictions on the occurrence of the genitive subject. The first restriction is that the genitive subject is less acceptable when certain elements intervene between it and the verb. The example sentences are originally from Harada (1971: 80)

(16a) kodomotati-ga minna-de ikioi-yoku kake-nobotta kaidan
　　　children-Nom together vigorously run-climb up stairway
　　　'the stairway which those children ran up together vigorously'

(16b) *kodomo-tati-no minna-de ikioi-yoku kake-nobotta kaidan
　　　children-Gen together vigorously run-climb up stairway

The second restriction is from Dubinsky (1993), who pointed out the fact that scrambling is not possible across a genitive subject as we see in (17).
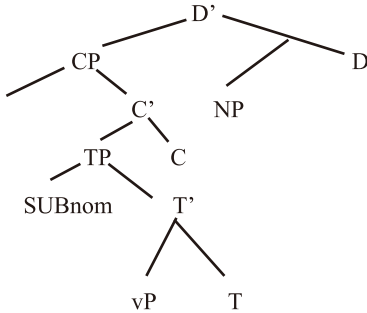
(17) geki-de$_i$ musume-ga/*-no t$_i$ odotta koto
　　play-in daughter-Nom/-Gen danced fact
　　'the fact that my daughter danced in the play'

The third restriction on the genitive subject he mentioned is the observation by Akaso and Haraguchi (2011) such that a focus element on the subject prohibits the genitive from occurring.
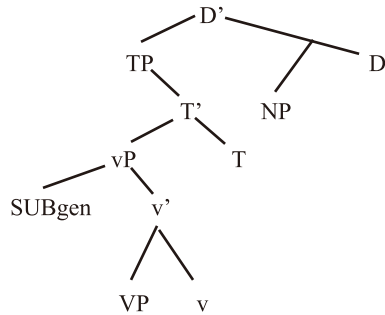
(18) Taroo-dake-ga/*-no　nonda kusuri
　　Taro-only-Nom/-Gen took　medicine
　　'medicine that only Taro took'

In order to account these three kinds of restrictions on Genitive subject, Miyagawa proposed D-licensing of the Genitive Case.

(19a =Miyagawa's 11a) Nominative   (19b=Miyagawa's 11b) Genitive

It is not my intension here to argue against his analysis. It will suffice to describe a couple of relevant points. The goal of Miyagawa's analysis is the defence of Univormity principle (Chomsky 2001). He simply uses the analysis of GA/NO conversion to provide some evidence for it. First, his approach to the case assignment seems to follow the post GB tradition such that it relates the case assignment to some grammatical features of some particular syntactic categories. Miyagawa argues that T has to be fully activated with a full set of grammatical features, in this case, inherited from C in order to assign the nominative Case. TP selected by D, on the other hand cannot inherit those features from D, hence unable to assign nominative case. In his exact words,

> "Because the T is not selected by C, the T does not contain formal features and is unable to license nominative case. As a result, D reaches in to license the case marking on the subject, leading to the subject being marked by genitive case." (2013, p5-6)

In this explanation, however, it is not clear as to how D actually reaches in to license the genitive case. He named it D-licensing of the Genitive Case, but he doesn't explain what kind of features D must have to assign the genitive case.

The second point which I find most troublesome is that his relative clause construction in (19), whether it is CP or TP, looks like it is outside the NP headed by the head noun of the relative clause. The NP, "Taroo-ga katta hon" must dominate the relative clause "Taroo ga katta" as shown in (20).[iii]

(20a) Hanako-ga Taroo ga   katta   hon o   suteta.
          -NOM   -NOM BOUGHT BOOK-ACC THREW AWAY
      "Hsnsko threw away the book that Taroo bought."
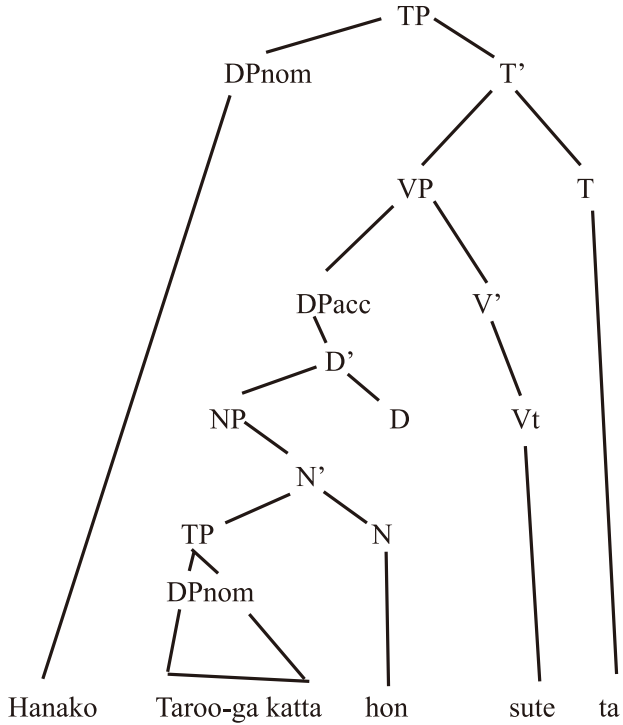
(20b) Hanako-ga Taroo-no　katta　　　hon-o　　　　suteta.
　　　　　　-NOM　-GEN BOUGHT BOOK-ACC THREW AWAY
　　"Hanako threw away the book Taroo bought."

The syntactic tree structure:

- TP
  - DPnom → Hanako-ga
  - T'
    - VP
      - DPacc
        - D'
          - NP
            - DPgen → Taroo-no
            - N'
              - TP → katta
              - N → hon
          - D
      - V'
        - Vt → sute
    - T → ta
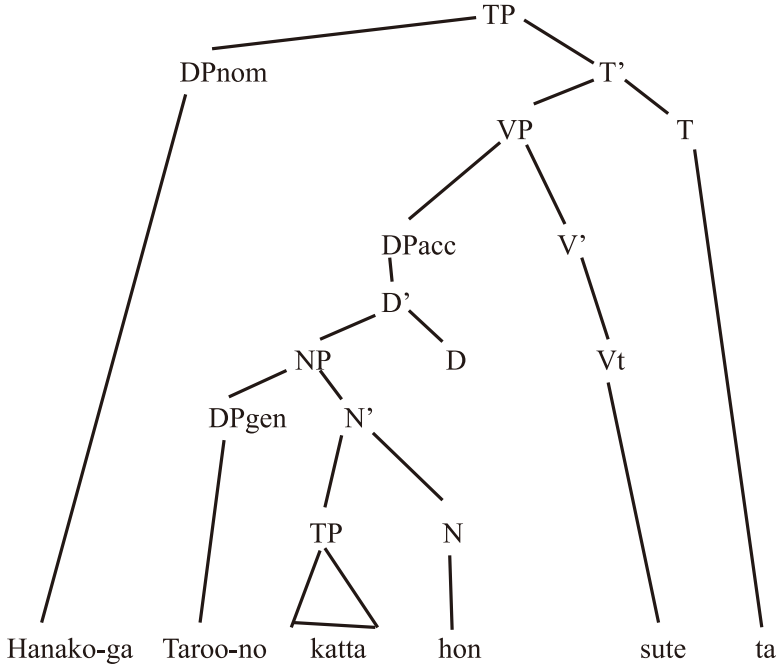
In Miyagawa's analysis, the genitive subject stays inside the TP, and somehow receives the genitive case by the head of DP which dominates that TP. However, if the genitive DP is licensed in the spec of NP which dominates the relative clause as we see in (20b), all three alleged restrictions on the genitive subject Miyagawa discussed seem to be accounted for.

(16b)′ ?kodomo-tati-no,   minna-de ikioi-yoku kake-nobotta kaidan
        children-Gen   together vigorously run-climb up stairway

If you put a pause after the genitive subject in (16b), acceptability will certainly improve. If you change the context a little bit like in (21), it sounds perfectly OK.

(21) Kodomotati-no minna-de gennkini hashirimawatteita   kootee-ga
     Children-GEN together with vigor were running around school yard-NOM
     shinsai kara   nenen-o kakete,   yatto   fukkyuushita.
     Earthquake disaster from taking two years finally has been restored
"The school yard where children were running around together with vigor has been finally restored two years after the earthquake disaster."

(17) geki-de$_i$ musume-ga/*-no t$_i$ odotta koto
     play-in daughter-Nom/-Gen danced fact
     'the fact that my daughter danced in the play'

The adverbial phrase "geki-de" modifying the VP inside the relative clause, cannot move out the TP which dominates that VP. If the genitive subject is outside the TP, the adverbial phrase cannot go out beyond that genitive Subject.

(18) Taroo-dake-ga/*-no   nonda kusuri
     Taro-only-Nom/-Gen took   medicine
     'medicine that only Taro took'

If the genitive subject in (18) is outside the TP, the scope of the focus is no longer TP. So the focus relation between "Taroo dake" and "nonda" in "Taroo dake ga nonde" cannot be retained when the focus element is outside the scope.

5. Further arguments

Before I move to the concluding part of this paper I shall provide a couple of further arguments for the proposed structural case assignment; one for the topic case, and the other for the accusative case without theta-marking. One argument for having a non-thematic structural case available in the spec of CP is that it might explain why Japanese stative verbs (which are adjectives in English), and nominal predicates in general take a topic DP as unmarked logical subject. When those predicates occur with a nominative DP as their subjects, the sentences will have a focus interpretation for that nominative DP.

(22a) Taroo-wa takumashii
          -TOP IS STRONG
     "Taroo is strong."

(22b) Taroo-ga takumashii
          -NOM IS STRONG
     "TAROO is strong."

(23a) Taroo -wa   ashita   Otaru ni   kuru
          -TOP TOMORROW   TO WILL COME
     "Taroo will come to Otaru tomorrow."

(23b) Taroo -ga   ashita   Otaru ni   kuru
          -TOP TOMORROW   TO   WILL COME
     "Taroo will come to Otaru tomorrow."

So-called exhaustive listing interpretation of the nominative DP as shown in (22b) cannot be observed in the sentence with a verb which assigns subject theta role to its external argument as shown in (23b). Unaccusative verbs like "korosareru" (be killed) pattern with those stative verbs as we see in (22ab).

(24a) Taroo-wa   korosareta.
          -TOP WAS KILLED
    "Taroo was killed."

(24b) Taroo-ga   korosareta.
          -NOM WAS KILLED
    "TAROO was killed."

One way to explain the difference is that in sentences like (22a) and (24a), the spec of IP is not occupied because any theta role is not projected, while the spec of IP in (23a) is occupied by pro which bears a theta role. Elsewhere (1992b) I argued that the unoccupied position in the spec of IP will create a space for a topic DP to move into, and shift its semantic type appropriate for the focus reading, from $<<e,t>,t>$ to $<e>$ type. Those predicates which do not theta-mark the nominative DP like unaccusative verbs can still have their logical subject case-marked in the spec of CP in Japanese. This is because there is an extra non-thematic structural case available in the spec of CP in Japanese. The nominative case does not need to accommodate those DPs which do not bear the subject theta role, or external theta role, while in English the spec of IP is the only place where the internal argument of the unaccusative verb can be structurally case-marked.

Treating the accusative case assignment as being independent of the

theta-marking might enable us to deal with some data which have not been often discussed in the literature.

(25) Taroo-wa kiiroku irozuita pupura namiki-o hitori yukkuri aruite iku.
　　　　-TOP YELLOW COLORED POPLAR TREES-ACC ALONE SLOWLY WALKING GO-NONPAST
　　"Taroo walks away along the golden colored roadside poplar trees leisurely all by himself.

(26) Hanako-wa tsumetai ame-no naka-o itsumademo tatte ita.
　　　　　-TOP COLD RAIN-GEN INSIDE-ACC FOREVER STANDING WAS
　　Hanako was standing in the cold rain forever.

(27) Taroo-wa yuuyami-no sattoo-no naka-o dennsh-ni notta.
　　　　-TOP EVENING SHADE-GEN CROWD-GEN INSIDE-ACC TRAIN-DAT GET ON-PAST
　　Taroo got on the train through the crowd in the evening shade.

These accusative DPs are certainly not selected by the verb, but all seem to confirm the prediction from Burzio's generalization: all verbs assigning an external theta role can in principle assign accusative Case.

6. Morphological cases vs. Abstract/structural Cases

In this concluding section I will review the morphological case theory that Aoyagi and Marantz propose, and try to defend the abstract/ structural case theory including Case Filter against their morphological case theory. I do not deny those inherent, or lexical cases, but I would like to argue that syntax does license some DP positions by assigning an abstract case independently from theta-marking. In doing so, I will discuss two phenomena in particular. One is case-marker ellipsis in Japanese, which seems to be strong evidence for the abstract case assignment in Japanese. The other is multiple subject constructions, which on the other

hand, pose a formidable challenge to the abstract case assignment.

6.1 Morphological case theory

If you do not distinguish licensing a DP position by case assignment from licensing of the content of the position by theta-marking, then you might be led to think that you can dispense with one over the other. Marantz certainly came to that conclusion in his 1991 paper.

> "Giving content to the theory of morphological case allows for the elimination of abstract Case theory from the theory of syntax. The mapping between semantic roles and argument positions, augmented by the subject requirement of the Extended Projection Principle, is sufficient to license NPs in argument positions."

Following Marantz, Aoyagi (2006) not only denies the abstract case itself, but also he claims that it is redundant to have Case Filter when we have Theta theory and the extended projection theory. He argues that cases in Japanese are not abstract cases, but morphological cases. In other words, it is not syntax that determines which case a particular DP has to carry, but it is the morphological part of the grammar in which morphological cases will be assigned to D in the process of linearization of the spelled out morphemes. Since D has a case feature, so-called case particles in Japanese like GA, O will be adjoined to D to give phonetic form to that case feature in D. Following Marantz who proposes 4 kinds of morphological cases and prioritizes them as in (28), Aoyagi treats Dative NI as inherent case, Accusative O as Dependent case, and Nominative GA as Default case, and prioritizes them as in (29).

(28) 1. Inherent case   (29) 1. Dative: NI (Inherent case)

   2. Dependent case   2. Accusative: O (Depended case)

   3. Unmarked case   3. Nominative: GA (Default case)

   4. Default case

   Dative NI will be assigned first, then accusative O, and whenever either NI or O cannot be assigned, the default case, nominative GA will appear. According to Marantz and Aoyagi, the job which the case theory has to accomplish is to decide or predict which case among those morphological cases each DP in the sentence will appear with. If that is the case, Aoyagi's morphological case theory is just for the sake of predicting possible or probable correct case array. Here is no syntactic rationale, by which a certain case has to be assigned in a certain syntactic position. Such a canonical case like nominative, which always occur in the spec position of IP/TP, will be assigned in this system not because a sentence (IP/TP) requires a subject DP, but just because no other case is available, and the nominative case is a default case. In the following I will argue that this morphological case theory can provide a sufficient explanation of neither case marker ellipses nor multiple subject constructions.

6.2 Case marker ellipses

   Case markers in Japanese often drop, which has been regarded as strong evidence for the abstract cases in Japanese.

(30a) Yamada-sensee, musuko-san kotoshi   kookoo   sotsugyoo suru
             -PROF. HIS SON THIS YEAR HIGH SCHOOL WILL GRADUATE
     "As for Prof. Yamada, his son will graduate from high school this year."

(30b) Yamada-sensee-wa musuko-san-ga kotoshi kookoo-o sotsugyoo suru.
　　　　　　　-TOP　　　　　　-NOM　　　　　　　-ACC
　　"As for Prof. Yamada, his son will graduate from high school this year."

　　The fact that these case markers can drop could be explained if those DPs have already been assigned abstract cases. It is not difficult to find examples in which topic, nominative and accusative markers are missing, but it is difficult to find a case in which a genitive marker drops. What happens in an NP containing a genitive DP, is not case marker ellipsis, but noun ellipsis like in (31).

(31) Kore, dare-no hon?
　　 THIS, WHOES BOOK
　　 "Whose book is this?"
　　 *Hanko hon
　　 Hanako-no.
　　　　　　 -GEN
　　 "(It is) Hanako's (book)."

(32) Dare-no hon-o　　　 katta no?
　　 WHOES BOOK-ACC BOUGHT COMP
　　 "Whose book did you buy?"

　　 *Chomsky-no　　 katta.
　　 Chomsky-no　　 hon　 katta
　　　　　　 -GEN BOOK BOUGHT
　　 "I bought Chomsky's book."

　　 Chomsky-no　　 o　　 katta
　　　　　　 -GEN -ACC BOUGHT
　　 "I bought Chomsky's (book)."

　　In (31), noun ellipsis must have occurred after assigning the genitive case. (32) shows that in order to have accusative marker ellipsis, we cannot have

noun ellipsis, and after noun ellipsis, accusative case marker cannot be dropped. Here the genitive case assures the existence of the head noun which assigns that case, which itself enables the ellipsis to occur. Unlike the other case markers, WA, GA, O, the fact that genitive case marker, NO never drops could be regarded as an evidence for the abstract case assignment by the head noun. That is so because if the head noun does not license a DP in its spec by assigning the genitive case, the ellipsis of the head noun will never occur.

Aoyagi also discussed on case marker drops. However, he dealt with a limited data such as those cases adjacent to the verb.

(33a) (=120a, p104) Taroo-ga   nani-o   katta   ka   oshiete.
                             -NOM WHAT-ACC BOUGHT COMP TELL ME
                     "Tell me what Taroo bought."

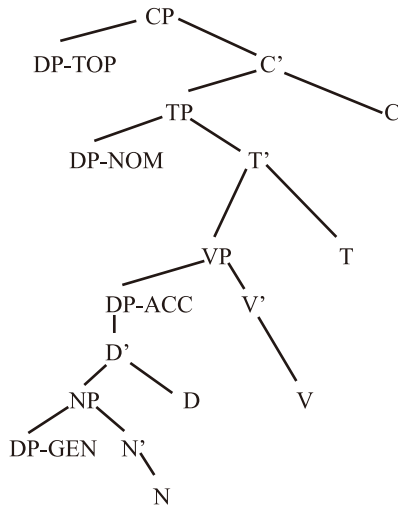(33b) (=120b, p104) Taroo-ga nani   katta   ka   oshiete.
                             -NOM WHAT BOUGHT COMP TELL ME
                     "Tell me what Taroo bought."

He assumes that the accusative case marker in (33a) will drop under the condition of being adjacent to the verb. Further he explains that the case feature in D will get a phonetic form directly by V, when D incorporates to V. Of course, the case marker ellipsis is not a phenomenon limited to the adjacent position to the verb as you see in (30a). I must say that his explanation is at least insufficient to cover the whole phenomenon of case marker ellipsis.

6.3 Multiple subject constructions

If we assume a system like (15), the typical sentence structure in Japanese will be as follows.

(34)

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                        CP
          DP-TOP              C'
                  TP               C
          DP-NOM       T'
                          VP        T
              DP-ACC    V'
                 |
                D'
            NP      D      V
      DP-GEN  N'
                N
```

In this system a certain case is assigned in a certain position, so it seems impossible to have the same case in multiple positions. Therefore Japanese so-called multiple subject constructions present an enormous challenge.

(35a) Tookyoo-ga   dansee-ga   heekinnjumyoo-ga   mijikai.
      TOOKYOO-NOM MALE-NOM AVEAGE LIFE SPAN-NOM SHORT
      "TOKYOO is such as the aveage life span of men is short."

(35b) Tookyoo-wa   dannsee-ga heekinjumyoo-ga   mijikai
      TOOKYOO-TOP MALE-NOM AVEAGE LIFE SPAN-NOM SHORT
      "Speaking of Tokyo, MEN have a short average life span."

(35c) Tookyoo-wa   dansee-no   heekinjumyoo-ga   mijikai
     TOOKYOO-TOP MALE-GEN AVEAGE LIFE SPAN-NOM SHORT
     "Speaking of Tokyo, mem's average life span is short."

One characteristic of these multiple subject constructions is that the leftmost nominative DP has obligatory focus reading. "Tookyoo" in (35a), "dansee" in (35b) have focus reading, but not "dansee-no heekinjumyoo" in (35c). Another characteristic is that a predication relation holds between the leftmost nominative DP and the right part of it. So in (35a), [Tookyoo-ga] is the argument of one-place predicate. [dansee-ga heekinjumyoo-ga mijikai]. In set-theoretical terms, if we look into a set of all the places where men' average life span is short, not Oosaka or Nagoya, but TOOKYOO is in that set. (35b) says, speaking of Tokyo, those whose average life span is short are not women, but MEN. In other words, One of all the properties Tokyo has is that the average life span of its MALE, not female population is short. The question here, of course, is how we can assign the same nominative case seemingly in multiple positions?

Aoyagi explains that the DP [heikinjumyo] which is theta-marked by [mijikai] cannot get accusative case because there is no other independently theta marked DP which [heikinjumyo] can refer to. With the same reason, neither [Tookyoo] nor [dansee] can get accusative, therefore all the DPs get default nominative case. Such an explanation, however, won't explain anything about those characteristics mentioned above.

Now suppose the head noun of the nominative DP in (35c) moves into the head of VP to incorporate and form a new predicate, then the DP in the spec of NP cannot get a case because of the absence of the head noun. In order to get a case, that DP has to move to the spec of IP to receive the

nominative case as in (35b). If the leftmost subject in (35b) moves into the head of VP again to form an incorporated predicate, the spec of IP will be unoccupied, creating a room for a topic DP to move in and shift its semantic type from <e,t>,t> to <e> type, yielding the obligatory focus reading in (35a). The abstract/structural case assignment system I propose is in fact incapable to assign the same case in multiple positions, however, it is quite capable to assign the same case in one position multiple times. The Japanese multiple subject constructions, which present an apparent obstacle to the structural case assignment, can be much better explained by the nominative DP's incorporation to the verbal head to form a new predicate, and the structural case assignment to the position opened as a result of this incorporation.

6.4 Conclusion

I disagree with Aoyaqgi in that Japanese cases are all morphologically assigned, but do agree with him in that D has case feature. DP is the case receiver after all. It is quite reasonable to think the head D has case feature. Aoyagi thinks that Japanese D has no phonetic form, therefore it has to be adjoined by case particles like GA, O, and NI. He argues that those case particles are to give a phonetic form to the case feature in D. It is true that we don't have so-called determiners, like definite, or indefinite articles in English. The main function of those English determiners is quantification, and their case feature doesn't seems to be given a phonetic form. However, the case feature must be there, if no DPs are without Case. For example, another Germanic language, German, has articles overtly case-marked. If DPs in Japanese are to be case marked, and D has case feature, a plausible candidate for Japanese Determiner is Case marking

particles. It is also known that topic marker WA and nominative marker GA behave just like English definite and indefinite articles as you see in (36).[iv]

(36) Otoko-ga　　mise　ni　　haittekita.
　　 MAN-NOM SHOP INTO ENTERED
　　 "A man came into the shop."
　　 Otoko-wa　kauntaa　　de biiru-o　　　huumon shita.
　　 MAN-TOP COUNTER AT BEER-ACC ORDERED
　　 "The man ordered beer at the counter."

　If those case marking particles are to give a phonetic form to the case feature in D as Aoyagi argues, then it won' be too outlandish to say they are indeed determiners. I do not intend to provide further discussion here on this matter. It will suffice if I could just point out the possibility of Japanese D having a phonetic form.

　I would like to conclude this paper with one general argument to defend the abstract/structural case assignment against the morphological case theory. Case theory has to explain why that DP is in that position with that case. Furthermore, it should answer a fundamental question: why must a DP have a case? Case filter is important not because it provides an answer to that question, but because it reminds us of that question. If Aoyagi thinks that morphological case theory should just predict possible or probable correct case array, he certainly trivializes Case theory. There are many non-argument DPs, and if it is true that all the DPs must have case, then Syntax must have a system to license a position for those DPs and assign an appropriate case to each of them regardless of its argumenthood. If licensing a DP position is an essential job of syntax, and that job is to be

performed by case-assignment, then Case assignment must be also a job of syntax, not morphology.

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Notes：

i　In Japanese, "NO" can be at least the following:

　　　　　1.　Genitive case marker
　　　　　　Watashi-no hon "my book"
　　　　　2.　Nominalizer
　　　　　　Utau-no-wa　　　　　　　tanoshii.
　　　　　　SING-Nominalizer-TOP　IS FUN
　　　　　　"Singing is fun."
　　　　　3.　Complementizer
　　　　　　Kare-ga shinda-no-wa　　　　jujitsu da.
　　　　　　HE-NOM DIED-COMP-TOP IS TRUE
　　　　　　"It is true that he died."
　　　　　4.　Pronoun "one"
　　　　　　Akai-no-ga　　　Taroo-no　　　kuruma da.
　　　　　　RED ONE-NOM TAROO-GEN CAR　　IS
　　　　　　"The red one is Taroo's car.

　　NO is used also in a pseudo-cleft sentence like,
　　　　　　Watashi-ga sagashiteiru-no-wa　　　　　　　kuruma-no kagi da.
　　　　　　　I-NOM　AM LOOKING FOR ONE-TOP CAR-GEN KEY IS
　　　　　　"What I am looking for is the car key."

　This NO could be analyzed also as a pronoun functioning as the head noun of the relative clause. With those verbs of perception, NO complements also appear.

　　　　　　Dareka-ga　　　　　　hashirisaru-no-o　　　　　　　mita.
　　　　　　SOMEBODY-NOM RUN AWAY-COMP-ACC SAW
　　　　　　"I saw someone run away."

　I assume this NO is also a complementizer, because the nominalizer NO does not take a clause, but only a verb phrase.

　It is also known that NO occurs between two Nouns in Japanese. Some study (Kitagawa & Ross 1982) treats this NO not as a genitive case marker, but as a

prenominal modification marker. NO in GA/NO conversion, however, cannot be this modification marker because this DP marked by NO is not modifying anything.

ii   In Japanese, interrogative pronouns do not move to anywhere unlike in English. English uses the spec of CP as a space for WH, or relative pronoun to move in. I argued elsewhere (1989) that Japanese employs pro strategy for the formation of relative clauses.

iii   Here I discuss only those restrictive relative clauses in which the set that a NP (which consists of a relative clause and its head noun) denotes is a proper subset of the set the head noun denotes as the example (a). I regard the non-restrictive relative clause like in (b) as an adjunct.

>   (a)   [[Taroo-ga   yonda]hon]
>   -NOM READ BOOK
>   "book that Taroo read"

>   (b)   [[Taroo-ga   yonnda][kono hon]]
>   -NOM READ   THIS BOOK
>   "this book, which Taroo read"

iv   In Montague grammar, all NP's are treated as generalized quantifiers, type $<<e,t>,t>$. Traditionally, however, a NP can be in three types, e-type, $<e,t>$, and $<<e,t>,t>$. Partee proposes (1987) universal type-shifting principles such as "iota", which maps a singleton set to a referring expression, e-type and "THE" which maps a singleton set to a generalized quantifier,$<<e,t>,t>$. The semantic function English determiners are to perform is mainly quantification and fixing the reference, but it also functions as type-shifter. Japanese case marker could be also regarded as a type-shifter. When an indefinite NP is introduced in a discourse, it will get a referential index, which serves as an antecedent for an anaphorically definite NP, a generalized quantifier. Topic position in Japanese is the designated position for this type of meaning.