Two Types of QP and Scrambling*

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Abstract

This paper examines Miyagawa's (2010) analysis of scrambling as an instance of feature-driven movement into [Spec, TP]. Limiting the discussion to scrambling of quantified noun phrases, I point out that only a certain well-defined class of QPs can be the goal targeted by the probe on T. I also point out that the relevant class of QPs must be defined on the basis of the internal syntactic structure of scrambled QPs.

Keywords: scrambling, topic, quantifier, presuppositional

0. Introduction

This paper examines Miyagawa's (2010) analysis of scrambling as an instance of feature-driven movement into [Spec, TP], and points out that not all DPs can be the goal targeted by the probe on T. After reviewing Miyagawa's (2010) analysis in Section 1, I show in Section 2 that only one of the two types of quantified noun phrases (henceforth, QP) pointed out in the past literature can move into [Spec, TP] while the other cannot. In Section 3 I propose an account of the facts observed in Section 2. Section 4 provides a supporting argument for the proposal made in Section 3.

1. Scrambling as a Feature-Driven Movement

Miyagawa (2010) characterizes the difference in the word order in Japanese as a result of the difference in the choice of the constituent that serves as the "topic" of the sentence. Miyagawa also proposes that the choice of the topic DP is made in a syntactic way by the topic probe on the head T. If the subject DP, generated in [Spec, vP], has a corresponding topic feature, it serves as the goal targeted by the probe on T and moves into [Spec, TP]. This results in the SOV order. If, on the other hand, the goal is the object DP, it is the object DP that is attracted into [Spec, TP]. This yields the OSV order. These two processes are illustrated in (1): [1]
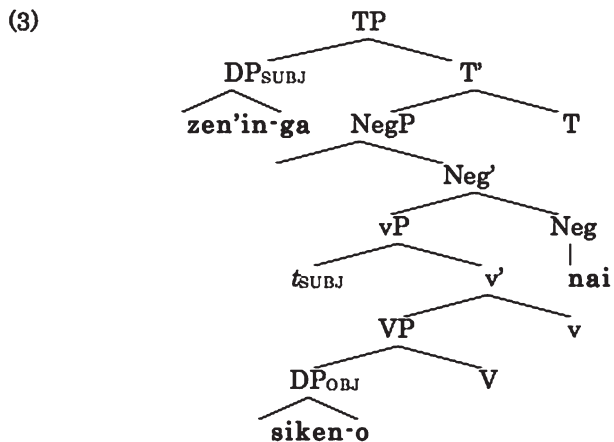
(1) a.
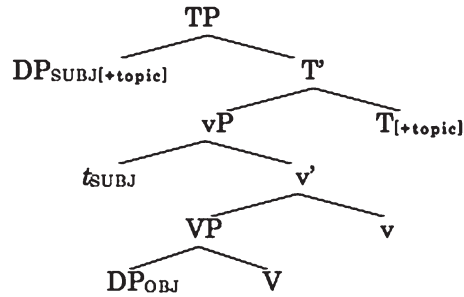
b.
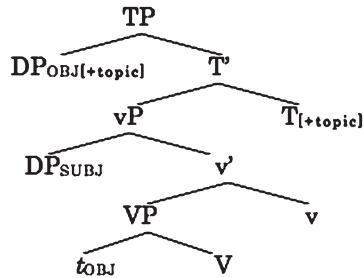
What is noteworthy in the structures in (1) is that the subject DP is located in two different positions in these two word orders: while the subject is in [Spec, TP] in the SOV order as in (1a), it is in [Spec, vP] in the OSV order as in (1b). As a piece of evidence for this difference in the position of the subject, Miyagawa (2010) points out the following fact involving the relative scope of the subject and the negation:

(2) a. *Zen'in-ga*   siken-o uke-*nakat*-ta
        everyone-Nom test-Acc take-Neg-Past
        'Everyone did not take the test.'
        [unambiguous: $\forall$ > Neg, *Neg > $\forall$]
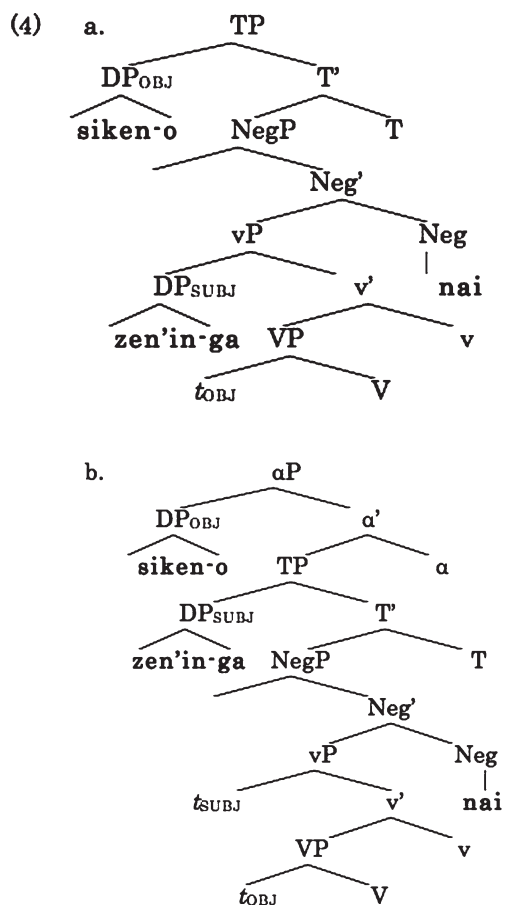   b. Siken-o *zen'in-ga*   uke-*nakat*-ta
        test-Acc everyone-Nom take-Neg-Past
        'Lit. The test, everyone did not take.'
        [ambiguous: $\forall$ > Neg, Neg > $\forall$]   (Miyagawa (2010))

In (2a) the subject DP is moved into [Spec, TP] by the topic probe, over the negation that is assumed to be located between TP and vP, as in (3).

(3)

```
                        TP
              DP_SUBJ        T'
            zen'in-ga   NegP       T
                           Neg'
                       vP        Neg
                  t_SUBJ    v'    |
                                 nai
                            VP      v
                       DP_OBJ   V
                      siken-o
```

Since the subject *zen'in-ga* moves into [Spec, TP], it is in the position c-commanding the negative *nai*. Thus the subject can only take wide scope over negation in (2a). On the other hand, (2b) has either of the following derivations:

(4)　a.

```
                    TP
          DP_OBJ        T'
         siken-o   NegP       T
                      Neg'
                  vP        Neg
            DP_SUBJ   v'      |
           zen'in-ga  VP      nai
                   t_OBJ   v
                        V
```

b.

```
                    αP
          DP_OBJ        α'
         siken-o   TP        α
            DP_SUBJ     T'
           zen'in-ga  NegP       T
                          Neg'
                      vP        Neg
                t_SUBJ    v'      |
                              nai
                         VP      v
                      t_OBJ   V
```

In (3a), the subject stays in [Spec, vP], and thus is interpreted as taking narrow scope under negation, since it is in a position c-commanded by Neg. In the other derivation in (3b), the subject moves into [Spec, TP] and the object into [Spec, α P], the projection above TP that has a similar function as TP, as Miyagawa proposes. In this case, the subject *zen'in* c-commands the negation, so that it takes wide scope over negation.

Although Miyagawa (2010) does not provide much convincing evidence for the claim that the relevant feature on T has to do with topicality, there is a piece of evidence that the sentence-initial DP, whether it is the subject or the scrambled object, is understood to serve as a topic. Consider the following discourses:

(5) A: Taroo-wa nani-o   katta-no
         Taro-Top what-Acc bought-Q
         'What did Taro buy?'
    B: i) Porsche-desu. ??Taroo-ga   Porsche-o   kai-masita
         Porsche-is   Taro-Nom Porsche-Acc buy-Pol-Past
         'A Porsche. Taro bought a Porsche.'
      ii) Porsche-desu. Porsche-o   Taroo-ga   kai-masita
         Porsche-is   Porsche-Acc Taro-Nom buy-Pol-Past
         'Lit. A Porsche. A Porsche Taro bought.'

(6) A: Dare-ga   Porsche-o   katta-no
         who-Nom Porsche-Acc bought-Q
         'Who bought a Porsche?'
    B: i) Taroo-desu. Taroo-ga   Porsche-o   kai-masita
         Taro-is   Taro-Nom Porsche-Acc buy-Pol-Past
         'Taro. Taro bought a Porsche.'
      ii) Taroo-desu. ??Porsche-o   Taroo-ga   kai-masita
         Taro-is   Porsche-Acc Taro-Nom buy-Pol-Past
         'Lit. Taro. A Porsche Taro bought.'

In the examples in (5) and (6), B's responses all consist of a short answer, providing an answer to A's question, and of a complete sentence that repeats the information provided by the preceding short answer. The accessibility of the complete sentence depends on the placement of the constituent serving as the repeated answer: the

constituent that repeats the answer must be in the sentence-initial position.

We may say that this semantic property of a sentence-initial constituent justifies Miyagawa's (2010) analysis that the sentence-initial constituent serves as a topic since the referent of the relevant sentence-initial DP has already appeared in the preceding short answer.[2]

2. Not All Instances of Scrambling Can Yield a Partial Negation Reading

It must be noted, however, that not all DPs can move into [Spec, TP]. As far as quantificational noun phrases (henceforth, QPs) are concerned, scrambling of particular types of QP does not allow the subject to take narrow scope under negation. The possibility of moving into [Spec, TP] depends on the syntactic position of a quantifier within a scrambled QP. If the scrambled object QP contains a pre-nominal quantifier, the subject *zen'in* may take narrow scope under negation:

(7)　a.　Zen'in-ga　　　3-tu-no　tesuto-o　uke-nakat-ta
　　　　　everyone-Nom 3-Cl-Gen test-Acc take-Neg-Past
　　　　　'Everyone did not take three tests.'
　　　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　　b.　3-tu-no　tesuto-o　zen'in-ga　　　uke-nakat-ta
　　　　　3-Cl-Gen test-Acc　everyone-Nom take-Neg-Past
　　　　　'Lit. Three tests, everyone did not take.'
　　　　　[ambiguous: ∀ > Neg, Neg > ∀]

(8)　a.　Zen'in-ga　　　2-tu-no　kamoku-o　risyuusi-nakat-ta
　　　　　everyone-Nom 2-Cl-Gen course-Acc take-Neg-Past
　　　　　'Everyone did not take two courses.'
　　　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　　b.　2-tu-no　kamoku-o zen'in-ga　　　risyuusi-nakat-ta
　　　　　2-Cl-Gen course-Acc everyone-Nom take-Neg-Past
　　　　　'Lit. Two courses, everyone did not take.'
　　　　　[ambiguous: ∀ > Neg, Neg > ∀]

In contrast, a scrambled object with a floating quantifier does not allow the subject

to take narrow scope under negation:

(9) a. Zen'in-ga   tesuto-o 3-tu uke-nakat-ta

     everyone-Nom test-Acc 3-Cl take-Neg-Past

     'Everyone did not take three tests.'

     [unambiguous: $\forall$ > Neg, *Neg > $\forall$]

  b. Tesuto-o 3-tu zen'in-ga   uke-nakat-ta

     test-Acc 3-Cl everyone-Nom take-Neg-Past

     'Lit. Three tests, everyone did not take.'

     [unambiguous: $\forall$ > Neg, *Neg > $\forall$]

(10) a. Zen'in-ga   kamoku-o 2-tu risyuusi-nakat-ta

     everyone-Nom course-Acc 2-Cl take-Neg-Past

     'Everyone did not take two courses.'

     [unambiguous: $\forall$ > Neg, *Neg > $\forall$]

  b. Kamoku-o 2-tu zen'in-ga   risyuusi-nakat-ta

     course-Acc 2-Cl everyone-Nom take-Neg-Past

     'Two courses, everyone did not take.'

     [unambiguous: $\forall$ > Neg, *Neg > $\forall$]

If the narrow scope of the subject signals the presence of the scrambled object DP in [Spec, TP], as Miyagawa (2010) argues, then the fact that the scrambled object with a floating quantifier does not allow the subject to take narrow scope under negation, as in (9) and (10), tells us that a DP with a floating quantifier may not be the goal of the topic probe on T.

Moreover, if a quantifier in a scrambled object QP is preceded by a modifier of the head noun such as an adjective (e.g. *muzukasii* 'difficult') and a nominal adjective (e.g. *yuunoo-na* 'competent'), it is impossible for the subject *zen'in* to take narrow scope under negation. Observe the following contrast between the sentences in (11) and (13) on one hand and those in (12) and (14) on the other:

(11) a. Zen'in-ga   2-tu-no muzukasii-kamoku-o risyuusi-nakat-ta

     everyone-Nom 2-Cl-Gen difficult-subject-Acc recommend-Neg-Past

     'Everyone did not take two difficult courses.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　b. 2-tu-no　muzukasii-kamoku-o zen'in-ga　　　risyuusi-nakat-ta

　　　2-Cl-Gen difficult-subject-Acc　everyone-Nom recommend-Neg-Past

　　　'Two difficult courses everyone did not take.'

　　　[ambiguous: ∀ > Neg, Neg > ∀]

(12) a. Zen'in-ga　　　muzukasii 2-tu-no　kamoku-o　risyuusi-nakat-ta

　　　everyone-Nom difficult　2-Cl-Gen subject-Acc take-Neg-Past

　　　'Everyone did not take two difficult courses.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　b. Muzukasii 2-tu-no　kamoku-o　zen'in-ga　　　risyuusi-nakat-ta

　　　difficult　2-Cl-Gen subject-Acc everyone-Nom take-Neg-Past

　　　'Two difficult courses everyone did not take.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

(13) a. Zen'in-ga　　　3-nin-no yuunoona sensyu-o　　suisensi-nakat-ta

　　　everyone-Nom 3-Cl-Gen competent athlete-Acc recommend-Neg-Past

　　　'Everyone did not recommend three competent athletes.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　b. 3-nin-no yuunoona sensyu-o　　zen'in-ga　　　suisensi-nakat-ta

　　　3-Cl-Gen competent athlete-Acc everyone-Nom recommend-Neg-Past

　　　'Everyone did not recommend three competent athletes.'

　　　[ambiguous: ∀ > Neg, Neg > ∀]

(14) a. Zen'in-ga　　　yuunoona 3-nin-no　sensyu-o　suisensi-nakat-ta

　　　everyone-Nom competent 3-Cl-Gen　athlete-Acc recommend-Neg-Past

　　　'Everyone did not recommend three competent athletes.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

　　b. Yuunoona 3-nin-no sensyu-o　　zen'in-ga　　　suisensi-nakat-ta

　　　competent 3-Cl-Gen athlete-Acc everyone-Nom recommend-Neg-Past

　　　'Three competent athltes everyone did not recommend.'

　　　[unambiguous: ∀ > Neg, *Neg > ∀]

As shown in (12b) and (14b), the scrambling of an object does not allow the subject to

take narrow scope under negation if the scrambled object has its quantifier following a noun modifier.

These facts suggest that not all types of QP can move into [Spec, TP], and that the choice of the landing site for a scrambled object QP is determined by the syntactic position of a quantifier within the scrambled QP. Under Miyagawa's (2010) proposal that movement into [Spec, TP] is triggered by the topic probe on T, this means that only those QPs with a quantifier in a certain syntactic position in them can bear the topic feature which makes them the goal of the probe on T. But where does a quantifier need to be in DP in order for the DP to have the topic feature?
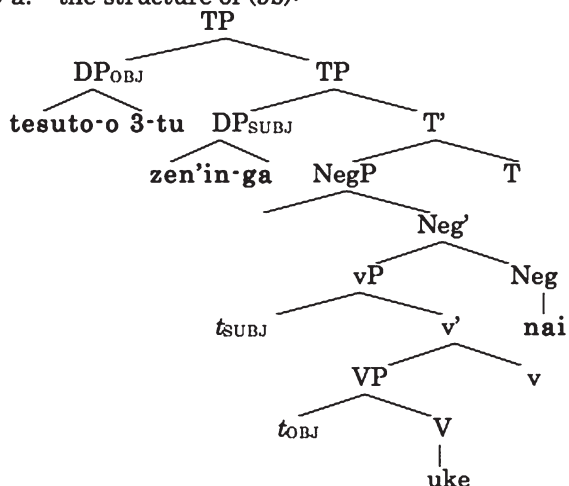
3. An Account

The observation made in the preceding section leads us to the generalization that only those QPs with a quantifier in the left-edge of DP are compatible with the topic feature whereas those whose quantifier is in a different position are not. To account for this generalization, I propose that the topic feature originates in the head D of DP and attracts a quantifier, which originates in a lower position, into [Spec, DP]. This is illustrated in (15):
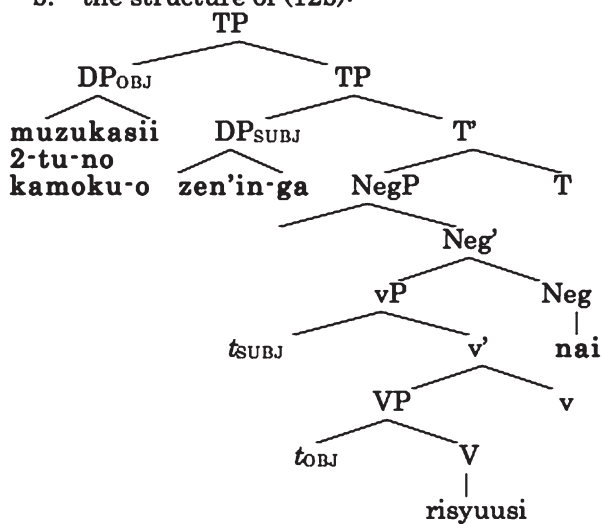
(15)
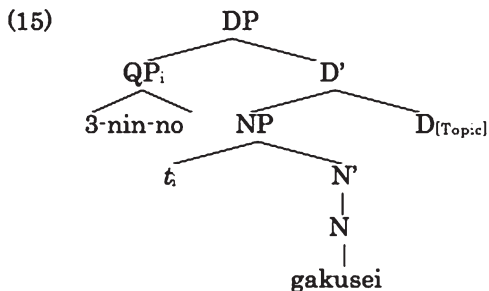
Lack of the topic feature on D, on the other hand, does not make it possible for a quantifier to be in [Spec, DP]. In this case, a quantifier, if the DP has any, appears in a different position from [Spec, DP]. This is the case with QPs with a prenominal quantifier in a lower position, as in (12) and (14), and those with a floating quantifier as in (9) and (10). Since these QPs do not have the topic feature, they cannot be the goal of the topic probe on T, which makes it impossible for these QPs to move into [Spec, TP]. If a scrambled object DP cannot move into [Spec, TP], it must be another DP, say the subject, that must be targeted by the topic probe on T to move into [Spec, TP]. The structure of (9b) and (12b), for example, is represented as follows:

(16) a.　the structure of (9b):

```
                        TP
              ┌──────────┴──────────┐
          DP_OBJ                    TP
         ┌───┴───┐         ┌─────────┴─────────┐
   tesuto-o 3-tu  DP_SUBJ                      T'
                 ┌───┴───┐            ┌─────────┴─────────┐
            zen'in-ga   NegP                              T
                    ┌─────┴─────┐
                            Neg'
                   ┌──────────┴──────────┐
                  vP                     Neg
            ┌──────┴──────┐               │
         t_SUBJ          v'              nai
                   ┌──────┴──────┐
                  VP             v
             ┌─────┴─────┐
           t_OBJ         V
                         │
                        uke
```

b.　the structure of (12b):

```
                        TP
              ┌──────────┴──────────┐
          DP_OBJ                    TP
         ┌───┴───┐         ┌─────────┴─────────┐
   muzukasii     DP_SUBJ                       T'
   2-tu-no      ┌───┴───┐          ┌──────────┴──────────┐
   kamoku-o  zen'in-ga  NegP                             T
                     ┌─────┴─────┐
                             Neg'
                   ┌──────────┴──────────┐
                  vP                     Neg
            ┌──────┴──────┐               │
         t_SUBJ          v'              nai
                   ┌──────┴──────┐
                  VP             v
             ┌─────┴─────┐
           t_OBJ         V
                         │
                      risyuusi
```

Thus the facts that certain scrambled object QPs do not allow the subject to take narrow scope under negation can be accounted for by proposing that only QPs with a quantifier in [Spec, DP] may be the goal of the topic probe on T.

4.　An Argument for the Syntactic Origin of the Topic Feature in QPs

In the preceding section we proposed that the topic feature of DPs originates in the syntactic way as illustrated above.　Thus we are proposing that the availability of the topic feature for a QP is defined in syntactic terms.

Alternatively, however, one might claim that the possibility of a QP's bearing the topic feature depends on the semantics of the QP, not the internal syntactic structure of it. In fact, the syntactic position of a quantifier in a QP is significantly related to the semantic interpretation of the QP. It is suggested in Muromatsu (1999) and Homma (2011, 2013) and that there are more than one syntactic positions for a quantifier inside DP in Japanese, as in (17), and that these positions correspond to two distinct semantic interpretations of the QP:[3]

(17) a. [$_{DP}$ [3-nin-no] [$_{NP}$ gakusei]]
    b. [$_{DP}$ [$_{NP}$ [3-nin-no] gakusei]]

If a quantifier is in [Spec, DP], as in (17a), the DP (QP) has a presuppositional reading in the sense of Diesing (1990, 1992), in which three students referred to by the QP are among the set of students from the preceding discourse. If a quantifier is in another position, say [Spec, NP], the QP is interpreted to refer to three students newly introduced into the discourse (a nonpresuppositional reading).

This is indeed supported by the fact that a QP has either a presuppositional or a nonpresuppositional reading when its quantifier precedes a noun modifier, while it can only have a nonpresuppositional reading when the quantifier follows a noun modifier (Homma (2013)).

(18) a. Sono-dansei-wa *3-nin-no kireina zyosei-o*   syokuzi-ni sasotta
         that-man-Top   3-Cl-Gen beautiful woman-Acc dinner-Dat invited
         'The man invited three beautiful women to a dinner.'
         [✓presuppositional, ✓nonpresuppositional]
    b. Watasi-wa *3-dai-no akai kuruma-o* mokugekisita
         I-Top   3-Cl-Gen red car-Acc witnessed
         'I witnessed three red cars.'
         [✓presuppositional, ✓nonpresuppositional]

(19) a. Sono-dansei-wa *kireina 3-nin-no zyosei-o*   syokuzi-ni sasotta
         that-man-Top   beautiful 3-Cl-Gen woman-Acc dinner-Dat invited
         'The man invited three pretty women to a dinner.'
         [*presuppositional, ✓nonpresuppositional]

b. Watasi-wa *akai 3-dai-no kuruma-o* mokugekisita

I-Top　　　red 3-Cl-Gen car-Acc　　witnessed

'I witnessed three red cars.'

[*presuppositional, ✓nonpresuppositional]

Floating numeral quantifiers, as in *gakusei-o 3-nin*, are another instance of quantifiers that are not in [Spec, DP]. Indeed, QPs with a floating quantifier are interpreted to have a nonpresuppositional reading, as pointed out by Homma et al. (1992) and Muromatsu (1999).

(20) a. Watasi-wa 3-nin-no gakusei-o　　mita

I-Top　　　3-Cl-Gen student-Acc saw

'I saw three students.'

[✓presuppositional, ✓nonpresuppositional]

b. Watasi-wa gakusei-o　　3-nin mita

I-Top　　　student-Acc 3-Cl　saw

'I saw three students.'

[*presuppositional, ✓nonpresuppositional]

While the QP in (20a) *3-nin-no* gakusei-o has a presuppositional and a nonpresuppositional reading since the prenominal quantifier, *3-nin-no* can be in [Spec, DP] as well as in a lower position, the QP in (20b) *gakusei-o 3-nin* can only have a nonpresuppositional reading.

The set of QPs that do not allow the subject *zen'in* to take a narrow scope under negation seem to match the set of QPs that have only a nonpresuppositional reading. If so, one might argue that the availability of the topic feature for QPs could also be defined on the basis of the QP's semantic property of (non)presuppositionality, not on the basis of the internal syntactic structure of the QP.

Nonetheless, the following piece of evidence strongly suggests that it is the internal syntactic structure of QPs that is responsible for the presence/absence of the topic feature. Consider the following examples:

(21) a. Zen'in-ga　　　sensei-ga　　suisensita　　3-satu-no hon-o

everyone-Nom teacher-Nom recommended 3-Cl-Gen book-Acc

yom-anakat-ta

read-Neg-Past

'Everyone did not read three books that the teacher recommended.'

[unambiguous: ∀ > Neg, *Neg > ∀]

    b. Sensei-ga   suisensita   3-satu-no hon-o   zen'in-ga

teacher-Nom recommended 3-Cl-Gen book-Acc everyone-Nom

yom-anakat-ta

read-Neg-Past

'Lit. Three books that the teacher recommended, everyone did not read.'

[ambiguous: ∀ > Neg, Neg > ∀]

(22) a. Zen'in-ga   konnendo-kara hissyuu-ni   sita   3-tu-no   kamoku-o

everyone-Nom this year-from compulsory-Dat made 3-Cl-Gen course-Acc

risyuusi-nakat-ta

take-Neg-Past

'Everyone did not take three courses that have been made compulsory this year.'

[unambiguous: ∀ > Neg, *Neg > ∀]

    b. Konnendo-kara hissyuu-ni   sita   3-tu-no   kamoku-o   zen'in-ga

this year-from compulsory-Dat made 3-Cl-Gen course-Acc everyone-Nom

risyuusi-nakat-ta

take-Neg-Past

'Lit. Three courses that have been made compulsory this year, everyone did not take.'

[ambiguous: ∀ > Neg, Neg > ∀]

(23) a. Zen'in-ga   sensei-ga   suisensita   hon-o   3-satu yom-anakat-ta

everyone-Nom teacher-Nom recommended book-Acc 3-Cl   read-Neg-Past

'Everyone did not read three books that the teacher recommended.'

[unambiguous: ∀ > Neg, *Neg > ∀]

    b. Sensei-ga   suisensita   hon-o   3-satu zen'in-ga   yom-anakat-ta

teacher-Nom recommended book-Acc 3-Cl   everyone-Nom read-Neg-Past

'Lit. Three books that the teacher recommended, everyone did not read.'

[unambiguous: ∀ > Neg, ??Neg > ∀]

(24) a. Zen'in-ga　　　konnendo-kara hissyuu-ni　　sita　kamoku-o　3-tu
　　　　　everyone-Nom this year-from compulsory-Dat made course-Acc 3-Cl
　　　　　risyuusi-nakat-ta
　　　　　take-Neg-Past
　　　　　'Everyone did not take three courses that have been made compulsory this
　　　　　year.'
　　　　　[unambiguous: $\forall$ > Neg, *Neg > $\forall$]

　　　b. Konnendo-kara hisyuu-ni　　　sita　kamoku-o　3-tu zen'in-ga
　　　　　this year-from　compulsory-Dat made course-Acc 3-Cl everyone-Nom
　　　　　risyuusi-nakat-ta
　　　　　take-Neg-Past
　　　　　'Lit. Three courses that have been made compulsory this year, everyone
　　　　　did not take.'
　　　　　[unambiguous: $\forall$ > Neg, ??Neg > $\forall$]

The examples in (23) and (24) involve an object DP with a floating quantifier. Although the preceding section has shown that a QP with a floating quantifier can only have a nonpresuppositional reading, the QPs with a floating quantifier in (23) and (24) are most naturally interpreted to have a presuppositional reading, which is made possible by the presence of a relative clause (Ishii (1997, 1998)). In (23), for example, the object DP *sensei-ga suisensita hon-o 3-satu* 'three books that the teacher recommended' is most naturally interpreted to refer to three books among the set of books referred to by the noun and the relative clause.

　　What is significant here is that scrambling of these presuppositional QPs does not readily allow the subject *zen'in* to take narrow scope under negation. This means that the QPs in (23) and (24) cannot have the topic feature despite the fact that they have a presuppositional reading. Thus this fact tells us that the presence/absence of the topic feature on a DP must be determined on the basis of the internal structure of the DP, not on the basis of the semantic property of presuppositionality.

5.　Conclusion and Speculation

　　In this paper we have proposed that scrambling of a QP into [Spec, TP] is allowed by the presence of the topic feature on D, which makes the QP a goal targeted by the

topic probe on T. However, since we have limited our attention to QPs and have left other DPs outside the scope of this paper, we may ask whether our analysis could be extended to other types of DPs, as well as QPs.

Non-quantificational DPs readily allow the subject *zen'in* to take narrow scope as in the following example cited at the outset of this paper:

(25) (= (2))

    a. *Zen'in-ga*   siken-o   uke-nakat-ta

       everyone-Nom test-Acc take-Neg-Past

       'Everyone did not take the test.'

       [unambiguous: $\forall$ > Neg, *Neg > $\forall$]

    b. Siken-o   *zen'in-ga*   uke-nakat-ta

       test-Acc everyone-Nom take-Neg-Past

       'Lit. The test, everyone did not take.'

       [ambiguous: $\forall$ > Neg, Neg > $\forall$]   (Miyagawa (2010))

However, careful examination of these particular sentences reveals an interesting fact. The partial negation reading of sentence (25b) seems possible only if we interpret the scrambled object *siken-o* as referring to a particular test mentioned in the previous discourse, a reading that corresponds to a definite DP in English such as *the test*. If we interpret *siken-o* as having an indefinite reference, as with the English indefinite DP *a test*, it is difficult for the subject *zen'in* to take narrow scope under negation. Indeed, if we add a determiner such as *sono* 'that' or *ano* 'that' to the scrambled object DP in (25) in order to make the object to have a definite reference, the partial negation reading is readily available, as in:

(26) Sono-siken-o *zen'in-ga*   uke-*nakat-ta*

    that-test-Acc everyone-Nom take-Neg-Past

    'Lit. The test, everyone did not take.'

    [ambiguous: $\forall$ > Neg, Neg > $\forall$]

The unavailability of the partial negation reading with the indefinite interpretation of the scrambled object in (25b) can be accounted for under our analysis. The object does not have a quantifier in [Spec, DP] so that the object does not have a topic feature

and hence cannot move into [Spec, TP]. The availability of the partial negation reading for (26) can also be captured if we assume that the demonstrative *sono* occupies [Spec, DP].

This leaves unexplained the availability of the partial negation reading with (25b) under the definite reading of the object: the object *siken-o* does not have a quantifier in [Spec, DP], but allows the subject to take narrow scope under negation. How can this problem be solved under our analysis?

Recall from our discussion in the previous sections that the topic feature on D gives rise to presuppositionality as well as attracting a quantifier into [Spec, DP]. One conceivable analysis consistent with our proposal is to say that the topic feature on D can give rise to definiteness as well as presuppositionality, but does not need to attract any quantifier or demonstrative into [Spec, DP]. This can account for the fact that a bare DP *siken-o* can have the topic feature and definite reference and is allowed to move into [Spec, TP].

Notes

[1] Miyagawa (2010) also points out cases of movement into [Spec, TP] driven by the focus probe on T, but I do not discuss these cases in this paper.

[2] A question arises at this point as to what the difference is between the topicality of a sentence-initial DP and that of a DP with the topic marker *wa*, as in the following examples:

(i) a. Taroo-wa Porsche-o   kaimasita
         Taro-Top Porsche-Acc buy-Pol-Past
          'Taro bought a Porsche.'
     b. Porsche-wa Taroo-ga kaimasita
         Porsche-Top Taro-Nom buy-Pol-Past
         Lit. A Porsche, Taro bought.'

As has been pointed widely in the literature, a DP with the topic marker *wa* denotes a piece of old information and therefore cannot provide an answer to a question.

(ii)　A: dare-ga　　Porsche-o　　kaimasita-ka
　　　　who-Nom Porsche-Acc buy-Pol-Past
　　　　'Who bought a Porsche?'
　　　B: *Taroo-wa Porsche-o　　　kaimasita
　　　　Taro-Top　Porsche-Acc buy-Pol-Past
　　　　'Taro bought a Porsche.'

The difference in question has to do with this property regarding the old/new information. While the topic marker *wa* must carry old information, the sentence-initial DP in (5) and (6) denotes new information, although both serve as the topic of a sentence. The sentence-initial DP in (5) and (6) carries new information since it constitutes an answer to A's question. Importantly, a DP with the topic marker *wa* cannot occur in the environment in (5) or (6) since it has to carry old information.

(iii)　A: Taroo-wa nani-o　　　katta-no
　　　　Taro-Top what-Acc bought-Q
　　　　'What did Taro buy?'
　　　B: Porsche-desu. *Porsche-wa　Taroo-ga　kai-masita
　　　　Porsche-is　　　Porsche-Top Taro-Nom buy-Pol-Past
　　　　'Lit. A Porsche. A Porsche Taro bought.'

(iv)　A: dare-ga　　Porsche-o　　katta-no
　　　　who-Nom Porsche-Acc bought-Q
　　　　'Who bought a Porsche?'
　　　B: Taroo-desu. *Taroo-wa　Porsche-o　　kai-masita
　　　　Taro-is　　　Taro-Nom Porsche-Acc buy-Pol-Past
　　　　'Taro. Taro bought a Porsche.'

[3] A proposal to the same effect has been made by Muromatsu (1999) for Japanese. See also Hudson (1989), Giusti (1990) and Borer (2005) for other languages.

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