

Scope and Syntactic Licensing of QPs*

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1. Introduction

In this paper, I discuss the scope property of DPs with a floating quantifier (henceforth, FQs) as exemplified in (1b), in contrast to that of DPs with a prenominal non-floating quantifier as in (1a):

- (1) a. hutatu-no booru-o daremo-ga ketta.
 two-of ball-ACC everyone-NOM kicked
 'Everyone kicked two balls' (EVERY > TWO, TWO > EVERY)
- b. booru-o hutatu daremo-ga ketta.
 ball-ACC two everyone-NOM kicked
 'Everyone kicked two balls' (EVERY > TWO, *TWO > EVERY)

I first review the past account of this fact in Homma et al. (1992), who try to capture the scope property of FQs based on the semantic property of “specificity” in the sense of Enç (1991). I then point out the problem of Homma et al.’s account of the scope property of FQs and instead capture the relevant facts by assuming that only those DPs that have a certain syntactic feature can be attracted to a functional head in the CP-layer. If the analysis along these lines is correct, then we can open up the possibility of replacing the rule of QR with a covert feature-driven syntactic movement that attracts quantified DPs (henceforth, QPs).

2. Scope of Floating Quantifiers

As observed widely in the past literature on QP scope in Japanese, a sentence with two QPs in Japanese yields the interpretive patterns in (2) (Kuroda (1969/70) and Hoji (1985)):

- (2) a. $QP_{NOM} QP_{ACC/DAT} V$
 [unambiguous: $QP_{NOM} > QP_{ACC/DAT}$, * $QP_{ACC/DAT} > QP_{NOM}$]
- b. $QP_{ACC/DAT} QP_{NOM} e_i V$
 [ambiguous: $QP_{NOM} > QP_{ACC/DAT}$, $QP_{ACC/DAT} > QP_{NOM}$]

This is exemplified in the following sentences:

- (3) a. dareka-ga daremo-o mita
 someone-NOM everyone-ACC saw
 'Someone saw everyone.'
 [unambiguous: SOME > EVERY, *EVERY > SOME]
- b. daremo-o_i dareka-ga e_i mita
 everyone-ACC someone-NOM saw
 'Lit. Everyone, someone saw.'
 [ambiguous: SOME > EVERY, EVERY > SOME]

While only the Nominative QP can take wide scope over the Accusative QP in the order QP_{NOM} QP_{ACC}, either QP can take scope over the other in the reversed order QP_{ACC} QP_{NOM}.

However, this ambiguity disappears if one of the QPs involves an FQ, as pointed out in Homma et al. (1992).¹

- (4) (= (1))
- a. hutatu-no booru-o daremo-ga ketta.
 two-of ball-ACC everyone-NOM kicked
 'Everyone kicked two balls'
 [ambiguous: EVERY > TWO, TWO > EVERY]
- b. booru-o hutatu daremo-ga ketta.
 ball-ACC two everyone-NOM kicked
 'Everyone kicked two balls'
 [unambiguous: EVERY > TWO, *TWO > EVERY]

As observed in (4), a QP with an FQ cannot take wide scope over the other QP in the position where a QP with a prenominal quantifier can.

3. An Account by Homma et al. (1992)

This disposition of an FQ to take narrow scope has been accounted for by Homma et al. (1992). Their analysis is based on the dichotomy of quantifiers in terms of the semantic notion of “specificity” in the sense of Enç (1991), which is equivalent to Diesing’s (1990, 1992) notion of “presuppositionality.” According to this dichotomy, a DP is “presuppositional” or “specific” iff the DP refers to a subset of a set that is assumed to exist in the discourse, and “nonpresuppositional” or “nonspecific” iff the DP introduces newly established referents in the discourse.

Homma et al.’s account also consists of the proposal that only presuppositional QPs

undergo Quantifier Raising at LF, and the mapping rule whereby the QPs raised by QR are mapped as the Operator and the Restrictive Clause in the semantic representation in the sense of Heim (1982), Kratzer (1989) and Diesing (1990, 1992), whereas the QPs staying in situ at LF are mapped into the Nuclear Scope. ²

Secondly, Homma et al. (1992) observe that numeral FQs in Japanese must take a “bare” nominal as its host:

- (5) a. sono sannin-no otoko-ga unagi-o tabeta
 that three -GEN man-NOM eel-ACC ate
 'Those three men ate eel'
 b. * sono otoko-ga sannin unagi-o tabeta
 that man-NOM three eel-ACC ate

Furthermore, Homma et al. point out that bare DPs in Japanese, as well as bare plural DPs in English, can only have a nonpresuppositional interpretation. Observe (6):

- (6) 10-nin-no otoko-ga syoogendai-ni tatta. sosite *syoonin-ga*
 10-CL-of man-NOM witness stand-DAT stood and witness-NOM
 hontoo-no koto-o itta
 true-of thing-ACC said
 'Ten men took the witness stand, and witnesses told the truth'

As Homma et al. observe, it is impossible to interpret the subject DP *syoonin-ga* as referring to the subset of the set of ten men established in the first sentence, although the interpretation of it corresponds to that of such an existential DP as “some witnesses.” Instead, it has to refer to a newly-introduced set of some witnesses not included in the set of ten men introduced in the first sentence, which makes the discourse in (6) somewhat weird. In contrast to bare DPs, those DPs with such an overt quantifier as *nan-nin-ka-no* makes a DP presuppositional. Consider (7):

- (7) 10-nin-no otoko-ga syoogendai-ni tatta. sosite *nan-nin-ka-no syoonin-ga*
 10-CL-of man-NOM witness stand-DAT stood and some-of witness-NOM
 hontoo-no koto-o itta
 true-of thing-ACC said
 'Ten men took the witness stand, and some (of the) witnesses told the truth'

Now since FQs can only take a nonpresuppositional host DP and that nonpresuppositional DPs do not undergo QR, it follows that DPs with an FQ do not undergo QR. As Homma et al. show, the above set of assumptions can explain the narrow scope property of FQs as in (4). The LF and the semantic representation of (4a)

and (4b), for example, are each represented as follows:

(8) a. LF of (4a):

i) $[_{IP} [_{hutatu-no} \text{ booru-o}]_i [_{IP} [_{daremo-ga}]_j [_{IP} t_j t_i \text{ ketta}]]]$

ii) $[_{IP} [_{daremo-ga}]_j [_{IP} [_{hutatu-no} \text{ booru-o}]_i [_{IP} t_j t_i \text{ ketta}]]]$

b. LF of (4b):

$[_{IP} \text{ daremo-ga}]_j [_{IP} t_j [_{\text{booru-o hutatu}}] \text{ ketta}]]$

(9) a. SR of (4a):

i) $\frac{[_{TWO} y: y = \text{a ball}][\forall x: x = \text{a person}]}{\text{Operator, Restrictive Clause}} \quad \frac{(\text{kicked}(x, y))}{\text{Nuclear Scope}} \quad \text{(from LF (8a-i))}$

ii) $\frac{[\forall x: x = \text{a person}][_{TWO} y: y = \text{a ball}]}{\text{Operator, Restrictive Clause}} \quad \frac{(\text{kicked}(x, y))}{\text{Nuclear Scope}} \quad \text{(from LF (8a-ii))}$

b. SR of (4b):

$\frac{[\forall x: x = \text{a person}]}{\text{Operator, Restrictive Clause}} \quad \frac{\exists y(\text{two balls}(y) \ \& \ (\text{kicked}(x, y)))}{\text{Nuclear Scope}} \quad \text{(from LF (8b))}$

Both QPs in (4a) can be interpreted presuppositionally so that they undergo QR. If we assume that QR adjoins a QP to an IP node, we obtain either of the LF structures in i) and ii). On the other hand, the DP with an FQ in (4b) does not undergo QR and hence must stay in the relevant syntactic domain that is mapped onto the Nuclear Scope.

This explains the obligatory narrow scope of FQs.

4. Problems

The first problem with Homma et al.'s (1992) account is that it crucially relies on the idea that the rule of QR is driven by the semantic notion of presuppositionality: QR is assumed to apply to presuppositional QPs, but not to nonpresuppositional ones. This view on QR is problematic in light of the Minimalist assumption that movement is driven by syntactic features. In fact, given the lack of any syntactic feature that drives QR, it has been proposed sometimes that the rule of QR simply does not exist (Kitahara (1992), Homma (1998), etc.).

The second problem is an empirical one. Consider the following examples:

(10) a. kinoo kita kyaku-ga 3-nin kyoo kaetta
 yesterday came guests-NOM 3-CL today returned
 'Three guests who came yesterday left today'

b. boku-wa sensei-ga suisen-sita hon-o 3-satu yonda

I-TOP teacher-NOM recommended book-ACC 3-CL read
 'I read three books that the teacher recommended'

Despite Homma et al.'s claim that FQs can only be hosted by non-presuppositional DPs, the most natural interpretation of the DPs *kinoo kita kyaku-ga 3-nin* and *sensyuu karita hon-o 3-satsu* can be said to be presuppositional in the sense that the former refers to three guests in the set of guests that are presupposed to exist, and the latter to three of the set of books that the teacher recommended. Moreover, these DPs can only take a narrower scope than a QP with a prenominal quantifier. Consider:

- (11) a. 4-syurui-no miyage-o kinoo kita kyaku-ga 3-nin katta
 4-kind-of souvenir-ACC yesterday came guest-Nom 3-CL bought
 'Three guests who came yesterday bought four kinds of souvenir'
 [unambiguous: *THREE > FOUR, FOUR > THREE]
- b. sensei-ga suisen-sita hon-o 3-satu daremo-ga yonda
 teacher-NOM recommended book-ACC 3-CL everyone-NOM read
 'Everyone read three books that the teacher recommended'
 [unambiguous: EVERY > THREE, *THREE > EVERY]

It is quite difficult, if not totally impossible, to interpret the DPs with an FQ *kinoo kita kyaku-ga 3-nin* and *sensei-ga suisen-sita hon-o 3-satu* as taking wide scope over the other QP in the sentence, in contrast to the QP with a prenominal quantifier as in the following examples:

- (12) a. 4-syurui-no miyage-o kinoo kita 3-nin-no kyaku-ga katta
 4-kind-of souvenir-ACC yesterday came 3-CL-of guest-NOM bought
 'Three guests who came yesterday bought four kinds of souvenir'
 [unambiguous: THREE > FOUR, FOUR > THREE]
- b. sensei-ga suisen-sita 3-satu-no hon-o daremo-ga yonda
 teacher-NOM recommended 3-CL-of book-ACC everyone-NOM read
 'Everyone read three books that the teacher recommended'
 [unambiguous: EVERY > THREE, THREE > EVERY]

Even if Homma et al. discard the proposal that FQs can only take a bare, nonpresuppositional DP, their analysis still predicts wrongly that the QPs in (11) can take wide scope over the other QP, since they have the presuppositional interpretation and as such should undergo QR.

5. A Proposal

The above consideration leads us to saying that it is the syntactic structure of a QP, but not the semantic notion of presuppositionality, that makes the QP take wide scope. If we assume the Mapping Hypothesis of Diesing (1990, 1992) or the equivalent of it in Homma et al. (1992), we can say that only those QPs that have a prenominal quantifier can be in the syntactic domain that is mapped onto the Operator and the Restrictive Clause. The question, then, is what syntactic mechanism licenses QPs with a prenominal quantifier in that domain.

Let us propose that a prenominal quantifier lies in the outermost Spec position of a DP, so that the structure of *hutatu-no booru* is represented as (13):

(13) [_{DP} [hutatu-no] D [_{NP} booru]]

Let us also assume that the syntactic feature [+Quantifier] born by the phrase *hutatu-no* is percolated up to the DP node containing it so that the whole DP shares this feature, as in (14):

(14) [_{DP}[+Quantifier] [₊Quantifier] hutatu-no] D [_{NP} booru]]

FQs, on the other hand, is clearly not in the prenominal position, so that DPs with a FQ has no element filling in its Spec, which means that the whole DP does not have the [+Quantifier] feature.

Thus, the source of the difference in the scope property between DPs with a prenominal quantifier and those with an FQ can be said to lie in the existence/nonexistence of the [+Quantifier] feature on the DP. If we are to capture the difference in the scope property in terms of the (non)applicability of the rule of QR, as in Homma et al. (1992) and Diesing (1992), then we can say that the (non)existence of the [+Quantifier] feature on a DP affects the applicability of QR.

For capturing this correlation between the presence/absence of the [+Quantifier] feature and the applicability of QR, the most likely analysis will be to assume that there is a functional head somewhere up in the syntactic structure that attracts those DPs with the [+Quantifier] feature in order to check this feature. One candidate for such a functional head would be Foc(us) in the CP domain, which is assumed in the series of cartography works including Rizzi (2004) and Endo (2007), to name just a few.

The above assumptions do not seem to be ad hoc ones. On the contrary, mechanism like these are necessary on independent grounds in order to capture, for instance, the WH-movement and the internal structure of DPs containing a WH expression.

- (15) a. [_{DP} [_{AP} How stupid] a man] is he?
 b.* [_{DP} A [_{AP} how stupid] man] is he?

As these examples tell us, a WH DP can be successfully licensed if the WH phrase (*how stupid*) contained in it is in the outermost Spec of the DP. If *how stupid* remains in its original position, not in the outermost Spec, as in (15b), the WH DP cannot be successfully licensed.

Now the difference between (4a) and (4b) with respect to scope can be explained in the following way. Assuming the Spec of the QP *daremo-ga* is filled with *dare* or *daremo*, both QPs in (4a) are attracted by Foc and moved to the position that allows the [+Quantifier] feature to be checked by Foc. Here I assume that a Spec can accept more than one constituent, as long as the constituents are legitimate, a mechanism independently necessary to accommodate more than one WH-phrase in one Spec CP, as in *Who saw what?*. The LF of (4a) and (4b) are then represented as follows:

- (16) a. LF of (4a):
 i) [_{FocP} [_{DP}[+Quantifier] *daremo-ga*]_i [[_{DP}[+Quantifier] *hutatu-no booru-o*]_j Foc [_{TP} *t_i* [_{VP} *t_j* *ketta*]]]]
 ii) [_{FocP} [_{DP}[+Quantifier] *hutatu-no booru-o*]_j [[_{DP}[+Quantifier] *daremo-ga*]_i Foc [_{TP} *t_i* [_{VP} *t_j* *ketta*]]]]
 b. LF of (4b):
 [_{FocP} [_{DP}[+Quantifier] *daremo-ga*]_i [Foc [_{TP} *t_i* [_{VP} [_{DP} *booru-o hutatu*]_j *ketta*]]]]

Assuming that two QPs can move in two different orders, we obtain the two LF structures in (16a). The LF in (16a-i) yields the scope order EVERY > TWO and the one in (16a-ii) the TWO > EVERY reading. On the other hand, the DP with an FQ in (4b) has nothing in its Spec so that the whole DP lacks the [+Quantifier] feature. Thus it cannot be attracted by Foc and instead must remain in, or reconstructed into, a position inside TP. This accounts for the obligatory narrow scope of the DP *booru-o hutatu*.

6. Ambiguity of Prenominal Numeral Quantifiers

As Homma et al. (1992) point out, DPs with a prenominal numeral quantifier are in fact ambiguous with respect to presuppositionality. Consider:

- (17) *hutari-no otokonoko-ga haittekita*
 two-of boy-NOM entered
 ‘Two boys entered’

The QP *hutari-no otokonoko-ga* can either refer to two boys of a set of boys (the

presuppositional reading) or to two boys who are newly introduced into the discourse (the nonpresuppositional reading). One may then wonder if this ambiguity is reflected in the difference in the scope taking property. Consider the following example:

- (18) 3-tu-no ringo-o daremo-ga motteiru
 3-CL-of apple-ACC everyone-NOM have
 ‘Everyone has three apples’
 [unambiguous: EVERY > THREE, *THREE > EVERY]

The DP with a prenominal quantifier *3-tu-no ringo-o* is the most naturally understood to have a non-presuppositional reading, since it is pragmatically difficult to imagine a situation where the apples that each person has are from a particular set of apples that are presupposed to exist. Homma et al. (1992) correctly predict the unambiguity of this example, since the object QP, being nonpresuppositional, cannot undergo QR and is mapped into the Nuclear Scope, whereas the subject QP *daremo-ga* is presuppositional and hence is moved by QR. Indeed, it seems impossible to understand the object QP *3-tu-no ringo-o* as taking wide scope over the subject QP *daremo-ga* in (18).

Now how can we capture this fact along the lines we have proposed so far? I propose that the syntactic position of a prenominal numeral quantifier is in fact ambiguous in the way illustrated in (19):

- (19) a. [_{DP}[+Quantifier] [_{DP}[+Quantifier] 3-tu-no] [_{D'} D [_{NP} [_{N'} ringo]]]
 b. [_{DP} [_{D'} D [_{NP} [_{DP}[+Quantifier] 3-tu-no] [_{N'} ringo]]]

I suggest that the presuppositional reading of the DP arises from (19a) where the quantifier occupies the Spec DP position and the feature [+Quantifier] is percolated up to the whole DP node, which is attracted by Foc and moves into Spec Foc, as we have already proposed. On the other hand, (19b) gives rise to the nonpresuppositional reading of the DP in (18).⁴ In this structure, the quantifier *3-tu-no* is not in the Spec DP position, but in the Spec of a lower projection, say NP, so that the [+Quantifier] feature of it does not percolate up to the whole DP node. Since the whole DP node lacks the feature that is necessary to be attracted, it does not move up by QR and must stay in a lower position, which yields the obligatory narrow scope.

The semantic function of such numeral quantifiers as *3-tu-no* in the presuppositional and the nonpresuppositional reading of DPs has sometimes been called the “cardinal” reading as opposed to the “partitive” and “quantificational” reading (Milsark (1974, 1977). In the cardinal reading, the numeral quantifier only serves to mark the amount of entities denoted by the noun associated with it, whereas in the partitive or quantificational reading the numeral quantifier ranges over a set of entities presupposed in the discourse and picks out a subset out of that set, which gives rise to the

presuppositional reading.

The correlation between these semantic functions and the syntactic positions of quantifiers is empirically confirmed by the following examples:

- (20) a. *san-nin-no watasi-no gakusei*
 3-CL-of I-of student
 ‘three of my students’
 b. *watasi-no san-nin-no gakusei*
 I-of 3-CL-of student
 ‘my three students’

As the English translations show, (20a) is naturally interpreted as referring to three students out of the set of students that the speaker teaches, whereas (20b) is taken to refer to the whole set of the speaker’s students which consists of only three students. In other words, the reading of (20a) is an instance of partitive or quantificational interpretation, since the numeral quantifier *san-nin-no* ranges over the presupposed set of students. This gives rise to the presuppositional reading of the DP in (20a). On the other hand, the same numeral quantifier in (20b) does not have this function but only has the cardinal function of simply referring to the number of students in the speaker’s class.

This is accounted for by appealing to the syntactic difference of the quantifier in (20a) and (20b). The quantifier *san-nin-no* in (20a), being to the left of *watasi-no*, is in the Spec DP position and thus yields the quantificational function of ranging over the presupposed set. On the other hand, the quantifier in (20b) being to the right of *watasi-no*, is inside the internal NP structure and thus yields the cardinal interpretation.

This correlation between the syntax and the semantics of quantifiers is not an accidental property of Japanese. In English, quantifiers such as *three* and *many* exhibit the same property. It has been pointed out in the literature (Milsark (1974, 1977) among others) that expressions such as *three students* and *many boys* can in principle be interpreted either quantificationally or cardinally, as with Japanese. In other words, *three students* can either refer to three out of the set of students presupposed in the discourse (quantificational/presuppositional) or to three students newly introduced in the discourse (cardinal/nonpresuppositional).

However, if a quantifier is to the right of some other elements such as the genitive pronoun *my*, that quantifier only has the cardinal reading:

- (21) My three/many students were absent from the class today.

Unlike the DPs *three/many students (of mine)* and *three/many of my students*, the DP in (21) *my three/many students* can only mean that there are three/many students in the

speaker's class and all the students in that class were absent from the class. It does not refer to three/many students out of a set of students that the speaker teaches.

At this point, one may wonder why the DPs with an FQ in (10) have a presuppositional reading despite the fact that they do not have a DP-internal prenominal quantifier.

- (10) a. kinoo kita kyaku-ga 3-nin kyoo kaetta
 yesterday came guests 3-CL today returned
 'Three guests who came yesterday left today'
- b. boku-wa sensei-ga suisen-sita hon-o 3-satu yonda
 I-TOP teacher-NOM recommended book-ACC 3-CL read
 'I returned three books that the teacher recommended'

As I have already suggested above, the presence of a quantifier in the outermost Spec in a DP assures the presuppositional interpretation of the DP. However, this leaves open the possibility of the presuppositionality coming from other sources. In other words, even when the outermost Spec is not occupied by a quantifier, the DP could still have a presuppositional interpretation via, for example, the rich semantic content of the modifier of the head noun. This is the case with the examples in (10), where the semantic content of the relative clause assures the existence of a set of guests who stayed at the speaker's house and a set of books that the teacher recommended. A similar account holds with the DP in (20b), which is interpreted presuppositionally despite the present analysis that the quantifier does not occupy the outermost Spec of the DP.

- (20) b. watasi-no san-nin-no gakusei
 I-of 3-CL-of student
 'my three students'

This particular DP refers to all of the three students that the speaker teaches, whose existence the speaker assumes to exist. The presuppositionality of (20b) can be ascribed to the presence of the possessive DP *watasi-no*, which assures the existence of a group of students that the speaker teaches. In fact, the presence of *watasi-no* alone can make the DP presuppositional, as we see in (22):

- (22) watasi-no gakusei
 I-of student
 'my students'

This DP can refer to all the students in a set of students that the speaker teaches, the

set that the speaker assumes to exist.

The above analysis raises a question of what, if any, is the semantic distinction between the presuppositionality that is assured syntactically by the quantifier in the outermost Spec and the presuppositionality that is not. I will, however, leave this matter for a future research.

7. Conclusion: an Implication on the Rule of Quantifier Raising

Since the pioneering work in May (1977), the existence of the rule of Quantifier Raising, which moves quantified DPs (henceforth, QPs) such as *everyone* and *some student* to an appropriate position at the level of Logical Form (LF), has been widely assumed in the literature. Among the works on this covert movement rule, some have provided empirical motivation for the existence of the rule by considering such phenomena as Antecedent-Contained Deletion (May (1985), Kennedy (1997), etc.) and the scope property in the VP-ellipsis environment (May (1985)). Despite the empirical support provided, however, it does not seem to have been totally agreed on what the driving force for this covert “syntactic” movement is. Given the lack of any “syntactic” feature that would trigger the movement of QPs, some have even proposed that the rule of QR simply does not exist and that the scope of QPs are determined in terms of the syntactic position reached by QPs not by application of QR, but by some other “feature-driven” syntactic movement such as the movement for Case-checking (Kitahara (1993), Homma (1998)).

Moreover, some linguistics have held the view that the movement rule of QR is driven by “semantic” factors. Among these, Diesing (1990, 1992) has proposed that QR applies only to “presuppositional” DPs, which she defines as those DPs that denote a subset of a set of entities whose existence in the discourse is understood by the speaker.

This paper has sketched an analysis of the scope property of FQs in contrast to the pronominal quantifiers. The difference in the scope property of these two kinds of construction can be explained away by referring to the internal syntactic structure of DPs, or more precisely to the (non)presence of a quantifier in the Spec position of DPs. If the analysis sketched in this paper is on the right track, it can open up the possibility of replacing the rule of QR with a syntactic operation that covertly moves QPs into the Spec of a relevant functional head by attracting the syntactic feature of those QPs, an operation that works in a quite parallel fashion to other well-motivated operations such as WH-movement.

Notes

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1 This is also pointed out in Hasegawa (1991).

2 Homma et al. (1992) proposed this analysis quite independently of Diesing (1990, 1992). Although they employ the term “specificity” of Enç (1991), I will use Diesing’s term “presuppositionality” in this paper in order to avoid the confusion that might arise from the different sense of “specificity” employed in the past literature (Jackendoff (1972), etc.).

3 Homma et al. (1992) assume that scrambled DPs are reconstructed to their base-generated positions first at LF, and, if presuppositional, undergo QR.

4 As I discuss shortly in this section, a presuppositional reading of a DP can come from other sources.

References

- Diesing, M. (1990) *The Syntactic Roots of Semantic Partition*, Ph. D. diss., University of Massachusetts, Amherst.
- _____ (1992) *Indefinites*. MIT Press, Cambridge, MA.
- Enç, M. (1991) “The Semantics of Specificity,” *Linguistic Inquiry* 22, 1-25.
- Endo, Y. (2007) *Locality and Information Structure*, John Benjamins, Amsterdam/Philadelphia.
- Hasegawa, N. (1991) “On Non-Argument Quantifiers,” *Metropolitan Linguistics* 11, 52-78.
- Heim, I. (1982) *The Semantics of Definite and Indefinite Noun Phrases*, Ph. D. diss., University of Massachusetts, Amherst.
- Hoji, H. (1985) *Logical Form Constraints and Configurational Structure in Japanese*, Ph. D. diss., University of Washington.
- Homma, S. (1998) “Scope of Negation, Syntactic Movement, and Structure of Japanese Negative Sentences,” *Tsukuba English Studies* 17, ed. by Manabu Kusayama and Akiko Miyata, 25-50, University of Tsukuba.
- Homma, S., N. Kaga, K. Miyagawa, K. Takeda, and K. Takezawa (1992) “Semantic Properties of the Floated Quantifier Construction in Japanese,” *Proceedings of the 5th Summer Conference of Tokyo Linguistic Forum*, 15-28, Tokyo Linguistic Forum, Tokyo.
- Jackendoff, R. (1972) *Semantic Interpretation in Generative Grammar*, MIT Press, Cambridge, MA.
- Kennedy, C. (1997) “Antecedent-Contained Deletion and the Syntax of Quantification,” *Linguistic Inquiry* 28, 662-688.
- Kitahara, H. (1992) “Checking Theory and Scope Interpretation Without Quantifier Raising,” ms. Harvard University.
- Kratzer, A. (1989) “Stage-Level and Individual-Level Predicates,” *Papers in Quantification*, NSF Grant Report, Department of Linguistics, University of Massachusetts,

Amherst.

Kuroda, S.-Y. (1969/70) "Remarks on the Notion of Subject with Reference to Words like *Also*, *Even*, or *Only*; Part 1 and 2," *Annual Bulletin* 3, 111-129, *Annual Bulletin* 4, 127-152, University of Tokyo.

May, R. (1977) *The Grammar of Quantification*, Ph.D. diss., MIT.

Milsark, G. L. (1974) *Existential Sentences in English*, Ph. D. diss., MIT.

_____ (1977) "Toward an Explanation of Certain Peculiarities of the Existential Construction in English," *Linguistic Analysis* 3. 1, 1-29.

Rizzi, L. (2004) "Locality and Left Periphery," in *Structures and Beyond*, ed. by A. Belletti, 104-131, Oxford University Press.