

What Gets Mapped to the Tripartite Structure of Quantification in Japanese

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1. Numeral-Classifier Combinations in Japanese

A numeral-classifier combination (#-CL) in Japanese can appear in various positions in relation to its 'host NP', as shown in (1)-(3).¹

(1) ... NP-CM ... #-CL ...
gakusei-ga kinoo san-nin kita
student-NOM yesterday 3-CL came
'three students came yesterday'

(2) ... #-CL-GEN NP-CM ...
san-nin-no gakusei-ga kita
3-CL-GEN student-NOM came
'(the) three students came'

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1. *CM* stands for a case marker, and *NP* for *NP* or *N*. There are cases in which a #-CL precedes its 'host NP', as shown below.

(i) #-CL (...) NP-CM
san-nin (kinoo) gakusei-ga kita
3-CL yesterday student-NOM came
'Three students came (yesterday).'

(i) patterns with (1) in the respects relevant to the present discussion.

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- (3) ... NP #-CL-CM ...

gakusei	san-nin-ga	kita
student	3-CL-NOM	came

 '(the) three students came'

A few more examples are given in (4).

- (4) a. gakusei-ga biiru-o 3-bon nonda
 student-NOM beer-ACC 3-CL (BOTTLE) drank
 'students drank 3 bottles of beer'
 b. biiru-o gakusei-ga 3-bon nonda
 'students drank 3 bottles of beer'
 c. gakusei-ga biiru-o 3-nin nonda
 'three students drank beer'
 d. gakusei-ga 3-nin biiru-o nonda
 'three students drank beer'

2. On Alleged Restrictions on a 'Floating' #-CL

It was suggested in Kuroda 1980 and Haig 1980 that examples like (4c) were unacceptable or awkward, in contrast to (4a, b, d), and floating numeral-classifiers have since been extensively discussed in Japanese syntax, especially in relation to the so-called scrambling, passive and unaccusative constructions. (Saito 1983, 1985; Miyagawa 1989 and many subsequent works.) The essentials of the 'standard analysis' of the alleged unacceptability of (4c), in contrast to (4a), (4d) and especially (4b), can be stated as in (5).

- (5) Standard analysis of the alleged unacceptability of (4c):
 a. The #-CL (or its trace) and the 'host NP' (or its trace) must be close enough (either adjacent, as in Kuroda 1980 (and Haig 1980), or in a mutual c-command relation, as in Miyagawa 1989),
 b. The object NP can be preposed to the sentence-initial position, and
 c. The subject NP cannot be so preposed. ("Subjects cannot scramble" in Saito 1985.)

Observations contrary to these 'standard judgments', however, began appearing in the mid-1990s (Gunji & Hasida 1998, Takami 1998, and Ishii 1999) that examples of the form in (6) are not necessarily unacceptable and that the subject NP can be associated with a #-CL across some intervening materials, including *o*-marked or *ni*-marked (argument) NPs.

- (6) (=4c)

gakusei-ga	biiru-o	3-nin	nonda
student-NOM	beer-ACC	3-CL (PERSON)	drank

Miyagawa & Arikawa 2003 (=M&A) argues that examples like (6), when acceptable, are derived from (7) by multiple applications of overt movement, as indicated in (8).

- (7) (=4d)
- | | | | |
|-------------|---------------|----------|-------|
| gakusei-ga | 3-nin | biiru-o | nonda |
| student-NOM | 3-CL (PERSON) | beer-ACC | drank |
- (8) [_{TP} gakusei-ga₁ [_{TP} biiru-o₂ [_{t₁} 3-nin [_{t₂} nonda]]]]
- | | | | |
|-------------|----------|---------------|-------|
| student-NOM | beer-ACC | 3-CL (PERSON) | drank |
|-------------|----------|---------------|-------|

More specifically, they argue that such a 'long-distance' (i.e., non-adjacent) association between a #-CL and its 'host NP' is possible only if *NP-o* is A-moved to the spec of TP, due to the EPP feature, and *NP-ga* is subsequently A'-moved to the sentence-initial position.

Now consider the example in (9).

- (9) 55% *izyoo-no* *robotto-o* [_{NP} *so-itu-o* *tyuumonsita*
 55%:or:more-GEN robot-ACC that-thing-ACC ordered
hito]-ga *koozyoo-ni* 3-nin *okurikaesita* (koto)
 person]-NOM factory-DAT 3-CL (PERSON) sent:back (fact)
 '55% or more *x*, *x* = a robot, three persons who had ordered *x* sent *x*
 back to the factory'

According to M&A, the derivation of (9) must proceed as indicated in (10), where β within *NP-ga* is dependent on *NP-o* for its interpretation.

- (10) a. **Initial order**
 [_{NP} ... β ...]-ga [_{3-nin}] NP-ni NP-o V
- b. **EPP-driven** (hence A-) **movement** of *NP-ni*
 NP-ni₁ [_{NP} ... β ...]-ga [_{3-nin}] t₁ NP-o V
- c. **A'-movement** of *NP-ga*
 [_{NP} ... β ...]-ga₂ NP-ni₁ t₂ [_{3-nin}] t₁ NP-o V
- d. **A'-movement** of *NP-o*
 NP-o₃ [_{NP} ... β ...]-ga₂ NP-ni₁ t₂ [_{3-nin}] t₁ t₃ V

Under M&A, the landing site of the movement of *NP-o₃* (see (10d)) must be an A'-position since it crosses the A'-moved *NP-ga₂*, and hence the binding of β by *NP-o₃* in (10d) is predicted to be impossible. The fact that such binding is not impossible, as indicated in (9), thus disconfirms this negative prediction and hence falsifies the hypothesis in question.

Similar remarks apply to (11), whose derivation is given in (12), where β within *NP-ni* is dependent on *NP-o*.

- (11) 55% *izyoo-no* *robotto-o* *ten'in-ga* [*so-itu-o*
 55%:or:more-GEN robot-ACC salesclerk-NOM that-thing-ACC
seizoo-sita *koozyoo*]-*ni* 3-*nin* *okurikaesita* (*koto*)
 manufactured factory-DAT 3-CL (PERSON) sent:back (fact)
 '55% or more x , x = a robot, three salesclerks sent x back to the
 factory that had manufactured x '

- (12) a. **Initial Order**
 $\boxed{\text{NP-ga}}$ $\boxed{\beta\text{-nin}}$ [$\text{NP} \dots \beta \dots$]-*ni* NP-o V
- b. **EPP-driven** (hence A-) **movement** of *NP-ni*
 $\boxed{\text{NP-ga}}$ $\boxed{\beta\text{-nin}}$ [$\text{NP} \dots \beta \dots$]-*ni* $\boxed{\text{NP-ga}}$ $\boxed{\beta\text{-nin}}$ t_1 NP-o V
- c. **A'-movement** of *NP-ga*
 $\boxed{\text{NP-ga}_2}$ [$\text{NP} \dots \beta \dots$]-*ni* t_2 $\boxed{\beta\text{-nin}}$ t_1 NP-o V
- d. **A'-movement** of *NP-o*
 NP-o_3 $\boxed{\text{NP-ga}_2}$ [$\text{NP} \dots \beta \dots$]-*ni* t_2 $\boxed{\beta\text{-nin}}$ t_1 t_3 V

The status of examples such as (9) and (11) goes directly against M&A's account of *A-ga B-o #-CL V* where *A-ga* is the host of *#-CL* since, as we noted, they argue that such a 'long-distance' association is possible only if *NP-o* is A-moved to the spec of TP, due to the EPP feature, and *NP-ga* is subsequently A'-moved to the sentence-initial position.^{2, 3}

3. The Structural Conditions on BVA with the Tripartite Structure of Quantification

The observations above are compatible with the view, advocated in Fukushima 1991, Kobuchi-Philip 2003, Gunji & Hasida 1998, and Takami 1998, that the *#-CL* in examples like (1) and (13) is base-generated at its surface position as an adverbial. They are also in harmony with the view, argued for by the latter two of the works just cited, that it can be associated with its 'host NP' across other elements, including a *{ni/o}*-marked (argument) NP.

2. In (9) and (11), *#-CL* is associated with the matrix *NP-ga*; hence under M&A's account, the matrix *NP-ni* must be in the spec of TP, an A-position, and the 'dislocated NPs' appearing to the left of that NP must be all A'-moved. The binding in (9) and (11) would thus be unexpected under M&A's account, but it is as expected under Ueyama 1998: Chapter 2, 2003, where it is observed that only the first of the two or more 'displaced NPs' can exhibit 'A-properties'.

3. It is also possible for the sentence-initial *NP-o* in (i) to bind both *A* and *B*, where *#-CL* is associated with the *ga*-marked NP, further confirming the conclusion reached in the text. But the relevant paradigm is not provided here for reasons of space.

(i) NP-o [... A ...]-*ga* [... B ...]-*ni* *#-CL* V

- (13) indo-no syookengaisya-ga ookura daizin-ni 3-sya
 India-GEN stock:company-NOM finance minister-DAT 3-CL
 tagaku-no kenkin-o sita
 huge-GEN contribution-ACC did
 '3 *x*, *x* = an Indian stock company, *x* made a huge contribution to
 the finance minister'

We thus wish to maintain, in line with Gunji & Hasida (1998) and others, that the distributional restrictions on 'long distance association' reported in the literature are not reflections of a formal grammatical condition, and that the association between a #-CL and its 'host NP' is not constrained by a structural condition of the sort summarized in (5a); see Gunji & Hasida 1998 for various semantic as well as pragmatic factors that seem to contribute to the relevant speaker judgments.⁴

One might wonder if there are no structural restrictions at all on the distribution and the interpretation of a 'floating' #-CL. It has been known, for example, in reference to local disjointness effects (i.e., the effects of so-called Binding Principle B), that the distribution of BVA (bound variable anaphora) is more revealing than that of coreference in regard to the formal properties of the language faculty. We might thus turn our attention to cases that involve BVA; cf. Hoji 2003: 2.2.2.2 and 2.3.3. We in fact seem to observe some structural restriction on the association between a #-CL and its 'host NP' once we consider the distribution of BVA in relation to a 'floating' #-CL. Consider (14).

- (14) a. indo-no syookengaisya-ga kinoo 3-sya [so-ko-o
 India-GEN stock:company-NOM yesterday 3-CL that-place-ACC
 siensiteiru seizika]-ni tagaku-no kenkin-o sita
 is:supporting politician-to huge-GEN contribution-ACC did
 '3 *x*, *x* = an Indian stock company, *x* made a huge contribution
 yesterday to a politician who was supporting *x*'
 b. *? indo-no syookengaisya-ga [so-ko-o siensiteiru
 India-GEN stock:company-NOM that-place-ACC is:supporting

4. We have checked with 18 native speakers of Japanese about 14-20 sentences with various lexical selections, not using an unaccusative verb, in which a 'floating' #-CL is to be associated with its 'host NP' across another argument, either *NP-o* or *NP-ni*. Similarly, 10 speakers who clearly detect the contrasts in the paradigms of bound variable anaphora as discussed widely in the literature have been asked about 9 sentences such as (9), (11) and the one alluded to in footnote 3, along with 20 other sentences. The results of these surveys are clearly in harmony with what is stated in the text. Due to the space limitation, however, we cannot provide the details of the surveys here and we intend to do so on a separate occasion.

seizika]-ni kinoo 3-sya tagaku-no kenkin-o sita
 politician-to yesterday 3-CL huge-GEN contribution-ACC did
 '3 x , x = an Indian stock company, x made a huge contribution
 yesterday to a politician who was supporting x '

Under the 'standard' conception of how the linguistic objects are syntactically represented (in Japanese), both the #-CL and its 'host NP' c-command the dependent term *so-ko* in (14a), while such is not the case in (14b). If the availability of BVA is not at stake, as in (13) above, the 'long-distance' association between the #-CL and its 'host NP' is possible.⁵

One way to account for this state of affairs is to assume that an unmarked way for an 'adverbial' #-CL to be interpreted is as an operator of the tripartite structure of quantification.⁶ We can state the relevant restrictions as follows. Let us use the terms in (15), and consider first (16).

- (15) a. 'Operator-to-be' = Op
 b. 'Restriction-to-be' = R
 c. a dependent term (in term of BVA) = β

(16) Mary praised every student

(16) is interpreted as in (17b), and each element in the LF representation schematized in (17a) is understood to correspond to a particular object in Semantic Representation, as indicated in (17), in the form of the so-called tripartite structure of quantification.

- (17) a. [every student [Mary praised t]]
 ↓ ↓ ↓
 b. $\forall x$, student (x), Mary praised x

5. Not every speaker rejects examples like (14b). That seems related to, among other factors, (i) the possibility of a 'bare NP' being understood as plural-denoting, and (ii) the possibility of 'a floating #-CL' being understood as being an adverbial modification (an instance of *measurement* as discussed extensively in Gunji & Hasida 1998). It seems that such a reading can be excluded/suppressed, to some extent, by using for the 'host NP' an NP that cannot be plural-denoting. One such NP is *dokoka-no N*, intended as 'some nonspecific N', and if we use it as the 'host NP', we seem to get results that are more in harmony with our expectations. The use of what is called *Deep OS* in Ueyama 1998 also seems to give us better results. The possibility of the *ga*-marked NP being a major subject also seems to have some effects on judgments of some speakers. A full discussion of the relevant points is not possible here due to space limit, however. We must therefore let the examples in (14) serve our purpose here, while acknowledging the repeatability problem associated with the paradigm in (14), which has turned out to be more serious than we had thought while preparing for the WCCFL presentation.

6. See, however, Gunji & Hasida 1998 for an opposing view.

In English, Op and R are the Determiner and its complement NP, respectively, and form a constituent.

- (18) a. [every boy] ... his ...
 (Op-R) (β)
 b. [[Op-R]₁ [t₁ ... β ...]]

In Japanese, on the other hand, Op and R are realized separately, at least in the pattern in (1), as shown in (19).

- (19) a. [auto company]-ga ... 3-sya ... so-ko ...
 3-CL ... it ...
 (R) (Op) (β)
 b. [Op [R₁ [t₁ ... ___ ... β ...]]] (Both R and Op are IP-adjoined.)

Given these, we can state some of the necessary conditions for BVA(Op-R, β) as in (20).⁷

- (20) BVA(Op-R, β) is possible only if at LF
 a. Op c-commands β, and
 b. The trace of (Op-)R c-commands β.

We now wish to suggest an extension of the 'regular' Isomorphism Principle in (21), as in (22).⁸

- (21) The c-command relation between two linguistic objects each of which gets mapped to an operator cannot be altered by LF movement.

7. *BVA(A, B)* expresses an intuition that (i) B does not have an inherent value of its own, and (ii) the value of B *co-varies with* the value of A. (e.g., *BVA(every boy, his)* in *every boy loves his mother*). The crucial assumption in connection with the text discussion is that the BVA in (14) is the kind of BVA that is subject to the conditions in (20).

8. (21) is meant to have the effects of (i) and (ii).

- (i) Suppose A and B are both QP's or both Q-NP's or Q-expressions, then if A c-commands B at SS, A also c-commands B at LF. (Huang 1982: 220, (70))
 (ii) A logical structure in which a quantifier binding a variable *x* has wide scope over a quantifier binding a (distinct) variable *y* is a possible interpretation for a given structure S just in case in the surface structure of S the quantified expression corresponding to *y* is in the (c-command) domain of the quantified expression corresponding to *x*. (Reinhart 1976: 191, (39))

- (22) The c-command relation (and the lack thereof) between what gets mapped to an operator Op and an element that is to be interpreted as being dependent upon the variable bound by the Op cannot be altered by LF movement.

Given (20) and (22), we predict (23) and hence (24).

- (23) The BVA is not possible if the dependent term is not c-commanded by both Op and R prior to the application of LF movement.
- (24) The BVA is not possible in (25).

- (25) a. * $[so-ko-o$ siensiteiru seizika]-ga $\boxed{3-sya}$
 that-place-ACC is:supporting politician-NOM 3-CL
 sooridaizin-ni $\boxed{indo-no}$ $\boxed{syookengaisya-o}$ syookaisita
 prime:minister-to India-GEN stock:company-ACC introduced
 '3 x , x = an Indian stock company, a politician who was supporting
 x introduced x to the prime minister'
- b. * $\boxed{3-sya}$ $[so-ko-o$ siensietiru seizika]-ga
 3-CL that-place-ACC is:supporting politician-NOM
 sooridaizin-ni $\boxed{indo-no}$ $\boxed{syookengaisya-o}$ syookaisita
 prime:minister-to India-GEN stock:company-ACC introduced
 '3 x , x = an Indian stock company, a politician who was supporting
 x introduced x to the prime minister'

If the BVA in (25) were available, this negative prediction would be disconfirmed, falsifying the hypothesis in question (i.e., (20) combined with (22)).

The observation that the elimination of the intended BVA results in much improvement, as indicated in (26) below, enhances the plausibility of the hypothesis that what is responsible for the status of (25) is the BVA, not the 'association' of *NP-o* (that is in a box) and *3-sya*.

- (26) a. {aso-ko/GM}-o siensiteiru seizika-ga $\boxed{3-sya}$
 that-place/GM-ACC is:supporting politician-NOM 3-CL
 sooridaizin-ni $\boxed{indo-no}$ $\boxed{syookengaisya-o}$ syookai-sita
 prime:minister-to India-GEN stock:company-ACC introduced
 '3 x , x = an Indian stock company, a politician who was supporting
 {that (other) company/GM} introduced x to the prime minister'
- b. $\boxed{3-sya}$ {aso-ko/GM}-o siensiteiru seizika-ga
 3-CL that-place/GM-ACC is:supporting politician-NOM

sooridaizin-ni indo-no syookengaisya-o syookai-sita
 prime:minister-to India-GEN stock:company-ACC introduced
 '3 x , x = an Indian stock company, a politician who was supporting
 {that (other) company/GM} introduced x to the prime minister'

By contrast, (27) can satisfy (or correspond to a structural description that satisfies) the necessary conditions for the BVA in question, since at LF *NP-ni* can be in its 'theta position' and be c-commanded by both *NP-ga* and *3-sya*.⁹

(27) [*so-ko-o* siensiteiru seizika]-ni indo-no
 that-place-ACC is:supporting politician-to India-GEN
syookengaisya-ga kyonen 3-sya tagaku-no
 stock:company-NOM last:year 3-CL huge-GEN
 kenkin-o sita
 contribution-ACC did
 '3 x , x = an Indian stock company, x made a huge contribution last
 year to a politician who was supporting x '

We therefore do not predict the BVA to be impossible in (27), in contrast to examples like (25).¹⁰ Hence the availability of the BVA in examples such as (27) enhances the plausibility of (20), combined with (22).

As noted in footnote 5, our discussion above suppresses a number of complications, and the suggested account of (14) must be regarded at this point as only a little more than a descriptive generalization that still has to be substantiated fully and it need to be given a more rigorous theoretical characterization than what is offered in this section. It is nevertheless hoped that it will serve as a basis for further investigation; and in the following section, we will consider a few of its consequences.

4. Some Consequences

4.1. "Productivity" of the patterns in (1)-(3)

It is perhaps worth noting that the pattern in (1) is extremely productive, as opposed to those in (2) and (3). For example, typical quantificational sentences in English can be translated into Japanese most naturally by using

9. We adopt the thesis that the string *NP-o/-ni NP-ga V* (roughly, *Object Subject Verb*) in Japanese can be represented at LF identically to *NP-ga NP-o/-ni V* (roughly, *Subject Object Verb*), giving rise to so-called reconstruction effects, as argued and discussed extensively in a series of works by M. Saito, including Saito 1992 and Ueyama 1998: Chapter 2, 2003, among others; see also Hoji et al. 1999.

10. We do not *predict* the availability of the BVA here since the conditions in (20) are necessary (but not sufficient) conditions for the BVA in question.

the pattern in (1), but not those in (2) or (3). One of the restrictions that we observe in the case of (2) and (3) but not (1) is that the former two are, or tend to be, used to refer to a specific entity. The point, which has been noted sporadically in the past literature, at least since C. Kitagawa's work in the late 1970s (as the first author of this paper recalls), is briefly illustrated below.

- (28) a. A! Ko-ko-ni resutoran-ga 2-ken aru.
 look this-place-in restaurant-NOM 2-CL(HOUSE) be
 'Look! There are two restaurants here.'
- b. #A! Ko-ko-ni 2-ken-no resutoran-ga aru.
 look this-place-in 2-CL-GEN restaurant-NOM be
 'Look! There are two restaurants here.'
- c. #A! Ko-ko-ni resutoran 2-ken-ga aru
 look this-place-in restaurant 2-CL-NOM be
 'Look! There are two restaurants here.'

One plausible interpretation of this is that (1) does, but (2) and (3) do not, get mapped to the tripartite structure of quantification in the way suggested in the preceding discussion.

4.2. Different patterns in (1)-(3) and BVA

We have made crucial reference to linguistic objects getting mapped to an operator and a restriction of the tripartite structure of quantification, as indicated below.

- (29) a. ... NP₁-CM ... #-CL ...
 b. [#-CL [NP₁ [... t₁(-CM) ... ___ ...]]]
- (30) a. NP₁ ==> a restriction
 b. #-CL ==> an operator

So far, we have been concerned with (1). When we turn our attention to (2) and (3), however, a different picture emerges. The crucial observation is that examples of the form in (1) do, but those of the forms in (2) and (3) do not, yield a clear paradigm of BVA.¹¹

Let us first consider the BVA paradigm in English given in (31), which illustrates the generalization in (32); see (20).

- (31) a. *at least one sumo wrestler criticized his coach*

11. This observation, to be illustrated below, was first made in a systematic way in Ueyama 1998, a summary of which can be found in Hoji 2003. J.-R. Hayashishita has subsequently shown in a series of works that the 'QP type' affects the possibility of not only BVA but also inverse scope in essentially the same way.

- b. **his* coach criticized *at least one sumo wrestler*
 c. (I wonder) which one of *his* coaches *at least one sumo wrestler* criticized
- (32) An NP β can be construed as a variable bound by an NP α only if β is c-commanded by α and its trace at LF.

Now consider (33).

- (33) a. konpyuutaa-ga a-no mise-kara 3-dai so-re-o
 computer-NOM that-GEN store-from 3-CL that-thing-ACC
 kowasita hito-ni hikitor-are-ta (koto)
 broke person-by end:up:buying-PASS-PAST (fact)
 'each of the three computers ended up being bought by the person who had broken it'
- b. *so-re-o kowasita hito-ga konpyuutaa-o a-no
 that-thing-ACC broke person-NOM computer-ACC that-GEN
 mise-kara 3-dai hikitotta (koto)
 store-from 3-CL ended:up:buying (fact)
 'the person who had broken it ended up buying (each of the) three computers from that store'
- c. so-re-o kowasita hito-ni konpyuutaa-ga a-no
 that-thing-ACC broke person-by computer-NOM that-GEN
 mise-kara 3-dai hikitor-are-ta (koto)
 store-from 3-CL end:up:buying-PASS-PAST (fact)
 'each of the three computers ended up being bought by the person who had broken it'

In contrast to (33b), examples like (34) and (35), with the intended interpretation, are relatively acceptable for many speakers, despite the fact that *so-re* fails to be c-commanded by 'its antecedent'.

- (34) (?)so-re-o kowasita hito-ga a-no mise-kara
 that-thing-ACC broke person-NOM that-GEN store-from
 3-dai-no konpyuutaa-o hikitotta (koto)
 3-CL-GEN computer-ACC ended:up:buying (fact)
 'the person who had broken it ended up buying (each of the) three computers from that store'
- (35) ??so-re-o kowasita hito-ga a-no mise-kara
 that-thing-ACC broke person-NOM that-GEN store-from
 konpyuutaa 3-dai-o hikitotta (koto)
 computer 3-CL-ACC ended:up:buying (fact)
 'the person who had broke it ended up buying (each of) the three computers from that store'

The unexpected availability of BVA is not restricted to examples with a numeral-classifier combination. It has been observed in Ueyama 1998 that the construal intended in examples like (36) is felt to be possible, to varying degrees among speakers, in contrast to examples like (37a).

(36) (Ueyama 1998: 213, (80))

- a. ?*so-ko-no* bengosi-ga *Toyota to Nissan-o* suisensita
that-place-GEN attorney-NOM Toyota and Nissan-ACC recommended
'its attorney recommended *Toyota and Nissan*'
- b. ?*so-ko-no* bengosi-ga *subete-no zidoosya-gaisya-o*
that-place-GEN attorney-NOM all-GEN automobile-company-ACC
uttaeteiru
sued
'its attorney has sued *every automobile company*.'

(37) (Hoji 2003: (59)¹²)

- a. **so-ko-no* zyooren-ga *20.5% izyoo-no kissaten-o*
that-place-GEN regular-NOM 20.5% more-GEN coffee:shop-ACC
suisensita node ...
recommended because
'because *its* regulars recommended *20.5% or more of the coffee shops, ...*'
- b. ?*so-ko-no* zyooren-ga (*rei-no*) *5-tu-no*
that-place-GEN regular-NOM (under:discussion-GEN) 5-CL-GEN
kissaten-o suisensita node ...
coffee:shop-ACC recommended because
'because *its* regulars recommended (those) *5 coffee shops* (under discussion), ...'

Ueyama 1998 and Hayashishita 2000, 2004 argue that apparent violation of (20), as in (36), for example, surfaces because what appears to be a QP in such examples is in fact not an Op-R. Given the suggestion in the preceding section that (1), at least in the unmarked cases, gets mapped to the tripartite structure of quantification, one might account for the observations as reported in (34) and (35) by hypothesizing that the relevant elements in (2) and (3) need not undergo such mapping. Examples like (37a) are of the pattern in (2), however; hence, the unexpected availability of BVA in examples like (34) and (35) cannot simply be attributed to how the pattern in (2) gets interpreted in general, in contrast to that in (1).¹³

12. The contrast in (37) is attributed in Hoji 2003 to the works by J.-R. Hayashishita as well as Ueyama 1998. See Hoji 2003: 4.1.2 for further discussion.

13. See Ueyama 1998: Appendix D for discussion on how BVA appears to obtain without involving Op-R. Hayashishita 2004: Chapter 3 also contains much relevant discussion.

4.3. NP as an argument in Japanese

Given that (1) gets mapped to the tripartite structure of quantification, as suggested above, it follows that the nominal projection in an argument position cannot always be a DP. It must be possible for it to be type $\langle e, t \rangle$ and hence NP. This is in harmony with Fukui 1986 and Chierchia 1998.¹⁴

5. Concluding Remarks

We have endorsed the view, advocated by Gunji & Hasida (1998) and others, that the association between a 'floating' #-CL and its 'host NP' is not grammatically constrained. If we consider cases where BVA is at stake with a #-CL and its 'host NP' together serving as the intended 'binder', however, there seems to be a restriction such that both the #-CL and the 'host NP' must c-command the 'dependent term' prior to the application of LF movement. The exact nature of this restriction is not clearly understood yet, but if it is crucially related to the mapping of the relevant linguistic objects into elements of the tripartite structure of quantification, as suggested above, it seems to have some interesting consequences, and we have discussed a few of them in the preceding section.

This paper perhaps raises more questions than it solves, but the questions it raises, we hope and wish to maintain, are of the sorts that are likely to lead us to a better understanding of not only the relevant aspects of the Japanese language but also what UG makes available for expressing quantification in natural language.¹⁵

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14. Some of the details of Chierchia 1998 are not compatible with what is being pursued here, however.

15. Among what should be included in further research is a close examination of (A) what is discussed and proposed in Gunji & Hasida 1998, where (i) a #-CL is considered to be an instance of what they call a 'measure phrase', and (ii) its quantificational interpretation, as opposed to its 'measurement' interpretation, is claimed to be marked (*coerced* in their terms) as well as (B) (i) what is discussed in Ishii 1999 and Kawazoe 1999 in regard to what Ishii (1999) calls *VP quantifiers* and *NP quantifiers*, corresponding to #-CL in (1), and (ii) how they are to be related to Gunji & Hasida's adverbial 'measure phrases' and to the #-CL that gets mapped to an operator in the analysis suggested above.

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