

On NPI Licensing in Japanese

HIROSHI AOYAGI AND TORU ISHII

University of Southern California and Nanzan University, University of California, Irvine

0. Introduction

This paper concerns about the so-called negative polarity items (NPIs) in Japanese. Among the NPIs in the language, two different types must be recognized. One type, *XP-sika*, which means 'anyone/anything but XP,' is an agreement-inducing element, only licensed by Spec-head agreement with Neg at LF. The other type, an indeterminate pronoun (IND) suffixed with *-mo*, is not an agreement-inducing element in the same sense that *XP-sika* is. However, since it is "identified" with a phonetically null operator, base-generated in Spec of NegP, it must adjoin to that operator at LF. The locality requirement that the NPIs must satisfy in relation to Neg can be derived from the above characterizations of each type of NPIs and the general theory of movement.

In what follows, just for an expository reason, we will refer to these two types of NPIs as SIKA-NPIs and MO-NPIs, respectively. In section 1, we will first present evidence in favor of the NPI-status of SIKA-NPIs and

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MO-NPIs, and then, we will see that the NPIs in Japanese are a class of floating quantifiers. In section 2, we will explicate how these two types of NPIs are licensed. We will also look at two independent arguments in favor of our analysis, that is, multiple occurrence of NPIs and weak crossover effects. Section 3 discusses co-occurrence facts among NPIs and other operators like *wh*-phrases. Finally, we will touch upon the locality on NPI-licensing in section 4, claiming that the clausemate condition on NPIs and Neg can be obviated.

1. Two types of NPIs

An NPI-creating suffix *-sika* attaches to virtually any maximal projection, and XP suffixed with *-sika* is interpreted as 'anyone/anything but XP' or 'only XP' in combination with Neg. The use of SIKI-NPIs is exemplified in (1):

- (1) a John-sika ringo-o tabe-na-katta (koto)
 -SIKA apple-ACC eat-Neg-PAST (COMP)
 'Only John ate apples.'
 b. John-ga ringo-sika tabe-na-katta (koto)
 -NOM apple-SIKA
 'John ate only apples.'

Japanese has another NPI-creating suffix, i.e. *-mo*. *-mo* attaches to what Kuroda (1965) calls "indeterminate pronouns" (INDs) like *dare* 'who' and *nani* 'what' and turns them into MO-NPIs. The use of MO-NPIs is exemplified in (2):¹

- (2) a daRE-MO ringo-o tabe-na-katta (koto)
 anyone apples-ACC eat-Neg-eat (COMP)
 'No one ate apples.'
 b. John-ga naNI-MO tabe-na-katta (koto)
 -NOM anything
 'John did not eat anything.'

Evidence supporting the NPI status of SIKI-NPIs and MO-NPIs comes from the fact that they require the presence of a negative morpheme

¹ Japanese is a pitch-accent language and an accent falls on the last syllable of a stretch of high-pitch tones (cf. McCawley 1968). Although INDs are inherently accented, e.g. *DA're* 'who' and *NA'ni* 'what', the NPI-creating *-mo* deaccentuates the stem; hence, *daRE-MO* (no accent) 'anyone' and *naNI-MO* (no accent) 'anything'. (Here and in the relevant examples to follow, high-pitch tones are indicated by the upper case, and low-pitch tones, by the lower case.) Note that the universally-quantified particle *-mo*, though isomorphic, must be distinguished from this NPI-creating suffix in that the former maintains the accent of the stem; thus, *DA're-mo-ga* 'everyone-NOM' remains as accented as *DA're*.

in the same clause. Thus, if a SIKA-NPI or a MO-NPI does not co-occur with a negative element, the result will simply be ungrammatical, as shown in (3) and (4):

- (3) a. *John-sika ringo-o tabe-ta
 -SIKA apples-ACC eat-PAST
 b. *John-ga ringo-sika tabe-ta
 -NOM
 c. *John-sika [Mary-ga ringo-o tabe-na-katta to]
 eat-Neg-PAST COMP
 omotte iru
 think
- (4) a. *daRE-MO ringo-o tabe-ta (koto)
 anyone
 b. *John-ga naNI-MO tabe-ta (koto)
 anything
 c. *daRE-MO [Mary-ga ringo-o tabe-na-katta to] omotte iru

Now let us mention the adverbial nature of the NPIs in Japanese. As indicated in (5) and (6), both SIKA-NPI and MO-NPI may co-occur with a referential noun phrase with a Case-particle.

- (5) a. John-ga ringo-sika kudamono-o tabe-na-katta
 -NOM apples-SIKA fruits-ACC eat-Neg-PAST
 'Among fruits, John ate only apples.'
 b. John-ga kudamono-o ringo-sika tabe-na-katta
 c. (?)ringo-sika John-ga kudamono-o tabe-na-katta
- (6) a. John-ga naNI-MO kudamono-o tabe-na-katta
 -NOM anything fruits-ACC eat-Neg-PAST
 'John did not eat any fruits.'
 b. John-ga kudamono-o naNI-MO tabe-na-katta
 c. naNI-MO John-ga kudamono-o tabe-na-katta

However, the examples in (7) show that neither type of NPI may be Case-marked. Compare (7) with (1b) and (2b).

- (7) a. *John-ga ringo-o-sika/ringo-sika-o tabe-na-katta
 -ACC-SIKA/ -SIKA-ACC
 'John ate only apples.'
 d. *John-ga naNI-MO-O/naNI-O-MO tabe-na-katta
 'John did not eat anything.'

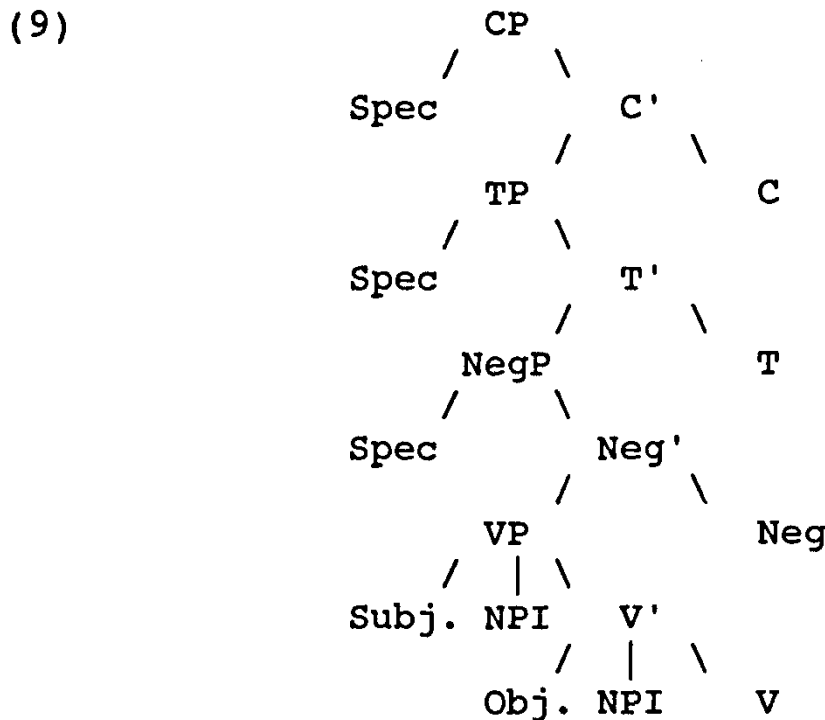
Thus, we may attribute the relatively free distribution of NPIs and their lack of Case particles to their adverbial nature.

Furthermore, as noted by Fujita (1991), the distribution of NPIs is similar to that of floating numeral quantifiers (FQs) like *3-bon* '3-classifier', as exhibited in (8).

- (8) a. John-ga 3-bon banana-o tabe-ta
 -NOM -CL -ACC eat-Past
 'John ate 3 bananas.'
 b. John-ga banana-o 3-bon tabe-ta
 c. 3-bon John-ga banana-o tabe-ta

Following Fujita, we will assume that NPIs are a class of FQs and that they do not form a constituent with the referential NPs that they modify.²

Throughout this paper, we will assume the clausal structure represented in (9) for Japanese.



We will adopt the VP-internal subject hypothesis, advocated by authors like Fukui (1986), Kitagawa (1986), Koopman & Sportiche (1991), and Kuroda (1988) among others. Following Laka (1990), Ouhalla (1990), Pollock (1989), and Zanuttini (1991), we assume that Neg heads its own maximal projection, NegP, which is generated below T', but higher than VP.

According to Miyagawa (1989), FQs are base-generated in sister relation to their host (referential) NPs. We will extend his analysis of FQs to NPIs; NPIs are base-generated as sisters to the referential NPs that they are predicated of, as indicated in (9).³

²For an alternative view of FQs, see Kitahara (1993).

³Note that our claim in the text is neutral to the feature checking theory of Chomsky (1992). According to Chomsky, arguments must move to Spec of AGR for morphological checking. Although arguments might have to be accommodated by

2. Licensing Conditions on NPIs

In this section, we will propose licensing conditions for SIKA-NPI and MO-NPI. We will then look at two independent arguments in favor of our licensing conditions in the subsequent two sections.

2.1. Licensing condition on SIKA-NPIs

We propose that SIKA-NPI is an agreement-inducing element, and subject to the licensing condition in (10):

- (10) SIKA-NPI is an agreement-inducing element licensed by Spec-head agreement with Neg at LF. (cf. Takahashi 1990)

Let us consider (1a), repeated here as (11), as an example. Its derivation proceeds as in (12):

- (11) John-sika ringo-o tabe-na-katta (koto)
 -SIKA apple-ACC eat-Neg-PAST (COMP)
 'Only John ate apples.'
- (12) a. S-structure:
 [TP [NegP [VP John-sika ringo-o tabe-na-katta]]]
 b. LF:
 [TP [NegP John-sika_i [VP t_j ringo-o tabe-na-katta]]]

As indicated in (12a), *John-sika* 'only John' stays in Spec of VP at S-structure; however, it moves to Spec of NegP in order to be licensed as an NPI through Spec-head agreement with Neg, as indicated by (12b).

2.2. Licensing condition on MO-NPIs

As we will see, MO-NPI is not an agreement-inducing element in the same sense that SIKA-NPI is. Extending Ouhalla's (1990) analysis of NegP in English, we will propose that Spec of NegP in Japanese can

Spec of AGR for checking even in Japanese, NPIs in this language are non-arguments, therefore, exempted from checking. We will also remain non-committal to the nature of V-raising in Japanese. No matter what driving force is involved (e.g. morphological amalgamation or feature checking), we will simply assume that V raises (through Neg) to T in LF, at the latest.

This state of affairs must be contrasted to NPIs in languages like English. While there is no subject/object asymmetry in occurrence of NPIs in Japanese, as exhibited in (1) and (2), NPIs may not appear in subject position in English, as illustrated in (i):

- (i) a. John didn't eat anything
 b. *Anyone didn't eat apples

If feature checking indeed takes place in English, and if NPIs must be in the c-command domain of Neg to be licensed, the impossibility of (ib) shows that NPIs in English are, unlike those in Japanese, arguments; subject NPIs must raise to Spec of TP (or AGRsP), higher than Neg, at the time of NPI-licensing.

accommodate a null operator as a licenser for MO-NPI, and that MO-NPI is subject to the following licensing condition:

- (13) At LF, MO-NPI must be identified with a phonetically null operator which is base-generated in Spec of NegP.

Following Watanabe's (1992) idea on "identification" of a wh-phrase with a null operator, we will assume that MO-NPI must adjoin to the null operator in Spec of NegP at LF.

With these in mind, let us consider (2a), repeated here as (14), and its derivation in (15).

- (14) daRE-MO ringo-o tabe-na-katta (koto)
 anyone apples-ACC eat-Neg-PAST (COMP)
 'No one ate apples.'
- (15) a S-structure:
 [TP [NegP OP [VP daRE-MO ringo-o tabe-na-katta]]]
 b. LF:
 [TP [NegP [daRE-MO_i [OP]] [VP t_i ringo-o tabe-na-katta]]]

OP designates a phonetically null operator. In (14a), *OP* is accommodated in Spec of NegP to license MO-NPIs. In (14b), the MO-NPI is adjoined to *OP* at LF; thus, the licensing condition in (13) is satisfied.⁴

2.3. Multiple Occurrence of NPIs

There are several arguments in favor of our licensing conditions. First of all, as noted by Kato (1985), although multiple occurrence of MO-NPIs is permissible, that of SIKA-NPIs is not, as indicated in (16):

- (16) a daRE-MO naNI-MO tabe-na-katta (koto)
 anyone anything eat-Neg-PAST (COMP)
 'No one ate anything.'
- b. *John-sika ringo-sika tabe-na-katta (koto)
 -SIKA apple-SIKA eat-Neg-PAST
 'Only John ate only apples.'

Since a SPEC-head relation is basically a one-on-one relation, multiple occurrence of SIKA-NPIs with respect to one Neg should be prohibited. A

⁴As long as Spec of NegP is in the c-command domain of Neg at LF (after V together with Neg raises to T), our analysis conforms to the recent proposal by Fujita (1991) and Homma (1991) that MO-NPI is an existential quantifier taking narrow scope under Neg, rather than a wide-scope universal quantifier. However, we differ from those authors in that licensing of MO-NPI is completed by movement; i.e., MO-NPI is not licensed in situ. Although this contention seems to render a lot of consequences, the space limitation does not allow us to discuss them all.

MO-NPI, on the other hand, is not an agreement-inducing element in itself, but is licensed by an empty operator, which may accommodate more than one MO-NPIs at LF.⁵

Furthermore, our analysis can correctly predict that co-occurrence of SIKA-NPI and MO-NPI is never permitted, as shown below:⁶

- (17) a. *John-sika naNI-MO tabe-na-katta
 -SIKA anything eat-Neg-PAST
 'Only John ate nothing/everything.'
 b. ?*daRE-MO ringo-sika tabe-na-katta
 anyone apples-SIKA eat-Neg-PAST
 'No one/Everyone ate only apples.'

Remember that SIKA-NPI is licensed by Spec-head agreement with Neg, and MO-NPI, by a null operator in Spec of NegP. Let us assume that a specifier position can accommodate only one element when it induces agreement with the head. Then, in (17), since the SIKA-NPI in Spec of NegP induces agreement with Neg, Spec of NegP cannot accommodate a licenser for the MO-NPI; thus, the deviance of the examples in (17) straightforwardly follows.

2.4. Weak crossover

Secondly, both SIKA-NPI and MO-NPI induce the weak crossover effect, as shown in (18) and (19) (cf. Hoji 1985, Takahashi 1990):

- (18) a. (20-nen mae, Amerika-ni sinsyutussteita Nihon
 (20 years ago -LOC advanced Japan
 kigyoo-no uti) Sony_i-sika [soko_i-no raibaru-
 company-GEN among -SIKA its rivaling-
 gaisya]-o obiyakasitei-na-katta
 company-ACC threaten-Neg-PAST
 '(20 years ago, among those Japanese companies who had
 advanced to the U.S.) Sony was the only x such that x
 threatened x's rivaling companies.'
 b. ?*[Soko_i-no raibaru-gaisya]-ga Sony_i-sika obiyakasitei-
 na-katta
 'Sony was the only x such that x's rivaling companies
 threatened x.'

⁵This function of the null negative operator can be paralleled with that of the [+wh] null operator in the sense of Watanabe (1992). He argues that in the case of multiple wh-questions, only one null [+wh] operator needs to move to Spec of CP at S-structure, and that all wh-phrases must adjoin to that operator for identification at LF.

⁶For some speakers, (17b) is marginally acceptable under the interpretation where daRE-MO 'anyone' is construed as a universal quantifier.

- (19) a (John, Bill, Tom-no uti) daRE-MO_i [soitu_j -no nyoo boo]-o
 among anyone his wife-ACC
 home-na-katta
 praise-Neg-PAST
 '(Among John, Bill and Tom,) there was no one x such
 that x praised x 's wife.'
- b. ?*[Soitu_j-no nyoo boo]-ga daRE-MO_i home-na-katta
 his wife-NOM anyone praise-Neg-PAST
 'There was no one x such that x 's wife praised x .'

As indicated, in the a-sentences in (18) and (19), the pronouns *soko* 'it' and *soitu* 'that guy or he' can be interpreted as variables bound by *Sony-sika* 'only Sony' and daRE-MO 'anyone', respectively. However, if the subject and the object are permuted as in each b-sentence, the pronoun contained in the subject cannot be construed as a variable bound by the phrase in object position. We may conclude that the failure of bound variable interpretation in (18b) and (19b) exhibits a typical weak crossover effect. Our analysis can correctly predict that SIKA-NPI and MO-NPI induce the weak crossover effect. Under our analysis, the LF-representations of the b-sentences in (18) and (19) would be (20a) and (20b), respectively:

- (20) a [TP [NegP Sony-sika_i [VP [soko_i-no raibaru-gaisya]-ga t_j
 obiyakasitei-na-katta]]]
- b. [TP [NegP [daRE-MO_i [OP]] [VP [soitu_j -no nyoo boo]-ga
 t_j home-na-katta]]]

In the LF-representations (20a-b), the variable t_j does not c-command the pronoun *soko* or *soitu*, and thus cannot be the antecedent of the pronoun due to the condition in (21):

- (21) A variable cannot be the antecedent of a pronoun that it does not c-command. (cf. Reinhart 1976, Saito & Hoji 1983)

Under our theory, since both the SIKA-NPI in (18b) and the MO-NPI in (19b) cross over the subject at LF due to the requirement that they move to Spec of NegP for licensing, they induce the weak crossover effect.

3. Co-occurrence of NPIs and wh-phrases

3.1. Scope and the principle of relation preservation (PRP)

It is widely recognized in the literature that there is a scopal asymmetry between subject and object quantifiers in languages like Japanese. The Japanese sentence in (22a) is unambiguous unlike its English translation; DA-re-mo 'everyone' in the object position may not take wide scope. However, if the object QP is scrambled over the subject QP as in (22b), a clear ambiguity arises, as first pointed out by Kuroda (1970):

- (22) a. DAre-ka-ga DAre-mo-o but-ta
 someone-NOM everyone-ACC hit-PAST
 (i) $E > A$ (ii) $?*A > E$
 'Someone hit everyone.'
 b. DAre-mo-o; DAre-ka-ga t_j but-ta
 (i) $E > A$ (ii) $A > E$
 'Everyone_j, someone hit t_j.'

(cf. Kuroda 1970, Kuno 1973)

In order to explain the scopal asymmetry as in (22), several conditions have been proposed in the literature. Along the same lines of Huang (1982) and Hoji (1985), we will assume that LF-mapping in languages like Japanese should be constrained by some principle like (23):

- (23) The Principle of Relation Preservation (PRP)
 An operator A c-commands an operator B at LF iff A c-commands B or a trace of B at S-structure.
 (cf. Huang 1982, Hoji 1985, Watanabe 1992)

We will adopt Reinhart's (1976) definition of scope in (24) and her definition of c-command in (25).

- (24) The scope of a is the set of nodes that a c-commands at LF.
 (25) A node A c-commands a node B iff neither dominates the other and the first branching node dominating A dominates B.

With these definitions in mind, let us consider (22a-b). Irrelevant details put aside, the logically possible LF-representations of those sentences are schematically shown in (26) and (27), respectively. Note that in (27), the trace t_j in the VP-adjoined position indicates the position of *everyone* after scrambling at S-structure.

- (26) a. [TP someone_i [TP everyone_j [TP [VP t_i [V' t_j V]]]]]
 b. [TP everyone_j [TP someone_i [TP [VP t_i [V' t_j V]]]]]
 (27) a. [TP someone_i [TP everyone_j [TP [VP t'_j [VP t_i [V' t_j V]]]]]]]
 b. [TP everyone_j [TP someone_i [TP [VP t'_j [VP t_i [V' t_j V]]]]]]]

In (22a), *someone* asymmetrically c-commands *everyone* at S-structure. Hence, the LF-representation in (26a), where the former c-commands the latter, is well-formed, but the LF-representation in (26b), where the latter asymmetrically c-commands the former, is not. Let us next consider (22b). On the assumption that the landing site for clause-internal scrambling of an argument is a VP-adjoined position (cf. Abe 1993), *everyone* in (22b) is adjoined to VP at S-structure. It then further adjoins to TP by QR in order to satisfy the syntactic requirement for a quantified phrase at LF. If *someone* is adjoined to the upper segment of TP, we will get (27a). If

someone is adjoined to the lower segment of TP, we will get (27b). Both (27a-b) satisfy the PRP, since in (22b), although *everyone* asymmetrically c-commands *someone*, the latter c-commands the trace of the former at S-structure. The asymmetry in scopal ambiguity between (22a-b) can thus be accounted for.⁷

Since in section 2, we have made an explicit claim that MO-NPI adjoins to an empty operator in Spec of NegP for identification and SIKA-NPI moves to Spec of NegP for agreement, we should make certain predictions concerning co-occurrence of NPIs and other operators. In fact, these predictions seem to be borne out. It can be demonstrated that our theory of NPIs, together with the PRP, can account for cases where NPIs interact with other operators like *wh*-phrases. However, due to the constraint on space, we will only discuss two cases for illustration in the following subsections.

3.2. SIKA-NPIs and *wh*-phrases⁸

First, we will consider co-occurrence restrictions between SIKA-NPIs and *wh*-phrases. If we put a SIKA-NPI in the subject position and a *wh*-phrase in the object position, as in (28a), the resulting sentence exhibits low acceptability. However, if the object *wh*-phrase scrambles over the subject NPI as in (28b), the result becomes acceptable. On the contrary, although the base order of a *wh*-phrase followed by a SIKA-phrase in (29a) is perfect, the scrambled order in (29b) sounds awkward.

- (28) a. ?*John-sika NAni-o tabe-na-katta no
 -SIKA what-ACC eat-Neg-PAST Q
 'What did only John eat?'
 b. NAni-o; John-sika t_j tabe-na-katta no
- (29) a. DAre-ga ringo-sika tabe-na-katta no
 who-NOM apples-SIKA eat-Neg-PAST Q
 'Who ate only apples?'
 b. ??ringo-sika; DAre-ga (t_j) tabe-na-katta no

The fact that (29b) has only lower acceptability than (29a) is rather surprising, because, as is well known, scrambling generally ameliorates an unfavorable c-command relation between operators. Along the line of Hoji (1985), the paradigm in (28) and (29) can be accounted for in the following way. Under our analysis, to put irrelevant details aside, the LF-representations of (28a-b) and (29a-b) can be schematically shown as in (30a-b) and (31a-b), respectively:

⁷For an alternative view of the crosslinguistic asymmetry in scope interactions, see Aoun & Li (1993).

⁸As is usually the case in the discussion of scope interactions, our grammatical judgments are relative, rather than absolute, in the discussion below.

- (30) a. [CP what_j [TP [NegP only John_i [VP t_i [V' t_j V]]]]]
 b. [CP what_j [TP [NegP only John_i [VP t'_j [VP t_i [V' t_j V]]]]]]
 (31) a. [CP who_i [TP [NegP only apples_j [VP t_i [V' t_j V]]]]]
 b. [CP who_i [TP [NegP only apples_j [VP t'_j [VP t_i [V' (t_j) V]]]]]]

Remember that under our clausal structure for Japanese, Spec of CP is always generated higher than Spec of NegP. Hence, a *wh*-phrase always *c*-commands a SIKA-NPI at LF. In (28a), the SIKA-NPI *only John* asymmetrically *c*-commands *what*. In its LF-representation (30a), the latter *c*-commands the former; hence, the PRP is violated. In (28b), on the other hand, *what* *c*-commands *only John* as the result of scrambling. Also in its LF-representation (30b), the *wh*-phrase *c*-commands the SIKA-NPI; the structural relation between the two is preserved, satisfying the PRP. In (29a), *who* asymmetrically *c*-commands the SIKA-NPI *only apples*, and in its LF-representation (31a), the former *c*-commands the latter; therefore, there is no violation of the PRP.

As for (29b), notice that the NPI *only apples* scrambles at S-structure. Since, as noted in section 1, SIKA-NPI is an adverbial element, we propose that either scrambling of adverbials does not leave a trace at all or, if it does, such a trace does not count for the purpose of relation preservation.⁹ If we take the latter option, although in (29b), *who* *c*-commands the trace of the NPI at S-structure, that trace does not count. Then, the *c*-command relation between the two operators is reversed in the mapping from the S-structure in (29b) to the LF in (31b), violating the PRP.

3.3. MO-NPIs and *wh*-phrases

Next we will consider the cases in which MO-NPIs and *wh*-phrases interact. If we put a MO-NPI in the subject position and a *wh*-phrase in the

⁹This view is supported by the fact that with quantificational adverbials, the reversed order does not result in scope ambiguity, as indicated in examples like the following (cited from Hoji 1985:245):

- (i) a. John-ga [nitiyoobi ka doyoobi-ni] [ekimae ya kooen-de]
 -NOM Sunday or Saturday-on in front of the station and park at
 gitaa-o hiiteiru
 guitar-ACC plays
 'On Sunday or Saturday, John plays the guitar in front of the station, at the park and so on.'
 b. John-ga [ekimae ya kooen-de] [nitiyoobi ka doyoobi-ni] gitaa-o hiiteiru
 'In front of the station, at the park and so on, John plays the guitar on Sunday or Saturday.'

This is in contrast with the fact that in the case of argument QPs, the reversed order creates scope ambiguity, as shown in (22b). Hoji suggests that adverbials are simply base-generated in a random order, rather than they scramble without leaving a trace. However, the choice between the two options does not affect our argument in the text.

object position, as in (32a), the result sounds awkward to many speakers.¹⁰ As indicated in (32b), when the object wh-phrase scrambles, the result becomes much improved. As shown in (33a), if we put a wh-phrase in the subject position and MO-NPI in the object position, the result is acceptable. If the object MO-NPI scrambles, as indicated in (33b), the result becomes unacceptable:

- (32) a. ??*daRE-MO NAni-o tabe-na-katta no*
 anyone what-ACC eat-Neg-PAST Q
 'What did no one eat?'
 b. *NAni-o_j daRE-MO t_j tabe-na-katta no*
 'What did no one eat?'
- (33) a. *DAre-ga naNI-MO tabe-na-katta no*
 who anything eat-Neg-PAST Q
 'Who ate nothing?'
 b. ?**naNI-MO_j DAre-ga (t_j) tabe-na-katta no*
 'Who ate nothing?'

The LF-representations of the examples in (32a, b) and (33a, b) are shown in (34a, b) and (35a, b), respectively:

- (34) a. [CP *what_j* [TP [NegP [*anyone_i*] [OP]] [VP *t_i t_j eat-Neg-Past*]]] Q
 b. [CP *what_j* [TP [NegP [*anyone_i*] [OP]] [VP *t'_j* [VP *t_i t_j eat-Neg-Past*]]]] Q]
- (35) a. [CP *who_i* [TP [NegP [*anything_j*] [OP]] [VP *t_i t_j eat-Neg-Past*]]] Q
 b. [CP *who_i* [TP [NegP [*anything_j*] [OP]] [VP *t'_j* [VP *t_i (t_j) eat-Neg-Past*]]]] Q]

In (32a), although the MO-NPI *daRE-MO* 'anyone' asymmetrically c-commands the wh-phrase *NAni-o* 'what', the latter c-commands the former in its LF-representation in (34a) in violation of the PRP. In (32b), *NAni-o* asymmetrically c-commands *daRE-MO*, and the c-command relation is maintained during the mapping from (32b) to (34b); there is no PRP violation. In (33a), *DAre-ga* 'who' asymmetrically c-commands *naNI-MO* 'anything'. Also in its LF-representation (35a), *who* c-commands *anything* in Spec of NegP; the PRP is met. On the contrary, the c-command relation between *naNI-MO* and *DAre-ga* is asymmetrically reversed during the mapping from (33b) to (35b); hence the derivation is ruled out. Remember that the trace of *anything* after scrambling in (35b) is not relevant for relation preservation.

¹⁰For speakers to whom D-linking of *NAni* 'what' is easily available, (32a) is quite acceptable.

4. Locality of NPI Licensing

4.1. "Long-distance" NPI licensing

Finally, we will touch upon the locality of NPI licensing. In Japanese, "long-distance" NPI-licensing is generally prohibited, as exemplified in (36):¹¹

- (36) a. *John-ga [Mary-ga ringo-sika tabe-ru to] iw-ana-
 -NOM -NOM apple-SIKA eat-NPST C say-Neg-
 katta (koto)
 PAST
 'John did not say that Mary would eat anything but apples.'
- b. *John-ga [Mary-ga naNI-MO tabe-ru to] iw-ana-
 -NOM -NOM anything eat-NPST C say-Neg-
 katta (koto)
 PAST
 'John did not say that Mary would eat anything.'
- c. John-ga Bill-ni-sika/daRE-NI-MO [Mary-ga ringo-o
 -to-SIKA/to anyone
 tabe-ru to] iw-ana-katta (koto)
 'John did not say to anyone but Bill/anyone that Mary
 would eat apples.'

As indicated in (36a-b), NPIs in the embedded object positions cannot be licensed by the matrix negative elements.

4.2. The "clausemate" condition

In order to prohibit "long-distance" NPI-licensing, the "clausemate condition" like (37) has been stipulated in the literature:

- (37) An NPI must be a clausemate of Neg.
 (cf. McGloin 1976, Muraki 1978)

However, we will claim that a condition like (37) can be obviated.

Let us first consider the case of SIKA-NPI in (36a). In order for *ringo-sika* 'only apples' to be properly licensed, it must move from the

¹¹"Long-distance" NPI licensing seems to be less restricted if we use *omow* 'think' as the matrix verb, as shown below:

- (i) a. ??John-ga [Mary-ga ringo-sika tabe-ru to] omow-ana-katta (koto)
 -NOM -NOM apples-SIKA eat-NPST C think-Neg-Past
 'John did not think that Mary would eat anything but apples.'
- b. ??John-ga [Mary-ga naNI-MO tabe-ru to] omow-ana-katta (koto)
 anything
 'John did not think that Mary would eat anything.'

It is still true, however, that there is a contrast in acceptability between sentences like (ia-b) and sentences like (36c). It is this contrast that we will aim to account for in this section.

embedded object position to Spec of NegP in the matrix clause. Notice that this movement must be mediated by Spec of CP; otherwise, the resultant chain-link would violate the subjacency condition. Since V raises through Neg to T, Spec of NegP is [+L-related] in the sense of Chomsky (1992) and Mahajan (1990).¹² Spec of CP, however, remains [-L-related] at LF. Hence, if *only apples* moves from the embedded object position to Spec of the embedded CP, and then to Spec of the matrix NegP, the resultant chain is not uniform with respect to L-relatedness, as depicted in (38):

- (38) [TP [NegP *only apples*_i [VP [CP *t*'_i [TP [VP [V' *t*_i V]]]]]]]
 [+L] [-L] [+L]

The chain (*only apples*, *t*' , *t*) in (38) violates the chain uniformity condition in (39), proposed by Chomsky & Lasnik (1991) and Fukui (1992):¹³

- (39) Chains must be uniform with respect to L-relatedness.

Turning now to MO-NPI, the ill-formedness of (36b) can be accounted for in a similar fashion. In order for *naNI-MO* 'anything' to be properly licensed, it must adjoin to the empty operator in Spec of the matrix NegP. If this movement were not mediated by Spec of CP, it would violate the subjacency condition. Let us assume that every position within a maximal projection of a [+L-related] category is identified as [+L-related]. Since V raises to T through Neg, every position within TP is [+L-related] in Japanese. Hence, if *anything* moves from the embedded object position to Spec of the embedded CP, and then adjoins to Spec of the matrix NegP, the resultant chain is not uniform with respect to L-relatedness, as illustrated below:

- (40) [TP [NegP [*anything*_i [OP]] [VP [CP *t*'_i [TP [VP [V' *t*_i V]]]]]]]
 [+L] [-L] [+L]

The chain (*anything*, *t*' , *t*) in (40) violates the chain uniformity condition in (39). Hence, the "clausemate condition" on NPI licensing can be subsumed under the theory of movement incorporating the condition in (39).¹⁴

¹²The choice between S-structure and LF for the level of V-raising is irrelevant here. See footnote 3.

¹³Since we would not want to permit deletion of the intermediate trace in Spec of the embedded CP to satisfy (39), which is allowed by Chomsky & Lasnik (1991), but not by Fukui (1992), the latter should be preferred over the former in the present discussion.

¹⁴Note that our analysis also obviates the binding requirement, proposed, for instance, by Progovac (1988), that NPIs are subject to Condition A of the binding theory.

4.3. Apparent counterevidence

There seems to be an apparent exception to the "clausemate condition" on NPI-licensing. Although several factors like the choice of predicates intervene, NPIs in the complement object position may hardly be licensed by the matrix Neg, as indicated in (41a).¹⁵ If NPIs appear at the beginning of the complement clause, however, they can be licensed, as shown by the grammaticality of (41b).

- (41) a. ??John-wa [Mary-ga ringo-sika/naNI-MO tabe-ru to]
 -TOP -NOM apple-SIKA/anything eat-NPST COMP
 omow-ana-katta (koto)
 think-Neg-Past (COMP)
 'John did not think that Mary would eat anything but
 apples/anything.'
 b. John-wa [Mary-sika/daRE-MO ringo-o tabe-ru to]
 -SIKA/anyone -ACC
 omow-ana-katta (koto)
 'John did not think that anyone but Mary/anyone would
 eat apples.'

The contrast between (41a) and (41b) might suggest the lack of the "clausemate condition" effect with respect to NPIs in the complement subject.

However, there is an alternative account for the contrast between (41a) and (41b). Ishii (1990) and Hoji (1991) independently argue that verbs like *omow* 'think' can be associated with a "major object", as indicated by the underlined parts in (42a) and (42b):

- (42) a. John-wa Mary_i-o [kanozyo_i-ga/pro_i baka da to] omot-ta
 -TOP -ACC she-NOM fool be C think-Past
 'John thought of Mary that she was a fool.'
 b. John-wa Mary_i-o [Bill-ga ?kanozyo_i-o/pro_i gokaisiteiru to] omot-ta
 misunderstand
 'John thought of Mary that Bill misunderstood her.'

If this analysis is correct, the NPIs in (41b) can be in the "major object" position, hence, "clausemates" with Neg.

If the "major object" position is occupied by some other element, we should expect that the NPI in the complement subject position may not be licensed. Indeed, this prediction is borne out, as exhibited in (43).

¹⁵As noted in footnote 11, (41a) is more acceptable than (36a-b) for many speakers. This is presumably because the matrix predicate in (41a) is more "transparent" with respect to negation than that in (36a-b); i.e., *omow* 'think' is more readily identified as a Neg-Raising predicate than *iw* 'say' is.

- (43) ?*John-wa Maryi-o [Bill-sika/daRE-MO kanozyo_i-o/pro_i
 -TOP -ACC -SIKA/anyone
 gokaisiteiru to] omow-ana-katta
 misunderstand COMP think-Neg-PAST
 'John did not think of Mary that anyone but Bill/anyone
 misunderstood her.'

Hence, as long as the "major object" analysis is available in cases like (41b), our analysis is not jeopardized.

5. Conclusion

Japanese has two types of NPIs, SIKA-NPI and MO-NPI, and they are subject to different licensing conditions. While SIKA-NPI is licensed by Spec-head agreement with Neg, MO-NPI is identified with a null operator in Spec of NegP by adjoining to it. Facts about multiple occurrence of NPIs, weak crossover, co-occurrence restrictions among NPIs and other operators like *wh*-phrases, and the locality of NPI-licensing have evidenced our analysis.

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