On the Symmetric C-Command

Koji ARIKAWA

1. Background
1.1. The Numeral Quantifier as a Case Study of Syntactic Locality
1.1.1. Subject/Object Asymmetry

Studies of the distribution of numeral quantifiers (NQ) have provided excellent test cases for the strict locality in the narrow syntax, i.e., the head-complement relation (mutual c-command relation = symmetric c-command relation), which is the most primitive example of the symmetrical structure in the computational system of natural language that evolved in the human brain. NQ studies have provided insights into diagnostics for examining the structure and derivation of natural language. In the traditional studies of the structure and derivation in Japanese, NQ has played an important role. Haig (1980:1068) and Kuroda (1980) report subject/object asymmetry with respect to NQ distribution; the distribution of the subject NQ (NQsubj) is tighter than that of the object NQ (NQobj).

(1) a. gakusei-ga suu-nin tegami-o kak-ta

\textit{student-NOM several-CL letter-ACC write-past}

‘Several students wrote letters.’
b.*gakusei-wa/ga tegami-o suu-nin kak-ta
   student-TOP/NOM letter-ACC several-CL write-past
   ‘Several students wrote letters.’

c. hon-wa/o gakusei-ga 5-satu kaw-ta
   book-TOP/NOM student-NOM 5-CL buy-past
   ‘Speaking of books, students bought five books/Students bought five books.’

       (Haig 1980:1068)

Thus, the Subj, unlike the Obj, must be adjacent to the relevant NQ.5)

(2) a. Subj NQ_{subj} Obj V
    b.* Subj Obj NQ_{subj} V
    c. Obj Subj NQ_{obj} V

This asymmetry opened up a Pandora’s box, stimulating debates on the possible structure and derivation of natural language.

The organization of this article is the following. In the following section, I review arguments on the nonscramblability of the subject (Saito 1985) and the Mutual C-Command Requirement (MCR) (Miyagawa 1989). In Section 2, I introduce one of the proposed five types of counterexamples against the MCR. Other types of counterexamples are described in Appendix I with possible solutions. I then review the NP/VP-NQ dichotomy hypothesis (Nishigauchi & Ishii 2003, Ishii 1998), and point out their problems. A functional solution to the MCR puzzles based on the Japanese informational structure (Kuno 1978b, Takami 1998) and their problems are provided in Appendix II. In Section 3, I argue that the alleged counterexamples are explained by the MCR and two distinct sources of SOV order, and provide supporting evidence. In Section 4, I present a summary.

1.1.2. Nonscramblability of Subject

Saito (1985) proposed that the Subj, unlike the Obj, does not undergo
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long-distance scrambling in Japanese. 6)

(3)*[kono giron]-ga [Mary-ga John-ni [t̪, okasii to] itta]
this argument-Nom Mary-Nom John-Dat strange that told
'This argument, Mary told John that is strange.'  (Saito 1985:192)

A null hypothesis is that Japanese lacks subject scrambling altogether (Saito 1985:225). This explains the distribution of NQ generalized in (2). Saito (1985) offers evidence that <Obj, Subj, V> derives from <Subj, Obj, V> by Obj scrambling. 7) Thus, from (2a), <Obj, Subj, NQ<sub>obj</sub>, V> can be optionally derived. However, if the Subj could move to the front, we would be able to obtain (2b). Since (2b) is not possible in Japanese, the Subj must not move. Obj scrambling accounts for (2c), assuming the following structure:

(4) Obj, Subj  t̪, NQ<sub>obj</sub> V

The Obj, unlike the Subj, can scramble to the front. Another piece of evidence for the nonscramblability of the Subj comes from a scope fact. 8)

(5) a. dareka-ga daremo-o nagur-ta
someone-NOM everyone-ACC beat-past
'Someone beat everyone.'

b. daremo-o dareka-ga t̪, nagur-ta
everyone-ACC someone-NOM beat-past
'Everyone, someone beat.'  (cf. Kuroda 1980)

(5a) is unambiguous: The Subj quantifier phrase (Subj QP) takes a wider scope: there is some x, x a person, such that x has beaten everyone. (5b) shows scope ambiguity: either (i) there is some x, x a person, such that x has beaten everyone ('someone' > 'everyone'), or (ii) for every x, x a person, there is y such that y has beaten x ('everyone' > 'someone').

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(5b) is ambiguous because it contains a trace of the fronted Obj QP between Subj QP and V: Obj QP c-commands Subj QP, which in turn c-commands the trace of the Obj QP. This symmetrical c-command creates scope ambiguity. Now suppose a Subj could scramble in (5a). Then the following derivation would be possible for (5a).

(6) \[TP \text{ dareka}-ga \ [TP \text{ daremo}-o \ [TP \text{ t}, \text{ t}, \text{ nagur-ta}]]]  

\text{someone-NOM everyone-ACC beat-past}  

'Someone beat everyone.'

The Obj first scrambles, and then the Subj scrambles. The Subj QP c-commands the Obj QP, which c-commands Subj-QP trace. We would expect (5a) to exhibit scope ambiguity, which is nonexistent. Thus, the assumption that the Subj scrambles is excluded from the possible scenarios.

1.2. Mutual C-Command Requirement


(7) MCR

For a predicate to predicate of a NP, the NP or its trace and the predicate or its trace must c-command each other. (Miyagawa 1989:30)

The MCR is sensitive to traces. The MCR has a wide empirical coverage for the displacement phenomena, and it is one of the widely used tests for examining structures and derivations of natural language. To understand how NQ is used as a test, consider the following examples.

(8) a. neko-ga 3-biki keeki-o tabe-ta (simple SOV)  

\text{cat-NOM 3-CL cake-ACC eat-past}  

'Three cats ate cakes.'
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b.* neko-ga keeki-o [\textit{VP} 3-biki tabe-ta] (simple SOV)
\textit{cat-NOM cake-ACC 3-CL eat-past}
‘Three cats ate cakes.’

c. keeki-o [\textit{neko-ga [\textit{VP} t, 3-ko tabe-ta]}] (Obj scrambling)
\textit{cake-ACC cat-NOM 3-CL eat-past}
‘Three cakes, a cat ate.’

(8b) indicates the absence of a Subj trace in VP. (8c) indicates that Obj can scramble, and leave its trace within the VP. Consider the following:

(9) a.* keeki-ga [\textit{\textit{PP [NP neko] ni}} 3-biki] tabe-rare-ta (direct passive)
\textit{cake-NOM cat-by 3-CL eat-passive-past}
‘The cake was eaten by the cat.’

b. petto-zuki-no tomodati-ga [\textit{\textit{NP neko-ni}} 3-biki] sin-are-ta (indirect passive)
\textit{pet-like-GEN friend-NOM cat-DAT 3-CL die-passive-past}
‘The three cats died on my friend who likes pets.’

c. oya-ga [\textit{\textit{NP kodomo-ni}} 3-nin] hon-o yom-ase-ta (causative)
\textit{parent-NOM child-DAT 3-CL book-ACC read-causative-past}
‘The parents made/let the child read the book.’

(9a) demonstrates that \textit{ni} is the head of the projected PP in direct passives, and (9b) shows that \textit{ni} is a Case marker and does not project in indirect passive. (9c) shows that \textit{ni} is a Case marker that does not project. Consider the following:

(10) a.* kodomo-ga [\textit{\textit{VP tumiki-de 3-nin asob-da]}] (unergative)
\textit{child-NOM blocks-with 3-CL play-past}
‘Three children played with building blocks.’
b.  doa-ga [VP kono kagi-de t, 3-tu ak-ta]  (unaccusative)

\textit{door-NOM this key-with 3-CL open-past}

‘Three doors opened with this key.’

(10a) illustrates that there is no Subj trace in the VP where V is unergative, whereas (10b) indicates that there is a Subj trace in the VP where V is unaccusative.

The transformational approach to NQ distribution has been challenged unrelentingly with counterexamples (Inoue 1978, Kuno 1978a, Gunji & Hasida 1998, Takami 1998). Recently, Nishigauchi & Ishii (2003: 5-108) have argued for two types of NQ: NP-NQ and VP-NQ, and claimed that the MCR is irrelevant to VP-NQ. I argue, however, that the alleged counterexamples of the MCR are illusory and that they in fact support the MCR, the Obj movement to [Spec, TP], and Subj scrambling to TP (Miyagawa 1997, 2001, 2003; Ko 2003).

2. Alleged Counterexamples of MCR

2.1. A Typology of Counterexamples

The alleged counterexamples of the MCR are classified as five types, called MCR puzzles.

(11) Typology of Counterexamples of the MCR (MCR Puzzles)

a. Adjunct-rich environments
b. Approximate NQ
c. D-linked environments
d. Use of non-typical transitive verbs
e. Subset counters

Although it is beyond the scope of this article to propose an extensive analysis, it is assumed that the five factors share a common property: the verbal projection is somehow “modified” in the technical sense. We mainly deal with (11a). The examples of other types of MCR puzzles and possible solutions are shown in Appendix I.
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With neutral intonation, the following example in which Obj intervenes between Subj and NQsubj with an unergative verb is unacceptable. However, when an adjunct, an adverb in this case, is added, the acceptability improves; call the additional-adjunct effect.\(^{10}\)

(12) a. * gakusei-ga sake-o 3-nin nom-da
   \textit{student-NOM sake-ACC 3-CL drink-past}
   ‘Three students drank sake.’ \(\text{(Kuroda 1980)}\)

   b. ? gakusei-ga sake-o imamadeni 3-nin nom-da
   \textit{student-NOM sake-ACC so far 3-CL drink-past}
   ‘Three students drank sake so far.’ \(\text{(Gunji & Hasida 1998:57)}\)

   c. ? gakusei-ga sake-o yukkurito 3-nin nom-da
   \textit{student-NOM sake-ACC slowly 3-CL drink-past}
   ‘Three students drank sake slowly.’

(13) a. * kodomo-ga kaeru-o 3-nin koros-ita
   \textit{child-NOM frog-ACC 3-CL kill-past}
   ‘Three children killed a frog.’

   b. kodomo-ga kaeru-o kono class-de-wa 3-nin koros-ita
   \textit{child-NOM frog-ACC this class-at-TOP 3-CL kill-past}
   ‘Three children killed a frog in this class (at least).’

When an NQ is followed by an adverbial particle, the sentence becomes immune from the MCR violation.\(^{11}\)

(14) a.* gakusei-ga hon-o 2-ri kaw-ta
   \textit{student-NOM book-ACC 2-CL buy-past}
   ‘Two students bought a book.’
b. gakusei-ga hon-o 2-ri-dake kaw-ta
   _student-NOM book-ACC 2-CL-only buy-past_
   ‘Only two students bought a book.’

c. gakusei-ga watasi-no hon-o 2-ri-sika kaw-anakat-ta
   _student-NOM my-GEN book-ACC 2-CL-only buy-not-past_

(5) a.*kodomo-ga kaeru-o 3-nin koros-ita
   _child-NOM frog-ACC 3-CL kill-past_
   ‘Three children killed a frog.’

b. kodomo-ga kaeru-o 3-nin-ne, koros-ita
   _child-NOM frog-ACC 3-CL-SP kill-past_
   ‘Three children killed a frog. (I want you to pay attention to the number three).’

c. kodomo-ga-ne, kaeru-o-ne, 3-nin-ne, koros-ita
   _child-NOM-SP frog-ACC-SP 3-CL-SP kill-past_
   ‘Three children killed a frog (I want you to pay attention to the number three, children, and a frog)’

The problem that we now must solve is the following.

(6) Why does the addition of an adverbial element ameliorate the apparent MCR violation?

2.2. Possible Solutions and Their Problems

2.2.1. Problems of NP/VP-NQ Dichotomy Hypothesis

   Capitalizing on Kitagawa & Kuroda’s (1992) semantic analysis of NQ interpretation, Nishigauchi & Ishii (2003) and Ishii (1998) argue that the MCR puzzles are solved by the NP/VP-NQ dichotomy hypothesis.
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   a. There are two types of NQ: NP-NQ and VP-NQ.
   b. VP-NQ has a stricter interpretation, i.e., it allows the distributive reading only.
   c. The MCR is not relevant to VP-NQ.

An NP-NQ merges with the host NP, whereas a VP-NQ adjoins to the VP. The following examples pose a problem:

(18) a. gakusei-ga kyoubousite sake-o kono mise-de-wa 3-nin nom-da
    student-NOM conspire sake-ACC this restaurant-at-TOP 3-CL drink-past
    ‘3 students conspired to drink sake in this restaurant.’
    (cf. Gunji & Hasida 1998:57)

   b. Nadakou-no seito-wa, maitoshi onazi hi-ni isseini
    Nada-high school-GEN student-TOP every year same day-at all together
    Toudai-o 80-nin-izyou zyukensu-ru
    Tokyo University-ACC 80-CL-over take exam-nonpast
    ‘As for Nada high school students, more than 80 of them take Tokyo University entrance examination in the same day at the same time.’
    (cf. Takami 1998, 1:91)

   c. ano daigaku-wa kinou isseini [ryuugakusei-no ukeire-o]
    that college-TOP yesterday all together students-abroad-GEN acceptance-ACC
    30-nin kotowar-ta
    30-CL refuse-past
    ‘That college refused all at once the acceptance of 30 students abroad.’
    (cf. Kikuchi 1994:83)

The NP/VP-NQ dichotomy hypothesis wrongly predicts that these
examples are unacceptable since the single-event reading is forced on VP-NQ.\(^{13}\)

Ishii (1998:165) offers two syntactic arguments for the NP/VP dichotomy hypothesis. The first uses the reduction to absurdity by employing the Proper Binding Condition. Consider the following examples:\(^{14}\)

(19) a. Taro-ga hon-o 3-satu kaw-ta

\textit{Taro-NOM book-ACC 3-CL buy-past}

‘Taro bought three books.’

b. Taro-ga 3-satu hon-o kaw-ta

\textit{Taro-NOM 3-CL book-ACC buy-past}

‘Taro bought three books.’

Ishii argues that 3-satu in (19a) is an NP-NQ, whereas the same NQ in (19b) is a VP-NQ.\(^{15}\) Ishii (1998:166) in fact assumes that hon-o 3-satu ‘book-ACC 3-counter’ in (19a) is derived from \([_{\text{NP}} \text{NP \ NQ}]\), followed by adjoining the NP to NQP, yielding \([_{\text{NQP}} \text{NP} [_{\text{NQP}} \text{t}, \text{NQ}]\]). However, the motivation to adjoin the host NP to the NQP is not clear. This is the first difficulty that Ishii encounters.

Let us adopt the standard view that the Obj eventually moves to \([\text{Spec, vP}]\) for feature-checking. This does not distort Ishii’s point since the relative relationship among the elements in the result structure remains the same. If so, then, Ishii’s logic would proceed as in the following. Suppose that both NQs in (19) were NP-NQs. In (19a), the Obj and the NQ are externally merged at the complement position of V. Since (19a) involves the simplest external Merge of the NQ and the host NP, hon-o 3-satu ‘book-ACC 3-counter’ counts as a basic order. The Obj eventually moves to \([\text{Spec, vP}]\) for feature-checking. At this point, the relevant part of the structure is the following:
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\[
\begin{array}{c}
\text{Obj}_{i} \quad v' \\
\text{VP} \\
\text{t}_{i} \\
\text{NQ} \\
\end{array}
\]

\[
\begin{array}{c}
\text{VP} \\
\text{t}_{v} \\
\end{array}
\]

The MCR is satisfied by the Obj trace and the NQ in the above structure. Now, to derive \textit{3-satu hon-o} ‘3-counter book-ACC’ in (19b), the constituent [t, NQ] must adjoin to v’ in (20), yielding the following structure:

\[
\begin{array}{c}
\text{XP} \\
\text{t}_{i} \\
\text{NQ} \\
\text{Obj}_{i} \quad v' \\
\text{VP} \\
\text{t}_{i} \\
\text{t}_{v} \\
\end{array}
\]

Ishii argues that the above structure violates the Proper Binding Condition (PBC) as in the following:

\[
\text{The PBC = def. Traces must be bound.}
\]

Since the sentence in (19b) is acceptable, the conclusion is contradictory: In (21), the partial structure of (19b), the Obj trace is unbound, violating the PBC; (19b) should be unacceptable due to a PBC violation. Thus, the assumption that \textit{3-satu} in (19b) is an NP-NQ is wrong. Therefore, Ishii concludes, the relevant NQ in (19b) cannot be an NP-NQ. If the NQ is either an NP-NQ or a VP-NQ, the NQ in (19b) must be a VP-NQ. However, it is not clear why Ishii cannot save the structure by chain binding (Barss 1986). In fact, Kitahara (1993), who claims a similar analysis for (19b), avoids the apparent PBC violation by chain binding (Kitahara 1993:179, fn 5). This is the second difficulty Ishii faces.

The third difficulty that Ishii faces is expressed in the following question: Why cannot the NQ alone in (20) adjoin to v’, and thereby avoid
the PBC violation? One might argue that the operation is invalid because a head cannot adjoin to a non-minimal projection. However, if we adopt the Bare Phrase Model of Chomsky (1994), one can assume that an NQ is both a minimal and maximal projection.16)

Ishii’s (1998) second argument for the NP/VP dichotomy hypothesis is based on the constituency test. Consider the following contrast:17)

23 a. Taro-ga kaw-ta-no-wa, hon-o 3-satu da
   Taro-NOM buy-past-that-TOP book-ACC 3-CL is
   ‘It is three books that Taro has bought.’

   b.* Taro-ga kaw-ta-no-wa, 3-satu hon-o da
   Taro-NOM buy-past-that-TOP 3-CL book-ACC is
   ‘It is three books that Taro has bought.’ (Kamio 1983)

The string hon-o 3-satu ‘book-ACC 3-counter’ can appear in the focused position followed by the copular da ‘be’ in the pseudo-cleft sentence, as in (23a), whereas 3-satu hon-o ‘3-counter book-ACC’ cannot, as in (23b). Provided that only a constituent can appear in the focused position in the cleft sentence as an independent unit, hon-o 3-satu ‘book-ACC 3-counter’ forms a constituent, whereas 3-satu hon-o ‘3-counter book-ACC’ does not. Ishii argues that 3-satu ‘3-counter’ in (23a) is an NP-NQ, which forms a constituent with the host NP; the MCR is relevant, whereas 3-satu ‘3-counter’ in (23b) is a VP-NQ that adjoins to the VP and does not form a constituent with the host NP; the MCR is irrelevant. Ishii argues that the distinct nature of the NQ creates the contrast in (30). However, the following example poses a problem for Ishii’s analysis.18)

24* Taro-ga kaw-ta-no-wa, hon-o da
   Taro-NOM buy-past-that-TOP book-ACC is
   ‘It is a book that Taro has bought.’

If (24) is unacceptable without the NQ, one cannot attribute the
unacceptability of (23b) to the NQ. The mechanism of excluding the examples in (23b) and (24) must be the same.19)

3. MCR Sustained

3.1. Mechanism

3.1.1. Inactivation of v by Adverb

The following contrast in English suggests that the inactivation of v is induced by an adverb under the very strict interpretation of the Larsonian Shell Hypothesis (Stowell 1981, Larson 1988, Chomsky 1993b).

23 a. Mary reads books often
   b. Mary often reads books
   c.* Mary reads often books

In (25c), the intervening adverb often between V and Obj blocks the Case-checking of Obj.20) Given that the Obj moves to [Spec, vP] for Case-checking, the adverb often must be located in [Spec, vP] in (25c), preventing the [ACC]-checking of Obj. Thus, an adverb behaves as an argument of V in this case. Let us first consider (25a), the relevant pre-Spell-Out structure:

![Diagram of sentence structure]

The above structure has two complements: books and VP (multiple complements). The adverb (Adv) often adjoins to the VP. The Adv behaves as an adjunct in this case. The light verb v attracts the Obj, books, as the
complement of V+\nu. The Obj tucks into a v-projection as the second complement of V+\nu (multiple complement). Crucial assumption is that both specifiers and complements can be multiple: another manifestation of symmetry in natural language. T and V combine at PF. The relevant structure of (25b) before Spell Out is the following:

(27)

\[
\begin{array}{c}
\text{TP} \\
\text{Mary} \\
\text{T} \\
\text{vP} \\
\text{often} \\
\text{tj} \\
\text{v} \\
\text{V+\nu} \\
\text{read} \\
\text{books} \\
\text{VP} \\
\text{tk} \\
\text{tv} \\
\text{ti}
\end{array}
\]

In the above structure, the light verb v attracts the Obj for feature checking, and the Obj tucks into a v-projection as the second complement of v. Adv behaves as an adjunct and adjoins to the vP. T and V combine at PF. However, the Adv behaves differently in (25c) in the sense that it is more like an argument interacting with DP-movement. The relevant structure is the following:

(28)

\[
\begin{array}{c}
\text{TP} \\
\text{Mary} \\
\text{T} \\
\text{vP} \\
\text{often} \\
\text{tj} \\
\text{v} \\
\text{V+\nu} \\
\text{read} \\
\text{books} \\
\text{VP} \\
\text{tk} \\
\text{tv} \\
\text{ti}
\end{array}
\]

In the above structure, the Adv merges externally with the V’ as the
specifier of the VP. That is to say, the Adv behaves as an argument of the V in this case. The light verb v attracts the Adv as the second complement of v. This inactivates v’s feature-checking ability of Obj.

3.1.2. Two Sources of SOV

In a Subj-prominent language such as English, only the [NOM]-bearing Subj occupies [Spec, TP] due to strict 1-to-1 agreement between the [NOM] and T (Kuroda 1988, Saito & Fukui 1996), so there is no way that the Obj-feature checking can be saved when v is inactivated. In a Topic-prominent language such as Japanese, there is a way to save the Obj in the same situation. It follows that there are two ways that the [ACC] of the Obj is checked off in Japanese: it is checked off either in [Spec, vP] or in [Spec, TP] (Miyagawa 1997, 2001, 2003). It follows that there are two types of SOV; call them SOV1 and SOV2. The corresponding derivations are:

29 a. SOV1

\[ \begin{aligned}
TP &\rightarrow T' \\
Subj_i &\rightarrow \text{vP} \rightarrow T \\
 &\rightarrow t_j \rightarrow v' \\
Obj_j &\rightarrow v' \rightarrow \text{VP} \rightarrow V+v \\
 &\rightarrow t_i \rightarrow t_v
\end{aligned} \]

b. SOV2

\[ \begin{aligned}
TP &\rightarrow TP \\
Subj_i &\rightarrow \text{Obj} \rightarrow T' \\
Obj_i &\rightarrow \text{vP} \rightarrow V+v+T \\
 &\rightarrow t_i \rightarrow v' \\
Adv &\rightarrow v' \rightarrow \text{VP} \rightarrow t_v \\
 &\rightarrow t_i \rightarrow t_v
\end{aligned} \]
In (29a) (= SOV1), V adjoins to v, followed by Obj-movement to [Spec, vP] for Case-checking, and Subj moves to [Spec, TP] for EPP/Case-checking. In (29b) (= SOV2), an adverbal element (Adv) causes a temporal inactivation of the Case-feature-checking ability of the v, and as a consequence, the Obj cannot check Case feature off in [Spec, vP]. As the last resort to rescue the Obj, the V adjoins to the v, and the [V+v] adjoins to T. Once the light verb [V+v] adjoins to T, and the v reactivates for Case-checking of [ACC] of Obj. The T accompanied by V+v attracts the Obj to [Spec, TP] for EPP/Case-checking. The Subj later adjoins to the TP for [NOM][FOCUS]-checking.

The absence of a similar contrast in Japanese suggests that there are two sources of SOV.

30) a. Mary-ga yoku hon-o yom-u (koto)
    Mary-NOM often book-ACC read-nonpast (fact)
    ‘Mary often reads books.’

    b. Mary-ga hon-o yoku yom-u (koto)
    Mary-NOM book-ACC often/well read-nonpast (fact)
    ‘Mary often reads books/Mary reads books well.’

Only the SOV1 is available in (30a). The relevant structure is:

31) [TP Mary-ga [vp yoku [vp t’1 hon-o [vp t, t,v] V+v]] T] (SOV1)

Suppose that (30a) had SOV2 derivation. Then the Obj is rescued by T, which attracts it to [Spec, TP]. The Adv must be somewhere in a T-projection. At the same time, the light verb v must have attracted the Adv, which behaves as an argument in [Spec, VP]. The Adv must be in the specifier or the complement of v, and it must be frozen there. It follows that Adv is within the v-projection and in the T-projection at the same time, which is a contradiction. Thus, (30a) cannot have the SOV2 structure.
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On the other hand, the relevant structure of (30b) is either (32a) (= SOV1) or (32b) (= SOV2).

32 a. \([\text{TP} \text{ Mary}_{-}\text{ga} \ [\text{VP } t'] \text{ hon}_{-}\text{o} \ [\text{VP } yoku \ [\text{VP } t; \text{ t}_v] \ [\text{V}_v\text{yom}]]]\ [\text{u}]]\]
   \text{Mary-NOM } \text{book-ACC well } \text{read-nonpast}
   ‘Mary reads books well.’

   b. \([\text{TP} \text{ Mary}_{-}\text{ga} \ [\text{TP} \text{ t'} \text{ hon}_{-}\text{o} \ [\text{VP } yoku \ [\text{VP } t; \text{ t}_v] \ [\text{V}_v\text{yom-u}]]]\]
   \text{Mary-NOM } \text{book-ACC } \text{often } \text{read-nonpast}
   ‘Mary often reads books.’

The difference in the interpretation of the Adv in (30) supports the analysis. (30b) is ambiguous with respect to the meaning of the Adv; it can have either the temporal reading as in (33a) or the manner reading as in (33b).

33 a. Mary often reads books. (Temporal reading)
   b. Mary reads books in an excellent way. (Manner reading)

On the other hand, (30a) has the temporal reading only. If we assume that the Adv adjoins to the vP when it has the temporal reading (=higher Adv), whereas the Adv adjoins to the VP when it has the manner reading (=manner Adv), the contrast is accounted for: in (30a), only the SOV1 is available, in which the Adv adjoins to the vP (temporal reading), whereas in (30b), either the SOV1, in which the Adv adjoins to the VP (manner reading), or the SOV2, in which the Adv occupies the [Spec, vP] (temporal reading), is available.

3.1.3. Proposal

The apparent MCR violation is immunized by the addition of an adjunct (the additional adjunct effect). Consider the following contrast:
34a. *gakusei-ga sake-o 3-nin nom-da
   student-NOM sake-ACC 3-CL drink-past
   ‘Three students drank sake.’
   (Kuroda 1980)

b. gakusei-ga sake-o kono mise-de-wa 3-nin nom-da
   student-NOM sake-ACC this restaurant-at-TOP 3-CL drink-past
   ‘Three students sake drank at this restaurant’
   (Gunji and Hasida 1998:57)

c. gakusei-ga sake-o 3-nin kono mise-de-wa nom-da
   student-NOM sake-ACC 3-CL this restaurant-at-TOP drink-past
   ‘Three students drank sake at this restaurant.’

We argue that with a neutral intonation, the source of the SOV is distinct between (34a) and (34b-c). The former originates in the SOV1, and the latter originates in the SOV2. Consider (34a), where the relevant structure is the following:

\[35\] [TP gakusei-ga[TV [VP t_i [\_v [sake-o 3-nin] [\_v [VP t_i [\_v [\_v_i nom]]]]]]]] [\_T da]]

   student-NOM sake-ACC 3-CL drink past
   ‘Three students drank sake.’

The Obj first externally merges with the V, and is assigned a Theme-theta. The Obj then internally merges with the \(v'\) immediately after the \(v\) merges with the VP, and \(V\) adjoins to the \(v\). This is forced by the Case-checking by the \(v\). The Subj externally merges with the \(v'\), and is assigned an Agent-theta. The T attracts the Subj for EPP/Case-checking. Provided that branches are binary and that they do not cross, the only place the NQ 3-nin ‘3 counter’ can externally merge is within the projection of \(v'\). The structure violates the MCR, since the secondary predicate NQ does not mutually c-command the host DP (Subj) or its trace.

Crucially, if the Obj moved to the [Spec, TP] here, we would wrongly predict that (34a) is acceptable, for the NQ and the trace of the Subj could
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satisfy the MCR. Thus, (34a) cannot take a SOV2. Next consider (34b-c), where the relevant structure is the following:

\[
\begin{align*}
\text{[TP\text{-}gakuseii\text{-}ga [TP sake\text{-}o [T [v\text{-}[t, 3\text{-}nin]] [v\text{-} kono mise\text{-}de\text{-}wa[[v\text{-} [t, t_v] t_r]]]]]} \\
\text{student\text{-}NOM sake\text{-}ACC 3\text{-}CL this restaurant\text{-}at\text{-}TOP} \\
\text{[v_{vv}, T nom\text{-}da]]]}
\end{align*}
\]

\textit{drink\text{-}past}

‘Three students drank sake at least at this restaurant.’

The derivation is the following: Obj and V merge, and V assigns a theta to Obj. After v merges with VP and V adjoins to v, Adv, as an argument, tucks into [Spec, vP], and temporarily inactivates the feature-checking ability of v. That is to say, the Adv in this case occupies [Spec, vP], into which the Obj otherwise moves for Case-checking. The Obj cannot check the [ACC] off at this point. The Subj merges with the v’, and is assigned a theta. The [ACC] of the Obj has not been checked off yet. As the last resort, V\text{-}to\text{-}v\text{-}to\text{-}T head movement is forced to save the Obj, expanding the minimal domain of T. T can now attract the Obj for EPP/Case-checking, since v under T can check [ACC] off. This forces the Obj to move to [Spec, TP]. The Subj later adjoins to TP for [NOM]/ [FOCUS]-checking.\textsuperscript{77} Crucially, there is now a position for the NQ to satisfy the MCR: the Subj trace and the NQ mutually c-command. The apparent counterexamples against the MCR in fact support the MCR and SOV2. In (34b), the Adv as an argument occupies the upper [Spec, vP] (multiple Specs), again temporarily curtailing the feature-checking ability of v.

Suppose that the Obj occupied [Spec, vP] in (34b-c); that is to say, suppose the structure was SOV1. Then the Adv must be an adjunct in this case. Assume that the Subj occupies the [Spec, vP]. In (34b), the Adv must adjoin to the vP because it is higher than the Sub NQ, and the Obj further adjoins to the vP for feature checking. If this were the case, we would expect (34a) to also be acceptable since, in (34a), the Obj could adjoin to the vP for feature checking, and the NQ and Subj trace would
satisfy the MCR, contrary to the fact. In (34c), the Adv adjoins to the VP, and the Obj could adjoin to the vP crossing Subj NQ for feature checking. If this were possible, it would again lead us to a wrong prediction that (34a) is acceptable since the Obj can adjoin to the vP for feature checking, and the Subj trace and the NQ would satisfy the MCR. Therefore, only SOV1 is available for (34a), whereas only SOV2 is available for (34b-c).

When we have an NQ that is followed by a focus particle, call it NQ-FP, it first merges with the Subj in [Spec, vP], and then adjoins to the vP, and behaves as the second Spec of v. This temporarily inactivates v, and the Obj must move to [Spec, TP] to be rescued. The Subj later is scrambled to TP. Thus, (37) has the derivation as in (38).

\begin{align*}
\text{\texttt{gakusei-ga sake-o 3-nin-dake nom-da}} & \\
\text{\texttt{gakusei-NOM sake-ACC 3-CL-only drink-past}} & \\
& \text{‘Only just 3 students drank sake.’}
\end{align*}

\begin{align*}
\text{\texttt{[TP gakusei\texttt{-g}] [TP sake-o [\tau [v 3-nin-dake, [v_t t_i [v_p t_i t_v] t_v \texttt{\nom-da}[\texttt{\nom-da}]]]]]}} & \\
\text{\texttt{student-NOM sake-ACC 3-CL-only drink-past}} & \\
& \text{‘Only just 3 students drank sake.’}
\end{align*}

In the above structure, the Subj trace and NQ trace satisfy the MCR.\(^{29}\)

The issue of cyclicity is relevant in this discussion because the timing of Merge of an Adv saves the sentence. That is to say, we are now looking at two types of syntactic behavior of the Adv. Only the Adv as an adjunct is relevant for the Late Insertion Hypothesis (LIH) (Lebeaux 1988).\(^{29}\)

In the LIH, the Adv is introduced in the secondary plane (cf. Chomsky 2001), and it tucks in noncyclically after structure building and calculation have been completed in the primary plane. On the other hand, the Adv as an argument is introduced in the primary plane as quickly as possible after the introduction of the v, and awaits urgent feature checking. This urgency plays a role in the activation of the v when the Adv as an argument appears.

---

\begin{align*}
\text{\texttt{gakusei-ga sake-o 3-nin-dake nom-da}} & \\
\text{\texttt{gakusei-NOM sake-ACC 3-CL-only drink-past}} & \\
& \text{‘Only just 3 students drank sake.’}
\end{align*}
3.2. Evidence for the MCR and SOV1/SOV2 Dichotomy

3.2.1. QP Scope

In SOV2, the Subj c-commands the Obj, and the Obj in turn c-
commands the trace of Subj. Therefore, it is predicted that the SOV2 ex-
hibits the scope ambiguity of the Subj quantifier phrase (QP) and Obj QP. 
In SOV1, such scope ambiguity is not expected. The prediction is borne 
out by the following examples that must be tested with the neutral into-
nation.

39) a. dareka-ga 3-nin dono madogarasu-mo war-ta
   *someone-NOM 3-CL which window glass-also break-past*
   'Some three people broke every window.'
   (some three > every window, *every window > some three)

   b. dareka-ga dono madogarasu-mo imamadeni 3-nin war-ta
      *someone-NOM which window glass-also so far 3-CL break-past*
      'Some three people broke every window so far.'
      (some three > every window, every window > some three)

That is to say, the logical representation of (39a) is (40a) only, whereas 
that of (39b) is either (40a) or (40b).

40) a. There are some 3 x, x a person, such that x broke every window.
   b. For every y, y a window, such that there are some 3 persons who
      broke y.

(39a) has the SOV1 structure in which the Subj QP asymmetrically c-
commands the Obj QP. On the other hand, (39b) has the SOV2 structure 
and its TP-adjoined Subj QP c-commands the Obj QP, and its Obj QP c-
commands the trace of the Subj QP. This symmetrical c-command relation 
explains the ambiguous scope in (39b). The above fact supports the 
distinct derivation of SOV1 and SOV2. 30)
3.2.2. Idiom Chunk Movement

Additional evidence for the SOV2 analysis derives from the idiom-chunk movement test. An idiom-chunk scrambles (moves) to an A-position only (Miyagawa 1997, Tsujimura 1999). Consider the following contrast:

(41) a. John-ga hoterugyou-ni te-o nobasi-ta
    
    *John-NOM hotel business-to hand-ACC extend-past
    ‘John started hotel business.’

    b. te-t-o [John-ga hoterugyou-ni to nobasi-ta]
    
    hand-ACC John-NOM hotel business-to extend-past
    ‘John started hotel business.’

    c.* te-t-o [Mary-ga [John-ga hoterugyou-ni to nobasi-ta to]
    
    hand-ACC Mary-NOM John-NOM hotel business-to extend-past that
    houkoku-si-ta
    report-past
    ‘Mary reported that John started hotel business.’

In (41b), the idiom-chunk Obj (Obj-ic) is fronted to [Spec, TP] (A-position). In (41c), the Obj-ic undergoes long-distance movement from a finite clause, and adjoins to the matrix TP (A’-position). An idiom-chunk moves only to an A-position. It is predicted that the Obj-ic movement is impossible in the OSV1, but it is possible in OSV2 or SOV2. The prediction is borne out by the following examples, which show the idiom-chunk movement and MCR interaction.

(42) a.* gakusei-ga hoterugyou-ni te-o 3-nin nobas-ita (SOV1)
    
    *student-NOM hotel business-to hand 3-CL extend-past
    ‘Three students started hotel business.’
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b.* te-o gakusei-ga heterugyou-ni t, 3-nin nobas-ita (OSV1)
  hand-ACC student-NOM hotel business-to 3-CL extend-past
  ‘Three students started hotel business.’

c. te-o gakusei-ga heterugyou-ni tugitugito 3-nin t, nobas-ita
   hand-ACC student-NOM hotel business-to consecutively 3-CL extend-past
   ‘Three students started hotel business one after another.’ (OSV2)

d. gakusei-ga te-o heterugyou-ni tugitugito 3-nin t, nobas-ita
   student-NOM hand-ACC hotel business-to consecutively 3-CL extend-past
   ‘Three students started hotel business one after another.’ (SOV2)

In (42a) (SOV1), a MCR violation occurs: the Obj-ic is in the lower [Spec, vP], and the NQ cannot c-command the Subj trace in the higher [Spec, vP]. In (42b) (OSV1), the Obj-ic adjoins to the TP, which is an A’-position. The MCR is also violated. In (42c) (OSV2), the Adv behaves as an argument, and inactivates the feature-checking ability of v. As a last resort, the Obj-ic moves to [Spec, TP], which is an A-position. The Subj originated in [Spec, vP] adjoins to the vP in this case. The MCR is satisfied by the Subj trace and the NQ. (42d) derives from (42c) by adjoining the Subj to the TP. The Obj-ic is in [Spec, TP]. The MCR is satisfied by the Subj trace and the NQ. Thus, the MCR and Obj-ic movement interaction is accounted for by the SOV1/SOV2 dichotomy.

3.2.3. NEG-QP Scope Interaction

The Obj movement to [Spec, TP] in SOV2 is confirmed by the scope test regarding the NEG-QP interaction. Consider the following contrast.\(^{32}\)

(43) a. gakusei-ga 2-ri zen’in-o mi-nakat-ta (NEG > ALL, ALL > NEG)
   student-NOM 2-CL all-ACC see-not-past
   ‘Two students did not see all.’
b. gakusei-ga zen’in-o 2-ri-tomo mi-nakat-ta (*NEG>ALL, ALL>NEG)
   student-NOM all-ACC 2-CL-FP see-not-past
   ‘None of the two students saw all.’

c. gakusei-ga zen’in-o 2-ri-sika mi-nakat-ta (*NEG>ALL, ALL>NEG)
   student-NOM all-ACC 2-CL-FP see-not-past
   ‘Only two students saw all.’

In (43b-c), the focus particle (FP) is attached to the NQ, forcing a SOV2 structure: the NQ+FP merges with the Subj in [Spec, vP], and adjoins to the vP, inactivating the feature-checking ability of v. This forces Obj movement to [Spec, TP]. The NEG > ALL reading in (43a) is indicated in (44a), and ALL > NEG in (43a) is shown in (44b).

44 a. It is not the case that 2 students saw every x, x a person.
   (NEG>ALL)
   b. For every x, x a person, such that 2 students did not see x.
   (ALL>NEG)

Crucially, NEG cannot take a wider scope in (43b-c) (= SOV2). The example in (43b) has the following SOV2 structure:

45 \[_{TP \text{ gakusei-ga } [_{TP \text{ zen’in-o } [\text{T} \text{ [_{NEGIP \text{ [_{vP \text{ 2-ri-tomo} t_{k\text{t}} \text{ [_{v\text{t}_{k\text{t}} \text{ [_{v\text{t}} t_{v}} \text{ student-NOM all-ACC 2-CL-FP
}}}}\text{t_{v\text{t}_{k\text{t}}\text{NEG}}\text{[_{v\text{t}_{k\text{t}}\text{NEG} T\text{ mi-nakat-ta][][]}}\text{see-not-past}}]]]

In the above structure, NQ+FP 2-ri-tomo ‘2-CL-FP’ adjoins to vP. The light verb v takes it as an argument, and checks its uninterpretable feature. This inactivates the further feature-checking ability of v. This in turn forces V-to-v-to-NEG-to-T movement to save the Obj. As a last resort, the T attracts the Obj to [Spec, TP]. The Subj later adjoins to the
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TP for [NOM]/[FOCUS]-checking. In this final stage, the universal Obj QP (ALL) c-commands NEG, yielding only \(\text{ALL} \succ \text{NEG}\). Notice that if QP undergoes Quantifier Raising (QR) (May 1977) and adjoins to TP, we still get the same scope relation, i.e., \(\text{ALL} \succ \text{NEG}\). On the other hand, (52a) has the SOV1 structure. When the Obj QP (ALL) remains within the vP, the scope relation \(\text{NEG} \succ \text{ALL}\) is obtained. When Obj QP undergoes QR and adjoins to TP at LF, the scope relation \(\text{ALL} \succ \text{NEG}\) is obtained. Hence, the scope ambiguity in (52a). The SOV1/SOV2 dichotomy accounts for the NEG-QP scope interaction as predicted.

3.2.4. Focus Particle

Kishimoto (2001) proposes diagnostics for pinpointing an argument position. Consider the following contrast. The examples must be read with the neutral intonation without any pause or stress.

(46) a. Taro-sae-ga kono hon-o yom-i-sae-si-ta
    \(\text{Taro-even-NOM this book-ACC read-to-even-do-past}\)
    ‘(Lit.) Even Taro even read this book.’

b.* Taro-ga kono hon-o-sae yom-i-sae-si-ta
    \(\text{Taro-NOM this book-ACC-even read-to-even-do-past}\)
    ‘(Lit.) Taro even read even this book.’

c.* Taro-ga Hanako-ni-sae kono hon-o watas-i-sae-si-ta
    \(\text{Taro-NOM Hanako-to-even this book-ACC give-to-even-do-past}\)
    ‘(Lit.) Taro even gave this book even to Hanako.’

(Kishimoto 2001:611)

Kishimoto proposes the Double Focusing Condition (DFC) to account for the contrast.
(47) DFC

A single constituent cannot be focused by more than two instances of the same particle.  

(Kishimoto 2001:612)

Kishimoto proposes the following clause structure for Japanese, putting aside the traces of DP-movements.

\[
\begin{array}{c}
\text{TP} \\
\text{DP-NOM} \\
\quad \text{vP} \\
\quad \quad \text{T} \\
\quad \text{DP-DAT} \\
\quad \quad \text{V} \\
\quad \text{VP} \\
\quad \quad \text{V+v} \\
\text{DP-ACC} \\
\quad \text{tV}
\end{array}
\]

V adjoins to v, which makes \([_{vP} \text{DP-DAT} [_{v} [_{vP} \text{DP-ACC}] \text{V+v}]]\) a single constituent. There are two separate constituents, i.e., TP and vP. (46a) is acceptable since the two focused elements, Subj and V+v, are not in the single constituent, thereby satisfying the DFC. (46b-c) are unacceptable since the two focused elements, a direct Obj and V, or an indirect Obj and V, are contained in the single constituent, i.e., vP, and thus violate the DFC.

Given the DFC, it is predicted that both the Obj and V+v can be focused in the SOV2 structure: the focused Obj is in \([\text{Spec, TP}]\), and it is outside the constituent within which the focused V+v is contained.

However, one might argue that this analysis is not valid from the beginning: V raises only to v, but not to T, therefore the \([\text{ACC}]\) of the Obj cannot be checked off in \([\text{Spec, TP}]\). We argue that, in this type of SOV2, the \(V+sae\) amalgam remains at the light verb position, and that the light verb su ‘do’ alone adjoins to T. We assume that the focus particle sae ‘even’ tucks in between the V and v inside the amalgam \([V+v]\), and that the V is phonetically supported by the focus particle. This allows v to be separated from V, and v adjoin to T. Notice that we still have a semi-uniform head chain \([T+v, V+sae(tv, tv)]\), which is sufficient for T to check
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[ACC] off. T checks its own [EPP] off. In Kishimoto (2003), the V remains within the vP, and a dummy *su ‘do’ adjoins to the T to support the T phonetically. This is compatible with our analysis in that the dummy verb in T checks [ACC] off.

Given this much, it is predicted that the Obj in SOV2 does not show the DFC, for the Obj occupies [Spec, TP] in SOV2. This prediction is borne out by the following contrast. The examples must be read with the neutral intonation.

(49) a. *kodomo-ga 3-nin sake-o-sae nom-i-sae-si-ta
   \(\text{child-NOM 3-CL sake-ACC-even drink-to-even-do-past}\)
   ‘Three children even drank even sake.’

   b. kodomo-ga sake-o-sae imamadeni 3-nin nom-i-sae-si-ta
   \(\text{child-NOM sake-ACC-even so far 3-CL drink-to-even-do-past}\)
   ‘Three children even drank even sake so far.’

(49a) (=SOV1) is unacceptable since both the direct Obj and V are in the same single constituent, i.e., vP, violating the DFC. (49b) (=SOV2) is acceptable since the Obj is in [Spec, TP], which is in a separate constituent from vP. The relevant structure of (49b) is the following:

(50) \[\begin{array}{c}
   \text{TP} \\
   \text{‘child-NOM’} \\
   \text{kodomo-ga} \\
   \text{sake-o-sae} \\
   \text{‘sake-ACC-FP’} \\
   \text{TP} \\
   \text{T} \\
   \text{vP} \\
   \text{v+T} \\
   \text{si-ta} \\
   \text{‘do-past’} \\
   \text{imamadeni} \\
   \text{‘so far’} \\
   \text{v} \\
   \text{‘3-CL’} \\
   \text{3-nin} \\
   \text{t_t} \\
   \text{VP} \\
   \text{t_t} \\
   \text{V+sae+v} \\
   \text{nom-i-sae-t_v} \\
   \text{‘drink-i-FP-t_v’} \\
   \end{array}\]

In the above structure, the two focused elements, Obj and V, are in two
3.2.5. Indeterminate Pronoun Binding

Kishimoto (2001) provides another test for locating argument positions. Kishimoto proposes that, in the following examples, an indeterminate pronoun such as dare ‘who’ or nani ‘what’ must be contained within the scope domain of the NPI particle mo. Consider the following contrast:

(51) a. Taro-ga nani-o kaw-i-mo-si-nakat-ta (koto)
   Taro-NOM what-ACC buy-to-NPI-do-not-past (fact)
   ‘Taro did not buy anything.’

b. Taro-ga dare-ni aw-i-mo-si-nakat-ta (koto)
   Taro-NOM who-to meet-to-NPI-do-not-past (fact)
   ‘Taro did not meet anyone.’

c. Taro-ga dare-ni omiyage-o age-mo-si-nakat-ta (koto)
   Taro-NOM who-to gift-ACC give-NPI-do-not-past (fact)
   ‘Taro did not give a gift to anyone.’

d.* dare-ga waraw-i-mo-si-nakat-ta (koto)
   who-NOM laugh-to-NPI-do-not-past (fact)
   ‘No one laughed.’

e.* dare-ga Hanako-o home-mo-si-nakat-ta (koto)
   who-NOM Hanako-ACC praise-NPI-do-not-past (fact)
   ‘No one praised Hanako.’ (Kishimoto 2001:600)

(51a-c) are acceptable: the indeterminate pronoun is within the scope domain of the NPI particle mo, which is a vP. (51d-e) are unacceptable: the
indeterminate pronoun in [Spec, TP] is outside the scope domain of the NPI particle, which is a vP. It is predicted that the Obj indeterminate pronoun cannot be bound by NEG in SOV2 since the Obj is in [Spec, TP], which is not c-commanded by NEG, and hence, outside the domain of the NPI particle *mo*. Again, we assume that the NPI particle *mo* tucks into V+v, forming V+mo+v, and then v alone adjoins to NEG, followed by the adjunction of [v+NEG] amalgam to T, which is sufficient for checking the [ACC] off of Obj in [Spec, TP]. The prediction is borne out by the following contrast:

52) a. kodomo-ga nani-o kaw-i-mo-si-nakat-ta (koto)
child-NOM what-ACC buy-to-NPI-do-not-past (fact)
‘The child did not buy anything.’

b. * kodomo-ga nani-o imamadeni 3-nin kaw-i-mo-si-nakat-ta (koto)
child-NOM what-ACC so far 3-CL buy-to-NPI-do-not-past
‘Three children did not buy anything so far.’

(52a) has the SOV1 structure, and the indeterminate pronoun is contained in the scope domain of the NPI particle *mo*, thereby satisfying the scope domain condition. (52b) exhibits the SOV2 structure, and the indeterminate pronoun in [Spec, TP] is outside the scope domain of the NPI particle *mo*, which is vP. The structure of (52b) is the following:
In the above structure, the indeterminate pronoun \textit{nani} ‘anything (lit. what)’ is outside the scope domain (= vP) of the NPI particle \textit{mo}, which is a violation of the scope domain condition. In (52b), when the indeterminate pronoun \textit{nani} ‘what’ is interpreted as specific and definite, as English pronoun ‘it,’ the sentence is acceptable. This fact further supports the prediction that the Obj moves to [Spec, TP] in this case, given that specificity is connected to a higher projection.

3.2.6. Variable Binding

The variable binding fact also supports our analysis. Consider the following examples. A stress is indicated by capital bold type, and a pause is indicated by \underline{||}. Otherwise, the example must be read with the neutral intonation.

54) a.* soko-no gakusei-ga dono daigaku-o-mo hihansi-ta

\textit{there-GEN student-NOM which university-ACC-FP criticize-past}

‘Its students criticized every university.’

b. soko-no gakusei-ga \underline{DONO DAIGAKU-O-MO} \underline{||} hihansi-ta

\textit{there-GEN student-NOM which university-ACC-FP criticize-past}

‘Its students criticized EVERY UNIVERSITY.’
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c. soko-no gakusei-ga dono daigaku-o-mo 10-nin tugitugito
   there-GEN student-NOM which university-ACC-FP 10-CL consecutively

   hihansi-ta
   criticize-past
   ‘Its ten students criticized every university one after another.’

   d. soko-no gakusei-ga dono daigaku-o-mo tugitugito 10-nin
      there-GEN student-NOM which university-ACC-FP consecutively 10-CL

   hihan si-ta
   criticize-past
   ‘Its ten students criticized every university one after another.’

55 a.* soitu-no ronbun-ga dono gakusei-o-mo kurusime-ta
   (s)he-GEN paper-NOM which student-ACC-FP torture-past
   ‘(Lit.) Her/his paper tortured every student.’

   b. soitu-no ronbun-ga DONO GAKUSEI-O-MO || kurusime-ta
      (s)he-GEN paper-NOM which student-ACC-FP torture-past
      ‘(Lit.) Her/his paper tortured EVERY STUDENT.’

   c. soitu-no ronbun-ga dono gakusei-o-mo 3-tu tugitugito
      (s)he-GEN paper-NOM which student-ACC-FP 3-CL consecutively

      kurusime-ta
      torture-past

      ‘(Lit.) Her/his three papers consecutively tortured every student.’
d. soitu-no ronbun-ga dono gakusei-o-mo tugitugito 3-tu
   (s)he-GEN paper-NOM which student-ACC-FP consecutively 3-CL
   kurusime-ta
   torture-past

   (Lit.) Her his three papers consecutively tortured every student.’

In the examples in (54b-d) and in (55b-d), the Obj universal QP dono
daigaku-mo ‘every university (lit. where-university-also)’ can bind the
pronominal variable soko ‘it (there)’ or soitu ‘that guy.’ The Adv in the
broad sense (adverbial, stress, or a pause) behaves as an argument in
SOV2. In SOV2, the Obj in [Spec, TP] binds the Subj trace in [Spec, vP].
Since the pronominal variable is in the Subj trace, it can be bound by the
Obj.

3.2.7. Stative v

A nominative Obj (Obj-nom) interacts with the MCR in an interest-
ing way. Consider the following contrast:

60 a.* gakusei-ga raamen-o 3-nin tabe-ta
   student-NOM noodles-ACC 3-CL eat-past
   ‘Three students ate noodles.’

b. gakusei-ga raamen-o 3-nin tabe-ta-i-rasii
   student-NOM noodles-ACC 3-CL eat-want-nonpast-seem
   ‘It seems that three students want to eat noodles.’

c.* gakusei-ga raamen-ga 3-nin tabe-ta-i-rasii
   student-NOM noodles-NOM 3-CL eat-want-nonpast-seem
   ‘It seems that three students want to eat noodles.’
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d. raamen-o gakusei-ga 3-nin tabe-ta-i-rasii
   *noodles-ACC student-NOM 3-CL eat-want-nonpast-seem*
   ‘It seems that three students want to eat noodles.’

Examples (56a) and (56c) show the violation of the MCR. The basic word order type of (56a) and (56c) is the SOV1 structure. In (56a), the [ACC] of the accusative Obj (Obj-acc) is checked off in [Spec, vP]. In (56c), the Obj-nom is checked in [Spec, vP], where v [+stative] is an auxiliary verb *ta* ‘want.’ The question is why the MCR violation is ameliorated in (56b). If we assume that the light verb *ta* checks [NOM], then there is no place where [ACC] is checked off within vP, given that V is not a feature checker. As a last resort, the Obj-acc moves to [Spec, TP] for [NOM]-checking by T. The Subj later adjoins to TP. The example in (56d) shows a stage of the derivation before Subj scrambling. Thus, (56b) provides evidence for the SOV2 that the Obj-acc is checked off in [Spec, TP] by T as a last resort. The following contrast shows that Obj-nom scrambling is not entirely free.

57) a. gakusei-ga 3-nin raamen-ga tabe-ta-i-rasii
   *student-NOM 3-CL noodles-NOM eat-want-nonpast-seem*
   ‘It seems that three students want to eat noodles.’

   b.* raameni-ga gakusei-ga 3-nin t, tabe-ta-i-rasii
   *noodles-NOM student-NOM 3-CL eat-want-nonpast-seem*
   ‘It seems that noodles, three students want to eat.’

We argue that (57b) is unacceptable due to a relativized minimality (RM) effect: Subj-nom intervenes between the scrambled Obj-nom and its trace, and Subj-nom breaks the chain (Obj-nom, t).

4. Concluding Remarks

We have shown that the alleged counterexamples of the MCR are consistent with the MCR, and that they in fact support the MCR and the
SOV1/SOV2 dichotomy. We have focused on one of the MCR puzzles in which the addition of an adverb ameliorates the MCR violation (the additional-adjunct effect). We have argued that an adverb behaves either as an adjunct or as an argument of the verb. When an adverb behaves as an argument, the [ACC]-checking ability of v is temporarily inactivated. In a Subj-prominent language such as English, the derivation crashes at this point. However, in a non-Subj prominent language such as Japanese, there is a way to rescue the unchecked Obj. The rescue operation is to raise V+v to T, and the [ACC] of the Obj is checked off in [Spec, TP] by V+v+T. T checks off its own [EPP]. This makes the order <Subj, Obj, tSubj, NQSubj, V> possible to satisfy the MCR even when the Obj intervenes between the Subj and NQSubj. Nishigauchi & Ishii (2003) and Takami (1998) are too hasty in seeking alternative solutions that invoke semantic and functional reasoning. These solutions are dubious in my opinion. Looking at the alleged counterexamples against the MCR reveals that a strictly local and symmetric syntactic condition as the MCR assisted by the hypothesis of SOV1/SOV2 dichotomy accounts for a variety of empirical data. The MCR is reserved at this point as a condition that is based on the simplest symmetrical structural relation found in the computational system of the natural language that has evolved in the human brain.
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Appendix I.
Other MCR Puzzles and Possible Lines of Solution

The MCR Puzzle (11b): Approximate NQ

a. boku-wa apaato-zumai-dakedo, saikin douryou-ga ie-o
   I-TOP apartment house-living-though recently colleague-NOM house-ACC

4.5-nin tugitugito tate-mas-ita
4.5-CL consecutively build-polite-past
‘Although I live in an apartment house, my four or five colleagues have recently built their houses one after another.’

b. Nada-kou-no seito-wa maitosi Toudai-o
   Nada-high school-GEN student-TOP every year Tokyo University-ACC

80-nin-izyou zyukensu-ru
80-CL-over take exam-nonpast
‘Speaking of Nada high school students, they take the entrance exam of Tokyo University every year.’ (Takami 1998, 1:91)

A Possible Solution to the MCR Puzzle (11b)
An approximate NQ behaves as an NQ-adv, and it adjoins to vP, and behaves as an argument of V, inactivating v. The Obj is rescued by moving to [Spec, TP], and the Subj scrambles to TP.

The MCR Puzzle (11c): D-Linked Environments
a. * gakusei-ga ittai nani-o 3-nin nom-da no?
   Student-NOM hell what-ACC 3-CL drink-past Q
   ‘What the hell did three students drink?’

b. ? gakusei-ga dono osake-o 3-nin nom-da no?
   Student-NOM which sake-ACC 3-CL drink-past Q
   ‘Which sake did three students drink?’

A: kono sinkan-zassi, ure-te-mas-u-ka?
   this newly edited magazine sell-to-polite-nonpast-Q
   ‘Does this new magazine sell well?’

B: ee, kesa-mo gakusei-san-ga sore-o 5-nin kaw-te-ikimas-ita-yo
   yes this morning-also student-polite-NOM it-ACC 5-CL buy-to-go-polite-past-SP
   ‘Yes, this morning also 5 students came and bought it.’ (Takami 1998, 1:91)

2. a.? 2-ri, zyosei-ga Taro-ni ais-are-te-i-ru
   2-CL woman-NOM Taro-by love-passive-to-be-nonpast
   ‘Two women are loved by Taro.’ (Miyagawa 1989)

b. 3-nin, gakusei-ga sono sensei-ni nagur-are-ta
   3-CL student-NOM that teacher-by beat-passive-past
   ‘Three students were beaten by that teacher.’

c. 2-ri, zyosei-ga sono otoko-ni osow-are-ta-rasii
   2-CL woman-NOM that man-by rape-passive-past-seem
   ‘It seems that two women were raped by that man.’

d. 3-nin, kodomo-ga sono ganko-ziisan-ni donar-are-ta
   3-CL child-NOM that stubborn old man-by yell-passive-past
   ‘Three children were yelled at by that stubborn old man.’

   (Takami 1998, 2:88)
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A Possible Solution to the MCR Puzzle (11c)
The D-linked Obj moves to [Spec, TP], thereby forcing the SOV2 structure, in which an NQ-subj and Subj trace satisfy the MCR. In passive cases, when the agent PP is non-D linked, the NQ head originates within the VP, and the scrambling violates the locality condition on movement. When the agent PP is D-linked, NQ can be late-inserted after an Obj movement.

The MCR Puzzle (11d): Employment of Non-Typical Transitive Verbs

Unaccusative Auxiliary Verbs

63 A: kono sinkan-zassi, ure-te-mas-u-ka?
     *this newly edited magazine sell-to-polite-nonpast-Q
     ‘Does this new magazine sell well?’

B: ee, kesa-mo gakusei-san-ga sore-o 5-nin kaw-te-
     *yes this morning-also student-polite-NOM it-ACC 5-CL buy-to-
     ikimas-ita-yo
     *go-polite-past-SP
     ‘Yes, this morning also five students came and bought it.’

     (Takami 1998, 1:91)

64 kaisya-houmon-de, zimoto-no kigyou-ni 2-tu ik-te-ki-ta
     *company-visit-cause local-GEN enterprise-to 2-CL go-to-come-past
     ‘To apply for the internship of company, I went to two local enterprises and came back.’
     (ibid., 94)

65 a. gakusei-ga kyousitu-de 4-nin abaremawar-ta
     *student-NOM classroom-at 4-CL run wild-past
     ‘Four students ran wild in the classroom.’

b. gakusei-ga kyousitu-de 4-nin abare-mawar-te-i-ta
     *student-NOM classroom-at 4-CL run wild-to-be-past
     ‘Four students were running wild in the classroom.’
a.* kōdomo-ga umi-de 2-ri oyōg-da

child-NOM sea-at 2-CL swim-past

‘Two children swam in the sea.’

b. kōdomo-ga umi-de 2-ri oyōg-de-i-ta

child-NOM sea-at 2-CL swim-to-be-past

‘Two children were swimming in the sea.’

a.* kōdomo-ga butai-de 10-nin odor-ta

child-NOM stage-at 10-CL dance-past

‘Ten children danced on the stage.’

b. kōdomo-ga butai-de 10-nin odor-te-i-ta

child-NOM stage-at 10-CL dance-to-be-past

‘Ten children were dancing on the stage.’

Non-Typical Transitive Verb Stems

Creation

66 a. (?) tomodati-ni 4,5-nin tegami-o kak-ta

friend-to 4,5-CL letter-ACC write-past

‘I wrote a letter to four or five friends of mine.’ (Kuno 1978a)

b. boku-wa apaato-zumai-dakedo, saikin douryou-ga ie-o

I-TOP apartment house living though recently colleague-NOM house-ACC

4,5-nin tugitugito tate-mas-ita

4,5-CL consecutively build-polite-past

‘Although I live in an apartment house, recently four or five of my colleagues has built their houses one after another.’ (Takami 1998, 2:87)

Facing/Attitude
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9a. douryou-ga Yamada-kun-no teian-ni 5-nin sanseisi-ta
   colleague-NOM Yamada-Mr-GEN proposal-to 5-CL agree-past
   ‘Five of my colleagues agreed with Mr. Yamada’s proposal.’
   (Takami 1998, 2:87)

9b. kyonen itinen-de 50-dai-izyou-no huhuu-ga, nanraka-no
   last year a year-in 50-age-over-GEN couple-NOM some or the other-GEN
   riyuu-de 100-kumi-izyou rikonsi-ta
   reason-with 100-CL-over divorce-past
   ‘The last year more than 100 pairs of couples divorced for some or the other reasons.’
   (Takami 1998, 2:87)

c. boku-wa yuumeina gakusya-ni 3-nin aw-ta
   I-TOP famous scholar-with 3-CL meet-past
   ‘I met three famous scholars.’
   (Takami 1998, 1:93)

Source
70 ?? syuuzin-ga keimusyo-o 5-nin dassousi-ta
   prisoner-NOM jail-ACC 5-CL escape-past
   ‘Five prisoners escaped from the jail.’
   (Ishii 1998:162)

Transition
71 a. Nadakou-no seito-wa, maitosi Toudai-o 80-nin-izyou
   Nada high school-GEN student-TOP every year Tokyo University-ACC 80-CL-over
   zyukensu-ru
   take exam-nonpast
   ‘Speaking of Nada high school students, more than 80 of them take the entrance exam of Tokyo University every year.’
   (Takami 1998, 1:91)

b. kongakki-wa, nihonzin-ga watakusi-no koosu-o 2-ri zyukousi-te
   this semester-TOP Japanese-NOM I-GEN course-ACC 2-CL attend-to
-i-ru
-be-nonpast

‘This semester, two Japanese students are attending my class.’

(Naito 1993)

Transportation

73 mesiya-ni 2,3-ken ikimas-ita

restaurant-to 2,3-CL go-polite-past

‘(We) went to two or three restaurants.’

(Haig 1980)

Goal

73 kyonen huyuyama-ni 100-gurai nobor-ta

last year winter mountain-to 100-about climb-past

‘(I) climbed about 100 winter mountains last year.’

(Haig 1980)

Reception

74 a. boku-wa gantan-ni osiego-kara 5-nin nengazyou-o

I-TOP new year’s day-in my student-from 5-CL new year’s card-ACC

moraw-ta

receive-past

‘I received new year’s cards from five of my former students on the New Year’s Day.’

(Takami 1998, 1:94)

b. kodomo-ga hon-o 3-nin sono sisetu-kara moraw-ta

child-NOM book-ACC 3-CL that orphanage-from receive-past

‘Three children received books from that orphanage.’

c. kodomo-ga hon-o 3-nin sono sisetu-kara uketor-ta

child-NOM book-ACC 3-CL that orphanage-from receive-past

‘Three children received books from that orphanage.’
On the Symmetric C-Command

a.* kodomo-ga hon-o 3-nin sono sisetu-ni age-ta
\[\text{child-NOM book-ACC 3-CL that orphanage-to give-past}\]
‘Three children gave books to that orphanage.’

b. *kodomo-ga hon-o 3-nin sono sisetu-ni kihusi-ta
\[\text{child-NOM book-ACC 3-CL that orphanage-to donate-past}\]
‘Three children donated books to that orphanage.’

Psychology

a. gakusei-ga sono zizitu-o 3-nin yorokob-da
\[\text{student-NOM that fact-ACC 3-CL rejoice-past}\]
‘Three students rejoiced at the fact.’

b. gakusei-ga sono zizitu-o 3-nin kanasim-da
\[\text{student-NOM that fact-ACC 3-CL grieve-past}\]
‘Three students grieved at the fact.’

c. gakusei-ga sono zizitu-ni 3-nin odorok-ta
\[\text{student-NOM that fact-at 3-CL wonder-past}\]
‘Three students wondered at the fact.’

A Possible Solution to the MCR Puzzle (11d)

As for counterexamples involving the unaccusative auxiliary verbs *ik-u ‘go,’ *ku-ru ‘come,’ and *i-ru ‘be,’ they occupy the light verb position, and unaccusative verbs cannot check the [ACC] off. As a consequence, the Obj is forced to move to [Spec, TP]. The Subj is later scrambled to TP. When the unergative intransitive verb is involved, the PP adjoins to the vP, and the Subj trace in [Spec, vP] and the NQ satisfy the MCR. Thus, examples (77a) and (77b) have the structures in (78a) and (78b), respectively.

a. gakusei-ga sake-o 3-nin nom-de-ki-ta
\[\text{student-NOM sake-ACC 3-CL drink-te-come-past}\]
‘Three students drank sake and came.’
b.  kōdomo-ga  kyoujitsu-de 4-nin abarenawar-te-i-ta

classroom-NOM 4-CL run wild-to-be-past

‘Four children were running wild in the classroom.’

(78)
a. \[ \tau_4 \text{gakusei}-gα [\tau_4 \text{sake-o} [\tau_4 \text{v}, \text{t}, \text{v}_\text{t}, \text{v}_\text{v}, \text{v}_\text{n}, \text{t}, \text{v}_\text{n}, \text{t} \text{nom-de-ki-ta}]]] \\

\begin{align*}
\text{student-NOM} & \quad \text{sake-ACC} \\
\text{3-CL} & \quad \text{drink-to-come-past}
\end{align*}

b. \[ \tau_4 \text{kōdomo-ga} [\tau_4 \text{kyōjitsu-de} [\tau_4 \text{v}, \text{t}, 4-nin \text{v}_\text{t}, \text{v}_\text{n}, \text{abarenawar-te-i}][\tau_4 \text{ta}]]

\begin{align*}
\text{child-NOM} & \quad \text{classroom-at} \\
\text{4-CL} & \quad \text{run wild-to-be-past}
\end{align*}

In (78a), the Obj moves to [Spec, TP] (SOV2), and the Subj trace and NQ satisfy the MCR. In (78b), the vP with the lexical head \( \text{i} \) ‘be’ somehow helps PP to adjoin to vP. This allows the Subj trace and NQ to satisfy the MCR.

As for non-transitive verbal stems, they basically create the SOV1, but they are more like unaccusative verbs in that the Subj is generated within the VP, not in the vP. The Obj moves to [Spec, vP] for feature checking. Thus, (79) has the derivation in (80).

(79)  douryou-ga  ie-o  3-nin tate-ta

colleague-NOM  house-ACC 3-CL  build-past

‘Three of my colleagues built their houses.’

(80) \[ \tau_4 \text{douryou-ga} [\tau_4 \text{v}, \text{ie-o} [\tau_4 \text{v}, \text{t}, 3-nin \text{v}_\text{t}, \text{v}_\text{n}, \text{t}, \text{v}_\text{n}, \text{t} \text{tate+v}][\tau_4 \text{ta}]]] \\

\begin{align*}
\text{colleague-NOM} & \quad \text{house-ACC} \\
\text{3-CL} & \quad \text{build} \\
\text{past}
\end{align*}

These light verbs that select non-transitive verbs have low agentivity, and they cannot hold the agentic subject in their Specs. The light verb v’s low agentivity of creation-type verbs, for example, is indicated by the postposition used when they undergo direct passive.
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§1 a.* sono ie-ga douryou-ni tate-rare-ta

that house-NOM colleague-by build-passive-past
‘That house was built by my colleague.’

b. sono ie-ga douryou-ni-yotte tate-rare-ta

that house-NOM colleague-by-caused build-passive-past
‘That house was built by my colleague.’

In (81a), the agentivity of the postposition ni ‘by’ is too weak for the agent of this non-typical transitive verb. Therefore, the complex postposition as ni-yotte ‘by-caused,’ which has a stronger agentivity must be used, as in (81b). Teramura (1982) reports that the ni-phrase in (81a) tends to be interpreted as a locative phrase, which is stative. All these non-typical transitive verbs have some kind of restriction on direct passive formation due to the low degree of agentivity of v by which it is selected.

The MCR Puzzle (11e): Subset Counters

§2 a. 3-page-no hon-o yom-da

3-page-GEN book-ACC read-past
‘I read a book which consists of three pages.’

b. hon-o 3-page yom-da

book-ACC 3-page read-past
‘I read three pages in the book.’ (Inoue 1978)

Based on the difference in meaning in (82a) and (82b), Inoue (1978) claims that it is dubious to associate the two sentences via NQ-movement, assuming that the movement must operate among semantically identical sentences. They may constitute a potential problem for the MCR, since the MCR is blind to the alleged semantic distinction.

A Possible Solution to the MCR Puzzle (11e)
The assumption in the Inoue (1978) example is not valid: a displacement
(movement) is induced by semantic-(informational)-feature checking as well as formal-feature checking. If we want to postulate the MCR as a syntactic condition, it should be blind to those semantic interpretations.

Appendix II.
Problems of Functional Analysis of NQ Floating

Takami (1998, 2), capitalizing on the parallelism between topicalizability and NQ-floatability, proposes what I informally state as the following condition on floating NQs (FNQ).

88 Topic-Parasitic Condition in FNQ (TPC)
FNQ (= the secondary topic) must be adjacent to a directly topicalizable phrase (= the primary topic).

In direct topicalization, a postposition is deleted.

84 a. sono origami-de-wa, Taro-ga turu-o or-ta
   *that origami-with-TOP Taro-NOM crane-ACC fold-past
   ‘With that origami, Taro made a crane.’ (indirect topicalization)

     b.* sono origami-wa, Taro-ga turu-o or-ta
     *that origami-TOP Taro-NOM crane-ACC fold-past
     ‘Speaking of that origami, Taro made a crane.’ (direct topicalization)

Empirical evidence for the TPC are the following:

85 a. Taro-ga origami-de turu-o 3-ba or-ta
   Taro-NOM origami-with crane-ACC 3-CL fold-past
   ‘Taro made three cranes with origami.’

     b.* Taro-ga origami-de 3-mai turu-o or-ta
     *Taro-NOM origami-with 3-CL crane-ACC fold-past
     ‘Taro made a crane with three sheets of origami.’ (Takami 1998, 2:90)
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88 a. sono turu-wa, Taro-ga origami-de or-ta

*that crane-TOP Taro-NOM origami-with fold-past

‘Speaking of that crane, Taro made it with origami.’

b.* sono origami-wa, Taro-ga turu-o or-ta

*that origami-TOP Taro-NOM crane-ACC fold-past

‘Speaking of that origami, Taro made a crane with it.’ (ibid.)

According to Takami, (85b) is unacceptable because the phrase *origami-de ‘origami-

ti-with’ cannot be directly topicalized, as in (86b). In particular, what makes (85b)

 unacceptable is the fact that 3-mai (= the secondary topic) is not adjacent to a di-

rectly topicalizable phrase (= the primary topic). The above parallelism does not

by itself constitute counterexamples against the MCR. In fact, it supports the

MCR. The example in (85b) is unacceptable because the postposition *de ‘with’ has

semantic features and projects to the PP. The relevant structure is:

87 * \[NQ \{PP [NP Origami] [\_ de]] [NQ 3-mai]]\]

origami with 3-CL

‘with three sheets of origami’

NP1 and NQ1 do not satisfy the MCR. On the other hand, (86b) is unacceptable be-

cause the postposition *de ‘with,’ which has semantic content, is deleted. The fact

that the postposition *de has its semantic features alone can account both for (85b)

and (86b). The deletion of a semantic-feature-bearing element without sufficient

recoverability violates either the Preservation Law or the Principle of Full Inter-

pretation or both (Chomsky 1995).

88 Preservation Law

Every semantic feature must be preserved in the derivation.

In this way, the MCR together with the Preservation Law, automatically accounts

for the parallelism without any additional assumption. In contrast, Takami (1998)

needs to stipulate the TPC to begin with, which lacks the conceptually necessary
parallelism between direct-topicalizability and NQ-floatability.

Furthermore, if the NQ 3-

*sono 3-ba-wa, Taro-ga origami-de turu-o or-ta
that 3-CL-TOP Taro-NOM origami-with crane-ACC fold-past
‘Speaking of that three (cranes), Taro made cranes with origami.’

If the valid NQ is the secondary topic, it is expected that such an FNQ should be topicalized. However, such FNQ consistently resists topicalization. This suggests the dubious status of the TPC.

Takami (1998, 3:100) faces another difficulty, when he tries to explain the FNQ distribution using what I informally state as the following condition:

Single Focus Condition (SFC)
A sentence must have a single focus, where focus means either the newest and the most important information.


In addition, based on Kuno (1978b), Takami (1998, 3:99) argues for what I informally state as the following condition on the informational structure for Japanese.

Informational Structure Condition on Japanese (ISC)
Without stress, a non-finite nominal preceding the verb is focused, while a finite nominal preceding the verb is defocused.


However, the SFC is dubious for empirical reasons. Consider the following contrast:
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§2 a. * kodomo-ga geragerato 2-ri waraw-ta

\[\text{child-NOM loudly} \quad \text{2-CL laugh-past}\]

‘Two children laughed loudly.’ (Miyagawa 1989)

b. gakusei-ga kyousitu-de 2-ri abaremawar-te-i-ta

\[\text{student-NOM classroom-at 2-CL run wild-to-be-past}\]

‘Two students were running wild in the classroom.’ (Takami 1998, 3:101)

Both examples contain unergative verbs, and these sentences should be unacceptable since there is no subject trace next to the NQ. Takami tries to solve this MCR puzzle using the SFC. Consider the following contrast:

§3 a. * geragerato-wa, kodomo-ga waraw-ta

\[\text{loudly-TOP} \quad \text{child-NOM laugh-past}\]

‘Speaking of being loudly, children laugh in that manner.’

b. kyousitu-de-wa, gakusei-ga abaremawar-te-i-ta

\[\text{classroom-at-TOP student-NOM run wild-to-be-past}\]

‘Speaking of being in the classroom, students were running wild there.’

The manner adverb as geragerato ‘loudly’ cannot be topicalized, whereas the adverb of location as kyousitu-de ‘classroom-at’ can. Topicalization is defocusing. Accordingly, the manner adverb is focused, whereas the adverb of location is defocused. Thus, the informational structures of (93) are the following.

§4 a.

\[\text{F} \quad \text{F}\]

* kodomo-ga geragerato 2-ri waraw-ta

\[\text{child-NOM loudly} \quad \text{2-CL laugh-past}\]

‘Two children laughed loudly’
b. F
  gakusei-ga kyousitu-de 2-ri abaremawar-te-i-ta
  student-NOM classroom-at 2-CL run wild-to-be-past
  ‘Two students were running wild in the classroom.’

Example (94a) violates the SFC. Notice, however, that the contrast is also explained by the PTC. In (94b), the NQ 2-ri (= secondary topic) is adjacent to kyousitu-de ‘classroom-at’ (= the primary topic), which respects the PTC, whereas in (94a), the NQ is not adjacent to the primary topic, which is a violation of the PTC. Why does Takami need both SFC and PTC, which do the same work to account for the NQ distribution? Furthermore, the following contrast poses a problem. Topic 1 stands for the primary topic, and topic 2 stands for the secondary topic.

§5 a. non-topic
       F   F
  kodomo-ga geragerato 2-ri waraw-te-i-ta
  child-NOM loudly 2-CL laugh-to-be-past
  ‘Two children were laughing loudly.’

b. topic1  topic2
       F
  *gakusei-ga kyousitu-de 2-ri abaremawar-ta
  student-NOM classroom-at 2-CL run wild-past
  ‘Two students ran wild in the classroom.’

Example (95a) violates both the SFC and the PTC, and yet the sentence is acceptable. Example (95b) satisfies both the SFC and the PTC, and yet the sentence is unacceptable. Both the SFC and the PTC wrongly predict the opposite validity. Assumedly, existence or absence of the infinitival T te plus the unaccusative i-ru ‘be-nonpast’ affects the acceptability of these examples.
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Appendix III.

Another Illusory MCR Puzzle

Kikuchi (1994) argues that inalienable and event nominals, unlike simple nominals, show an apparent violation of the MCR.

(96) a.* Yamada-sensei-ga [gakusei-no tukue-o] 3-nin taos-ita
   \textit{Yamada-prof.-NOM student-GEN desk-ACC 3-CL knock down-past}
   ‘Prof. Yamada knocked down three students’ desks.’

b. Yamada-sensei-ga [gakusei-no kami-o] 3-nin kir-ta
   \textit{Yamada-prof.-NOM student-GEN hair-ACC 3-CL cut-past}
   ‘Prof. Yamada cut three students’ hair.’

c. Yamada-sensei-ga [gakusei-no hatugen-o] 3-nin seis-ita
   \textit{Yamada-prof.-NOM student-GEN speech-ACC 3-CL stop-past}
   ‘Prof. Yamada stopped three students’ speech.’

Kikuchi classifies \textit{tukue} ‘desk’ as a simple nominal, and \textit{kami} ‘hair’ as an inalienable nominal, and \textit{hatugen} ‘speech’ as an event nominal. Kikuchi argues that event nominals form IP-nominals. Although I do not address this issue for space reasons, I consider the marker \textit{no} in inalienable and event nominals as D [GEN] projecting its DP (DP inherits the feature of both the complement and the specifier), whereas the marker \textit{no} in simple nominals is P projecting PP. Thus, the usual PP intervention causes MCR violation in (96a), while DP and the NQ satisfy the MCR in (96b-c). The following examples suggest that both the specifier and the complement behave as arguments of the verb with inalienable and event nominals:

(97) a.* Yamada-sensei-ga gakusei-o tukue-o taos-ita
   \textit{Yamada-prof.-NOM student-ACC desk-ACC knock down-past}
   ‘(lit.) Prof. Yamada knocked down the student the desk’
b. Yamada-sensei-ga gakusei-o kami-o kir-ta
   \item \textit{Yamada-prof.-NOM student-ACC hair-ACC cut-past}
   \begin{flushright}‘(lit.) Prof. Yamada cut the student the hair.’\end{flushright}

c. Yamada-sensei-ga gakusei-o hatugen-o seis-ita
   \item \textit{Yamada-prof.-NOM student-ACC speech-ACC stop-past}
   \begin{flushright}‘(lit.) Prof. Yamada stopped the student the speech.’\end{flushright}

Examples (97b-c) permit the double-ACC structure. Example (97a) is excluded by the Theta Criterion; \textit{gakusei} ‘student’ lacks theta-role. Note that the NCP-(numeral classifier phrase)-DP analysis of NQ in Kitahara (1993:178) is compatible with our analysis. The NCP-DP analysis would assign the following relevant structure to (96c) provided that the event nominal projects DP with specifier and complement features.

\begin{itemize}
  \item \textit{\[\text{DP} \left[ \text{TP}_{<\text{-cleft}>} \ \text{gakusei-no hatugen-o} \right] \left[ \text{VP} \ v \  \left[ \text{NCP} \ t_n \right] \  \left[ \text{NCP} \ 3\text{-min} \right] \right] \ \text{D}_{<\text{ACC}>} \]}
  \item \textit{student-GEN speech-ACC 3-CL}
\end{itemize}

The original trace of DP and the NC (= NQ) satisfy the MCR. Thus, these examples in fact turn out to support the MCR.

Appendix IV.
On Constituency Issue and MCR
The constituency test based on pseudo-cleft has been problematic for the examination of NQ-associate structure. Consider the following contrast:

\begin{itemize}
  \item a. Taro-ga Hanako-kara moraw-ta-no-va, hon-(*o) da
        \item \textit{Taro-NOM Hanako-from receive-past-that-TOP book-(ACC) be}
        \begin{flushright}‘It is a book that Taro received from Hanako.’\end{flushright}
  \item b. hon-o Hanako-kara moraw-ta-no-va, Taro-(*ga) da
        \item \textit{book-ACC Hanako-from receive-past-that-TOP Taro-(NOM) be}
        \begin{flushright}‘It is Taro who received a book from Hanako.’\end{flushright}
\end{itemize}
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c. Taro-ga hon-o moraw-ta-no-wa, Hanako-*(kara) da
   \textit{Taro-NOM book-ACC receive-past-that-TOP Hanako-(from) be}
   \textquote{‘(lit.) It is Hanako who Taro received a book’}

Case markers as \textit{ga} [NOM] and \textit{o} [ACC] must appear in the focus position in the pseudo-cleft, whereas the postposition \textit{kara} ‘from’ must not. It complicates the analysis if we claim that \textit{hon-o} ‘book-ACC,’ unlike \textit{Hanako-kara} ‘Hanako-from,’ does not form a constituent. We argue that uninterpretable formal features such as NOM and ACC are not checked off in the focus position of pseudo-cleft sentences. A postposition \textit{P} has interpretable semantic features. Therefore, a postposition \textit{P} cannot be deleted; otherwise the sentence would violate the Preservation Law, which requires every interpretable feature be consistently present in the course of the derivation.

I argue that when the NQ and the host NP appear independently of feature checkers such as v and T, the NQ acts as feature checker. Following Kamio (1983) and Terada (1990), I assume that NQ can be a head, and that \textit{hon-o 3-satu} ‘book-ACC 3-counter’ in the following example has the structure in (101).

\begin{verbatim}
Taro-ga kaw-ta-no-wa [hon-o 3-satu] da
   \textit{Taro-NOM buy-past-that-TOP book-ACC 3-CL be}
   \textquote{‘It is three books that Taro has bought.’}
\end{verbatim}

\begin{verbatim}
[NQP NP NQ]
   [Case]
\end{verbatim}

The Case features [NOM] and [ACC] are checked off by the NQ predicate, which is a minimal-projection (head) in this case (Williams 1981, Miyagawa 1989). The feature-checking ability of NQ is supported by the following examples (cf. Shibatani 1977, 1978, Kuno 1978, Kitagawa 1980).

\begin{verbatim}
a. Ken-wa [3-nin-no otoko] to [4-nin-no onna]-no tiimu-o
   \textit{Ken-TOP 3-CL-GEN man and 4-CL-GEN woman-GEN team-ACC}
\end{verbatim}
henseisi-ta
organize-past
‘Ken organized a team of three men and four women.’

b. Ken-wa [otoko-ga 3-nin] to [onna-ga 4-nin]-no tiimu-o
Ken-TOP man-NOM 3-CL and woman-NOM 4-CL-GEN team-ACC

henseisi-ta
organize-past
‘Ken organized a team of three men and four women.’

c. Ken-wa [otoko-o 3-nin] to [onna-o 4-nin]-no tiimu-o
Ken-TOP man-ACC 3-CL and woman-ACC 4-CL-GEN team-ACC

hensei-si-ta
organize-past
‘Ken organized a team of three men and four women.’

The fact that [NOM] and [ACC] can appear in the conjoined nominal in (102b-c) indicates that the Case features are checked off within the nominal without T or v.

My analysis is conceptually compatible with Kitahara’s (1993) analysis. Kitahara (1993) assumes that the D checks [ACC] off, whereas we assume that the head NQ (NC in Kitahara (1993)) performs the same job. If we assume, following Kitahara (1993), that the Spec-Head agreement plays a role in NCP (my NQP), it is possible that the host NP moves to the specifier position of the head NQ.

Notice that we cannot invoke feature checking by v here, since if v were available in the focus position of the pseudo-cleft, the following example would also be as acceptable as (100).

*Taro-ga kaw-ta-no-wa [3-satu hon-o] da
Taro-NOM buy-past-that-TOP 3-CL book-ACC be
‘It is three books that Taro has bought.’
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I argue that (103) is unacceptable since the NQP, which adjoins to NP, cannot check [ACC] off in the configuration as in the following. The NQ behaves as a maximal projection in this case. Notice that there is no need to derive <NQ, NP> by fronting NQ from <NP, NQ>.

[NP NQP [NP N]]
[Case]

The NQP, which adjoins to the host NP, cannot form an appropriate checking configuration. Although Kitahara (1993), following Kamio (1983), assumes that the example is acceptable, the following example is in fact degraded with the neutral intonation.

*Taro-ga kaw-ta-no-wa, hon 3-satu-o da

\textit{Taro-NOM buy-past-that-TOP book 3-CL-GEN be}

‘It is three books that Taro has bought.’

In this case, 3-satu behaves as an NP, and there is no predicate to check its formal features. (103) and (105) are excluded because [ACC] is not checked off. Thus, I support Terada (1990), and argue against Kitahara (1993), in that the numeral quantifier can be (the head of) NQP or NP. The category-shift happens in the grammar.

a. [NP ooku-ga] gakusei dat-ta

\textit{many-NOM student be-past}

‘Many were students.’

b. gakusei-ga [ADV ooku] i-ta

\textit{student-NOM many be-past}

‘Students were many.’

According to Kitahara (1993), (103) is invalid since the NCP (my NQP) scrambled completely out of the complex DP. However, it is not clear as to what the NCP
adjoins to in (103). The only possibility is that the NCP adjoins to the DP, but then the whole structure can constitute a single constituent, thereby wrongly predicting that (103) would be acceptable. Let us return to the original problem.

a. Taro-ga  hon-o  3-satu  kaw-ta
   *Taro-NOM book-ACC 3-CL buy-past*
   ‘Taro bought three books.’

b. Taro-ga   3-satu hon-o   kaw-ta
   *Taro-NOM 3-CL book-ACC buy-past*
   ‘Taro bought three books.’

d. Taro-ga kaw-ta-no-wa,  hon-o  3-satu da
   *Taro-NOM buy-past-that-TOP book-ACC 3-CL be*
   ‘It is three books that Taro has bought.’

e. Taro-ga kaw-ta-no-wa,  3-satu hon-o da
   *Taro-NOM buy-past-that-TOP 3-CL book-ACC be*
   ‘It is three books that Taro has bought.’

Thus, we argue that (107) and (108) are accounted for independently. The NQ and the host NP externally merge in the complement position of V in both cases (107a,b). In (107a), the Obj moves to [Spec, vP], and the MCR is satisfied by the Obj trace and the remaining NQ. In (107b), the Obj NP moves to [Spec, vP], and the NQ as NQP adjoins to a v-projection. The MCR is satisfied by the original traces of the NP and the NQ. In (108a), the uninterpretable feature [ACC] is checked off by the predicate NQ as a head. In (108b), the NQ as NQP adjoins to the host NP, and [ACC] is unchecked in this structure. Thus, no problem arises in assuming that the both NQs in (107) are NP-NQs. Ishii’s (1998) argument for the VP-NQ does not hold. These arguments support the MCR.
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Notes

1) This study is supported in part by the Grant-in-Aid for Scientific Research (C) provided by the Japanese Ministry of Education, Culture, Sports, Science and Technology for 1998-2000 (Project No. 13610669). This project is also supported in part by a Research Grant provided by St. Andrew’s University (Osaka, Japan) for 2003-2004, which enabled my study at the Massachusetts Institute of Technology (Cambridge, Massachusetts, USA) with Prof. Shigeru Miyagawa, who is the first scholar to propose the Mutual C-Command Requirement (MCR): a numeral quantifier (or the trace/copy) and the associate (or the trace/copy) must symmetrically c-command. I am greatly indebted to Prof. Miyagawa for the initiation of the project. See Miyagawa and Arikawa (2003, 2004) for more conclusive arguments for the MCR.

2) For using NQ distribution as a diagnostic test for examining the trajectory of movement, see Sportiche (1988) and McCloskey (2000). Consider the following:

(i) a. Tous les enfants ont vu ce film
   all the children have seen this movie

   b. Les enfants ont tous vu ce film
   the children have all seen this movie

(Sportiche 1988:426)

In French, the quantifier tous ‘all’ shows the trajectory of movement. In (ib), there is a Subj trace between ont ‘have’ and vu ‘seen.’

3) It is worth noting that Haig (1980), citing examples from Kuno (1978a), reports the acceptability gradation with respect to NQ.

(i) a.* sensei-ga kodomo-ni 3-nin hon-o yar-ta
   teacher-NOM child-to 3-CL book-ACC give-past
   ‘The teacher gave books to three children.’

   b.** sensei-ga kodomo-ni hon-o 3-nin yar-ta
   teacher-NOM child-to book-ACC 3-CL give-past
The acceptability gradation has played an important role in the generative tradition.

(ii) a. ?? Who, do you wonder [whether John said t₁ solved the problem]?
    b. * How, do you wonder [whether John said Mary solved the problem t₂]?

(Lasnik 2000)

The example in (ii(a)) is mildly unacceptable since the wh-phrase who has crossed a wh-island (an opaque area for wh-movement), thereby violating a principle of movement. The example in (ii(b)) is worse since the wh-phrase not only crossed the island but also the trace left by the movement violated some principle: the adjunct trace, not being a member of the arguments of the verb, must have its antecedent nearby for information recovery. Our first approximation about the contrast in (i) is that only the MCR is violated in (i(a)), whereas both the MCR and a principle of Agree are both violated in (i(b)). See Kitahara (1993) for agreement of NQ.

4) CL = classifier/counter. As for the transcription, the verbal stem in Japanese is indicated phonemically, ignoring the phonetic adjustment on the last consonant of the stem followed by [t].

The examples must be read without any stress or pause unless otherwise indicated. This is crucial since one of our claims is that stresses and pauses create a significant structural shift. The lack of attention to the phonological aspect of these examples has led to serious confusion in the literature. See also Chomsky (1993b) calling for the same cautious attitude in the study of wh-in situ in English.

5) Subj = subject, Obj = object, and V = main verb.

6) A nominative Obj (Obj-nom) permits long-distance scrambling.

(ii) nihongo-ga [John-ga [Mary-ni t₁ yom-e-ru to] omotteiru]

Japanese-NOM John-NOM Mary-DAT read-can-nonpast that think

‘Japanese, John thinks that Mary can read.’

(Takezawa 1987:129)
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However, as we will see in 3.2.7, Obj-nom scrambling is not entirely free, as in the following:

* raamen-ga gakusei-ga 3-nin t, tabe-ta-i-rasii
  noodles-NOM student-NOM 3-CL eat-want-nonpast-seem
  ‘It seems that three students want to eat noodles.’

7) For evidence for Obj movement, e.g., pronominal binding facts, see Saito (1985).

8) A typical transitive verb is used in the examples unless otherwise indicated. For the relevance of the verb choice for NQ distribution, see Appendix I.

9) The copy theory of movement, which is consistent with the Preservation Law, i.e., no new element is added in the derivation (Chomsky 1993a), does not affect the validity of the MCR.

10) Both a “higher” adverb (related to a VP-external projection) such as imamadeni ‘so far (lit. Now-until-at)’ or a “lower” (manner) adverb (related to VP projection) such as yakkurito ‘slowly’ count as additional adjuncts. Interestingly, for unaccusative verbs, in contrast to unergative verbs, the addition of an adjunct makes the sentence less acceptable (the anti-additional-adjunct effect) (Miyagawa 1989, Takami 1998).

(i) a. seito-ga [vp kono kaidan-de 3-nin korob-da]
      pupil-NOM this step-at 3-CL fall-past
      ‘Three pupils fell at this step.’

b. * seito-ga [vp kono kaidan-de totuizen 3-nin korob-da]
      pupil-NOM this step-at suddenly 3-CL fall-past
      ‘Three pupils fell at this step suddenly.’

Provided that the NQ is the head of the predicate, the additional adverb tucks in and adjoins to the NQ’, breaking the mutual c-command relation. The relevant structure of (ib) is the following:
...[vp kono kaidan-de [vp [NGP t [[NG totuzen [NG [[NG 3-nin]]]...]

this step-at t [[pupil-NOM abruptly 3-CL]

11) SP = sentential particle
12) A possible solution for this MCR puzzle is suggested in Appendix III.
13) Nishigauchi & Ishii (2003:77) claim that (i) has the multiple-event reading only.

(i) Nadakou-no seito-wa, maitosi Toudai-o 80-
Nada-high school-GEN student-TOP every year Tokyo University-ACC 80-
nin-izyou zyukensu-ru

CL-over take exam-nonpast
‘As for Nada high school students, more than 80 of them take entrance exam
of Tokyo University every year. (cf. Takami 1998, 1:91)

According to Nishigauchi and Ishii, an entrance examination is a personal event
that takes place individually (multiple events), although the examination itself
may be a single event. This is ad-hoc and raises a methodological problem. Con-
sider the following dialogue:

(ii) A: kono sinkan-zassi, ure-te-masu-ka?

this newly-edited magazine sell-to-polite-nonpast-Q
‘Does this new magazine sell well?’

B: ee, kesa-mo gakusei-san-ga sore-o 5-nin kaw-te-ikimas-ita-yo

yes this morning-also student-polite-NOM it-ACC 5-CL buy-to-go-polite-past-SP
‘Yes, five students came to buy it this morning also.’

(Takami 1998, 1:91)

Nishigauchi and Ishii argue that (iiB) requires distributive (multiple event) read-
ing only, which is (iiiib).

三是 a. There was a single event of a group of students buying the magazine to-
gether at the same time (the single-event reading).
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b. There were five unrelated and independent events of buying the magazine (the multiple-event reading).

According to them, (iiB) becomes unacceptable when the verb forces a single-event reading.

A: kono zassi, ninki arimasu-ka?
this magazine popularity be-polite-nonpast-Q
‘Does this magazine have popularity?’

B*: ee, sakki-mo sokode gakusei-san-ga saisingou-o 5-nin
yes a while ago-also there student-polite-NOM new edition-ACC 5-CL
ubaiaw-te-i-mas-ita-yo
struggle-to-get-to-be-polite-past-SP
‘Yes, 5 students was struggling each other again to get it a while ago at that place.’
(Nishigauchi & Ishii 2003:78)

They claim that (ivB) is unacceptable since the non-distributive (single event) reading is forced on VP-NQ. The judgement is not clear. Furthermore, Nishigauchi and Ishii avoid D-linked Obj and add stage-level adverbs. Since we are testing the semantics of the verb, everything else must be kept constant as much as possible. Such arbitrary alternations may distort the test results. See Appendix I for examples in which a D-linked Obj and addition of the auxiliary verb *ik-u ‘go’ matter.

15) Kitahara (1993) argues for a similar analysis in which NCP (a complement of DP) adjoins to a projection other than the DP containing the NCP.
16) In fact, Kitahara (1993:174) argues against Terada (1990), who claims that a numeral quantifier can be both a minimal and maximal projection by invoking the structure preservation. However, given the Bare Phrase Structure Theory (Chomsky 1994), one can readily assume that an element can be both minimal
and maximal at the same time. Thus, the issue of structure preserving does not arise.


(i) Taro-ga kaw-ta-no-wa, hon 3-satu-o da

_Taro-NOM buy-past-that-TOP book 3-CL-ACC be_

‘It is three books that Taro has bought.’

Although Kamio (1983) gives full acceptability to the sentence in (i), the above example is less acceptable with the neutral intonation. With strong stress and pause, all these examples somehow become acceptable. PF features as stress and pause play a crucial role. Kamio (1983) points out that the same contrast appears in coordination.

(ii) a. Taro-wa hon-o 3-satu to pen-o 3-bon kaw-ta

_Taro-TOP book-ACC 3-CL and pen-ACC 3-CL buy-past_

‘Taro bought three books and three pens.’

b. Taro-wa hon 3-satu to pen 3-bon-o kaw-ta

_Taro-TOP book 3-CL and pen 3-CL-ACC buy-past_

‘Taro bought three books and three pens.’

c. *Taro-wa 3-satu hon to 3-bon pen-o kaw-ta

_Taro-TOP 3-CL book and 3-CL pen-ACC buy-past_

‘Taro bought three books and three pens.’

See Kitahara (1993) for the unified analysis of the NP-NQ order variation.

18) For the reason as I will discuss below, this example poses a problem also for Kitahara (1993). Again, it is crucial that the example is read with the neutral intonation without any stress or pause. Strong stresses and pauses make all the relevant examples relatively acceptable.

According to Kitahara, _hon-o ‘book-ACC’_ in the focused position of the cleft must have the following structure. NC stands for Numeral Classifier,
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which is the NQ (numeral quantifier).

(i) \[[\text{DP} \text{ hon}_i-\text{o} [\text{DP} \text{ t}^\prime, [\text{NCP} \text{ t}, \text{NC}]]] \text{D}]\]

\textit{book-ACC}

NP-ACC merges with the phonetically null NC. NP-ACC first moves to [Spec, NCP] for numeral-feature-checking. It then moves to [Spec, DP] for Case-checking. The resulting structure forms a constituent, and the model predicts that the relevant example should be acceptable, contrary to the fact. Furthermore, it is dubious that D checks [ACC] off. The standard assumption is that D checks [GEN] off. If D checks [ACC] off, the role of \(v\) becomes unclear in a simple SOV sentence. Furthermore, the following contrast poses a problem:

(ii) a.* gakusei-no 3-nin daigaku-o hihansi-ta riyuu

\textit{student-GEN 3-CL university-ACC criticize-past reason}

‘the reason why three students criticized the university’

b. gakusei 3-nin-no daigaku-o hihansi-ta riyuu

\textit{student 3-CL-GEN university-ACC criticize-past reason}

‘the reason why three students criticized the university’

c.* 3-nin gakusei-no daigaku-o hihansi-ta riyuu

\textit{3-CL student-GEN university-ACC criticize-past reason}

‘the reason why three students criticized the university’

The distribution of the genitive Subj in an embedded clause within a complex DP is highly restricted with respect to the NQ. Examples (iia) and (iic) are not readily accounted for by Kitahara’s NCP-DP analysis.

19) A possible solution to this problem is suggested in Appendix IV.

20) The controversial issue is the position of the main verb and Obj before and after Spell Out. The standard analysis to rule (25c) out is to assume that the main verb raises to \(T\) in the syntax, which invokes a Theta Criterion violation, since the remaining Obj cannot recover the theta role due to the weak nature of AGR
(or opaque AGR, in the sense that it cannot transmit the theta to the tail of the chain of the V-movement) in English (Emonds 1978, Pollock 1989, Chomsky 1991). Non-theta-bearing auxiliary verbs raise to T before Spell-Out in English, which takes place for both the main verbs and auxiliary verbs in a strong-feature-active language as French, which has a strong AGR (or transparent AGR). The issue is notorious because it always confounds any analysis, hence is always debatable.

We adopt the basic line of Lasnik’s (1981, 2000:187-196) analysis that the main verb and T in English are not combined in the narrow syntax (before Spell-Out), unlike in a language such as French. Lasnik (1981) suggested that they are combined in the interface between the syntax and morphology. We tentatively assume that the combination operation takes place at PF, where adjacency is respected. We assume that a main verb adjoins to v before Spell-Out, which is not assumed in Lasnik (2000).

21) The light verb v attracts the Adv before the V adjoins to the v. Before V raising, Adv is closer to the v than the Obj. We argue that this urgency comes from the fact that the Adv is an argument bearing an uninterpretable feature awaiting checking and deletion.

22) When the Adv behaves as an argument, the Adv in the broad sense includes an adverb, a stress, and a pause. To see how a pause behaves as an argumental Adv, consider the following example (Haig 1980):

(i) otoko-ga kodomo-o 3-nin yuukaisi-ta
    man-NOM child-ACC 3-CL kidnap-past
    ‘A man kidnapped three children.’ (Haig 1980:1069)

Haig reports that (i) is ambiguous.

(ii) a. A man kidnapped three children.
    b. Three men kidnapped a child/children.

Here the intonation plays a crucial role. The interpretation in (iia) is facilitated when the intonation is neutral, i.e., no stress or pause. On the other hand, the
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interpretation in (iiib) is facilitated when the Subj and the NQ are stressed or pauses are inserted around them. Thus, (i) must be represented in two ways:

\[\begin{align*}
\text{a. otoko-ga} & \quad \text{kodomo-o} \quad 3\text{-nin yuukaisi-ta} \quad (= \text{iiia}) \\
& \quad \text{man-NOM child-ACC 3-CL kidnap-past} \\
& \quad \text{`A man kidnapped three children.'} \\
\text{b. OTOKO-GA} & \quad \text{kodomo-o} \quad || \quad 3\text{-nin yuukaisi-ta} \quad (= \text{iiib}) \\
& \quad \text{man-NOM child-ACC 3-CL kidnap-past} \\
& \quad \text{`Three men kidnapped a child.'}
\end{align*}\]

We argue that (iiiia) has SOV1, whereas (iiib) has SOV2. Miyagawa (1997, 2001, 2003) assumes that T attracts an Obj only when V raises to T. The assumption must explain why such head movement is required, however.

23) It follows that the V-to-v-to-T head movement is required in order to have v under T, and not to expand the minimal domain. Given that V adjoins to v, both Subj and Obj are already in the same minimal domain, and hence they are equi-distant from T. The definitions of domain, minimal domain, and distance are the following:

(i) The domain of a head H = def. The set of nodes contained in the maximal projection of H (Max(H)) that are distinct from and do not contain H.

(ii) The minimal domain of a head H = def. For any set S of categories of the domain of a head H, the smallest subset K of S such that for any X contained in S, some Y contained in K reflexively dominates X.

(Cf. Chomsky 1995:178)

(iii) Distance = def. If A c-commands B, when targeting K for raising, with T the actual target of movement, A is closer to K than B is, unless

(a) A and T are in the same minimal domain, or

(b) A and B are in the same minimal domain. (cf. Uriagereka 1998)

24) There is evidence that Obj scrambling shows properties of both A and A’-
movement, indicating that the Obj occupies two different positions. Hence, two
different sources for OSV order exist, which in turn suggests that there are at
least two distinct sources for SOV order (Kuroda 1980, 1983, Haig 1980, Mahajan
1990).

25) The other possibility is that the Subj is checked [NOM] off in [Spec, vP] via ex-
ceptional Case marking (ECM) by T (Nishigauchi & Ishii 2003). This factor does
not affect our analysis.

SOV2 is compatible with Kuroda’s (1988) hypothesis for OSV, which is com-
patible with the view that the Subj remains in [Spec, vP], and the Obj moves to
[Spec, TP]. Evidence for Obj movement to [Spec, TP] comes from factors such as
pronominal coreference, crossover, and quantifier floating (Kuroda 1980, 1983,
Haig 1980, Saito 1985). It follows that there are at least two sources for OSV or-
der, OSV1 and OSV2. For OSV1, the V adjoins to the v, the Obj moves to [Spec,
vP], the Subj moves to [Spec, TP], and the Obj adjoins to the TP for [FOCUS]-
checking. For OSV2, the V adjoins to the v, the V+v adjoins to T, the Obj moves
to [Spec, TP], and the Subj in another [Spec, vP] is feature-checked by T by ECM
for evidence for OSV1 and OSV2. An important consequence is that the option
of scrambling is eliminated. Every step in scrambling is driven in the last-resort
fashion.

26) For expository purposes, we will not hereafter make a distinction between ex-
ternal Merge and internal Merge unless otherwise necessary.

27) See Miyagawa (1997, 2003) for empirical evidence for Obj movement to [Spec,
TP] and for V-to-v-to-T head movement in SOV2.

28) NQ-FP also saves the sentence with a fronted NQ-obj.

(i) a.?” 3-nin Tanaka-sensei-ga gakusei-o home-ta

3-CL Tanaka-professor-NOM student-ACC praise-past
‘Professor Tanaka praised three students.’

b. 3-nin-sika Tanaka-sensei-wa gakusei-o home-nakat-ta

3-CL-FP Tanaka-professor-TOP student-ACC praise-not-past
‘Professor Tanaka praised only three students.’
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(ii) a. * 3-nin Taro-ga  zyosei-o  ais-ite-i-ru

\[ 3-CL \ Taro-NOM \ woman-ACC \ love-to-be-nonpast \]

‘Taro loves three women.’

b. 3-nin-mo Taro-ga  zyosei-o  ais-ite-i-ru-nante

\[ 3-CL-FP \ Taro-NOM \ woman-ACC \ love-to-be-nonpast \ that \]

‘(I was amazed by the fact) that Taro loves as many as three women.’

(Takami 1998, 2:88)

The NQ as 3-nin is a head (Terada 1990, Kitahara 1993) and scrambling the head to the sentence-initial position somehow violates the locality condition, i.e., it crosses over too many other heads. The NQ-adv behaves as an argument and freely scrambles.

29) The Late Insertion Hypothesis of adverbial elements solves the binding puzzle as the following (Lebeaux 1988, 1991).

(i) a. * Whose claim that John, stole the money did he, reject?

b. Whose claim that John, had heard before did he, reject?

The example (ia) shows the Condition (C) violation, but (ib) does not. Lebeaux solves the puzzle by assuming that ‘that John stole the money’ in (ia) is the complement of the head of the complex NP, whereas ‘that John had heard before’ in (ib) is an adjunct. Only the former is introduced in the primary plane cyclically before wh-movement. It follows that the Condition (C) violation occurs before the wh-movement in (ia). In (ib), the adjunct clause is tucked in after the wh-movement of the relative head, thereby avoiding the same violation.

30) The following contrast supports our analysis.

(i) a. dareka-ga  dono madogarasu-mo  war-ta

\[ someone-NOM \ which \ window \ glass-also \ break-past \]

‘Someone broke every window.’

\[ (someone > every \ window, \ *every \ window > someone) \]
b. darekasira-ga dono madogarasu-mo war-ta
   someone-NOM which window glass-also break-past
   ‘Someone broke every window.’
   (someone > every window, every window > someone)

The following contrast suggests that dareka ‘someone’ is nominal, whereas darekasira ‘someone’ (Lit. Who I wonder) is adverbial.

(iii) a. dareka-san
   someone-polite
   ‘Mr/Ms so and so’

b.* darekasira-san
   someone (I wonder who)-polite
   ‘Mr/Ms so and so.’

The affixa -san ‘Mr/Ms’ selects only a nominal element. In (ib) (=SOV2), after v merges with the VP, an adverbial Subj QP darekasira occupies [Spec, vP] and is assigned a theta. Being adverbial in nature, the Subj QP immediately adjoins to the vP, and this inactivates the feature-checking ability of v (the additional-adject effect). The Obj cannot be feature-checked by the v. As a last resort, the Obj QP is forced to move to [Spec, TP] for EPP/Case-checking. The Subj QP later adjoins to the TP. The TP-adjointed Subj QP c-commands the Obj QP in [Spec, TP], and the Obj QP c-commands the trace of the Subj QP. This symmetrical c-command relation creates the scope ambiguity in (ib).

31) Let us put aside controversial issues around the A and A-bar positions. For expository purposes, assume that the Spec of the projection under TP is an A-position, and the Spec of CP is an A-bar position. There is evidence from binding facts that the Obj DP occupies an A-position in OSV order in Japanese.

32) FP = focus particle

33) Kishimoto (2001) postulates the Scope Domain Condition (SDC) for indeterminate pronoun licensing.
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(i) SDC
Y is in the domain of a head X if it is contained in Max (X), where Max (X) is the least-full category maximal projection dominating X

(Kishimoto 2001:601)

The indeterminate pronoun must be within the scope domain of the NPI particle mo, and the NPI particle must be within the domain of NEG.

34) Haig (1980:1066) discusses similar examples with approximate numerals in Inoue (1978) and Kuno (1978a). Consider the following contrast:

(i) a.* tomodati-ni 5-nin tegami-o kak-ta
friend-DAT 5-CL letter-ACC write-past
'I wrote letters to five friends of mine.'

b.(?) tomodati-ni 4,5-nin tegami-o kak-ta
friend-DAT 4,5-CL letter-ACC write-past
'I wrote letters to five friends of mine.' (cf. Kuno 1978a)

Inoue (1978) uses the following examples to argue against the transformational approach to NQ:

(ii) a.*ryokan-ni 3-ken atar-te-mi-ta
hotel-DAT 3-CL try-try-past
'I tried three hotels.'

b. ryokan-ni 2,3-gen atar-te-mi-ta
hotel-DAT 2,3-CL try-try-past
'I tried two or three hotels.' (cf. Inoue 1978)

Haig (1980) presents the following example:
kyonen  huyuyama-ni  100-gurai nobor-ta
last year winter mountain-DAT 100-about climb-past
I climbed about 100 winter mountains last year.’  (Haig 1980)

In this connection, Kawashima (1994, 1998) reports that an approximate numeral without counter, call it bare ANQ, which is not productive, cannot precede the host NP. For example:

a.  John-ga  mikan-o  2,3  moraw-te-ki-ta
   John-NOM  orange-ACC  2,3  receive-come-past
   ‘John received two or three oranges and came.’

b.*  2,3  John-ga  mikan-o  moraw-te-ki-ta
   2,3  John-NOM  orange-ACC  receive-come-past
   ‘John received two or three oranges and came.’

(v)  a.  John-ga  hon-o  2,3  mot-te-ki-ta
    John-NOM  book-ACC  2,3  bring-come-past
    ‘John brought two or three books and came.’

b.*  2,3  John-ga  hon-o  mot-te-ki-ta
    2,3  John-NOM  book-ACC  bring-come-past
    ‘John brought two or three books and came.’

(vi)  a.  Taro-ga  soko-no  hon-o  subete kaw-ta
    Taro-NOM  there-GEN  book-ACC  all  buy-past
    ‘Taro bought all the books there.’

b.*  subete  Taro-ga  soko-no  hon-o  kaw-ta
    all  Taro-NOM  there-GEN  book-ACC  buy-past
    ‘Taro bought all the books there’  (cf. Kawashima 1994:85, fn.37)

We argue that a bare ANQ contains a variable. For example, the logical
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structure of 2,3 is [2x or 3x], and that of subete ‘all’ is [all x], just as ‘every’ and ‘some’ are assumed as [every x] and [some x], respectively. In the above examples, all (a) examples are acceptable since the variable is bound by the host NP. In the (b) examples, the variable is not bound by the host NP.

35) Discourse (D)-linking affects the extractability of the wh-phrase (Pesetsky 1987). Consider the following contrast:

(i) a. Who bought what?
   b. Who bought which one?
   c.* Who bought what the hell?
   d. Who the hell bought that?

(ii) a. Mary-wa [[nani-o kaw-ta] hito]-o sagas-ite-i-ru-no?

   *Mary-TOP what-ACC buy-past person-ACC look for-to-be-nonpast-Q

   ‘(lit.) What is Mary looking for a person that bought?’

   b. Mary-wa [[dono hon-o kaw-ta] hito]-o sagas-ite-i-ru-no?

   *Mary-TOP which book-ACC buy-past person-ACC look for-to-be-nonpast-Q

   ‘(lit.) Which book is Mary looking for a person that bought?’

   c.* Mary-wa [[ittai nani-o kaw-ta] hito]-o sagas-ite-i-ru-no?

   *Mary-TOP hell what-ACC buy-past person-ACC look for-to-be-nonpast-Q

   ‘(lit.) What the hell is Mary looking for the person that bought?’

   d. Ittai-nanii-o Mary-wa [[ ti kaw-ta] hito]-o sagas-ite-i-ru-no?

   *Hell-what-ACC Mary-TOP buy-past person-ACC look for-to-be-nonpast-Q

   ‘(lit.) What the hell is Mary looking for the person that bought?’

A D-linked wh-phrase can undergo LF-wh movement, whereas an aggressively non-D-linked wh-phrase must move to the matrix [Spec, CP] before Spell-Out; i.e., the movement needs the PF effect.

36) Inoue (1978) contains similar examples in which specificity or definiteness improves the NQ-floatability, although the examples are introduced in a different
theoretical context.

(i) a.*Watasi-wa yadoya-ni 5-ken atar-te-mi-ta

\[
I-\text{TOP} \quad \text{hotel-DAT} \ 5-\text{CL} \ \text{try-try-past}
\]

'I tried 5 hotels.'

b. Watasi-wa dantaikyaku-o tomeru yadoya-ni 5-ken atar-te-mi-ta

\[
I-\text{TOP} \quad \text{group-ACC} \quad \text{stay} \quad \text{hotel-DAT} \ 5-\text{CL} \ \text{try-try-past}
\]

'I tried 5 hotels that is possible for group to stay.' (cf. Inoue 1978)

The addition of the relative clause makes the sentence more acceptable.

37) See Mihara (1997) for the relevance of aspectual properties of verbs with NQ-floatability.

38) For an insightful classification of verbal stems, see Taramura (1982), which I have adopted here.

39) The following examples highlight the same point:

(i) a. 30-byou-no kyoku-o kik-ta

\[
30 \ \text{second-GEN} \ \text{song-ACC} \ \text{listen-past}
\]

'I listened to a 30-second song.'

b. kyoku-o 30-byou kik-ta

\[
\text{song-ACC} \ 30-\text{second} \ \text{listen-past}
\]

'I listened to the song for 30 seconds.'
On the Symmetric C-Command

On the Symmetric C-Command

Koji ARIKAWA

The Symmetric C-Command is the strictest structural relationship found in the computational system of human natural language. Since Miyagawa’s (1989) insightful study of the Mutual C-Command Requirement (MCR), the validity of the MCR has consistently been challenged by apparent counterexamples. However, those MCR counterexamples are readily explained by the MCR accompanied by the hypothesis that there are two sources of SOV order in Japanese, which are independently motivated by many syntactic evidence. For example, evidence from scope, complex predicate, anaphor binding, pronominal binding, and variable binding support the hypothesis. More specifically, the apparent counterexamples of the MCR involve the Object-DP movement into the Specifier position of the Tense Projection ([Spec, TP]), followed by the Subject-DP adjunction to the TP (= SOV2). This provides the structure in which the trace of the Subject DP and the Floated Numeral Quantifier (FNQ) satisfy the MCR within the projection of the light verb (vP) (Miyagawa and Arikawa 2003, 2004). If this is correct, the alleged counterexamples of the MCR become syntactically predictable examples. In fact, those counterexamples support the MCR and the SOV1/SOV2 Dichotomy Hypothesis. I also provided the typological survey of the counterexamples of the MCR. I found that the various types of the MCR-counterexample form a natural class in that they involve a type of verbal projection “modification.” I argued that such modification includes the blocking effect of feature-checking in the verbal projection. Particularly, the modifying element is located on the edge of the verbal projection, and it suspends the
feature checking ability of the verbal system. This in turn forces the Ob-
ject to move to [Spec, TP]. A detailed presentation of the typology of the
MCR-counterexample is provided in the Appendix with possible solu-
tions.