

Raising to Object in Japanese: An HPSG Analysis

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Abstract

This paper discusses the so-called raising to object (RTO), which provides interesting problems with respect to the syntactic/semantic status of an accusative-marked NP. We argue that two types of matrix verb, control and raising, must be recognized in the construction. The linearization approach can capture the possibility of word order variation, especially, the distribution of accusative-marked NP in the construction. Moreover, we suggest that RTO involves a non-thematic NP related to the embedded predicate via predication.

1 Introduction

In some languages, an argument that belongs semantically to an embedded clause is realized syntactically as an object of a matrix clause, this “raising to object” (RTO) is schematized as follows:

- (1) [*matrix* subject ... object_{*i*} [*embedded* Δ_{*i*} ...] ...]

The term “raising” has its origin in the transformational analysis of such constructions in which the subject of the lower clause is “raised” to become the object of the matrix verb (Postal, 1974; Lasnik and Saito, 1991; among others).

In Japanese, it has been noted in the literature on transformational syntax that examples such as (2) share syntactic properties with English counterparts:

- (2) a. Yamada-wa Tanaka-o_{*i*} [*t_i* baka da]
Yamada-TOP Tanaka-ACC fool COP
to omotta.
COMP thought
‘Yamada thought Tanaka [to be a fool.]’

- b. Yamada-wa [Tanaka-ga baka da]
Yamada-TOP Tanaka-NOM fool COP
to omotta.
COMP thought
‘Yamada thought [that Tanaka was a fool.]’
(Kuno (1976): pp. 23-24, Slightly altered.)

As those glosses indicate, (2a) and (2b) show the same case alternation patterns that English exhibits.

There are a number of conditions which must be satisfied in order to form a grammatical RTO construction, but in this paper, we focus on the predicational relation between the accusative-marked NP and the complement predicate. More specifically, we argue that RTO involves a non-thematic NP related to the embedded predicate via predication.

2 Word Order and Embedded Predicate

While there can be no doubt that Kuno’s (1976) RTO phenomenon exists in Japanese (Tanaka, 2002), there are at least two questions that cannot be accounted for by his analysis.

One of the problems is concerned with the word order of an accusative-marked NP, which can be generally scrambled. Consider (3):

- (3) a. Yamada-wa Tanaka(-no koto)-o
Yamada-TOP Tanaka-GEN matter-ACC
baka da to omotta.
fool is that thought
‘Yamada thought Tanaka to be a fool.’
(Kuno 1976: 24)
- b. Yamada-wa baka da to Tanaka*(-no koto)-o
omotta. (Kuno 1976: 35)

Kuno's observation indicates that *Tanaka-o* 'Tanaka-ACC' can not be located to the right of the complement clause, while *Tanaka-no koto-o* 'Tanaka-GEN matter-ACC' can. The question arising from this contrast is: How can we derive the difference between *Tanaka-o* and *Tanaka-no koto-o* to account for their scramblability?

Another question comes from the restriction of embedded predicates. Kuno suggests that this is limited to 'either adjectives or nominal + copula *da*' (Kuno 1976, p. 33). Consider (4):

- (4) a. *Ken-wa Naomi-o Tokyo-ni kita to
 K-TOP N-ACC Tokyo-DAT came that
 omotta.
 thought
 'Ken thought that Naomi came to Tokyo.'
- b. Ken-wa Naomi-o futot-teiru to
 K-TOP N-ACC fattened-PROG that
 omotta.
 thought
 '(Lit.) Ken thought that Naomi was being
 fattened.'

As Kuno's restriction predicts, RTO is not licensed in (4a) with *kita* 'came'. However, it is licensed in (4b) with *futot-teiru* 'being fattened', though the predicate is neither the adjectives or nominal + copula *da* form. The question arising immediately from this contrast is: How can we define the nature of the embedded predicates allowing RTO?

In the rest of this paper, we will seek the answer to these questions, examining how RTO can be dealt with within the framework of HPSG (Pollard and Sag, 1987; Pollard and Sag, 1994; Sag, Wasow and Bender, 2003).

3 Two Types of Matrix Verb

In this section, we will argue that there are two types of *omow* 'think', and account for the scramblability in (3), based on their lexical entries.

3.1 NP-no koto Sentence and Control Verb

Kuno extensively discusses that control (equi) constructions like (5) have a number of properties which are not found in raising constructions.

One of his tests comes from the scramblability of the complement clause. Compare (5) with (3):

- (5) a. Yamada-wa Tanaka-ni sore-o suru
 Yamada-TOP Tanaka-DAT it-ACC do
 koto-o mejijita
 that-ACC ordered
 'Yamada ordered Tanaka to do it.'
 (Kuno 1976: 34)
- b. Yamada-wa sore-o suru koto-o Tanaka-ni
 mejiji-ta.
 (Kuno 1976: 35)

Tanaka-ni 'Tanaka-DAT' in (5b) and *Tanaka-no koto-o* 'Tanaka-GEN matter-ACC' in (3b) can be located to the right of the complement clause, while *Tanaka-o* 'Tanaka-ACC' in (3b) can not. It is noteworthy that the dative-marked NP and the NP-*no koto-o* behave in the same manner.

Another test is concerned with the equi-NP. Kuno points out that equi-NP deletion is not obligatory process, although (6) is less natural than (5a).

- (6)?Yamada-wa Tanaka_i-ni kare_i-ga sore-o
 Yamada-TOP Tanaka-DAT he-NOM it-ACC
 suru koto-o mejijita
 do that-ACC ordered
 '(Lit.) Yamada ordered Tanaka that he do it.'
 (Kuno 1976: 35)

Now consider a raising construction with a resumptive pronoun *kare-ga* 'he-NOM':

- (7) Yamada-wa Tanaka?(?)(-no koto)-o
 Yamada-TOP Tanaka-GEN matter-ACC
 kare_i-ga baka da to omotta.
 he-NOM fool is that thought
 '(Lit.) Yamada thought Tanaka that he was a
 fool.'

It is interesting that *kare-ga* 'he-NOM' co-occurs with NP-*no koto-o*. Though we will not be concerned with the problem of how resumptive pronouns are licensed, the crucial point here is that *Tanaka-ni* 'Tanaka-DAT' in (6) and *Tanaka-no koto-o* 'Tanaka-GEN matter-ACC' in (7) share certain characteristics.

Kuno indicates that when the object of raising verbs is human, *no koto* appears optionally after NP for the human (Kuno 1976, p.41). However, the above discussion shows that the sentence with *no koto* is a control construction and that there are two types of *omow* 'think'. Thus, we propose the following lexical entries for two types of *omow* 'think':

(8) a. *Raising Verb*:

SYN	HEAD	verb
	VAL	$\left[\begin{array}{l} \text{SUBJ} \langle \text{NP}^{[nom]}_i \rangle \\ \text{COMPS} \langle \text{NP}^{[acc]}_j, \right. \\ \left. \text{XP}^{[\text{SUBJ} \langle \text{NP}^{[nom]}_i \rangle]} : \text{I} \rangle \right]$
SEM	RELN	think
	THINKER	i
	ARG	I

b. *Control Verb*:

SYN	HEAD	verb
	VAL	$\left[\begin{array}{l} \text{SUBJ} \langle \text{NP}^{[nom]}_i \rangle \\ \text{COMPS} \langle \text{NP}^{[acc]}_j, \right. \\ \left. \text{XP}^{[\text{SUBJ} \langle \text{NP}^{[nom]}_i \rangle]} : \text{I} \rangle \right]$
SEM	RELN	think
	THINKER	i
	THINK_OF	j
	ARG	I

It should be noted that in a raising verb (8a), an accusative-marked NP is located outside XP against the Exceptional Case-marking (ECM) analysis (Kaneko, 1988; Ueda, 1988; Hiraiwa, 2001; Taguchi, 2009) in which such an NP is located inside XP as shown in (9a):

- (9) a. Ken-wa
Ken-TOP
[_{XP} Naomi-(ga/o) kawaii to] omotta.
Naomi-NOM/ACC pretty that thought
'Ken thought Naomi (was pretty / to be pretty).'
- b. Ken-ga omotteiru nowa
Ken-NOM thinking is
[_{XP} Naomi-(ga/*o) kawaii] toiukoto da.
Naomi-NOM/ACC pretty that is
'What Ken thinks is that Naomi is pretty.'

In (9b), when *Naomi* is marked with *ga*, the complement clause XP containing it can be clefted. On the other hand, when *Naomi* is marked with *o*, the clause can not be clefted although the accusative-marked NP is expected to be occupied within XP. This test suggests that an accusative-marked NP is not a constituent of XP. Therefore, we regard RTO construction without *no koto* as having the feature structure as (8a), and propose two types of lexical entry of *omow* 'think' as shown in (8).

3.2 Scrambling as Domain Union

Let us now turn to the scramblability illustrated in (3), and repeated in (10) with some modification:

- (10) a. Yamada-wa Tanaka(-no koto)-o
Yamada-TOP Tanaka-GEN matter-ACC
baka da to omotta.
fool is that thought
'Yamada thought Tanaka to be a fool.'

b.*Yamada-wa baka da to Tanaka-o omotta.

c. Yamada-wa baka da to Tanaka-no koto-o omotta.

To explain the difference in (10b) and (10c), we adopt Reape's (1996) linearization approach:

- (11) a. Word order is determined within the *word order domain*.
b. The *word order domain* is encoded by the feature DOM.
c. The *word order domain* of a daughter may be the same as a subpart of the domain of its mother.
d. The value of DOM is a list of elements of type NODE, which consists of the features PHON and SYNSEM
(Pollard, Kasper and Levine, 1993).

(11c) is described by the *sequence union* relation:

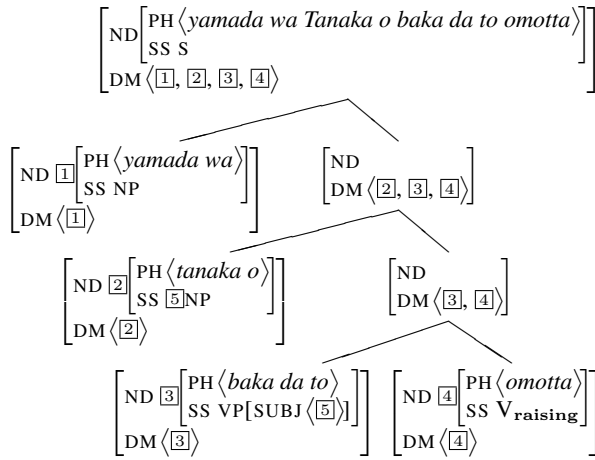
- (12) a. union($\langle \rangle$, $\langle \rangle$, $\langle \rangle$)
b. union($\langle A|X \rangle$, $\langle Y \rangle$, $\langle A|Z \rangle$) if union(X, Y, Z)
c. union($\langle X \rangle$, $\langle A|Y \rangle$, $\langle A|Z \rangle$) if union(X, Y, Z)

That is, Z is a list obtained by merging X and Y with the condition that the relative order of elements in X and Y is preserved in Z. For example, let A = $\langle a, b \rangle$ and B = $\langle c, d \rangle$, then union(A, B, C) iff C is one of the sequences in $\{ \langle a, b, c, d \rangle, \langle a, c, b, d \rangle, \langle a, c, d, b \rangle, \langle c, d, a, b \rangle, \langle c, a, d, b \rangle, \langle c, a, b, d \rangle \}$.

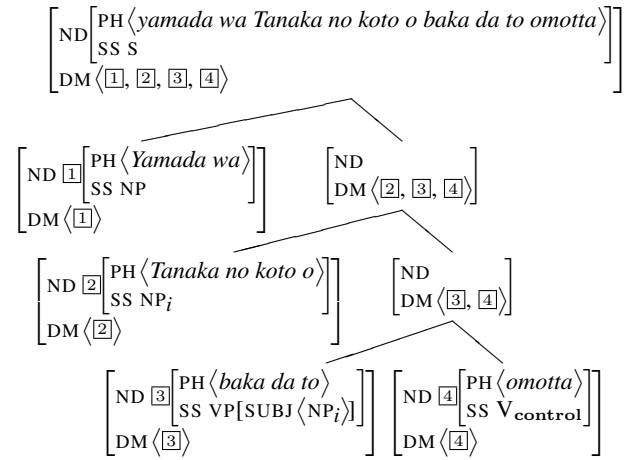
Returning to the word order of (10a), the following feature structure (14a) and (14b) can be applied. Though N(O)D(E) features of the complement and the head daughter, ③ and ④, are permutable in principle, we also assume the following linear precedence rule (13), which is needed to explain the head-final property of Japanese.

- (13) X < head

(14) a. *Raising Construction:*



b. *Control Construction:*



Since four elements in the D(O)M are permutable with each other as long as (13) is preserved, a total of six DM is derived as follows:

(15) a. DM $\langle \underline{1}, \underline{2}, \underline{3}, \underline{4} \rangle$

Yamada-wa Tanaka-o baka da to omotta.

Yamada-wa Tanaka-no koto o baka da to omotta.

b. DM $\langle \underline{1}, \underline{3}, \underline{2}, \underline{4} \rangle$

?(?) Yamada-wa baka da to Tanaka-o omotta.

Yamada-wa baka da to Tanaka-no koto o omotta.

c. DM $\langle \underline{2}, \underline{1}, \underline{3}, \underline{4} \rangle$

Tanaka-o Yamada-wa baka da to omotta.

Tanaka-no koto o Yamada-wa baka da to omotta.

d. DM $\langle \underline{2}, \underline{3}, \underline{1}, \underline{4} \rangle$

Tanaka-o baka da to Yamada-wa omotta.

Tanaka-no koto o baka da to Yamada-wa omotta.

e. DM $\langle \underline{3}, \underline{1}, \underline{2}, \underline{4} \rangle$

?(?) baka da to Yamada-wa Tanaka-o omotta.

baka da to Yamada-wa Tanaka-no koto o omotta.

f. DM $\langle \underline{3}, \underline{2}, \underline{1}, \underline{4} \rangle$

?(?) baka da to Tanaka-o Yamada-wa omotta.

baka da to Tanaka-no koto o Yamada-wa omotta.

Notice that not only (15b), with the word order of (10b) originally pointed out by Kuno (1976), but also (15e) and (15f) for raising verb are highly marginal. Moreover, notice that these DM include the linear precedence $\underline{3} < \underline{2}$, which is clearly rejected by a rule like (16):

(16) $\underline{2} < \underline{3}$

However, we cannot assume (16) as a linear precedence rule, because it fails to limit the freedom

of order between NP and VP complement daughters of a control construction as shown in (15). The question arising here is: How can we derive the effect of the application of rule (16) only to (14a)?

To solve this problem, we also assume the following linear precedence rule:

(17) $\underline{m} \text{ NP} < [\text{VAL} \dots \langle \underline{m} \rangle]$

Though we assume (17) without going into any detail about it here for the lack of space, it properly eliminates the illegitimate word order in Korean/Japanese small clause and other constructions which includes raising (Yoo, 1993).

Let us turn to (16). There is a structure-sharing relation between the NP in ND $\underline{2}$ and that in ND $\underline{3}$ as shown in (14a). Now, applying (17) to these NPs, $\underline{2}$ and $\underline{3}$ are not permutable indirectly:

(18) $\left[\begin{array}{l} \text{ND} \underline{2} \left[\begin{array}{l} \text{PH} \langle \text{Yamada-o} \rangle \\ \text{SS} \underline{5} \text{NP} \end{array} \right] \right] < \left[\begin{array}{l} \text{ND} \underline{3} \left[\begin{array}{l} \text{PH} \langle \text{baka da to} \rangle \\ \text{SS} [\text{SUBJ} \langle \underline{5} \rangle] \end{array} \right] \right]$

Note that the control construction is not relevant to (17) since a VP complement's subject is only coindexed with an NP complement, not structure-shared. Therefore, the difference in scramblability between *Tanaka-o* 'Tanaka-ACC' with a raising verb and *Tanaka-no koto-o* 'Tanaka-GEN matter-ACC' with a control verb arises.

4 Restriction of Embedded Predicate

In this section, we will argue the restriction of an embedded predicate allowing RTO, and note on the predicational relation between an accusative-marked NP and the embedded predicate.

4.1 Form of Embedded Predicate

Kuno (1976) suggests that the embedded predicate of RTO construction is limited to ‘either adjectives or nominal + copula *da*.’ This generalization predicts the unacceptability of the accusative-marked NP in (19), because the complement is a verb:

- (19) Ken-wa Naomi-(ga/*o) kuru to omotta.
 Ken-TOP Naomi-NOM/ACC come that thought
 ‘Ken thought Naomi came.’

Kuno (1976) and Oshima (1979) also point out that when the past tense form of predicate appears, RTO is not licensed or only marginally licensed.

However, some of the speakers we polled judged *baka-dat-ta* ‘was a fool’ case not so bad:

- (20) Ken-wa Naomi-o (baka da / (?)? baka
 Ken-TOP Naomi-ACC fool is fool
 datta) to omotta.
 was that thought
 ‘Ken thought that Naomi was a fool.’

Oshima (1979) and Ueda (1988) indicate that the complement clause of RTO is infinitive, but there is no implication for Kuno’s and this account of RTO.

The problem here is not so simple. Sakai (1996) points out the fact that the embedded predicate is not regulated by its form. Consider (21):

- (21) a. Takashi-wa ooame-(ga/*o) furi
 Takashi-TOP heavy rain-NOM/ACC rain
 soo da to omotta.
 is going to is that thought
 ‘Takashi thought that it was going to rain heavily any minute now.’
 b. Takashi-wa kono okashi-(ga/o)
 Takashi-TOP this cake-NOM/ACC
 oishi soo da to omotta.
 delicious looks like is that thought
 ‘Takashi thought this cake was appetizing.’
 (Sakai 1996: 7, English translation, Ohtani)

The grammaticality of the accusative-marked NP in (21b) is clearly problematic for Kuno’s analysis, because (21b) does not involve either the adjectives or nominal + copula *da* form. Moreover, the following sentence, involving gerundive form *teiru* ‘being’ also sounds good:

- (22) Ken-wa Naomi-(ga/o) futot-teiru to
 K-TOP Naomi-NOM/ACC fattened-PROG that
 omotta.
 thought

‘Ken thought that Naomi was being fattened.’

Examples (21b) and (22) show that RTO is not regulated by form and tensedness of the predicate, and it is also unexpected on the case alternation-motivated account of RTO.

To explain (21), Sakai (1996) proposes that the essential nature of embedded predicate of RTO construction is the type of predication for the predicate, which is originally suggested in Borkin (1984):

- (23) The predication in complements is a characteristics or an attribute of the entity represented by the raised NP. (Cited from Sakai 1996: 6)

We accept this intuition that the embedded predicate and its subject must reflect the relation ‘*has a property X*,’ and that there is stage/individual-level predicate (Carlson, 1977) asymmetry for licensing RTO. This approach also accounts for various judgements in (20) and the following examples because such a distinction highly depends on speakers.

Now compare the embedded predicate of (19)–(21), repeated as (24a)–(24d):

- (24) a. Naomi-ga kuru.
 Naomi-NOM come
 ‘Naomi comes.’
 b. Naomi-wa baka da.
 Naomi-TOP fool is
 ‘Naomi is a fool.’
 c. Ooame-ga furi soo da.
 heavy rain-NOM rain is going to is
 ‘It is going to rain heavily.’
 d. Kono okashi-wa oishi soo da.
 kono cake-TOP delicious look like is
 ‘This cake is appetizing.’

Only (24b) and (24d), which are the embedded predicate part of grammatical sentence, mean that the subject has a property described by its predicate. We point out here for later discussion that this distinction is also reflected on the marker of a subject, i.e., *ga* and *wa*.

Next, consider (25). The case alternation reflects the interpretation of the embedded complements, if the assumption here is correct.

- (25) a. *Stage-level Predicate Interpretation:*
 Ken-wa Naomi-(ga/??o) *saikin*
 Ken-TOP Naomi-NOM/ACC recently
 futottekita to omotta.
 has gained weight that thought
 ‘Ken thought that Naomi had gained weight recently.’
- b. *Individual-level Predicate Interpretation:*
 Ken-wa Naomi-(??ga/o) *umaretsuki*
 Ken-TOP Naomi-NOM/ACC by nature
 futotteiru to omotta.
 stout that thought
 ‘Ken thought that Naomi was stout by nature.’

By putting some modifiers forcing a stage/individual-level interpretation, nominative/accusative case alternation is observed.¹

4.2 RTO as Structure-Sharing

The next questions are: How is accusative case-marking allowed to take place in individual-level predicate and why is it disallowed in stage-level predicate?

In section 4.1, we pointed out the relation between semantic property of the predicate and the marker of its subject. It is summarized as follows:

- (26) a. The subject of a stage-level predicate is marked with a marker *ga*.
 b. The subject of an individual-level predicate is marked with a marker *wa*.

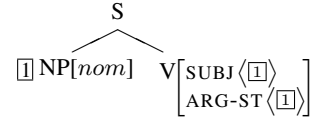
¹If a stage-level predicate has some lexical property to license nominative marker as in (25a), it is also predicted that a small clause with such a predicate also allows a *ga*-marked argument. Consider (i):

- (i) a.??*Watashi-wa bukka-(ga/o) takaku omou.*
 I-TOP price-NOM/ACC high think
 b. *Watashi-wa saikin bukka-ga takaku omou.*
 I-TOP recently price-NOM high think
 ‘(Lit.) I think that prices are recently high.’

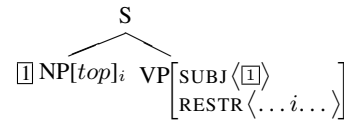
It is sometimes assumed that the realization of nominative marker is associated with tense (Takezawa, 1987). In (i) the small clause predicate lacks overt tense morpheme and the subject of the embedded predicate is unable to be marked with nominative as in (i)a. However, by putting modifier forcing a stage-level interpretation, a nominative marker is allowed in (i)b. This also suggests that a stage-level predicate licenses a nominative case.

Based on the summary in (26), we propose that the embedded predicate (24a) and (24b), repeated as (27a) and (27b), has the following feature specification:

- (27) a. Naomi-ga kuru.
 Naomi-NOM come
 ‘Naomi comes.’



- b. Naomi-wa baka da.
 Naomi-TOP fool is
 ‘Naomi is a fool.’



In (27b), NP[*top*] is the the following abbreviation for an explanatory purpose:

- (28) NP[*top*]_i $\left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \text{CASE} \textit{unspecified} \end{array} \right] \\ \text{SEM} \left[\begin{array}{l} \text{INDEX} \textit{i} \end{array} \right] \\ \text{CONX} \left[\begin{array}{l} \text{TOPIC} \textit{i} \end{array} \right] \end{array} \right]$

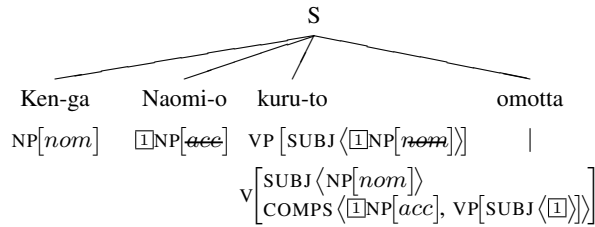
These feature structures capture that both *ga* and *wa*-marked NP in (27a) and (27b) are equally syntactic subject, but that they reflect the different semantic interpretations, concerning to generic, existential, topic, and so on (Kubo, 1992; Endo, 1994).

We claim that RTO asymmetry discussed in section 4.1 arises from the interaction between the case feature specification shown in (27) and the possibility of structure-sharing. Consider (29).

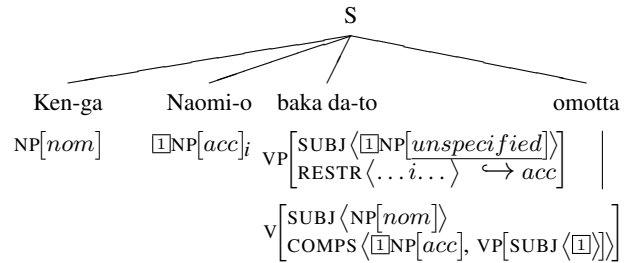
In (29a) the matrix object is specified as NP[*acc*]. On the other hand, the embedded subject is specified as NP[*nom*] because the nominative case is specified by some lexical property of the stage-level predicate. Thus, structure-sharing between them with $\boxed{\square}$ is not possible, consequently RTO is not licensed.

In (29b) the matrix object is specified as NP[*acc*] and at this point there is no difference between (29a) and (29b). However, the embedded subject is specified as NP[*top*] and the case feature is not specified by the embedded predicate. As shown in (28), topic represents semantic information rather than grammatical relation as case, thus *top* and *nom* are not treated as the same sort and the structure-sharing of $\boxed{\square}$ in (29b) is possible.

(29) a. *Stage-level Predicate:



b. Individual-level Predicate:



5 Some Constructions for licensing RTO

In the previous section, we discussed the crucial role that the stage/individual-level distinction of the embedded predicates plays in licensing RTO. In this section, we argue more specifically that the construction which involves a non-thematic NP related to the embedded predicate via predication allows RTO.

5.1 Multiple Subject Construction

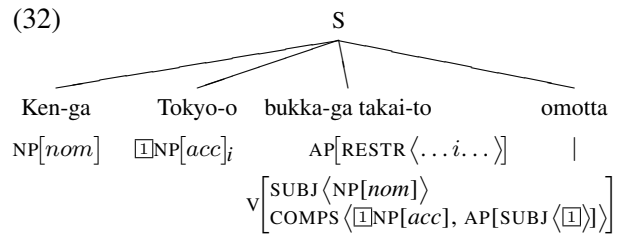
Multiple Subject Construction where two or more nominative-marked noun phrases occur in a single sentence as shown in (30a), have long been a central object of theoretical and empirical studies (Kuno, 1973; among others).

- (30) a. Tokyo-ga bukka-ga takai.
Tokyo-NOM price-NOM high
'It is Tokyo where prices are high.'
- b. Tokyo-wa bukka-ga takai.
Tokyo-TOP price-NOM high
'As for Tokyo, prices are high.'

A Japanese sentence is restricted to at most one *wa*-marked topic phrase, which, if present, appears in sentence-initial position as shown in (30b). Interestingly, (30b) licenses RTO as shown in (31).

- (31) Ken-ga Tokyo-o bukka-ga takai to
Ken-NOM Tokyo-ACC price-NOM high that
omotta.
thought
'As for Tokyo, Ken thought prices were high.'

The stage/individual-level distinction also predicts this state of affairs, because the predicate part of multiple subject construction also attributes an essential property to a person or an entity (Kuno, 1973) like individual-level predicate which allows RTO. Thus we can give the feature specification of the sentence in (31) as (32).



5.2 Bare Topic Construction

Bare topicalization, a kind of topicalization with a non-*wa*-marked topic in Japanese, is also accounted for if RTO involves a non-thematic NP related to the embedded predicate via predication. See (33).

- (33) a. Sono hito-wa
that person-TOP
kinoo-no jiken-no hannin da.
yesterday-GEN incident-GEN culprit is
- b. Sono hito,
that person
kinoo-no jiken-no hannin da.
yesterday-GEN incident-GEN culprit is
'(Lit.) That person, is the culprit of yesterday's incident.' (Taguchi 2009: 415)

Ordinary topicalization in (33a) and bare topicalization in (33b) pattern in the same way with respect to a number of properties. Taguchi (2009) points out that they differ in that the former can apply in embedded clauses, while the latter cannot, as shown in (34a) and (34b), respectively.

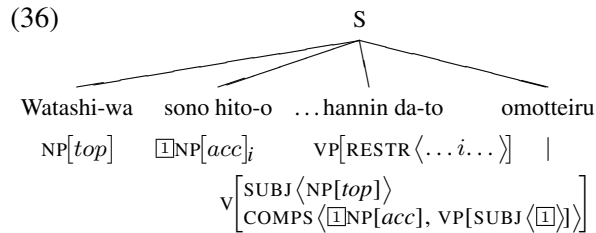
- (34) a. Watashi-wa [sono hito-wa,
I-TOP that person-TOP
kinoo-no jiken-no hannin da
yesterday-GEN incident-GEN culprit is
to] omot-teiru.
that think-PROG
'(Lit.) I am believing that that person, is the culprit of yesterday's incident.'

- b.*Watashi-wa [sono hito,
I-TOP that person
kinoo-no jiken-no hannin da
yesterday-GEN incident-GEN culprit is
to] omot-teiru.
that think-PROG (Taguchi 2009: 415)

Taguchi argues that the apparent matrix/embedded asymmetry regarding bare topicalization actually does not exist and embedded bare topicalization has been treated as ECM construction.

- (35) Watashi-wa [sono hito-o
I-TOP that person-ACC
kinoo-no jiken-no hannin da
yesterday-GEN incident-GEN culprit is
to] omot-teiru.
that think-PROG
'(Lit.) I am believing that that person to be the culprit of yesterday's incident.'

Putting aside the theoretical matters in the literature on transformational syntax, here we accept this observation that the embedded bare topic construction is allowed. Under our framework, the feature structure of the sentence (35) is shown in (36):



It should be noted that our analysis also allows the ordinary topic construction as (33a) to license RTO because the subject of embedded predicate is not thematic and any case is not specified.

Topicalization in Japanese does not involve movement since it is free of island effects (Kuno, 1973).

- (37) a. Sono hito-wa_i [adjunct *pro*_i
that person-TOP
shin-de mo] daremo naka-nai.
die-INF even.if anyone cry-NEG
'No one cries even if that person dies.'
- b. Sono hito-wa_i [complex NP *pro*_i
that person-TOP
taberu mono]-ga nai.
eat thing -NOM absent
'He doesn't have anything to eat.'

Like the topic NPs in (37), the accusative-marked NPs of RTO in (38) is free from island effects.

- (38) a. Watashi-wa [sono hito-o_i [adjunct *pro*_i
I-TOP that person-ACC
shin-de mo] daremo naka-nai
die-INF even.if anyone cry-NEG
to] omot-teiru.
that think-PROG
'(Lit.) I am believing no one will cry even if he died.'
- b. Watashi-wa [sono hito-o_i [complex NP *pro*_i
I-TOP that person-ACC
taberu mono]-ga nai to] omot-teiru.
eat thing-NOM absent that think-PROG
'(Lit.) I am believing him not to have anything to eat.'

This also suggests that an accusative-marked NP of RTO relates to the predicate part via predication.

There are a number of conditions which must be satisfied in order to form a grammatical RTO. This section shows some of the constructions and its conditions of predicational relation between the accusative-marked NP and the embedded predicate.

6 Conclusion

This paper discussed RTO, which provides interesting problems with respect to the syntactic/semantic status of an accusative-marked NP in the construction. We proposed that two types matrix verb, control and raising, must be recognized. We also suggested that the stage/individual-level distinction of the embedded predicates, more specifically, a non-thematic NP related to the embedded predicate via predication plays a crucial role for licensing RTO.

The conclusions outlined here are shown to account for problems illustrated by the possibility of word order changing and the restriction of the embedded predicate, which are not explained in Kuno (1976).

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