TOWARD A BETTER UNDERSTANDING OF "RELATIVE CLAUSES" IN JAPANESE: WITH SPECIAL REFERENCE TO "INTERNALLY-HEADED RELATIVE CLAUSES"

MASUHIRO NOMURA

Japan Women's University*


Keywords: noun-modifying constructions, relative clauses, internally-headed relative clauses, relational nouns, cognitive grammar

1. Introduction

Relativization and noun complementation have received considerable amount of attention in the literature since the advent of generative grammar. Consequently, Japanese noun modifying constructions including relative clauses and noun complements have been studied under the strong influence of generative studies of English relativization (cf. Okutsu (1974), Murasugi (1991)). At the same time, it has been observed both in descriptive studies (cf. Teramura (1975-78 [1992], 1980)) and in pedagogical studies (cf. Matsui (1979: Ch. 3.I)) that noun-modifying constructions in Japanese are fundamentally different from their English counterparts, which makes it hard for Japanese learners of English to appropriately translate Japanese noun-modifying constructions into English.

Matsumoto (1997), which has grown out of her dissertation work conducted at the University of California at Berkeley, is an attempt to show that previous syntactic approaches are not fully adequate to

* I am grateful to two anonymous reviewers of the journal for their comments and suggestions. All remaining errors are my own.
accommodate the full spectrum of Japanese noun-modifying constructions, thereby demonstrating a need for a semantics/pragmatics-oriented framework that enables a unified account of the well-behaved data that previous studies have focused on as well as the recalcitrant data that resist previous syntactic analyses. The aim of this paper is to review the work by critically assessing the theory Matsumoto advances and by offering an alternative account of the data that I find Matsumoto did not fully reach the depth of. The organization of the paper is as follows: Section 2 summarizes the work, focusing on her tripartite classification of Japanese noun-modifying constructions. Section 3 attempts to evaluate how successful Matsumoto's overall scheme is. In Section 3.1, I introduce yet another type of relative clauses, which Matsumoto does not discuss, namely, "internally-headed relative clauses." I point out in Section 3.2 potential problems of Matsumoto's framework and argue in Section 3.3 that consideration of internally-headed relative clauses enables a more revealing account of one of the three types of noun-modifying constructions Matsumoto discusses. Section 4 is a conclusion, where I summarize the present paper and point out some future tasks.

2. Outline of Matsumoto (1997)


Following the first two introductory chapters, Chapter 3 demonstrates the need for a theory of interpretation of Japanese noun-modifying constructions (henceforth, NMCs). Unlike English relative clauses, where an interpretation is syntactically obtained by binding the head noun to a missing complement of the relative-clause predicate, Japanese relative clauses require semantic/pragmatic knowledge to obtain an appropriate interpretation. Consider the example below (p. 40):¹

¹ Romanization and capitalization of quoted examples are modified in accordance with the style sheet of the journal. Abbreviations used in the paper are: Abl =
Toward a Better Understanding

(1) [[hon o katta] gakusei]
   book Acc bought student
   a. ‘the student (who) bought a book’
   b. ‘the student (from whom) ( ) bought a book’
   c. ‘the student (for/to whom) ( ) bought a book’

Unlike the English translations, in which the use of a preposition indicates the role that the head noun assumes with respect to the relative-clause predicate, the relationship between the head noun and the relative-clause predicate is underdetermined in Japanese NMCs: though (1a) is the most likely interpretation, other interpretations including (1b) and (1c) are also possible depending on contextual factors.

The influence of contextual factors on interpretation of Japanese NMCs is cogently exemplified by the following pair (p. 43):

(2) a. [[Tomo-chan ga katta] mise] wa doko.
   Tomo-Fam.Dim Nom bought store Top where
   ‘Where is the store (in which) little Tomo bought ( )?’
   Donald Trump Nom bought store Top where
   ‘Where is the store (which) Donald Trump bought?’

Pragmatic knowledge of the social standing and characteristic behavior of the buyer (i.e. Tomo and Donald Trump) is responsible for the sentences’ most likely interpretations shown in the English translations.

The point that syntax alone cannot assign an appropriate interpretation to NMCs is most clearly shown by such NMCs as illustrated below (pp. 48–49):

(3) [[atama ga yoku-naru] hon]
   head Nom good-become book
   ‘the book (by reading which) ( ) head gets better’

(4) [[toire ni ike-nai] komasharu]
   bathroom Goal go.can-not commercial
   ‘commercials (because of which) ( ) cannot go to the bathroom’

ablatived, Acc=accusative, Dat=dative, Dir=directional, Fam.Dim=familiar diminutive, Gen=genitive, Instr=instrumental, Loc=locative, Nml=nominalizer, Nom=nominative, Pass=passive, Qp=question particle, Top=topic.
These examples involve no missing argument in the modifying clause to be bound up with the head noun, which makes them resist simple non-relative paraphrases whereby the head noun with an appropriate case marker is inserted into the modifying clause, and consequently poses a serious problem for a purely syntactic account of NMCs.

These observations naturally lead us to the following questions: How are examples such as (3) and (4) to be successfully interpreted? Do we have a distinction between "syntactic" NMCs such as (1) and "semantic/pragmatic" NMCs such as (3) and (4)? Matsumoto suggests that NMCs form a gradation in terms of the amount of pragmatic knowledge required for interpretation, with examples such as (1) and examples such as (3) and (4) representing the extreme ends of a scale (p. 50). To accommodate this gradation, we need a theory for interpretation that is applicable to the whole spectrum of NMCs.

Matsumoto proposes an interpretive framework based on Fillmorean frame semantics (p. 58ff). For interpretation of NMCs, two types of frames are of particular importance, "predicate frame" and "nominal frame." The former is "a structure that provides the generalized scene of an event (an action or a state) evoked by a predicate. The elements in the predicate frame, which will be called the roles of the frame, are the prototypical constituents of such a scene, i.e., the concepts that are automatically made available when the scene is evoked" (p. 59). To determine the set of roles evoked by a predicate, Matsumoto proposes a diagnostic test that concerns acceptability of the dialogue consisting of the predicate P as the first sentence, followed by a sentence starting with sono N wa—‘that N Top—’ (p. 61). For example, the frame of Grilling is diagnosed as follows (pp. 63-64):

\[(5)\]
A: yakimasu.
\[\text{grill}\]
\[\text{‘( ) grill(s) ( ).’}\]
B1: sono sakana wa nan desu ka.
\[\text{that fish Top what is Qp}\]
\[\text{‘What is the fish?’}\]
B2: sono nioi wa hidoidesu ka.
\[\text{that smell Top is.terrible Qp}\]
\[\text{‘Is the smell terrible?’}\]
B3: #sono menyu wa doko desu ka.
\[\text{that menu Top where is Qp}\]
\[\text{‘Where is the menu?’}\]
This diagnostic test is taken to suggest that the object of grilling and smell produced by grilling are part of the Grill frame, but a menu isn’t. Notice that the notion of roles in a predicate frame is wider than that of subcategorized arguments of a predicate, since Smell is not considered a subcategorized argument of ‘to grill.’

Based on the notion of predicate frame, Matsumoto proposes “Predicate Frame Constraint,” which stipulates that “the head noun should denote a concept that instantiates a role in the frame evoked by the predicate of the modifying clause” (p. 68). This constraint is claimed to account for the difference between the following pair of NMCs (p. 67):

(6) a. *[[sakana o yaku] menyu] ga arimasu ka.
   fish Acc grill menu Nom exist Qp
   ‘Is there a menu with grilling fish?’

   b. [[sakana o yaku] nioi] ga suru.
      fish Acc grill smell Nom do
      ‘There is the smell of grilling fish.’

Example (6a) violates the Predicate Frame Constraint, since the head noun ‘menu’ is not included in the Grill frame as (5) indicates, while (6b) satisfies the Constraint as the head noun ‘smell’ is part of the Grill frame.

The second important type of frame is a nominal frame, which is evoked by content-taking nouns (e.g. jijitsu ‘fact,’ denpo ‘telegram’) and relational nouns (e.g. kekka ‘result’). The former evoke a frame that contains a role for the content of the head noun, and the latter evoke a frame that contains a role for the event/state relative to which the meaning of the head noun is to be understood. In either case, the role is to be instantiated by the modifying clause (p. 70).

Having introduced these frame-based notions, Matsumoto classifies Japanese NMCs into three types (pp. 70–74): (A) Clause Host (CH) type, in which the modifying clause “hosts” (i.e., evokes a frame for) the head noun. (B) Noun Host (NH) type, in which the head noun hosts the modifying clause. (C) Clause and Noun Host (CNH) type, in which the modifying clause and the head noun host each other.

Let us illustrate each type in turn. First, the CH-type is exemplified by (1), repeated here as (7) below:

(7) [[hon o katta] gakusei]
    book Acc bought student
    ‘the student who bought a book’
The verb *katta* ‘bought’ evokes a predicate frame which contains a set of roles, among which the Goods role is filled by *hon* ‘book.’ This composite frame, which results from other elements in the modifying clause making the predicate frame more specific, hosts the denotatum of the head noun, which may instantiate another accessible role of the frame, Buyer. As mentioned in the discussion of (1), it depends on context which role in the frame is matched with the head noun.

In addition to relative clause-like examples such as (7), the CH-type includes non-relative clause-like examples such as *honyaku-shita kane* (translated money) ‘the money (which resulted after) ( ) translated (something),’ where the modifying clause evokes a frame which contains the Product role to be instantiated by the head noun (p. 72).

Second, the NH type is illustrated by the following (p. 72):

(8) [[kane o nusunda] jijitsu] ga akirakani-natta.

money Acc stole fact Nom clear-became

‘The fact that ( ) stole money was revealed.’

Here, the head noun *jijitsu* ‘fact’ is a content-taking noun, which evokes a nominal frame containing a role for the content of the head noun, to be instantiated by the modifying clause.

Finally, the CNH-type is exemplified by the following (p. 73):

(9) [[kinoo tabesugita] kekka, kyoo nanimo tabe-rare-nai.

yesterday overate result today anything eat-can-not

‘(As) a result (of) having overeaten yesterday, ( ) cannot
eat anything today.’

Here, the head noun hosts the modifying clause in that the relational noun *kekka* ‘result’ evokes a nominal frame containing a role relative to which something is a Result, namely, the Cause role, which is to be instantiated by the modifying clause. At the same time, the modifying clause hosts the head noun in that the predicate frame evoked by *tabesugita* ‘overate’ contains, as one of its core roles, the Result role, which is to be instantiated by the head noun; in other words, “what is denoted by the head noun participates in the frame evoked by the modifying clause in a special way: by *naming or specifying* a role” (p. 149).

The frame-semantic approach to NMCs outlined above is claimed to have the advantage of allowing a unified treatment of the wide range of NMCs from relative clause-like NMCs (e.g. (1)) to NMCs that have no apparent syntactic gap (e.g. (3), (4)), thereby invalidating the traditionally maintained dichotomy between relative clauses and non-relative clauses. The difference among the range of NMCs is claimed to be
quantitative rather than qualitative: the difference “derives from a difference in the naturalness or directness of the relation between what is conveyed by the clause and the head noun” (pp. 106-107), in other words, “[t]he difference in degree lies in the relative amount of information that must be inferred from shared social and cultural knowledge for successful construal” (p. 114).

In Chapter 4, the CH-type is discussed in more detail with ample examples. In Section 1, the author discusses interaction of factors that determine successful construal of CH-type NMCs and argues that basically the same factors are at work for construal of both “relative clause” type NMCs and other instances of CH-type NMCs. In Section 2, the author presents her classification of possible semantic relationships between the head noun and the modifying clause in non-relative clause type NMCs: (i) condition and consequence; (ii) purpose and requisite; (iii) simultaneous actions or events; (iv) actions or events in simple temporal sequence; (v) “topic” and “comment”; (vi) part and whole (pp. 103-133). It is observed that relationship (i) is the most common, while (iii)-(v) are of limited use.

Chapter 5 describes NH-type and CNH-type NMCs in more detail, giving a classification of nouns for each type. Chapter 6 is a conclusion, where application of frame semantics to other linguistic phenomena is mentioned and further directions in the study of NMCs are adumbrated.

3. Discussion

For those who are familiar with Teramura’s work on NMCs (cf. Teramura (1975–78 [1992], 1980)), it is easy to see how much Matsumoto is indebted to him for the range of NMC data he collected, classified and accounted for. Matsumoto’s contribution should therefore be evaluated in theoretical aspects. In this section, we will discuss Matsumoto’s overall scheme from a viewpoint of “internally-headed relative clauses” by pointing out problems of her analysis, and argue for the possibility that some type of NMCs are more profitably analyzed as instances of “internally-headed relative clauses.”

3.1. The IHRC Construction

As a necessary preparation for our discussion in Sections 3.2 and 3.3, I will outline in this section what “internally-headed relative clauses”
are and how I analyze them within the framework of cognitive grammar developed by Langacker (1987, 1991, inter alia).

Relative clauses can be classified into two types depending on the position of the head noun: An internally-headed relative clause (henceforth, IHRC) has its head noun within the relative clause, whereas an externally-headed relative clause (henceforth, EHRC) has its head noun outside the relative clause. Japanese has been claimed to possess both types of relative clauses, as exemplified by the following pair:

(10) a. [sara-no ue-ni aru] ringo-o totta.
    plate-Gen top-Loc exist apple-Acc took
    ‘(I) picked up an apple that was on the plate.’

b. [ringo-ga sara-no ue-ni aru] no-o totta.
    apple-Nom plate-Gen top-Loc exist Nml-Acc took
    ‘(I) picked up an apple that was on the plate.’

Example (10a) involves a run-of-the-mill EHRC modifying the external head ringo ‘apple.’ Example (10b), on the other hand, involves an IHRC: semantically, it is ringo ‘apple’ that I picked up, but on the surface this semantic head is inside the subordinate clause. The entire subordinate clause followed by no takes the accusative case marker -o as required by the matrix verb totta ‘took,’ and the semantic head ringo ‘apple’ takes the nominative case marker -ga in accordance with its role in the subordinate clause.

Since the matrix verb in (10b) appears to take as its argument the entire subordinate clause followed by no, some kind of mechanism relating the matrix verb to the “internal” semantic head has been considered necessary. In the generative literature, the most common analysis is to posit an empty head to the right of the subordinate clause, relating the internal head to the empty head in one way or another (see Kuroda (1998: 3) for a succinct survey of the previous analyses of the IHRC construction in the generative literature). Notice that this type of syntactic analysis can be characterized as “reductive” in that it attempts to essentially reduce the structure of an IHRC to that of a corresponding EHRC.

I have proposed a cognitive grammar account of the IHRC construction (see Nomura (1996, 1998a, 1998b, 2000)), which I summarize briefly below. The first thing to notice for the analysis of the IHRC construction is the structural similarity between an IHRC and a verb complement. Compare (10b) with (11):
The two constructions have in common that the matrix verb takes as its argument the subordinate clause followed by no, which serves as a nominalizer in both cases (see Kuroda (1975-76, 1976-77) for the arguments that no following an IHRC is a nominalizer rather than a pronominal). How are the two constructions to be distinguished? I have proposed that the IHRC construction differs from the verb complement construction in that it involves active-zone/profile discrepancy (see Langacker (1984, 1993, 1997) for the concepts of “active zone” and “reference point”):

(12) Proposed Analysis:
The IHRC construction is essentially metonymic in that it is a reference-point construction that involves active-zone/profile discrepancy. More specifically, the main clause in the IHRC construction profiles a relationship taking an entire subordinate-clause event as its profiled participant, and an element associated with the subordinate-clause event serves as the active zone (interpreted as the “internal head”) with respect to its participation in the main-clause event. In terms of the reference-point model, the conceptualizer first invokes the subordinate-clause event as a “reference point” and shifts his focus of attention to a target (i.e. “internal head”) within the “dominion” of the reference point.

Consider example (10b) for illustration. On the proposed analysis, the matrix verb totta ‘took’ profiles a relationship taking as its profiled participant the entire subordinate-clause event ‘There was an apple on the plate,’ and an element associated with the subordinate-clause event, ringo ‘apple,’ serves as the active zone that most directly participates in the main-clause event, thereby being interpreted as the “internal head.” In terms of the reference-point model, the conceptualizer first invokes as a reference point the subordinate-clause event ‘There was an apple on the plate’ and shifts his focus of attention to a target, ‘apple,’ within the class of entities associated in some way with the subordinate-clause event.

The proposed analysis of the IHRC construction can account for data that would be hard to handle by the reductive approach, as will be seen in the subsections below.
3.1.1. Head Choice as Following the “Natural Paths”

It is known that an IHRC can be ambiguous as to the choice of internal head:

(13) [keikan-ga hannin-o renko
policeman-Nom suspect-Acc taking.to.the.police.station
shite-ita] no-o sunaipa-ga uchi koroshita.
doing-was Nml-Acc sniper-Nom shoot killed
‘The policeman was taking the suspect to the police station, who the sniper shot to death.’

Here, the head can be either the ‘policeman’ or the ‘suspect,’ depending on contextual or general knowledge. Passivization of the subordinate clause in (13) gives the following:

(14) [hannin-ga keikan-ni renko
suspect-Nom policeman-Dat taking.to.the.police.station
sarete-ita] no-o sunaipa-ga uchi koroshita.
do.Pass-was Nml-Acc sniper-Nom shoot killed
‘The suspect was being taken by the policeman to the police station, who the sniper shot to death.’

This sentence is no longer ambiguous; the only interpretation is that of the ‘sniper’ killing the ‘suspect’ (nominative-marked) rather than the ‘policeman’ (oblique-marked). This suggests that the choice of head is not solely determined by contextual or general knowledge, but also affected by Keenan and Comrie’s (1977) accessibility hierarchy.

Fronting the accusative-marked NP ‘suspect’ in (13) to the clause-initial position yields the following:

(15) [hannin-o keikan-ga renko
suspect-Acc policeman-Nom taking.to.the.police.station
shite-ita] no-o sunaipa-ga uchi koroshita.
doing-was Nml-Acc sniper-Nom shoot killed
‘The suspect, the policeman was taking to the police station, who the sniper shot to death.’

For this example, native speakers are most likely to choose the accusative-marked NP ‘suspect’ as the head. This suggests that temporal ordering of NPs also affects the choice of head.

The accessibility hierarchy subject > object > other (or trajector > landmark > other) and temporal ordering of words are instances of what Langacker (1991) calls “natural paths,” defined as “any cognitively natural ordering of the elements of a complex structure” (ibid: 550) and generalized by Langacker (1997) as constituting “focus chains.” We
may generalize then that the internal head is most likely to be a “starting point” of the natural paths. The tendency for the choice of head to follow the natural paths supports our proposed analysis in (12): the conceptualizer’s focus of attention is first directed to the subordinate-clause event as a whole and then is shifted to a cognitively salient element associated with the event, construed as the “internal head.” Since the starting point of a natural path is cognitively salient enough to attract the focus of conceptualizer’s attention, it is natural that head choice follows the natural paths.

3.1.2. “Headless” IHRCs

Consider the following examples:

(16) a. \([\text{asa kao-o sotta} \text{ no-ga yugata-ni-wa} \text{ mata nobite kita.}]\)
    \(\text{morning face-Acc shaved Nml-Nom evening-Loc-Top again growing came}
    \text{‘I shaved myself this morning, which (=beard) started to grow again in the evening.’}\)

b. \([\text{tsuchi-o hotta} \text{ no-o ue-kara nozokikonda.}]\)
    \(\text{soil-Acc dug Nml-Acc top-Abl looked.into}
    \text{‘I dug the soil, which (=hole) I looked into.’}\)

c. \([\text{enkai-de ashi-ga deta} \text{ no-o tatekaeta.}]\)
    \(\text{party-Loc foot-Nom came.out Nml-Acc paid}
    \text{‘We ran over our budget at the party, which (=difference) I paid.’}\)

These examples lack an internal head, as shown by the fact that they cannot be paraphrased into corresponding EHRCs:

(17) a. \(*[\text{asa sotta} \text{ kao-ga yugata-ni-wa mata} \text{ again growing came}]
    \text{morning shaved face-Nom evening-Loc-Top again nobite kita.}
    \text{Lit. ‘The face I had shaved this morning started to grow again in the evening.’}\)

2 Head choice also obeys the Empathy Hierarchy, speaker > hearer > others (cf. Nomura (1998b)).
b. *[hotta] tsumi-o ue-kara nozokikonda.
   dug soil-Acc top-Abl looked.into
   Lit. ‘I looked into the soil that I had dug.’

c. *[enkai-de deta] ashi-o tatekaeta.
   party-Loc came.out foot-Acc paid
   Lit. ‘I paid the foot that had come out at the party.’

What started to grow in (17a) should be ‘beard,’ not ‘face,’ what I
looked into in (17b) should be ‘a hole’ rather than ‘the soil,’ and what I
paid in (17c) should be ‘the amount that exceeded the budget’ rather
than ‘a foot.’ These examples thus involve violation of the selectional
restrictions of the matrix verbs.

Since the examples in (16) lack internal heads, the reductive account
will have difficulty handling the data. On our analysis, (16a), for in-
stance, can be explained as follows: the matrix verb nobite kita ‘started
to grow’ profiles a relationship taking the entire subordinate-clause
event ‘I shaved myself this morning’ as its profiled participant, and an
element associated with the subordinate-clause event, hige ‘beard,’
serves as the active zone that most directly participates in the main-
clause event, being interpreted as the notional “internal head.” The
noun kao ‘face’ does not represent a structurally salient level of organi-
zation with respect to the matrix verb, therefore causing no violation of
the selectional restriction of the matrix verb (see Nomura (1998a) for a
more detailed description of the phenomenon discussed in this section).

3.1.3. “Multiply-Headed” IHRCs

Also problematic for the reductive approach is an IHRC that in-
volves multiple heads, which makes it impossible to paraphrase into a
corresponding EHRC:

(18) [junsa-ga dorobo-o kawa-no ho-e
   policeman-Nom thief-Acc river-Gen direction-Dir
   oitsumete itta] no-ga ikioi amatte futaritomo
   track.down went Nml-Nom power exceed both.two
   kawa-no naka-e tobi-konda.
   river-Gen inside-Dir jumped
   ‘A policeman, was tracking down a thief, toward the river,
   who,. both, losing control, jumped into the river.’

(Kuroda (1975-76: 93))

In our analysis, we may say that the phrase futaritomo helps to give
equal cognitive salience to ‘policeman’ and ‘thief’ to serve as the active
zone or target. Note that an active zone is defined as something associated with a profiled entity, which does not preclude the possibility that more than two entities serve as active zone (cf. I'm in the phone book ~ My name, address, and phone number are in the phone book).

3.1.4. Gradation from IHRCs to Verb Complements

We saw earlier that the crucial difference between IHRCs and verb complements lies in whether active-zone/profile discrepancy is involved or not. Considering the fact that the choice of active zone depends on construal to some degree, we expect that the two form a gradation in terms of degrees of the active-zone/profile discrepancy. Indeed, the subordinate clause in (19) can be regarded as intermediate since it allows variable construal in that it is not so obvious whether the subject interacts with the whole subordinate-clause event or with the NP in the event:

(19) Taro-wa [ringo-ga sara-no ue-ni aru] no-o
Taro-Top apple-Nom plate-Gen top-Loc exist Nml-Acc
mita.
saw
'Taro saw an apple on the plate.' or 'Taro saw that an apple was on the plate.'

The gradation from IHRCs to verb complements cannot be captured by the reductive approach, because the verb complement construction is structurally different from the EHRC construction, whose main clause profiles a relationship taking a "thing" in the subordinate-clause event as its profiled participant.

3.1.5. The Relevancy Condition

The proposed analysis can explain why the IHRC construction obeys what Kuroda (1975–76) calls "the relevancy condition," whereas the EHRC construction doesn't. The relevancy condition is a semantic/pragmatic condition on the well-formedness of the IHRC construction, defined by Kuroda (1975–76: 86) as "For a p.-i [=pivot-independent] relative clause to be acceptable, it is necessary that it be interpreted

3 Similar intermediate cases are observed between the raising construction and the control verb construction (Langacker (1995: 48)). See also Kuroda (1976–77: 174–178).
pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause.” This condition is claimed to account for the difference between the following pair:

put Nml-Acc took
‘Taro picked up an apple which Hanako had (just) put on a plate.’

sketch Nml-Acc took
intended: ‘Taro picked up the apple which Hanako had sketched yesterday.’

Hanako’s sketching an apple has no direct relevance to Taro’s picking up the apple, thereby making (20b) unacceptable. The EHRC construction is not subject to this condition. Compare (20b) with (21) below:

(21) Taro-wa [Hanako-ga kinoo sukecchi shita] ringo-o Taro-Top Hanako-Nom yesterday sketched apple-Acc totta.
took
‘Taro picked up the apple which Hanako had sketched yesterday.’

The relevancy condition can be regarded as a condition on “event conflation” between the main-clause event and the subordinate-clause event (cf. Nomura (1997)). The proposed analysis in (12) makes it natural that the IHRC construction is subject to an “event conflation” constraint, since the matrix verb in the IHRC construction profiles a relationship taking an entire subordinate-clause event as its profiled participant. On the other hand, the matrix verb in the EHRC construction profiles a relationship taking a thing in the subordinate-clause event as its profiled participant; therefore, a constraint on event conflation is not necessary and selectional restrictions only hold between the matrix verb and the head noun.

3.2. Matsumoto’s Tripartite Classification of NMCs

Having outlined a cognitive grammar analysis of the IHRC construc-
tion, we are now back in a position to discuss Matsumoto’s theory of NMCs. Matsumoto’s greatest contribution, in my view, is her classification of Japanese NMCs into three types based on whether the modifying clause or the head noun (or both) evokes a frame for appropriate interpretation. Note, however, that Matsumoto’s tripartite classification of NMCs itself, which we saw in Section 2, can be regarded as re-classification of Teramura (1975–78 [1992], 1980), who classifies NMCs into the “inner relationship” type and the “outer relationship” type, the latter being further divided into NMCs headed by nouns of speech and thought, nouns of fact, nouns of perception, and relational nouns: Matsumoto’s CH-type approximately corresponds to Teramura’s “inner relationship” type, while her NH-type and CNH-type combined correspond to Teramura’s “outer relationship” type; more specifically, the NH-type corresponds to Teramura’s NMCs headed by nouns of speech and thought, nouns of fact and nouns of perception, and the CNH-type corresponds to Teramura’s NMCs headed by relational nouns.

What distinguishes Matsumoto from previous studies is her attempt to call into question two levels of dichotomy traditionally taken for granted. At one level, as we saw earlier, Matsumoto cogently demonstrates that her frame-semantic account of CH-type NMCs allows a unified treatment of relative clauses (e.g. (1)) and those previously analyzed as non-relative clauses (e.g. (3), (4)). At the other level, her postulation of the CNH-type is claimed to invalidate the traditional dichotomy between relative clauses (roughly corresponding to her CH-type) and noun complements (corresponding to her NH-type). Below I will examine her tripartite classification of NMCs and argue that her attempt at vitiating the second level of dichotomy, namely the distinction between relative clauses and noun complements, is not necessarily successful.

Matsumoto’s tripartite classification is interesting when viewed in terms of the reference point model proposed by Langacker (1993, inter

---

4 cf. “The absence of recognition of the CNH-type of NMCs as a distinct type has led previous research to an unsatisfactory treatment of the constructions as either noun complements or relative clauses” (p. 163); “The goal of the analysis was, in part, the presentation of this frame-based tripartite classification of NMCs as being more appropriate than the traditional dichotomy between relative-clause and noun-complement constructions” (p. 166).
alia). In an attempt to accommodate the oft-made claim that the head noun of a relative clause functions as a topic with respect to the clause (cf. Kuno (1973)), Langacker (1993: 34) suggests that “the head noun serves as a reference point and thus defines a dominion in which the content of the relative clause must be integrated.” The question arises as to whether Matsumoto's account fits in with Langacker's. Matsumoto's frame-semantic account can be translated in terms of the reference point model as follows: in the CH-type, the predicate serves as a reference point that evokes a dominion (= “predicate frame” or “composite frame”) within which the target (= role) is selected to be instantiated by the head noun. In the NH-type, on the other hand, the head noun serves as a reference point that evokes a dominion (= “nominal frame”) within which the target (= Content or Relational Concept role) is selected to be instantiated by the modifying clause. This means that Matsumoto's account of CH-type NMCs is in conflict with Langacker's account of relative clauses: the head noun serves as the target in the former account but as a reference point in the latter account. As far as the integration between the head noun and the modifying clause is concerned, Matsumoto's account seems to me intuitively more appealing than Langacker's, since it is not very clear in the latter what kind of dominion is evoked by the head noun for the content of the relative clause to be integrated. However, if we assume topichood of the head noun and the reference-point character of a topic, it remains to be seen how Matsumoto will accommodate these for CH-type NMCs (see pp. 24–33 and Matsumoto (1991) for her view on Kuno's theory of relativization).

The third category, the CNH-type, poses the most serious problems. CNH-type NMCs (i.e. those headed by relational nouns) are, as it were, a hybrid between the CH-type and the NH-type in that the head noun and the modifying clause host each other. It is intuitively clear that the relational head noun evokes a nominal frame in which the modifying clause is integrated in such a way that it expresses a concept relative to which the meaning of the head noun is defined. Problematic is the claim that the modifying clause evokes a frame that contains a

5 Langacker (1993: 34–35) briefly discusses Matsumoto’s example (4) based on his reference-point model characterization of relative clauses, which Matsumoto (1997: 186) mentions in her endnote 28 of Chapter 4 without any comments.
role to be named or specified by the relational head. Consider the following CNH-type example for illustration (p. 155):

(22) [[Fumiko ga suwatta] ushiro] no mado ni wa, —
Fumiko Nom sat behind Gen window Loc Top
‘In the window behind (where) Fumiko sat, —’

The crucial question here is whether the modifying clause evokes the frame that contains a role named by the head noun ‘behind.’ Intuitively, it seems obvious enough that the frame evoked by the clause ‘Fumiko sat’ does not necessarily contain the role ‘the place behind’; why not contain, instead, roles ‘the place in front,’ ‘the place on the right,’ ‘the place on the left,’ etc.? To make sure this intuition, let us apply Matsumoto’s own diagnostic test illustrated by (5) above to check whether the role ‘behind’ is evoked by the modifying clause in (22):

(23) A: Fumiko ga suwatta.
B: sono ushiro wa aitemashita ka.
that behind Top was.unoccupied Qp
‘Was the place behind her unoccupied?’

The result of the test appears at first sight to indicate that *ushiro* ‘behind’ is a role contained in the frame evoked by the modifying clause. Notice, however, that the use of *sono* ‘that’ in (23B) is different from that in (5B1): in the latter, the demonstrative indicates that the designated entity is unique in relation to the current discourse in such a way that both speaker and hearer can identify it. In the former, in contrast, the demonstrative anaphorically refers to the preceding utterance that describes the event ‘Fumiko sat.’ The difference between the two is shown by replacing the noun following *sono* with its superordinate term:

(5B1)’ *sono tabemono wa* nan desu ka.
that food Top what is Qp
‘What is the food?’

(23B)’ *sono basho wa* aitemashita ka.
that place Top was.unoccupied Qp
‘Was the place unoccupied?’

While *sono tabemono* ‘that food’ in (5B1)’ can refer to the same entity as *sono sakana* ‘that fish’ in (5B1), *sono basho* ‘that place’ in (23B)’ does not refer to the same location as *sono ushiro* ‘that (place) behind’ in (23B); the former refers to the place where Fumiko sat, and the latter to the place behind where Fumiko sat.

The above observation seems to indicate that the modifying clause
does not host the relational head noun, in violation of the “Predicate Frame Constraint.” This casts doubt on Matsumoto’s characterization of NMCs headed by relational nouns as CNH-type, leading us to the view that NMCs headed by relational nouns are essentially of NH-type. This brings Matsumoto back to the distinction CH-type vs. NH-type, the original dichotomy Matsumoto started out to demolish by positing the CNH-type.

The characterization of NMCs headed by relational nouns as NH-type instead of CNH-type does not mean that NMCs headed by relational nouns and those headed by content-taking nouns should not be distinguished; I am only claiming that they cannot be profitably distinguished by whether the modifying clause hosts the head noun or not, i.e. CNH-type vs. NH-type. In the next section, I will argue that NMCs headed by relational nouns are best characterized and most profitably distinguished from other types of NMCs when analyzed as IHRCs, which Matsumoto failed to take into account.6

3.3. NMCs Headed by Relational Nouns as IHRCs

Kuroda (1976–77: 161–163) is the first to draw our attention to the possibility that a certain type of NMC can be regarded as a type of IHRC. Consider the following example of his:

(24) [kesa mochi-o tabeta] nokori
    this.morning sticky.rice.cake-Acc ate leftover
    ‘the leftover of the sticky rice cake we ate this morning’

He suggests that this phrase can be regarded as an IHRC whose semantic head mochi ‘sticky rice cake’ holds the genitive relation with the matrix element nokori ‘leftover.’ Thus, (24) can be paraphrased into a corresponding EHRC as below:

(25) [kesa tabeta] mochi-no nokori
    this.morning eat sticky.rice.cake-GEN leftover
    ‘the leftover of the sticky rice cake we ate this morning’

In his later work, Kuroda (1983 [1992]) applies this IHRC analysis to the NMC headed by the spatial noun naka ‘inside,’ exemplified by (26),

---

6 She only mentions IHRCs in endnote 11 of Chapter 2 (pp. 176–177) when discussing the structure of EHRCs in Japanese.
which can be paraphrased into (27), in the same way that (24) can be paraphrased into (25):7

(26) Boku-wa [mori-ga ussoto shigeru] naka-o hitori I-Top forest-Nom luxuriant grow midst-Acc alone sanpo shita.
strolled
‘I strolled in a dense forest alone.’

(27) Boku-wa [ussoto shigeru] mori-no naka-o I-Top luxuriant grow forest-Gen midst-Acc hitori sanpo shita.
a lone strolled
‘I strolled in a dense forest alone.’

It is clear that the two nouns Kuroda takes up, nokori ‘remainder, leftover’ and naka ‘inside,’ are relational nouns in the sense that they profile a thing/region characterized with respect to the relationship it bears to some other, unprofiled thing; more concretely, ‘leftover’ is inherently ‘leftover of something,’ and ‘inside’ is inherently ‘inside of something.’8

Let us take the spatial noun ushiro ‘behind’ for illustration and consider its semantic structure in some detail. Being a relational noun, ushiro takes a genitive-marked noun as its landmark:

(28) Fumiko-no ushiro
Fumiko-GEN behind
‘behind Fumiko’

With Fumiko serving as landmark, the entire phrase designates a “search domain” (cf. Hawkins (1984), Langacker (1987: 286)) within which a trajector is to be confined. The trajector (Toshiyuki in (29)) can be expressed either as a noun following another no, as in (29a), or as a participant in a clause, as in (29b):

(29) a. Fumiko-no ushiro-no Toshiyuki
Fumiko-Gen behind-Gen Toshiyuki
‘Toshiyuki behind Fumiko’

7 See Nakau (1976, 1980) and Kunihiro (1980) for their analyses of this construction, against which Kuroda (1983 [1992]) proposes his IHRC account.

8 These two nouns are the only examples Kuroda takes up and he does not discuss what other nouns are amenable to the same kind of analysis. See Kuroda (1983 [1992]) for his arguments against analyzing the modifying clause headed by the temporal noun yokutoshi ‘next year’ as an IHRC.
b. Fumiko-no ushiro-ni Toshiyuki-ga tatta.
   ‘Behind Fumiko, Toshiyuki stood.’

In addition to taking a nominal landmark, Japanese relational nouns allow a clausal landmark:

(30) [Fumiko-ga suwatta] ushiro
   ‘behind the place where Fumiko sat’

Parallel to (28), this phrase designates a search domain within which a trajector is to be confined relative to the clausal landmark ‘Fumiko sat.’ The trajector holds the spatial relationship of ‘behind’ with respect to the landmark event ‘Fumiko sat’; however, what most directly and crucially participates in the spatial relationship in question is a thing rather than an event. Thus, I suggest that Fumiko in the landmark event serves as the active zone with respect to its participation in the spatial relationship of one thing being behind another, and is interpreted as “internal head.” In terms of the reference-point model, the profiled event ‘Fumiko sat’ is invoked as a reference point for establishing mental contact with the target ‘Fumiko,’ an element associated with the reference point. I will call NMCs such as example (30) “relational NMCs.”

In Sections 3.1.1-3.1.5, we saw a number of behavioral properties of the IHRC construction that are considered symptomatic of the proposed analysis spelled out in (12). If the above analysis of relational NMCs is correct, it is expected that relational NMCs will behave in a similar fashion to the IHRC construction with respect to the behavioral properties discussed above. Let us examine one by one.

First, relational NMCs appear to obey Keenan and Comrie’s accessibility hierarchy when it comes to head choice. Consider the following data:

(31) [Taro-ga Jiro-o shashin-satsuei shite ita] ushiro-de
    ‘Taro, was taking pictures of Jiro, behind whom the volcano erupted.’

In this example, the most likely interpretation is that the volcano erupted ‘behind Taro,’ but the ‘behind Jiro’ interpretation is not totally excluded.
Consider the next example, where the subordinate clause of (31) is passivized:

(32) [Jiro-ga Taro-ni shashin-satsuei sarete ita] ushiro-de Jiro-Nom Taro-Dat photo-taking do-Pass was behind-Loc kazan-ga bakuhatu shita. volcano-Nom eruption did ‘Jiro was being taken pictures of by Taro, behind whom the volcano erupted.’

Here, Jiro, but not Taro, is the one behind whom the volcano erupted. This seems to suggest that head choice of relational NMCs follows Keenan and Comrie’s accessibility hierarchy.

Second, relational NMCs can be “headless”:

(33) [zeikin-o haratta] nokori-o chokinshita. tax-Acc paid remainder-Acc saved ‘I saved what was left after I paid the tax.’
(34) [seetaa-o anda] nokori-de tebukuro-o anda. sweater-Acc knitted remainder-Instr glove-Acc knitted ‘I knitted gloves with what was left after I knitted a sweater.’

In these examples, the semantic head of nokori (i.e. x of ‘the remainder of x’) is not inside the subordinate clause: it is not the remainder of the ‘tax’ that I saved nor is it the remainder of the ‘sweater’ that I used to knit gloves. Thus, one cannot paraphrase these examples into corresponding EHRC sentences in the same way that (24) is paraphrased into (25). Instead, what I saved is the remainder of ‘my income’ after I paid the tax, and what I used to knit gloves is the remainder of the ‘wool’ after I knitted a sweater. These interpretations obtain when ‘my income’ and ‘wool’ are construed as the active zone with respect to nokori.

Third, relational NMCs can have multiple heads, as Kuroda (1983 [1992: 181]) shows:

---

9 I am not quite sure how strongly temporal ordering of NPs affects head choice for relational NMCs; i.e., whether Jiro-o Taro-ga shashin-satsuei shite ita ushiro, which results from switching the two NPs in the subordinate clause of (31), is more likely to be interpreted with Jiro as semantic head.

10 Alternatively, one might argue that shunyu-kara ‘from my income’ and keito-de ‘out of wool’ are missing in the subordinate clauses in (33) and (34) respectively.
(35) [ozei-no sensei-ga ozei-no seito-o hikitsurete many-Gen teacher-Nom many-Gen pupil-Acc lead aruite iru] naka-o walk be middle-Acc
‘in the midst of many teachers and many pupils who are walking, the former leading the latter’

This can be interpreted as ‘something happens in the midst of many teachers and many pupils,’ where both ‘many teachers’ and ‘many pupils’ are construed as heads with respect to their participation in the relationship of ‘X is in the midst of Y.’

Fourth, a certain semantic/pragmatic relationship, comparable to the relevancy condition, has to hold between the noun-modifying clause event and the main-clause event.\(^{11}\) Compare the following pair:

(36) a. [keeki-o tabeta] nokori-o reizoko-ni ireta. cake-Acc ate leftover-Acc refrigerator-Dat put ‘I put into the refrigerator the leftover of the cake I had eaten.’

b.??[keeki-o tabeta] nokori-o reizoko-kara cake-Acc ate leftover-Acc refrigerator-Abl took.out
toridashita. ‘I took out of the refrigerator the leftover of the cake I had eaten.’

The difference in acceptability between the pair is presumably due to whether or not the noun-modifying clause event and the main-clause event are interpretable as constituting a unified simplex event.\(^{12}\)

Fifth, relational NMCs and appositive NMCs form a gradation with NMCs headed by a perception noun occupying an intermediate position, just like IHRCs and verb complements form a gradation with sentential complements of perception verbs in between:

\(^{11}\) I benefited from the discussion with Yoshiki Nishimura on this point.

\(^{12}\) Nakau (1976: 452–459, 1980: 151–155) states in his discussion of aspectual constraints on relational NMCs such as (26) that the main-clause event and the subordinate-clause event have to be “simultaneous,” though he does not analyze (26) as involving an IHRC.
Example (37a) is a relational NMC in which ‘cake’ serves as the semantic head with respect to ‘leftover,’ while example (37c) involves an appositive NMC (=Matsumoto’s NH-type) in which the entire clause constitutes the content of the head noun ‘fact.’ The NMC with a perception head noun in (37b) can be regarded as intermediate because it allows variable construal in that it is not so obvious whether the object of perception is the entire modifying-clause event or a participant NP in the event. These differences are reflected by the paraphrasability into corresponding EHRCs:

(37) a. [Taro-ga keeki-o tabeta] nokori  
Taro-Nom cake-Acc ate leftover  
‘the leftover of the cake Taro ate’  
b. [Taro-ga keeki-o taberu] {sugata/oto}  
Taro-Nom cake-Acc eat appearance/sound  
‘the appearance/sound of Taro eating cake’  
c. [Taro-ga keeki-o tabeta] jijitsu  
Taro-Nom cake-Acc ate fact  
‘the fact that Taro ate cake’

Example (37a) is a relational NMC in which ‘cake’ serves as the semantic head with respect to ‘leftover,’ while example (37c) involves an appositive NMC (=Matsumoto’s NH-type) in which the entire clause constitutes the content of the head noun ‘fact.’ The NMC with a perception head noun in (37b) can be regarded as intermediate because it allows variable construal in that it is not so obvious whether the object of perception is the entire modifying-clause event or a participant NP in the event. These differences are reflected by the paraphrasability into corresponding EHRCs:

(38) a. [Taro-ga tabeta] keeki-no nokori  
Taro-Nom ate cake-Gen leftover  
b. [keeki-o taberu] Taro-no {sugata/oto}  
Taro-Gen cake-Acc eat appearance/sound  
c. *[Taro-ga tabeta] keeki-no jijitsu  
Taro-Nom ate cake-Gen fact  
*[keeki-o tabeta] Taro-no jijitsu  
Taro-Gen cake-Acc ate cake-Gen fact

4. Conclusion

I have outlined above an alternative analysis of relational NMCs (=Matsumoto’s CNH-type) and argued that they are best characterized and most profitably distinguished from other types of NMCs when analyzed as IHRCs: on this analysis, the difference between relational NMCs and appositive NMCs (=Matsumoto’s NH-type), being parallel to the difference between IHRCs and verb complements, boils down to whether the correspondence of the modifying-clause event with the head noun involves active-zone/profile discrepancy or not. The behavioral properties of relational NMCs discussed in Section 3.3 fall out as consequences of the characterization of relational NMCs as IHRCs.
On the other hand, Matsumoto's proposed characterization of relational NMCs as CNH-type cannot account for the range of data discussed in Section 3.3. This leads to the conclusion that her attempt at vitiating the dichotomy between relative clauses (=CH-type) and noun complements (=NH-type) by positing the intermediate CNH-type is not successful. To summarize the difference as to where to situate relational NMCs:¹³

(39) a. Matsumoto's tripartite classification of NMCs:
   CH-type — CNH-type — NH-type
   b. Proposed revision by the present paper:
      CH-type — appositive NMCs... perception NMCs... relational NMCs

NH-type

It remains to determine the range of relational nouns that are amenable to the IHRC analysis outlined above. The relational nouns we used for illustration are either spatial (e.g. ushiro ‘behind’) or physical (e.g. nokori ‘remainder, leftover’) and they conceptually presuppose a physical entity as their landmark. Consider, on the other hand, the following examples:

(40) a. [byoin-de kensa-o uketa] kekka
   hospital-Loc test-Acc received result
   ‘the result of the medical checkup I had at the hospital’
   b. [Taro-ga Jiro-o nagutta] kekka
      Taro-Nom Jiro-Acc struck result
      ‘the result of Taro’s having struck Jiro’

The noun kekka ‘result’ is relational in that it presupposes an event that causes the result. When the modifying clause includes an event noun (e.g. kensa ‘test’) as in (40a), the NMC is likely to receive the IHRC interpretation (cf. [byoin-de uketa] kensa-no kekka), but otherwise, as in (40b), the IHRC interpretation is difficult (cf. *[Jiro-o nagutta] Taro-no kekka, *[Taro-ga nagutta] Jiro-no kekka). This sug-

¹³ Note that I’m not claiming that the CH-type and the NH-type should be strictly dichotomous. I’m only claiming that the CNH-type does not serve as intermediate between the CH-type and the NH-type; there should be other types of intermediate cases (cf. Teramura (1980: 263)). Matsumoto herself discusses intermediate cases between the CH-type and the CNH-type on pp. 155-159 and between the CNH-type and the NH-type on p. 162. See Nomura (1993) for the intermediate cases between relative clauses and content clauses in English.
gests that what has been grouped as "relational nouns" is anything but homogeneous and is in need of careful reexamination, which is, however, beyond the purview of the present paper.\textsuperscript{14}

To conclude, Matsumoto's work convincingly demonstrates that Japanese-style NMCs including EHRCs require semantic and pragmatic knowledge for the integration of the modifying clause and the head noun, thereby defying a purely syntactic account, unlike English-type EHRCs where associating a missing subcategorized argument with the head noun is all that is needed. Given her analysis of NMCs including EHRCs, combined with the analysis of IHRCs outlined in the present paper, the Eurocentric notion of "relativization," which has been a constant topic of formal syntactic analyses, needs to be recast in a new light.

REFERENCES


\textsuperscript{14} Recent studies of the NMC headed by the noun \textit{hanbun} 'half' by Ishii (1990), Murasugi (1996) and Kuroda (1998: 61–66) can be viewed along these lines, though Kuroda himself argues that the NMC in question is not an IHRC.]


Matsui, Emi (1979) *Eisakubun ni Okeru Nihonjinteki Ayamari* (Common Errors Found in English Composition by Japanese Learners of English), Taishukan, Tokyo.


Department of English
Japan Women’s University
2-8-1 Mejirodai, Bunkyo-ku
Tokyo 112-8681
e-mail: nomura-m@jwu.ac.jp