The State of the Art in Linguistic Research

The Interface of Form and Meaning

言語研究の現在

形式と意味のインターフェース

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　中村捷先生は，平成 20 年 3 月をもって東北大学大学院文学研究科を定年によりご退職なさいます．昭和 56 年 4 月に東北大学文学部に赴任されて以来，27 年間にわたり研究と教育に力を尽くされ，英語学研究室を充実・発展させてこられました．また，東北大学評議員（2 期），東北大学研究評議員，文学研究科副研究科長を務められ，文学研究科ならびに東北大学の運営に寄与されました．学外においては，日本英語学会評議員・理事，日本英語学会編集委員会委員長，日本英文学会評議員として学会の運営・発展に多大な貢献をされました．私たちは，ご退官の記念として論文集を編纂し，中村先生の長年にわたる研究ならびに教育の功績を称えるとともに，感謝の念をこめてこれを献呈いたします．

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Sentential Modifiers in a Discourse-*Pro* Language*

Keiko Murasugi

1. Introduction

Two analyses have been proposed for Japanese relative clauses: the base-generation analysis, and the movement analysis. The base-generation analysis is found in Hoji (1985), where he argues that the gap in a Japanese relative clause is never created by movement but is always an unpronounced pronoun. Ishii (1991), on the other hand, maintains that Japanese relatives can be, and in some cases, must be derived by the movement of a relative operator as in their English counterparts.

In this paper, I will overview Murasugi (1991) and my subsequent works, where I developed the base-generation hypothesis, and attempt to explain why Japanese relative clauses never involve movement. The basic proposal is that the category of an NP-internal sentential modifier is parameterized between CP and the category lower than CP, like TP. The former includes the landing site for the relative operator while the latter is

a bare sentence. Japanese chooses TP, and as a result, its relative clauses cannot involve movement because they lack the position for the relative operator to move to. I suggest further that Japanese is quite permissive in the kinds of modification relations between a noun and its sentential modifier. This leads to the possibility that Japanese relative clauses are not relative clauses in the usual sense, but simple sentential modifiers of nouns (as that in *the claim that John loves Mary*).[1] They have the appearance of relative clauses especially when they contain an unpronounced pronoun that happens to correspond to the head noun.

2.   The Basic Properties of Japanese "Relative Clauses": The Absence of Movement

Kuno (1973) notes that Japanese relative clauses need not contain a gap as in (1), and that even when they contain a gap, they do not exhibit island effects that are observed with movement. The gap in (2) is contained in a relative clause within the main relative clause.[2]

(1)   [$_{NP}$ [$_{IP}$ syuusyoku -ga   muzukasii] [$_{NP}$ buturigaku]]
        getting job -Nom   hard   physics
      'Physics, which is hard to get a job in.'

(2)   [$_{IP}$ [$_{NP}$ [$_{IP}$ e_i e_j kiteiru]   yoohuku$_j$] -ga   yogoreteiru]
                      is wearing   suit   -Nom   is dirty
      sinsi$_i$
      gentleman
      'the gentleman who [the suit that he is wearing] is dirty'

He argues, based on the former fact, that what is required between the relative head and the relative clauses in Japanese is only the "aboutness

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[1] Mihara (1994), on the independent grounds, proposes a structure virtually identical to the present analysis for the Japanese relative clauses. His proposal is based on the detailed examination of the head-internal relative clauses. See Murasugi (1994) for the analysis of head-internal relative clauses in Japanese.

[2] Note that the English counterparts of (1) and (2) are totally ungrammatical.

relation." Perlmutter (1972) demonstrates convincingly that nothing prevents the gap in a Japanese relative clause from being a *pro* (unpronounced pronoun), and hence, the gap need not be produced by movement. This accounts for the absence of island effects noted above.

Hoji (1985) proposes a stronger hypothesis based on the absence of connectivity or reconstruction effect with Japanese relatives. The connectivity effect in English relative clauses is illustrated in (3a).

(3)   a.   the picture of himself that John likes [*gap*] best
       b.   John likes the picture of himself

In (3a), the relative head (*the picture of himself*) is "connected" to the gap, and this makes it possible to interpret *himself* as *John*. This kind of connectivity effect is observed when a gap is produced by movement, but not with a pronoun, as the examples of topic construction in (4) illustrate.

(4)   a.   That picture of himself, John liked
       b.   *That picture of himself, John liked it

What Hoji observes is that the Japanese counterpart of (3) is out, as shown in (5).

(5)   *[John$_i$-ga e_j taipu-sita] [zibun$_i$-no   ronbun]$_j$
                -Nom   typed   self -Gen   paper
      '*Lit.* self$_i$'s paper that John$_i$ typed'

As he notes, this absence of connectivity effect constitutes evidence that Japanese relative clauses can never involve movement.

Further evidence for Hoji's hypothesis can be found when we examine relativization of adjuncts. First, (6) apparently shows that relativization of reason/manner adjuncts exhibit island effects, in distinction with relativization of arguments.

(6)   a.   *[$_{IP}$ [$_{NP}$ [$_{IP}$ e_i e_j kubi-ni natta]   hito$_j$] -ga   minna okotteiru]
                        was fired   person-Nom all   is angry
        riyuu$_i$
        reason
        'the reason that [all the people who were fired (for it)] are angry'

b. *$[_{IP} [_{NP} [_{IP} e_i e_j$ mondai -o   toita] hito$_j$] -ga   minna
                  problem-Acc solved person-Nom all
    siken-ni otiru] hoohoo$_i$
    exam in fail   method
    'the method that [all the people who solved problem (by
    it)] fail the exam'

The grammatical status of these examples parallels that of the English
(7a–b).

(7)   a.   *the reason$_i$ [that [all of the students who were fired t_i] are
          angry]

      b.   *the manner$_i$ [that [all of the students who solved the
          problem t_i] fail the examination]

This fact can be accounted for straightforwardly if *pro* can occur only in
argument positions, and hence, (6a–b), as opposed to (2), must be
derived by movement (See Saito (1985)).

But the restriction on the relativization of reason/manner phrases is
much tighter. As shown in (8)–(9), they are clause-bound.

(8)   a.   [Mary-ga t_i kaetta] riyuu$_i$
             -Nom   left   reason
          'the reason$_i$ Mary left t_i'

      b.   *[Mary-ga [John-ga t_i kaetta to] omotteiru] riyuu$_i$
             -Nom   -Nom left C   think   reason
          'the reason$_i$ Mary thinks that John left t_i'

(9)   a.   [Mary-ga t_i mondai -o   toita]   hoohoo$_i$
             -Nom   problem -Acc solved   method
          'the method$_i$ Mary solved the problem t_i'

      b.   *[Mary-ga [John-ga t_i mondai -o   toita   to]
             -Nom   -Nom problem-Acc solved C
          omotteiru] hoohoo$_i$
          think   method
          'the method$_i$ Mary thinks that John solved the problem t_i'

If (8b) and (9b) can be derived by movement, we expect them to be

grammatical as their English counterparts in (10a–b).

(10) a.   the reason$_i$ (for which) John thinks [Mary was fired t_i]

      b.   the method$_i$ (by which) John thinks [Mary solved the
          problem t_i]

Based on examples of this kind, I argued in Murasugi (1991) that
relativization of pure adjuncts is simply impossible in Japanese. Given
this, (8a) and (9a) do not contain any gap and they are pure complex NPs
like those in (11a–b).

(11) a.   sakana-ga   yakeru nioi
          fish -Nom   burn   smell
          '*Lit.* the smell that the fish burns'

      b.   doa -ga   simaru oto
          door-Nom shut   sound
          '*Lit.* the sound that the door shuts'

Then, (8a), for example, has a structure that parallels the English (12).

(12) the reason for John's leaving

This analysis is in line with Hoji's hypothesis. (8b) and (9b) cannot be
base-generated with *pro*, since *pro* can appear only in argument positions.
And they cannot be derived by movement either, because Japanese
relative clauses, gapless or gapped, can never involve movement.

3. Japanese "Relative Clauses" as Bare Sentences

Given Hoji's hypothesis, a question arises why Japanese relative
clauses cannot involve movement. One straightforward answer is that
Japanese relative clauses are TPs (Tense Phrases), and not CPs
(Complementizer Phrases), as originally proposed by Saito (1985). If
they do not have the CP Spec position where a relative operator can move
to, they cannot be derived by movement.

In Murasugi (1991, 2002a, b, 2004), I argued this is indeed the case.
Some Japanese-speaking children, around the age 2 to 4, produce
ungrammatical relative clauses like those in (13). The object *taiko*

(drum) in (13a), and the subject *wanwa* (dog) in (13b), are "relativ-ized."

(13) a.   buta san-ga   tataiteiru   no   taiko   (M: 2;11)
           piggy   -Nom is-hitting *NO drum
           'the drum that the piggy is playing'

      b.   ohana   motteru   no   wanwa   (T: 2;6)
           flower   is-holding *NO doggie
           'a doggie that is holding a flower'

Here, the problem is the overgenerated particle 'no' following the relative clause, which is not allowed in adult grammar. I first presented detailed arguments that this particle is of the category C (complementizer). 'No' as a C appears in cleft sentences as shown in (14).

(14) a.   [[Yamada-ga   atta] no] -wa   Russell   da
                      -Nom   met   C   -Top   is
           'It was Russell that Yamada met'

      b.   [[Yamada-ga   atta] no] -wa   Russell ni   da
                      -Nom   met   C   -Top   with is
           'It was with Russell that Yamada met.'

Then, I argued that Japanese-speaking children initially hypothesize that Japanese relative clauses are CPs, and hence, produce 'no' at its head position.

This analysis of (13) implies that CP is the unmarked category for relative clauses. It also implies that those children eventually discover that Japanese relative clauses are TPs, but not CPs, and thus, cease to produce 'no'. And there is positive evidence that they can use to make this shift. (15) shows that an overt complementizer is not allowed in non-relative prenominal sentential modifiers in Japanese.

(15) a.   sakana-ga   yakeru (*no) nioi
           fish   -Nom   burn   C   smell
           '*Lit.* the smell that the fish burns'

      b.   doa -ga   simaru (*no)   oto
           door-Nom shut   C   sound

           '*Lit.* the sound that the door shuts'

This is in clear contrast with English. As shown in (16), English non-relative sentential modifiers require an overt complementizer.

(16)   the claim [$_{CP}$ *(that) [Bill had left the party]]

Stowell (1981) and Kayne (1981) analyze (16) as follows. If the complementizer 'that' is missing, there must be an empty category in the C position. But this empty category would then violate the Empty Category Principle, or some other condition on the licensing the empty categories. Thus, the complementizer 'that' must be present in examples like (16).

If we apply this analysis to the Japanese (15), it follows that the sentential modifier cannot be of the category CP. If it is CP, its head C position would be occupied by an empty category, and the empty category would be in violation of the principle governing the distribution of empty categories. Hence, the sentential modifier in (15) must be of the category TP. This means that Japanese-speaking children can infer, on the basis of positive evidence like (15), that the sentential modifier in a pure complex NP is of the category TP. Suppose, as it seems plausible, that the children generalize this conclusion to all prenominal sentential modifiers. Then, (15) serves as positive evidence that Japanese relative clauses are of the category TP.

If this analysis of the acquisition data in (13) is correct, it provides direct support for the TP hypothesis for Japanese relative clauses. According to this analysis, the category for relative clauses is para-meterized between CP and TP, CP being the unmarked case. And Japanese-speaking children eventually choose TP.

4.   The Modification Relation of Sentential Modifiers in Japanese

As noted above, Kuno (1973) shows that Japanese relative clauses need not contain a gap. The relevant example (1) is repeated in (17).

(17)   [$_{NP}$ [$_{IP}$ syuusyoku-ga   muzukasii] [$_{NP}$ buturigaku]]
              getting job-Nom hard   physics

'Physics, which is hard to get a job in'
Here, Kuno assumes that this kind of relative is licensed by the "aboutness relation" that applies to topics as well. Thus, we have the topic sentence in (18) corresponding to (17).

(18)   [$_{IP}$[$_{NP}$ buturigaku]-wa   [$_{IP}$ syuusyoku-ga   muzukasii]]
          physics   -Top   getting job-Nom   hard

   'As for physics, it is hard to get a job.'

Given this analysis, which has been highly influential, examples such as the following cannot be relative clauses:

(19)   a.   [[sakana-ga   kogeru] nioi]
              fish   -Nom burn   smell

   '*Lit.* the smell that a fish burns = the smell of a fish burning'

   b.   [[doa -ga   simaru] oto]
        door-Nom shut   sound

   '*Lit.* the sound that a door shuts = the sound of a door shutting'

This is so because the "aboutness relation" does not hold between the head (*nioi* in (19a)) and the sentential modifier (*sakana-ga kogeru* in (19a)) in these examples. The topicalization examples corresponding to (19a–b) are ungrammatical as shown below.

(20)   a.   *[sono nioi -wa [sakana -ga   kogeru]]
              that smell -Top fish   -Nom burn

   '*Lit.* As for that smell, a fish burns.'

   b.   *[sono oto   -wa [doa -ga   simaru]]
        that sound -Top door -Nom shut

   '*Lit.* As for that sound, a door shuts.'

Examples like (19a–b) have been considered typical cases of non-relative prenominal (pure) sentential modifiers in Japanese.

It would be useful to consider in this context another type of Japanese pure sentential modifiers, which I call "result relatives." Observe (21a). Here, the "the relative" head corresponds to a result/product of the

act/event denoted by the prenominal sentential modifier. Even ratio nouns such as 'hanbun' (half) can also appear in the "head" position, as shown in (21b).[3]

(21)   a.   [[kyabetu-o   komakaku kitta] mono]
              cabbage-Acc thinly   cut   thing

   '*Lit.* thing that one thinly cut a cabbage'
   = the thing which was produced by slicing a cabbage

   b.   [[haha -ga   zyagaimo-o   yudeta] hanbun]
        mother-Nom potatoes -Acc boiled   half

   '*Lit.* half that Mother boiled potatoes'
   = a half of that which Mother made by boiling potatoes

If we assume Kuno's (1973) criterion above, "result-relatives" must also be classified as pure sentential modifiers. In fact, the topicalization counterparts of (21) are all ungrammatical.

(21)   a.   *[sono mono-wa [kyabetu-o   komakaku kitta]]
              that thing -Top cabbage-Acc thinly   cut

   '*Lit.* As for that thing, one thinly cut a cabbage.'

   b.   *[sono hanbun-wa [haha   -ga   zyagaimo-o
        that half   -Top   mother -Nom potatoes -Acc
        yudeta]]
        boiled

   '*Lit.* As for that half, Mother boiled potatoes.'

Hence, the "aboutness relation" is not observed between the head and the sentential modifier in "result-relatives." This implies that they are not "relative clauses" in Kuno's sense.

Further, the modification relation with "result-relatives" is quite similar, if not identical, to that with the standard examples of pure sentential modifiers in (19). As noted above, in a typical "result-relative," the

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[3] Ishii (1991) argues that this type of Japanese relative clause should be analyzed in terms of movement to CP Spec. In what follows, I will illustrate the alternative analysis proposed in Murasugi (1997).

"head" corresponds to a result/product of the act/event denoted by the prenominal sentential modifier. Thus, (21a), for example, refers to 'the thing which was produced by slicing a cabbage.' A similar relation between the sentential modifier and the "head" holds in (21b) as well. (19a) and (19b) refer to 'the smell which is produced by a fish burning' and 'the sound which is produced by a door shutting' respectively. It seems reasonable, then, to suppose that typical "result-relatives" are interpreted in the same way as the pure sentential modifiers. Based on this and other evidence, Murasugi (1997) concludes that "result relatives" are not relative clauses but are pure sentential modifiers.

5. The Licensing Condition on Prenominal Sentential Modifiers

It was shown in the preceding section that Japanese employs prenominal sentential modification quite extensively. "Result relatives," for example, are not possible in English. (23) is another example that lacks an English counterpart.

(23)   sono toogeika-wa [[tuti-o   koneta]   itibu]-o
        that potter -Top soil-Acc softened-and-mixed a part-Acc
        moyoo-ni   tukatta
        pattern-for used
        'Lit. That potter used for the pattern [part that he softened and mixed soil].'
        = The potter used for the pattern part of the soil he softened and mixed.

Then the next question that arises concerns the nature of the modification relation expressed by these sentential modifiers. I made some speculative remarks on this issue in Murasugi (1997).

The modification relation in (23) seems to be of the kind that is typically observed across sentences in discourse. Thus, (23) can be paraphrased as in (24).

(24)   a.   sono toogeika-wa tuti-o   koneta
              that potter -Top soil-Acc softened-and-mixed
              'That potter softened and mixed the soil.'
        b.   sosite, sono   itibu -o   moyoo -ni tukatta
              and   its/that a part-Acc pattern -for used
              'And he used a part of for the pattern.'

The same can be said of the example in (25). Thus, it can be rewritten as in (26).

(25)   John-wa [[Bob-ga   yatin-ni tagaku-no okane -o   tukau]
            -Top   -Nom rent -for a lot -Gen money-Acc use
        (sono) hanbun-o   gyanburu-ni tukau
            half   -Acc gambling-for use
        'Lit. John uses for gambling [(the) half that Bob uses a large amount of money for rent].'
        = John uses for gambling as much as half of the large amount of money Bob uses for rent.

(26)   a.   Bob-wa yatin-ni   tagaku-no   okane -o   tukau
                -Top rent -for   a lot -Gen money-Acc use
              'Bob uses a large amount of money for rent.'
        b.   sosite, John-wa sono hanbun-o   gyanburu-ni tukau
              and   -Top its half   -Acc gambling-for use
              'Lit. And John uses its half for gambling.'
              = And John uses half of that amount for gambling.

This observation extends to typical examples of pure sentential modifiers. (27) contains a sentence modifying 'nioi' (smell).

(27)   [[Taroo-ga   kinoo   [sakana-ga   kogeteiru to] omotta]
            -Nom yesterday fish   -Nom is burning C   thought
        nioi] -ga   ima-mo   siteiru
        smell-Nom now-even   doing
        'Lit. Even now, [the smell that Taroo thought yesterday that a fish was burning] is around.'

Corresponding to this, we have (28).

(28) a. Taroo-ga   kinoo   [sakana-ga   kogeteiru to]
            -Nom yesterday fish   -Nom is burning C

          omotta
          thought
          'Taroo thought yesterday that a fish was burning.'

      b. sosite, *sono*   nioi -ga   ima -mo   siteiru
          and   *its/that* smell-Nom now-even   is doing
          'And that smell is still around even now.'

The examples above indicate that the discourse relation mediated by 'sono' (its/that) can be realized in Japanese as a modification relation in Noun Phrases. More generally, this suggests that in Japanese a syntactic configuration can be licensed by a typical discourse relation. This conclusion, if correct, can provide content for the claim that Japanese, as opposed to English, is a "discourse-oriented" language.

The discussion above on pure sentential modifiers has an important implication for the analysis of relative clauses. Recall first Kuno's (1973) claim that gapless relative clauses in Japanese are licensed by the "aboutness" relation. In the preceding section, I adopted this as a criterion to distinguish relative clauses and pure sentential modifiers. But the criterion itself is arbitrary, although it is certainly intuitively appealing. That is, there is no clear reason that relative clauses and pure sentential modifiers should be distinguished in this way. In this section, I examined examples that appear to be clear cases of pure sentential modifiers and suggested that they are licensed by virtue of the discourse relation mediated by 'sono' (its/that). If what have been considered gapless relative clauses have the same property, it is only natural to analyze them not as relative clauses but as pure sentential modifiers. In the remainder of this section, I will show that this is indeed the case.

Let us consider again a typical example of a gapless relative clause.

(29) [[[sotugyoo -ga   muzukasii] buturigaku]-o   senkousuru]
            graduation-Nom difficult   physics   -Acc major

          gakusei]-wa   ima -mo   ooi
          student -Top   now-even plentiful
          'Even today, there are many students who major in physics, which is difficult to get a degree in.'

Here, the sentence modifying 'buturigaku' (physics) is gapless. And the discourse relation discussed above holds here as well. Thus, (30) can be paraphrased as in (31).

(30) a. buturigaku-wa   sotugyoo -ga   muzukasii
          physics   -Top   graduation-Nom difficult
          'As for physics, it is difficult to get a degree.'

      b. sikasi, [[*sono*   buturigaku-o   senkoosuru]
          however *its/that* physics   -Acc major in
          gakusei]-wa ima -mo   ooi
          student -Top now-even   plentiful
          'But even today, there are many students who major in (that) physics.'

Hence, it seems indeed plausible to classify gapless relatives as pure sentential modifiers.

One remark is in order before I conclude this section. The gapless "relative clause" in (29) has been considered a relative clause in part because it is non-restrictive. But its non-restrictive nature is consistent with the proposal that it is a kind of a pure sentential modifier. Japanese seems to allow non-restrictive pure sentential modifiers quite generally as shown in (31).

(31) [[Taroo-ga   kinoo   [sakana-ga   yaketeiru to] omotta]
            -Nom yesterday fish   -Nom is burned C   thought
          kono nioi] -no   genin-wa   ima -mo   wakaranai
          this smell-Gen cause-Top now-even not-understood
          '*Lit.* The cause of [this smell that Taroo thought yesterday that a fish was burning] is not known even now.'

Thus, as far as I know, there is no strong reason that gapless "relative clauses" should be considered relative clauses.

6. "Japanese Relative Clauses" as Pure Sentential Modifiers

It was argued in the preceding section that gapless "relative clauses" should be classified as pure sentential modifiers. This leaves relative clauses with gaps as the only kind of relative clause in Japanese. But are they really relative clauses? I will suggest in this section that they are not.

Let us first consider the simple example in (32).

(32)   [[Taroo-ga   [*gap*] kaita]   hon] -wa   yoku   ureteiru
             -Nom   wrote book-Top   well   is selling
        'The book that Taroo wrote is selling well'

This example does not allow the kind of paraphrase permitted with pure sentential modifiers. For instance, (32) cannot be restated as in (33).

(33)   a.   Taroo-ga   [*gap*]   kaita
                  -Nom   wrote
              'Taroo wrote it.'

        b.   *sono*   hon -wa   yoku ureteiru
              its/that book-Top   well is selling
              'That book is selling well.'

(33b) is clearly strange as a sequel to (33a).

However, if the gap in (32) is an unpronounced pronoun, as I argued above, then there is independent reason for this. It is known that a pronoun can precede its antecedent within a sentence, but not across sentences. Thus, *he* can refer to *John* in (34a), but not in (34b).

(34)   a.   After he came into the room, John sat down and started
              reading a book

        b.   He came into the room. Then, John sat down and started
              reading a book

Then, the unpronounced pronoun in (33a) fails to refer to 'hon' (book) for the same reason that 'he' cannot refer to 'John' in (34b).

Interestingly, if we avoid this effect and substitute the indefinite noun 'hon' (book) for the gap in (33a), the paraphrase in fact becomes possible as shown in (35).

(35)   a.   Taroo-ga   hon -o   kaita
                  -Nom   book-Acc wrote
              'Taroo wrote a book.'

        b.   *sono*   hon -wa   yoku ureteiru
              its/that book-Top   well is selling
              'That book is selling well.'

This suggests two things. First, the unpronounced pronouns that correspond to gaps in Japanese relative clauses may be pronominal forms of indefinite nouns. This is plausible because it is known on independent grounds that unpronounced pronouns in Japanese can stand for indefinite nouns. An unpronounced pronoun can be used in place of 'ringo' (apple) in (36).

(36)   a.   Taroo-ga   ringo -o   mittu   tabeta
                  -Nom   apple-Acc three   ate
              'Taroo ate three apples.'

        b.   Hanako-wa   (ringo -o)   itutu   tabeta
                  -Top   apple-Acc   three   ate
              'Hanako ate five apples.'

Then the contrast between (33) and (35) is exactly what we expect. (32) cannot be paraphrased as in (33) because a pronoun cannot precede its antecedent across sentences. Then, it is necessary to replace the pronoun by its full form and we obtain (35).

Secondly, and more importantly, if this speculation on the gaps in Japanese relatives is correct, (35) suggests that Japanese relative clauses with gaps have the same kind of modification relation with their head nouns as pure sentential modifiers. That is, if we abstract away from the restriction on pronouns just mentioned, they allow the same kind of paraphrase as pure sentential modifiers. This, in turn, suggests that Japanese "relative clauses" with gaps should also be classified as pure sentential modifiers.

A possible objection to this is that those relative clauses allow "unbounded dependency." For example, the gap in (37) is contained in the

embedded clause within the relative clause.

(37)   [Hanako-ga   [Taroo-ga   [*gap*]   motteiru to] omotta] hon
　　　　　　-Nom　　　　-Nom　　　　　　　have　　 C　　thought   book
　　　　　'the book that Hanako thought that Taroo has'

If the clause with the subject 'Hanako' is a pure sentential modifier, then it must be licensed by virtue of its modification relation with the head noun *hon* (book), and it is not clear what role the correspondence between the gap and the head noun plays. It is this correspondence that is crucial in the interpretation of typical relative clauses.

However, it is not clear that the "unbounded dependency" observed in (37) is any different from the one in (38).

(38)   [[Taroo-ga   [sakana-ga   kogeteiru to] omotta] nioi]
　　　　　　　-Nom fish　　-Nom is burning C　 thought smell
　　　　　'*Lit.* the smell that Taroo thought that a fish is burning'

Here too, there is an apparent "unbounded dependency." The smell is that of a fish burning and not of Taroo thinking. But would this mean that what modifies 'nioi' in this example is not a pure sentential modifier? Most likely not. A plausible interpretation of the example is that the noun is modified by the whole prenominal sentential modifier. The "smell" is after all something that aroused a certain thought in Taroo's mind. Then, it is not clear that (37) provides any challenge to the analysis of Japanese "relative clauses" as pure sentential modifiers.

I would like to note finally that the discussion here is in line with Kuno's (1973) analysis of Japanese relative clauses in terms of the "aboutness relation." This analysis is often referred to regarding gapless relatives, but his claim is that the "aboutness relation" holds between a relative clause and the head noun in Japanese, whether the relative clause contains a gap or not. Then, what is important is the modification relation between the relative clause and the head noun, rather than the correspondence between the head noun and the gap. What I suggested in this paper is that the relevant relation is broader than "aboutness," and that it covers all prenominal sentential modifiers, including pure sentential modifiers and

what have been considered relative clauses.[4]

7.   Conclusion

I have argued in this paper that Japanese "relative clauses" are pure sentential modifiers, and consequently, that the language lacks relative clauses. What is, and what is not, a relative clause is in a sense a matter of definition. But if Japanese "relatives" are licensed in the same way as pure sentential modifiers, they should receive the same analysis. This implies that whatever that defines relative clauses as relative clauses (as opposed to pure sentential modifiers) is not important in the syntactic analysis of Japanese relative clauses.

The findings in this paper have larger implications. If the analysis presented here is correct, Noun Phrase Accessibility Hierarchy (NPAH) of Keenan and Comrie (1977), for example, is irrelevant for Japanese relatives (see also Comrie (1998a, 2002), Keenan (1985), Keenan and Comrie (1977), among others). NPAH is proposed to capture the typological differences in "relative clauses" among languages, and there has been some discussion whether it is applicable to Japanese. (See Inoue (1976), Koide (1998), Matsumoto (1988) and Comrie (1998a), among others.) If the conclusion of this paper is correct, the issue does not arise. Japanese simply lacks relative clauses, and whatever NPAH implies about the syntax or acquisition of language holds vacuously in this language.

The present paper also confirms that what is important in linguistics is the analysis rather than the "construction." In the Principles and Parameters Approach to syntax, principles and parameters are psychologically real whereas constructions are just epiphenomena. A passive construction

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[4] Comrie (1998a) reports the discussion of Matsumoto (1988), where a similar conclusion is drawn. She considers a variety of modification relations between prenominal sentential modifiers and their head nouns, and argues that relative clauses and pure sentential modifiers are both sentences simply attached the head nouns.

in one language may be analyzed in the same way as "tough construction" or "impersonal construction" in another, and the *wh*-question construction in one language may have the same syntactic properties as cleft construction in another. Therefore, it sometimes makes little sense to compare the same construction across languages. The present paper suggests that it would be more fruitful to compare Japanese pure sentential modifiers (including relative clauses) with those of other languages, rather than comparing Japanese "relative clauses" with those in others.

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