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Head-Internal Relative Clauses in Japanese and the Interpretation of Indefinite NPs*

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Abstract

In this paper I consider syntactic and semantic properties of head-internal relative clauses (HIRC) in Japanese. I argue that the properties of HIRCs in Japanese can be shown to follow from the following two proposals:

1. The semantic content of the HIRC induces E-type pronouns in the sense of Evans (1980).
2. The semantic content of an HIRC constitutes a thetic judgment, as against the categorical judgment, in the sense of Frantz Brentano. Cf. Kuroda (1972, 1992), Ladusaw (1994), Basilico (1998, 2003) etc.

The first of these, which makes reference to an E-type pronoun, captures a substantial part of the restrictions on the relation of the HIRC to the rest of the sentence. The second, on the other hand, explains the properties internal to the HIRC.

1. Introduction

In this paper I would like to consider syntactic and semantic properties of head-internal relative clauses (HIRC) in Japanese, exemplified by examples like (1).

(1) Taro-ga [ringo-ga kittin-ni aru no]-o   tot-te   tabe-ta.
     -Nom apple-Nom kitchen-in be No-Acc pick up ate
     'There was an apple in the kitchen and Taro picked it up and ate it.'

It has been shown in the literature that this construction is subject to a number of constraints and restrictions relating to syntax, semantics, and discourse-related factors.

In this paper, I'm going to argue that the properties of HIRCs in Japanese can be shown to follow from the two proposals presented in (2).

(2) 1. The semantic content of the HIRC induces E-type pronouns in the sense of Evans (1980).

2. The semantic content of an HIRC constitutes a thetic judgment, as against the categorical judgment, in the sense of Frantz Brentano. Cf. Kuroda (1972, 1992), Ladusaw (1994), Basilico (1998, 2003) etc.

The first of (2), the idea originating with Hoshi (1995) and Shimoyama (1999), which makes reference to an E-type pronoun, captures a substantial part of the restrictions on the relation of the HIRC to the rest of the sentence. In this sense, (2–1) can be thought of as an external condition on the HIRC. The second of (2), on the other hand, explains the properties internal to the HIRC.

2. Definiteness Restriction

Watanabe (1992) and Shimoyama (1999) point out that the head of HIRCs in Japanese is subject to a definiteness restriction, so that the internal head has to be an indefinite NP, and definite NPs and proper names are excluded.

(3)   [[{ <u>onnanoko</u> / *<u>sono onnanoko</u> / *<u>Hanako</u> }-ga yattekita]-no]-kara tegami-o uketotta
          girl   that girl   Hanako-Nom came-*no*-from   letter-ACC received
      '{(The) girl / Hanako} came and I received a letter from her.'

While the definiteness restriction is attested in the literature on other languages in which HIRCs are observed (cf. Munro (1976) on Mojave, Williamson (1987) on Lakhota, Tellier (1989) on Mooré, etc.) this restriction has not been widely discussed in the study of HIRCs in Japanese, as far as I am aware. A reason for this lack of attention has to do with the fact that HIRCs are structurally ambiguous when they appear in positions where they are marked, for example, by the accusative case. As Shimoyama (1999) points out, an HIRC can also be used as an adverbial expression denoting a circumstantial state of affairs when it is marked accusatively, and in this latter case the definiteness restriction does not hold.

(4)   Taroo-ga   [[{ (sono) <u>onnanoko</u> / <u>Hanako</u> }-ga yattekita]-no]-o tukamae-ta
      Taroo-NOM   that girl   Hanako-NOM came-*no*-ACC catch-PAST
      'Taro caught {(the) girl / Hanako} as she came in.' (may be a circumstantial adjunct)

This structural ambiguity does not arise in positions which can only be occupied by nominals, such as the position governed by a postposition *kara* 'from', as can be seen in (3), where the definiteness restriction is indeed observed. For this reason, for the remainder of this paper, we try to limit our discussion to HIRCs in the position governed by *kara* 'from', unless such examples are unavailable for some reason or inappropriate to current concerns.

(5)   [{ suunin-no / takusan-no / syoosuu-no / *subete-no / *hotondo-no }
        several   many   a few   all   most
      gakusei-ga paatii-ni araware-ta no]-kara ato-de meeru-o   morat-ta
      student-NOM party-to appeared No-from later   email-Acc got
      '{ Several / many / a few / all / most } students showed up at the party,
      and I got emails from them later.'

Example (5) shows the relevance of the weak/strong distinction of determiners to HIRC. Williamson (1987) observes that the same restriction applies in Lakhota HIRCs.

3.   HIRC and E-type pronouns

Following Hoshi (1995) and Shimoyama (1999), we assume that the interpretation of HIRC involves the process of interpretation of a construction with an E-type pronoun.

(6)   [[Taroo-ga   3-bon-no ronbun-o kaita]-no]-kara Hanako-ga   in'yoo-sita.
      Taroo-NOM 3-CL-GEN paper-ACC wrote-No-from Hanako-Nom quoted
      'Taro wrote *three papers* and Hanako quoted from *them*.'

This sentence should be interpreted in a different way from sentences involving head-external relative clauses (HERC) like the following.

(7)   [[Taroo-ga   kaita] 3-bon-no ronbun]-kara Hanako-ga   in'yoo-sita.
      Taroo-NOM wrote -3-CL-GEN paper-from   Hanako-Nom quoted
      'Hankao quoted from the *three papers* that Taro wrote.'

While (7) is compatible with a situation where Taro wrote five papers, of which the three were quoted by Hanako, (6) is incompatible with such a situation, and it must be interpreted in such a way that Taro wrote three papers and no more, all of which were quoted.

This latter interpretation is analogous to the interpretation of E-type pronouns (Evans, 1980), as exemplified in (8):

$$
(8) \quad \text{John owns} \left\{ \begin{array}{l} \text{many} \\ \text{some} \\ \text{a few} \end{array} \right\} \text{sheep, and he vaccinated them.}
$$

In this example, the pronoun in the second conjunct, an E-type pronoun, refers to all the sheep owned by John.

An E-type pronoun refers to the members of a set induced by a quantificational expression in the sentence, and the use of an E-type pronoun is contingent on the existential implication, at least as a necessary condition, of the relevant quantificational expression.

In the remainder of this section, I am going to argue that this supposition about the relevance of E-type pronouns to HIRCs has a number of consequences having to do with the delimitation of the relations of an HIRC with the rest of the sentence in which it appears. These properties are shown in (9):

(9)   1.   The interpretation of HIRCs requires that existential implication must hold involving the internal head of the HIRC.
      2.   The interpretation of HIRCs exhibits quantificational variability.

3.1   Existential Implication

One important property of E-type pronouns is that existential implication must hold with respect to the quantificational expression serving as the antecedent. Existential implication is related with a number of factors which are involved in the relation between an HIRC and the rest of the sentence.

NEGATION

The most straightforward way in which existential implication is related to E-type pronouns and HIRCs is by way of negation. Thus, in (10), in which the quantificational expression is dissociated from existential implication because of negation, the use of an E-type pronoun is not successful.

(10) a. *John owns no sheep, and he vaccinated them.
      b. *John doesn't own a sheep, and he vaccinated it.
      c. *John failed to catch a fish, and still thinks he would cook it for dinner.

Turning to HIRCs in Japanese, failure to establish existential implication within the clause constituting an HIRC causes the sentence to be ungrammatical.

(11) *[Taroo-ga   ronbun-o kaka-nakatta no]-kara Hanako-ga   in'yoo-sita.
      Taroo-NOM paper-ACC wrote-did-not No-from Hanako-Nom quoted
      '*Taro didn't write *papers* and Hanako quoted from *them*.'

This restriction does not hold for head-external relative clauses (HERCs), so the following sentence, which involves negation within the relative clause is not ungrammatical.

(12) [[Taroo-ga   kaka-nakatta] ronbun]-kara Hanako-ga   in'yoo-sita.
      Taroo-NOM wrote-did-not- paper-from   Hanako-Nom quoted
      'Hanako quoted from the paper which Taro didn't write.'

THE RELEVANCY CONDITION
The requirement of existential implication, a requirement on the successful use of E-type pronouns, and not a condition on HIRCs per se, overlaps pretty much in content with the Relevancy Condition, which Kuroda (1992) imposes on HIRCs.

(13) THE RELEVANCY CONDITION: For [an HIRC] to be acceptable, it is necessary that it be interpreted pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause. (Kuroda, 1992).

Kuroda (1992) considers sentences like (14), which he judges as pragmatically unacceptable, as part of the motivation for (13). (The judgment is Kuroda's.)

(14) #Taro-wa kesa   [ringo-ga   kinoo   kittin-ni   at-ta no]-o
      Taro-Top this morning apple-Nom yesterday kitchen-in was No-Acc
      tot-te tabe-ta.
      took   ate
      'There was an apple in the kitchen yesterday, and Taro took and ate it.'

Not all speakers find this sentence totally unacceptable, but the acceptability (if any) of this sentence is correlated with the possibility for the speaker to infer the existence of an apple this morning when somebody put it in the kitchen yesterday.

TENSE, ASPECT AND MODAL SUBORDINATION
As the following example indicates, HIRC sentences are unacceptable when the predicate in the HIRC is in the present progressive form.

(15) *[Taroo-ga   ronbun-o   kaite-iru no]-kara Hanako-ga   in'yoo-sita.
      Taroo-NOM paper -Acc writing   No-from Hanako-Nom quoted
      '*Taro is writing *a paper* and Hanako quoted from *it*.'

This sentence involves the verb *kak* 'write', a creation verb in its present progressive form, which does not ensure the existence of a paper written by Taro. Since existential implication with respect to 'a paper' is not available, this sentence is not acceptable. Consider (16).

(16)   [Taroo-ga   kaite-iru <u>ronbun</u>]-kara Hanako-ga   in'yoo-sita.
       Taroo-NOM writing   paper-from   Hanako-Nom quoted
       'Hanako quoted from the paper that Taro is writing.'

The acceptability of (16) can be explained in terms of the nature of HERCs in that they have the function of semantically restricting the head of the relative clause, so that there is some sense in saying that a paper that is being written can still be called a paper even if it is incomplete. This is not permissible with HIRCs since there is no restriction on the meaning of the internal head which would make the sentence acceptable.

The unacceptability of (15) is just on a par with the unacceptability of the use of an E-type pronoun in sentences like (17).

(17)   *John is writing *a paper*, and Mary quoted from *it*.

It is also well-know that this use of E-type pronoun is saved by modal subordination (Roberts (1987). Also see Jackendoff (1972).): It is possible for pronominal coindexing to succeed across sentence boundaries just in case the sentence in which the pronoun occurs contains some modal marker. Sentence (18) is fully acceptable because of this.

(18)   John is writing *a paper*, and Mary $\left\{ \begin{array}{l} \text{is going to} \\ \text{wants to} \\ \text{will} \end{array} \right\}$ quote from *it*.

Modal subordination saves the acceptability of (15) as well, so consider (19).

(19)   [Taroo-ga   <u>ronbun</u>-o   kaite-iru no]-kara Hanako-ga   in'yoo-sita-gatte iru.
       Taroo-NOM paper -Acc writing   No-from Hanako-Nom quote want   is
       'Taro is writing *a paper* and Hanako wants to quote from *it*.'

The acceptability of (20) is affected by the difference in tense.

(20)   Taro-ga   [kagi-ga ofisu-ni {at-ta / *aru} no]-o   nakusi-ta.
       Taro-Nom key-Nom office-in was / is   No-Acc lost
       'There was/is a key in the office, and Taro lost it.'

As (21) shows, the HERC is free from this distinction in tense.

(21)   Taro-ga   [ofisu-ni {at-ta / aru} <u>kagi</u>]-o   nakusi-ta.
       Taro-Nom office-in was / is   key-Acc lost
       ' Taro lost the key that was/is in the office.'

EXTENSIONAL NATURE OF HIRCs

Kim (2003) observes that verbs that take HIRCs as their complement are *extensional* with respect to direct object position in the sense that sentences containing them entail the existence of what is referred to by the direct object in the actual world. Consider (22).

(22)   Hanako-ga   [<u>ringo-ga</u>   kittin-ni   aru no]-o   sagasi-te iru.
       Hanako-Nom apple-Nom kitchen-in is   No-Acc search   is
       'There is an apple in the kitchen, and Hanako is looking for it.'

This requirement for extensionality can also be captured as what follows from the requirement for existential implication imposed on the internal head of HIRC, if existence is understood as existence in the actual world.

3.2 Quantificational Variability

As Shimoyama (1999) observes, HIRCs in Japanese exhibit quantificational variability involving the indefinite NP serving as the internal head. Consider Shimoyama's example (51a).

(23) Wasaburo-wa [dono gakusei-mo peepaa-o 3-bon dasi-ta no]-o   itiniti-de yon-da.
      Wasaburo-Top every student   paper-Acc 3-Cl hand in No-Acc 1 day-in read
      'Every student turned in *three term papers* and Wasaburo read *them* in one day.'
      (Shimoyama 1999)

Shimoyama observes that the meaning of this sentence is that Wasaburo read all the papers handed in by the students, rather than 'three papers'. The following example, adapted from Webber (1978) shows the same point.

(24) Each girl in class gave Ivan *three flowers* she picked. He arranged $\left\{ \begin{array}{l} them \\ those\ flowers \end{array} \right\}$
      artfully in an empty Glenfiddich bottle.

In the following example, which contains an adverb of quantification *taitei* 'usually' the quantificational force of the indefinite NP serving as the internal head is determined by the adverb.

(25) [Dono gakusei-mo peepaa-o 3-bon dasi-ta no]-ga   taitei   kyakka-sare-ta.
      every   student   paper-Acc 3-Cl hand in No-Nom usually rejected-was
      'Every student turned in *three term papers* and *they* were usually rejected.'

Thus, the property of HIRC exhibiting quantificational variability can be viewed as a phenomenon associated with E-type pronouns, not specific to the construction of HIRC.

4. Thetic and Categorical Judgments

In the remainder of this paper our attention will be focused on the internal structure of HIRCs. I am going to argue that the interpretation and syntactic structures of HIRCs in Japanese represent a syntactic realization of thetic judgments (as opposed to categorical judgments), based originally on the ideas of Franz Brentano (Brentano, 1973), revived in modern linguistic theory by Kuroda (1972, 1992), Ladusaw (1994), Raposo and Uriagereka (1995), and Basilico (1998, 2003).

The following quote from Ladusaw (1994) is a helpful summary of the idea:

> The basis for a thetic judgement is a presentation of an object: an entity or eventuality. An affirmation of such a presentation commits the judger to the existence of something which satisfies the presentation; a denial by contrast expresses a negative existence judgment.

> The basis for a categorical judgment is compound: first a presentation which is clarified into a particular object satisfying the description, and then a property to be affirmed or denied of the object.

Sentences involving the object of verbs meaning creation such as *write*, *build*, etc., and the subject of unaccusative verbs such as *appear*, *emerge* etc. are among the most typical linguistic expressions which represent the notion of thetic judgment, while sentences involving topicalization, clefting, generic statements and quantifiers (or 'strong determiners' in Milsark's (1974) sense) exemplify categorical judgments. Sentences involving verbs of action, with the

Agent role in subject, are subject to either of the two modes of judgment. We will consider the status of Agent in section 11.

For ease of exposition, I am going to refer to an object (or entity) that is involved in the 'presentation' in thetic judgments as **thetic focus.**[1] The bold-faced expressions in (26) are thetic foci.

Notice that the verbs in these sentences by no means inherently assert (or presuppose) the existence of the objects, since (26), in the progressive forms, clearly do not carry an existential implication.

(26) a. John is building **a house** on the hill.

     b. **A strange person** was appearing.

To make the connection clear between HIRCs in Japanese and the thetic/categorical distinction, consider first the fact that a clefted sentence, an instantiation of a categorical judgment, cannot form an HIRC.

(27) *[Huukeiga-o   kaita   no-ga   yuumei-na gaka   de-aru no]-ga
      landscape-Acc painted No-Nom famous   painter is   No-Nom
      kazatte   aru.
      ornament is
      'It was a famous painter who painted a landscape, and it is on dispaly.'

Sentence (28) shows that there is no problem with an HERC containing a cleft sentence, showing that HERCs are insensitive to the thetic / categorical distinction.

(28) [Kaita no-ga   yuumei-na gaka   de-aru huukeiga]-ga   kazatte   aru.
      painted No-Nom famous   painter is   landscape-Nom ornament is
      'A landscape such that it was a famous painter who painted it is on display.'

The notion of thetic focus plays an important role in determining the internal head when there is more than one candidate. To see this, consider (29).

(29) a. [Gakusei-ga syntax-no   ronbun-o   kai-ta no]-kara
        student-Nom syntax-Gen paper-Acc wrote NO-from
        sensei-ga   in'yoo-sita.
        professor-Nom quoted
        'A student wrote a syntax paper and the professor quoted from it
        (=the paper).'

     b.?*[Gakusei-ga syntax-no   ronbun-o   kai-ta no]-kara meeru-o   morat-ta.
        student-Nom syntax-Gen paper-Acc wrote NO-from email-Acc got
        'A student wrote a syntax paper and I got an email from her (=the student).'

In (29a), the object of the verb of creation, an acceptable candidate for a thetic focus in our sense, serves as the 'internal head' of the HIRC and the sentence is acceptable. In (29b), the agent within the HIRC is chosen as the internal head of the HIRC in spite of the presence of a

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[1]The object of dative constructions ('give a book to Mary'), and verbs meaning transformations ('grow plants from various seeds') can be a thetic focus, while the object of sensation/perception verbs ('see a man'), and psychological verbs ('respect/hate a person') cannot. These latter verbs presuppose the existence of the object in some sense.

more likely candidate for a thetic focus, viz. the object of the creation verb, and the sentence is low in acceptability.

Sentences in (30) indicate the same point, with the contrast between the unaccusative and unergative verbs.

(30) a. [Gakusei-ga paatii-ni araware-ta no]-kara meeru-o   morat-ta.
         student-Nom party-to appeared   NO-from email-Acc got
         'A student showed up at the party, and I got an email from her (=the student)'

     b. ??[Gakusei-ga konbini-de   hatarai-ta no]-kara meeru-o   morat-ta.
         student-Nom conv. store-at worked   NO-from email-Acc got
         'A student worked at a convenience store, and I got an email from her (=the student)'

5.   Existential Closure

In section 4. we claimed that the interpretation of HIRCs in Japanese involves thetic judgments, where we took the object position of a verb of creation, such as *write* and *build*, and the subject position of an unaccusative verb such as *appear*, as the canonical positions for a thetic focus, a linguistic expression denoting an entity or object whose existence is presented. These arguments typically occur in a certain position within VP. Later on, we will argue that such a position is the Spec of VP that occupies an inner layer in VP-shell structures that contain the argument structure of the relevant predicates.

In Diesing's (1992) theory, indefinite NPs interpreted in VP are subject to Existential Closure, by which the indefinite NP is interpreted as a (restricted) variable which is bound by an existential operator in the nuclear scope. Diesing characterizes the indefinite NP thus interpreted as having the cardinal interpretation, which merely asserts the cardinality of an entity or entities, with no presupposition as to the set of objects to which the entities belong. This also squares well with Brentano's conception of theticity whose 'essence is the idea that a cognitive agent can have a presentation of an object without it being the presentation of any particular object.' (quote from Ladusaw (1994).)

Thus, thetic judgments and the cardinal interpretation of indefinite NPs share much in common:

1. They both involve weak NPs,

2. They are (typically) VP-internal,

3. They are free from presupposition as to the identity of objects denoted by weak NPs.

6.   Stage-level vs. Individual-level predicates

The contrast in (31) is due to the stage-level/individual-level distinction of their predicates.

(31) a. *[France wain-ga   kookyuu-na no]-kara saikoo-no sina-o eran-da.
        France wine-Nom fancy   NO-from best   goods selected
        '(Bottles of) French wine are fancy/expensive, and I selected the best from them.'

     b. [France wain-ga   seeru-na no]-kara saikoo-no sina-o eran-da.
         France wine-Nom on sale NO-from best   goods selected
         '(Bottles of) French wine are on sale, and I selected the best from them.'

Example (31a), which involves an individual-level predicate within the HIRC, is much worse than (31b), which involves a stage-level predicate whose weak NP subject is interpreted VP-internally and receives the cardinal interpretation (and thetic judgment as well).

This is just what is expected, at least for two reasons. First, generic statements involving individual predicates are a typical case of categorical statements. Secondly, from a structural viewpoint, in Diesing's theory, the subject of individual-level predicates is interpreted outside of VP.

(32) a. *[Gakusei-ga yuusyuu-na no]-kara meeru-o   morat-ta.
           student-Nom excellent   No-from email-Acc got
           'A student is excellent, and I got an email from her.'

      b. [Gakusei-ga kyuugaku-tyuu-na no]-kara meeru-o   morat-ta.
          student-Nom on leave   No-from email-Acc got
          'A student is on leave of absence from school, and I got an email from her.'

7.   Existential Closure vs. Theticity

As one example showing the difference between existential closure and theticity, existential closure in Diesing's sense applies to the indefinite NPs in the object of *read* and *write* with no discrimination. However, *write* is a creation verb which by its meaning presents the existence of some kind of document, while *read* presupposes the presence of something written. This difference is reflected, for example, on the presence or absence of existential implication in the present progressive form, as (33) indicate.

(33) a. *John is writing *a paper*, and Mary quoted from *it*. (=(17))

      b. John is reading *a paper*, and Mary quoted from *it*.

Example (34) shows the relevance of this distinction to HIRCs in Japanese.

(34) [Taro-ga   syntax-no ronbun-o { kai-ta / ?*yon-da} no]-kara sensei-ga kopii-o   tot-ta.
       Taro-Nom syntax-Gen paper-Acc wrote   read   NO-from professor copy-Acc took
       'Taro wrote/?*read a syntax paper and the professor made a xerox out of it (=the paper).'

The difference between these sentences lies in the choice of verbs in the HIRC. Since it is clear that existential closure applies involving materials in the HIRCs in both the examples, we must look for something else to make the necessary distinction between these sentences.

We hold that theticity, especially as conceived in Basilico (1998), has a good chance of distinguishing between (34a–b) — *write* is a verb meaning creation and the object of this verb qualifies as thetic focus, while *read* cannot be characterized this way. Rather, the meaning of *read* presupposes the existence of something written. The use of *read* does not present the existence of whatever is denoted by the object indefinite NP, which therefore does not qualify as thetic focus.

## 8.   The Canonical Position for Thetic Focus

We hold that the canonical position for a thetic focus in our sense is the Spec of VP, denoted by α in diagram (35).

(35)

VP
α — V'
V — { Content (theme) / Location / Material / etc. }
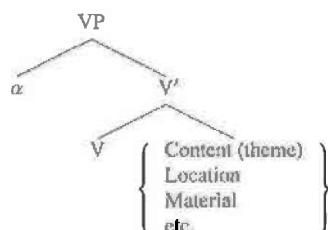
In th case of transitive verbs like *write*, we posit a higher VP-shell whose head V has the semantic import of CAUSE, along the lines of analysis dating back to Larson (1988). This is indicated in structure (36).

(36)

VP
Agent — V'
V — VP
DP (a paper) — V'
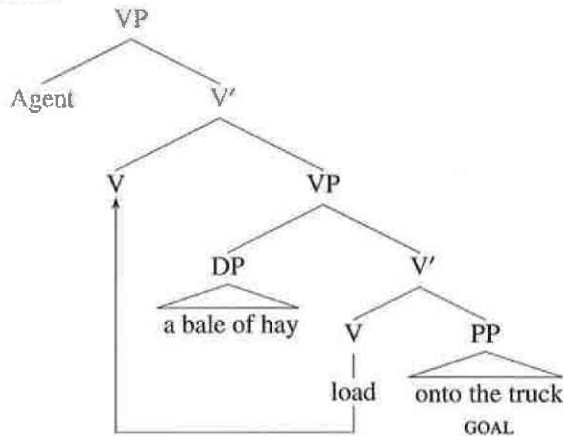V (write) — PP (on syntax THEME (content))
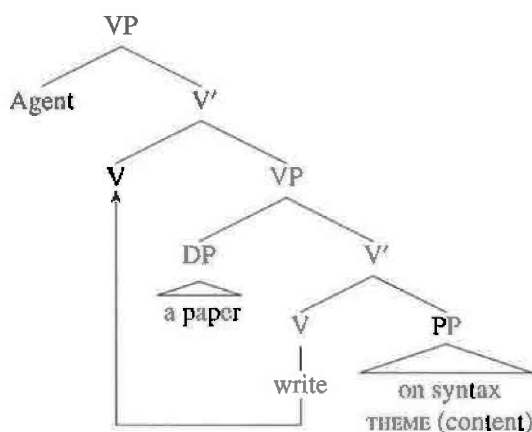
9. *Spray / Load* Alternations

Basilico (1998) presents a very important syntactic and semantic discussion on the well-known alternation involving locative expressions.

(37) a. The farmer loaded a bale of hay onto the truck.

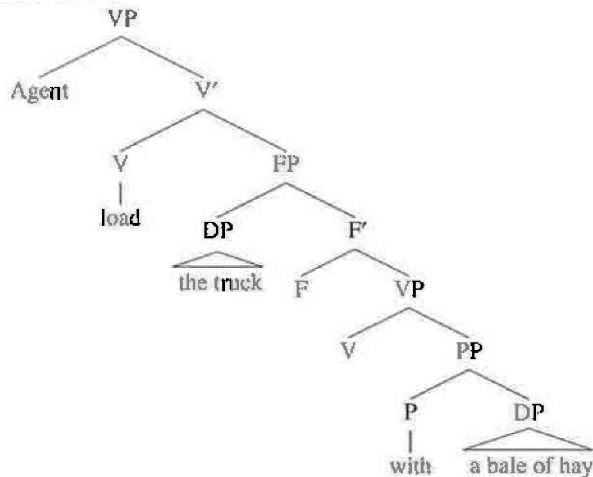   b. The farmer loaded the truck with a bale of hay.

Following Rappaport and Levin (1988), Basilico characterizes the alternation in such a way that the meaning of the alternant (37a) involves change of location with respect to a bale of hay, while the alternant (37b) should be semantically characterized as change of state with respect to the truck. Basilico identifies the former alternant as involving thetic judgments, the latter as categorical judgments.

On the structural side, I am going to adopt syntactic configurations for these types of sentences which are adapted from those proposed by Basilico (1998), who posits the presence of a projection of a functional category which he labels Trans (for transitivity) in both of the two structures. In the present analysis I'm going to propose a standard VP-shell configuration (without the intervention of TransP) for the thetic alternants, while I agree with Basilico in supposing that there is some kind of functional category intervening between the higher and the lower VP-shells in categorical alternants.

(38)   Thetic alternants:

```
                    VP
           _____|_____
        Agent              V'
                    _____|_____
                   V                VP
                   ^         _____|_____
                   |        DP              V'
                   |     ___|___      _____|_____
                   |    a bale of hay  V          PP
                   |                   |        ___|___
                   |                  load   onto the truck
                   |_____|          GOAL
```

(39)   Categorical alternants:

```
                    VP
           _____|_____
        Agent              V'
                    _____|_____
                   V                FP
                   |         _____|_____
                  load      DP              F'
                          ___|___      _____|_____
                         the truck  F          VP
                                          _____|_____
                                         V          PP
                                              _____|_____
                                             P            DP
                                             |          ___|___
                                           with      a bale of hay
```

The function of the functional category F is to establish a copulative relation between the argument in Spec (which is there to satisfy the strong [nominal] feature of the head F) and the projection in the complement to F, which serves as the predicate.

As evidence for this structural dichotomy, Basilico presents quantifier scope facts involving the constructions in question.

(40)   Basilico (1998):

    a.   The farmer loaded a bale of hay onto every truck. (ambiguous)

    b.   The farmer loaded a truck with every bale of hay. (unambiguous)

Sentences involving locative alternations in Japanese behave the same way with respect to quantifier scope.

(41) a.   Taro-ga hana-o   subete-no heya-ni   kazat-ta.
        -Nom flower-Acc all-Gen   room -in arranged
        'Taro arranged some flowers in every room.' (ambiguous)

      b.   Taro-ga heya-o   subete-no hana-de   kazat-ta.
           -Nom room-Acc all-Gen   flower -with arranged
           'Taro garnished a room with every flower.' (unambiguous)

This contrast suggests that sentences exhibiting locative alternations in Japanese have the structure (38) for thetic alternants like (41a) and the structure (39) for categorical alternants like (41b).

    Now with this much background, let us consider the following examples involving HIRCs in Japanese.

(42)   [Taro-ga <u>hana-o</u>   heya-ni   kazat-ta no]-kara
        -Nom flower-Acc room -in   arranged NO-from

       {a. 1-rin morat-ta. / b. ?*hito-ga de-te-ki-ta.}
           1-Cl got   person came out

       'Taro arranged some flowers$_i$ in a room$_j$, and
       {a. I got one flower from among them$_i$. / b. someone came out of it$_j$.}'

(43)   [Taro-ga heya-o   hana-de   kazat-ta no]-kara
        -Nom room-Acc flower -with arranged NO-from

       {a. ?*1-rin morat-ta. / b. ??hito-ga de-te-ki-ta.}
             1-Cl got   person came out

       'Taro garnished a room$_i$ with some flowers$_j$, and
       { I got one flower from among them$_j$. / someone came out of it$_i$.}'

That (42b) is ungrammatical confirms our idea that only an indefinite NP in the canonical position for thetic focus, viz. the object of a transitive verb, can be the internal head of HIRC. The ungrammaticality of (43) shows further that the object in a categorical alternant of the locative construction cannot be the internal head of HIRC.

10.   HIRCs and quantifier scope

So far we have developed an analysis of HIRCs in Japanese, in which we have claimed that a clause comprising an HIRC must represent a thetic judgment, and that the internal head must be what we call a thetic focus. This type of NP must be an indefinite NP, from the very nature of thetic judgments, and occupy Spec of VP headed typically by a transitive or an unaccusative verb, and is subject to existential closure. Since existential closure applies with VP as its domain, it is anticipated that the internal head of the HIRC should take scope narrower than any quantificational phrase that appears as subject of the HIRC. That this is indeed the case is shown by (44).

(44) a. [Hitori-no <u>gakusei-o</u>   minna-ga iin-ni   suisen-sita   no]-kara
         1-Cl-Gen student-Acc all-Nom committee-as recommended No-from

         zen'in-ga erab-are-ta (koto)
         all-Nom elected-was

         'Everyone recommended a student$_i$ for a committee member, and all of
         them$_i$ were elected (as members).' ($\forall > \exists$)

b. [Ringo-ga   dono-sara-no ue-ni-mo not-te-iru no]-kara
    apple-Nom   every plate   on   placed   No-from

    oisi-soo-na   no-o   eran-da.
    delicious-looking one-Acc   selected

'An apple was placed on every plate, and I selected the one that looked
delicious from among them (=apples).'

Although it has been recognized that scrambling affects scope interactions among quantifiers in
the sentence, this situation does not change, even when the object within the HIRC is scrambled
to the left of the subject. This would be quite naturally accounted for if the fronted indefinite
NP in (44a) is interpreted VP-internally in the position reconstructed at LF.

In this light, (45) shows a surprising behavior.

(45) [Sensei-ga   [hitori-no   gakusei-o   minna-ga suisen-sita   to]
      teacher-Nom one-Cl-Gen student-Acc all-Nom   recommended that

      it-ta no]-kara meeru-o   morat-ta (koto)
      said No-from   email-Acc   got   that

'The teacher said that everyone recommended a student$_i$ for a committee
member, and I got an email from her$_i$.' ($\exists > \forall, \forall > \exists$)

This sentence allows an interpretation on which the indefinite takes scope over the quantifier
in the subject of an HIRC, so that there is one student such that the teacher said that all the
students recommended her and that I got an email from her. But how does the embedding
make it possible to obtain such an interpretation?

I would like to suggest that embedding a clause as a complement to a verb of saying or
believing provides an additional syntactic position in which an expression can be a thetic focus,
which otherwise has no chance to be a thetic focus. Specifically, I would like to suggest that
verbs of saying or believing can be used in a configuration like (46).

(46)
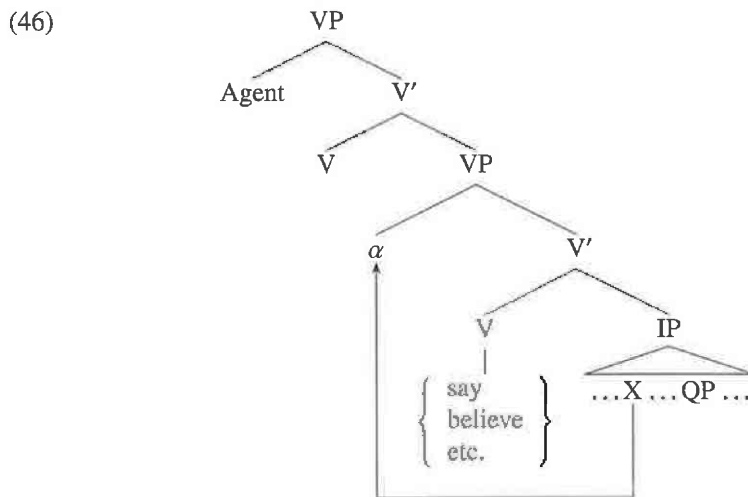
This is a structure that has been proposed to accommodate what has been traditionally labelled
ECM constructions in terms of subject-to-object raising (Lasnik (1999) etc.). Here an indefinite
NP generated in the position designated by X in the complement IP is moved to the position

designated by α, where it c-commands QP in IP, which accounts for the wide scope of α over QP.

The following sentence in which the same clause in (32a) is embedded as a complement to a verb of saying is much improved in grammaticality, in spite of the fact that it contains an individual-level predicate.

(47) [Sensei-ga   [hitori-no gakusei-ga   yuusyuu-da to]   it-ta no]-kara
      teacher-Nom one-Gen   student-Nom excellent   that said No-from

      meeru-o   morat-ta.
      email-Acc got

      'The teacher said that one student is excellent, and I got an email from her.'
      ☞ (32)

The sentence gains acceptability especially if the complement clause in (47) is interpreted de re. The structure and movement as depicted in (46) allows the indefinite NP to take scope over any quantifier inside the complement clause in the HIRC, which is just what is required for the de re interpretation involving the indefinite NP.

On the other hand, (46) implies that the indefinite NP occupying the position α should take scope within the VP headed by the verb of saying or believing, so that its scope should be narrower than a quantifier in the subject of the verb of saying or believing. This is indeed the case as (48) indicates.

(48) **[Minna-ga [hitori-no gakusei-ga   yuusyuu-da to]   it-ta no]-kara**
      all-Nom   one-Gen   student-Nom excellent   that said No-Nom

      daihyoo-ga   erab-are-ta.
      representative-Nom elected-was

      'Everyone said that one student$_i$ is excellent, and the representative was elected from among them$_i$.' ($\forall > \exists$)

This sentence exhibits the de re interpretation with respect to the indefinite NP, which means that it takes wide scope with respect to the embedded clause within the HIRC, and yet the indefinite NP takes scope narrower than the quantifier in the subject position. These properties are just what is expected of structure (46).

11.   Agent as Internal Head

At the outset of our discussion, we pointed out the contrast in the sentences (29), which we repeat here.

(29) a.   [Gakusei-ga syntax-no   ronbun-o   kai-ta no]-kara sensei-ga
           student-Nom syntax-Gen paper-Acc wrote NO-from professor-Nom

           in'yoo-sita.
           quoted

           'A student wrote a syntax paper and the professor quoted from it
           (=the paper).'

      b. ?*[Gakusei-ga syntax-no   ronbun-o   kai-ta no]-kara meeru-o   morat-ta.
           student-Nom syntax-Gen paper-Acc wrote NO-from email-Acc got
           'A student wrote a syntax paper and I got an email from her (=the student).'

Our claim in the present article is that an HIRC in Japanese must represent a thetic judgment, where the internal head must be a thetic focus, which is an indefinite NP that typically occurs as object of a verb meaning creation or coming into being, or as subject of an unaccusative verb that has a comparable meaning. On this criterion, the object indefinite NP in (29a) can be a thetic focus while the subject NP in (29b) cannot.

However, sentences like (29b) can be improved with a little change in the sentence. The following sentence is highly acceptable.

(49) [Gakusei-ga kakki-teki-na ronbun-o kai-ta no]-kara meeru-o morat-ta.
      student-Nom epoch-making paper-Acc wrote NO-from email-Acc got
      'A student wrote an epoch-making paper and I got an email from her (=the student).'

This sentence is acceptable with the agent in the subject of HIRC as internal head. Now, what's the difference between (29b) and (49)? Intuitively, the difference depends on the extent to which you can create a predicate in the HIRC that makes the subject qualify as thetic focus: Writing an epoch-making paper is a good predicate that has the effect of presenting the existence of a student who wrote it, while merely writing a syntax paper doesn't serve this purpose. Thus, there is a contrast between the following sentences.

(50) a. ??Ronbun-o kai-ta gakusei-ga iru!
         paper-Acc wrote student-Nom is
         'There is a student who wrote a paper.'

      b. Kakki-teki-na ronbun-o kai-ta gakusei-ga iru!
          epoch-making paper-Acc wrote student-Nom is
          'There is a student who wrote an epoch-making paper.'

Sentence (50a) is not informative as an existential sentence expressing surprise, while (50b) is appropriate as an existential sentence. The contrast in the following examples shows the same point, in which the subject in the HIRC is an agent.

(51) a. *[Gakusei-ga hasit-ta no]-kara meeru-o morat-ta.
         student-Nom ran   No-from email-Acc got
         'A student ran and I got an email from her (=the student).'

      b. [Gakusei-ga kokusai-taikai-de   hasit-ta no]-kara meeru-o morat-ta.
          student-Nom international event -at ran   No-from email-Acc got
          'A student ran at an international athletic event and I got an email from her (=the student).'

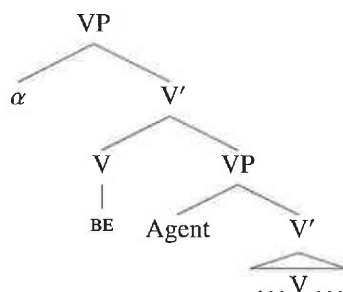This contrast correlates with the contrast in the following existential sentences.

(52) a. ??Hasit-ta gakusei-ga iru!
             ran student-Nom is
          'There's a student who ran.'

      b. Kokusai-taikai-de   hasit-ta gakusei-ga iru!
          international event -at ran student-Nom is
          'There's a student who ran at an international athletic event.'

Thus, there are a class of sentences with an agent in the subject position that represent thetic judgments, where the agent can be taken as thetic focus. In fact, many of the examples sentences involving thetic judgments discussed in Kuroda (1972) are these sentences, in which an indefinite NP marked with the nominative marker -*ga* is an agent.

To accommodate an agent as thetic focus, I suggest that the presentational character of some agentive sentences should involve a higher VP projection whose head has essentially the semantic content of 'be'.

(53)

```
                    VP
                  /    \
                 α      V'
                      /    \
                     V      VP
                     |    /    \
                    BE  Agent   V'
                              /    \
                            ... V ...
```

The agent in the lower projection is moved to the position α, a designated position for the thetic focus, to have its case licensed by T in the still higher projection.[2] Thus, the higher VP projection with BE as its head is a device to make an unaccusative construction out of a VP with an agent as its subject. Whether or not a given VP can be embedded in this construction is determined on the basis of semantic properties related with the contrasts in (50) and (52).

Kuroda (1992) discusses a sentence like the following, which is adapted from his (31).

(54) [Igakubu-no   gakusei-ga   eigo-no   umai zyogakusei-o
      medical school-Gen student-Nom English-Gen fluent female student-Acc

      syookai-site-kita no]-ga   suguni saiyoo-sare-ta.
      introduce-come   No-Nom   at once employed-Pass

      'A medical student came to introduce a female student who is fluent in English,
      and he/she was immediately employed.'

In this example, either the indefinite NP in subject or the indefinite NP in object can be interpreted as the internal head of the HIRC. Both of them can be a thetic focus, the object in the Spec of lower VP headed by the verb meaning "introduce", and the subject due to the higher unaccusative verb discussed in the present section. This represents the same property as our examples (29a) and (49).

12. Movement and HIRCs

Basilico (1996) develops an analysis of HIRCs in several languages. In all the languages exhibiting HIRCs he examines, the definiteness restriction on the internal head is observed, and Basilico argues that the Mapping Hypothesis of Diesing (1992) plays a vital role in the range of data he examines, and in this respect his analysis is similar in spirit to the present analysis. However, Basilico (1996) assumes that the internal head of HIRCs is subject to some kind of movement at LF or in overt syntax in some cases. For Basilico, the Mapping Hypothesis is relevant to his analysis in such a way that it provides the reason for the internal head to move: he does not wish to apply existential closure in the domain of the HIRC, and "the mapping hypothesis requires an indefinite to move out of VP to escape existential closure." (p. 510) Therefore, to Basilico, movement of the internal head may be to several possible landing sites, including to a position internal to the HIRC, as long as the movement is out of VP, since VP is the domain of existential closure.

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[2]Or to satisfy the EPP requirement of BE.

This is an interesting point of departure between Basilico's analysis and the present analysis, which is worth exploring, though I will not attempt to go any further into the matter in the present context. One thing appears to merit mention about the nature of HIRCs that Basilico discusses. In Mojave HIRCs, scrambling helps to disambiguate the identification of the internal head in HIRC sentences which are potentially ambiguous in basic word order. The following example from Mojave, quoted from Munro (1976) is ambiguous as the translation indicates.

(55) masahay ahvay ?-ay-n^y-č   ?ahot-m
       girl   dress I-give-Dem-Subj good-Tns
       'The girl I gave the dress to is nice' or
       'The dress I gave to the girl is nice.'

However, the fronting of 'dress' helps disambiguate the sentence, and only 'the dress' can now be interpreted as the internal head.

(56) ahvay masahay ?-ay-n^y-č   ?ahot-m
       dress girl   I-give-Dem-Subj good-Tns
       'The dress I gave to the girl is nice.'

Similar effects are reported with the data from some dialects of Diegueño, and other Yuman languages.

Some HIRCs in Japanese were seen to be potentially ambiguous with respect to the choice of the internal head — example (54) was seen to be ambiguous, and the same can be said about (49), with the choice of the main-clause predicate. However, the ambiguity is not resolved by the application of scrambling in these sentences.

I would like to claim that HIRCs in Japanese are not affected by scrambling because of the nature of theticity. A thetic focus is configurationally determined as an indefinite NP occupying Spec of VP whose head V has certain syntactic and semantic quality, so the internal head that is scrambled is expected to be reconstructed at LF and is interpreted in the designated position.

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