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The Nominalist Approach to the Head-Internal Relative Clause in Japanese Revisited: The Pure Internal Head vs. The Null External Head

Koji Hoshi

1. Introduction

In the history of generative grammatical studies in the Japanese language, the existence of the so-called head-internal relative clause (henceforth HIRC) construction was first addressed and formally discussed by Kuroda (1974, 1975–76, 1976–77).[1] Since the pioneering and seminal series of works by Kuroda (ibid.), the HIRC construction in Japanese has been extensively discussed in the literature (cf. Kuroda 1998, 1999 b and references therein). The bold-faced portions in the paradigm (1) illustrate representative examples of the relevant construction in Japanese:

(1) a. [**eki-de   yopparai-ga   sawaideita   no**]-ga
       station-at drunkard-NOM   making a noise-was   COMP-NOM
       keikan-ni   tukamatta.
       policeman-by   was arrested
       'A drunkard who was making a noise at the station was
       caught by a policeman.'

  b. Taroo-ga   [**ringo-ga   sara-no ue-ni aru   no**]-o
     Taro-NOM apple-NOM   plate-GEN on   exist   COMP-ACC
     totta.
     picked up
     'Taro picked up an apple which was on the plate.'

  c. Tanaka-ga   [**gakuseitati-ga   aruitekuru   no**]-ni
     Tanaka-NOM students-Nom   walking toward   COMP-DAT
     deatta.
     came across

'Tanaka came across the students who were walking toward him.'

(adapted from Kuroda (1999 b : 27))

In (1b), for instance, the semantic head NP *ringo* 'apple' occurs internal to the embedded clause at surface. Interestingly, in spite of the surface position of the internal semantic head, it functions semantically not only as an argument of the embedded predicate *aru* 'exist' but also as an argument of the matrix predicate *totta* 'picked up.'

Despite Kuroda's (1974, 1975–76, 1976–77) perspicacious argumentation, the very existence of HIRC in Japanese as an instance of relative clauses has been constantly challenged by some linguists in the literature (cf. Mihara 1994 a, b, Murasugi 1993, 1994, 1996 a, b, 2000, and Hoshi 1996 *inter alia*). They claim that the so-called HIRC in Japanese is in fact "a kind of adverbial clause." Therefore, in this "adverbialist" position, the bold-faced portions in (1a-c) are assumed to function as adverbial clauses which occupy an adjunct position, while a phonologically null NP associated with the internal NP in the adverbial clause is base-generated in an argument position in the matrix clause.

By contrast, the "nominalist" approach to the HIRC in Japanese considers the bold-faced relevant parts in (1a-c) occupy a nominal argument position in the matrix clause.[2] In a nutshell, "[t]he adverbialist wishes to claim that the apparent nominal use of head-internal relative clause forms can be reduced to the adverbial use, while the nominalist takes such reduction unwarranted." (Kuroda 1999 a : 417)[3]

By a painstakingly thorough comparison of the above-mentioned two approaches, Kuroda (1998, 1999 a, b) compellingly and securely defends the nominalist approach to the HIRC in Japanese against the adverbialist approach.[4] Furthermore, Kuroda (ibid.) distinguishes two kinds of analyses in the nominalist approach to the HIRC in Japanese (cf. Kuroda 1998, 1999 b for a concise survey and classification of various proposals in the past on this construction in Japanese): One can be referred to as the Pure Internal Head analysis, following Kuroda's original term "zyun-naizai-setu" in Japanese, and the other can be called the Null External Head analysis.

Based on a variety of empirical and theoretical motivations, Kuroda (1998, 1999 a, b) argues that the Pure Internal Head analysis is to be preferred over the Null External Head analysis. While the validity of the nominalist approach to the HIRC in Japanese has been established by a series of his works, there still seems to be some room for a debate between the Pure Internal Head analysis and the

Null External Head analysis.

The main objective of the present article is two-fold: (i) By closely re-examining Kuroda's (ibid.) arguments for the Pure Internal Head analysis over the Null External Head analysis, it will be demonstrated that none of them are quite decisive enough to choose one analysis over the other; (ii) several pieces of empirical evidence will be scrutinized and it will be suggested that the Null External Head analysis fares better than the Pure Internal Head analysis from both theoretical and empirical points of view.

The organization of this article is as follows. Section 2 briefly sketches two types of analyses in the nominalist approach to the HIRC in Japanese. Section 3 closely and critically re-examines empirical and theoretical motivations for the Pure Internal Head analysis, while coming up with alternative explanations from different angles. In section 4, several pieces of empirical evidence in favor of the Null External Head analysis are laid out and discussed at length. Section 5 concludes the present article.

2. Two Types of Analyses in the Nominalist Approach

2.1. The Pure Internal Head Analysis

The Pure Internal Head Analysis of the HIRC in Japanese was proposed by Kuroda (1974, 1975–76, 1976–77, 1998, 1999 a, b). More specifically, Kuroda (1998, 1999 b) postulates the following configuration for the relevant construction in Japanese:

(2)   ... [... NP...]$_S$... (S-pure internal head structure)

As an alternative, he also conceives the following structure:

(3)   ... [[... NP... no]$_S$]$_N$... (N-pure internal head structure)

As far as the structure is concerned, the crux of this analysis is that regardless of the categorial status of the whole construction, there is no external syntactic head in any form which is associated with the (semantic) internal head NP indicated in (2)–(3). Note that this analysis assumes that the HIRC is nothing but an S as in (2) or an N immediately dominating an S as in (3), and thus does not correspond to an NP or DP in the strict sense. Moreover, it is assumed that the inter-

nal head NP in question is directly assigned a theta-role from the matrix predicate across S (and N) (see section 3.4 for further discussion).

2. 2. The Null External Head Analysis

To the best of my knowledge, the origin of the Null External Head analysis of the HIRC in (Old) Japanese can be at least traced back to Harada (1974), who attempts to provide a universal underlying structure for relativization in general. Since then, there have been various proposals on the Null External Head analysis in the literature (cf. Kuroda 1998, 1999 b and references therein). Although there are several significant differences among those proposals, they basically share the following structure schematically represented in (4) :

(4)   ... [NP [CP [IP... NP...] no] [N e]]...

Unlike the Pure Internal Head analysis, this analysis posits a phonologically null nominal argument CP-externally, which is assumed to be associated with the internal head NP somehow. Crucially, this analysis takes the CP as constituting an NP (or possibly DP) together with the null external nominal head. Here, I abstract away from the exact identity of the relevant phonologically empty nominal argument in (4), coming back to this issue in section 3.3.

3. Re-examination of Motivations for the Pure Internal Head Analysis

3. 1. Skewed Distribution

Kuroda (1998, 1999 a, b) closely examines the distributional facts of the HIRC in Japanese and draws the conclusion that it can occur only at a position which is theta-governed by a predicate, postulating the following licensing principle for Japanese HIRCs (cf. Kuroda 1999 a : 423) :

(5) *The Theta Principle of Head-internal Relative Clauses*
    A head-internal relative clause is licensed by a lexical head that theta-governs it.

One of the motivations for this licensing principle comes from a peculiar skewed distribution that the Japanese HIRC exhibits. This point is illustrated in (6)

below :

(6) a. ano otoko-ga [[ginkoo-kara dete kita] gootoo] da
       that male-NOM bank-from move out came robber is
   b. *ano otoko-ga [gootoo-ga ginkoo-kara dete kita-no] da
       that male-NOM robber-NOM bank-from move out came-COMP is
       'That male is a robber who came out of the bank.'
(7) a. kore-ga [[ima Pikaso-ga kaite-iru] syoozooga] da
       this-NOM now Picasso-NOM painting-is portrait is
   b. *kore-ga [ima Pikaso-ga syoozooga-o kaite-iru-no] da
       this-NOM now Picasso-NOM portrait-ACC painting-is-COMP is
       'This is a portrait Picasso is painting now.'
                        (adapted from Kuroda (1999 a : 423))

As indicated in (6)-(7), the HIRC (6 b)/(7 b) may not occur as a predicate
nominal, whereas the regular head-external restrictive relative clause counterpart
(6 a)/(7 a) can appear in such a position without any difficulty. Since it is stan-
dardly assumed that a predicate nominal position is not theta-governed, the unac-
ceptability in (6 b) and (7 b) falls out from the licensing principle in (5), as de-
sired.

Kuroda argues that the Null External Head analysis cannot account for the
above fact, since it assumes that the *no*-phrase (CP) together with the null exter-
nal head makes up a noun phrase just like the regular head-external relative
clause. He claims that this in turn lends further credence to the Pure Internal
Head analysis, which takes the category of the whole HIRC is S (or N) rather
than NP or DP, expecting a different distribution from the regular head-external
relative of category NP or DP.

However, there seems to be an alternative explanation for the distributional
difference between the HIRC and the regular head-external relative clause in
Japanese based on the difference of interpretation between the two. First, con-
sider the regular head-external restrictive relatives in (8) below :

(8)   a. Taroo-wa [[e_i tabemono-o suteyootosyita] kodomo_i]-o donarituketa.
          Taroo-TOP   food-ACC was throwing away child-ACC shouted at
          'Taro shouted at the child who was throwing the food away.'
       b. Taroo-wa [[kodomo-ga e_i suteyootosyita] tabemono_i]-o toriageta.
          Taroo-TOP child-NOM   was throwing away food-ACC took away

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'Taro took away from the child the food which he was throwing away.'

Note that the interpretation of the whole regular head-external restrictive relatives *per se* is independent of the semantico-syntactic information such as theta-roles of the main predicate. The semantic head in this case is clearly represented as the external head noun *kodomo* 'child' in (8 a) or *tabemono* 'food' in (8 b) and the meaning of the whole noun phrase is determined on the basis of the intersection of the two sets of the external head noun and the restrictive relative clause. In fact, this interpretive process seems to be connected to the fact that the regular head-external restrictive relatives are free from the constraint in (5).

  With this much in mind, let us next consider the HIRC case in (9) below:

(9) a. Taroo-wa [[kodomo-ga tabemono-o suteyootosyita] -no]-o
   Taroo-TOP child-NOM food-ACC was throwing away -COMP-ACC
   donarituketa.
   shouted at
   'Taro shouted at the child as he was throwing the food away.'
  b. Taroo-wa [[kodomo-ga tabemono-o suteyootosyita] -no]-o
   Taroo-TOP child-NOM food-ACC was throwing away -COMP-ACC
   toriageta.
   took away
   'Taro took the food away from the child as he was throwing it away.'

Notice that the bracketed HIRC portions in (9 a-b) are identical and the only difference at surface is the choice of the matrix predicates, which is obviously responsible for the interpretive difference between (9 a) and (9 b). In this way, the interpretation of the HIRC is crucially dependent on the matrix predicate to the extent that the lack of thematic information of the matrix predicate renders the identification of the semantic head of the HIRC impossible. Unlike the case of (8) above, the identity of the semantic head cannot be determined autonomously within the embedded clause itself. This seems to be the very reason why the HIRC has to be constrained by Kuroda's licensing principle in (5).

  Accordingly, Kuroda's licensing principle in (5) is also compatible with the Null External Head analysis in (4). The distributional asymmetry between the HIRC and the regular head-external restrictive relative can be attributed to the interpretative difference between the two kinds of relatives with regard to the identification of the semantic head.[5]

3.2. Non-modifiability

Another motivation for the Pure Internal Head analysis stems from the fact that the HIRC in Japanese does not allow for further modification or specification by such elements as genitive phrases, (restrictive) relative clauses, adjectives, and demonstratives, as illustrated in (10)-(13) in boldface below (adapted from Kuroda 1999 b) :

(10) *kenzi-ga   [[**Sinzyuku-no**] [[ginkoo-kara gootoo-ga
      prosecutor-NOM   Sinzyuku-GEN bank-from robber-NOM
      detekita]-no]]-o   zinmonsita.
      came out-COMP-ACC   questioned
      (Intended) 'The prosecutor question the robber in Sinzyuku as he came out of the bank.'

(11) *kenzi-ga   [[**keikan-ga e$_i$ tukamaeta**] [[ginkoo-kara gootoo$_i$-ga
      prosecutor-NOM policeman-NOM caught   bank-from   robber-NOM
      detekita]-no]]-o   zinmonsita.
      came out-COMP-ACC   questioned
      (Intended) 'The prosecutor questioned the robber who was caught by the policeman as he came out of the bank.'

(12) *[[**sono**] [[Mary-ga   ringo-o   kattekita]-no]]-ga   asoko-ni aru.
       that   Mary-NOM apple-ACC bought-COMP-NOM   there exist
      (Intended) 'That apple which Mary bought is over there.'

(13) *[[**akai**] [[Mary-ga   ringo-o   kattekita]-no]]-ga   asoko-ni aru.
        red   Mary-NOM   apple-ACC bought-COMP-NOM   there exist
      (Intended) 'The red apple which Mary bought is over there.'

(10)-(13) represent cases in which the HIRCs are modified by a genitive phrase, restrictive relative clause, demonstrative, and adjective, respectively. Kuroda notes that if the HIRC is categorically an NP as claimed by the Null External Head analysis, it is quite mysterious why it resists further modification or specification as illustrated above.[6]

Kuroda (1988, 1999 b) argues if the HIRC in Japanese is categorially S as postulated under the Pure Internal Head analysis (see (2) in section 2.1), it is expected that nominal modifiers or specifiers in (10)-(13) should not be generated in the first place. He further claims that even if those nominal modifiers or specifiers are to be generated at prenominal positions, the unavailability of further modification or specification in (10)-(13) can be derived from the licensing prin-

ciple in (5). Due to the presence of a prenominal modifier or specifier, the HIRC *per se* can be regarded as being embedded within the whole NP and is not sister to the matrix predicate. Since theta-government is defined in terms of sisterhood between the theta-role assigner and its assignee (Chomsky 1986 a), all the configurations in (10)–(13) violate the licensing principle in (5). Kuroda (ibid.) takes this as constituting another support for the Pure Internal Head analysis.

Nevertheless, there are still alternatives conceivable under the Null External Head analysis as well. One possibility is to directly carry Kuroda's idea of theta-government restriction over to the Null External Head analysis (see the discussion in section 3.1) and say that any modifier or specifier merged to the HIRC will put the latter into a position which is not sister to and thus is not theta-governed by the matrix predicate. Even if this alternative turns out to be untenable, there is yet another possibility that the unavailability of further modification or specification is attributable to the interpretive mechanism of the HIRC in Japanese which is different from the one of the regular (restrictive) head-external relative in Japanese.[7]

In this connection, look at the following paradigm in (14)–(17), which involves the regular head-external relatives with an indefinite pronominal *no* 'one' as the external head :

(14) kenzi-ga **[[Sinzyuku-no]** [[ginkoo-kara e_i
     prosecutor-NOM Sinzyuku-GEN bank-from
     detekita] no_i]]-o zinmonsita.
     came out one-ACC questioned
     'The prosecutor question the one in Sinzyuku who came out of the bank.'

(15) kenzi-ga **[[keikan-ga e_i tukamaeta]** [[ginkoo-kara e_i
     prosecutor-NOM policeman-NOM caught bank-from
     detekita] no_i]]-o zinmonsita.
     came out one-ACC questioned
     'The prosecutor questioned the one who was caught by the policeman who came out of the bank.'

(16) **[[sono]** [[Mary-ga e_i kattekita] no_i]]-ga asoko-ni aru.
     that Mary-NOM bought one-NOM there exist
     'That one which Mary bought is over there.'

(17) **[[akai]** [[Mary-ga e_i kattekita] noi_i]]-ga asoko-ni aru.
     red Mary-NOM bought one-NOM there exist

'The red one which Mary bought is over there.'

All the sentences in (14)-(17) are acceptable, standing in stark contrast to (10) -(13). In (14)-(17), all the bold-faced prenominal modifiers or specifiers can function properly as a further restrictor with respect to the reference of the pronominal head *no* 'one', which is itself already restrictively modified by a prenominal regular relative clause. Thus, semantically speaking, the bold-faced part, the following restrictive relative clause, and the external head (= an indefinite pronominal) are compatible with one another in (14)-(17), since they are all predicates which contribute to the meaning of the whole NP in set-intersection.

On the other hand, the HIRC does not function as a restrictor of the semantic head in the same sense, but rather it serves as a domain from which the relevant referent corresponding to the semantic head is to be picked out (cf. Hoshi 1995, Grosu and Landman 1998, and Shimoyama 1999). Therefore, it does not seem far-fetched to assume that the different mode of interpretation causes incompatibility between the prenominal restrictive modifiers or specifiers and the HIRC in (10)-(13).

Hoshi (1995) argues that the phonologically null external head functions as an E-type pronominal and thus it can be regarded as a definite description (see Shimoyama 1999 for a more refined formal semantic treatment of the relevant E-type pronominal). If he is correct, then it is not surprising at all that the HIRC resists further modification by a restrictive modifier or specifer because of the status of the null external head as a definite nominal. It is well known that definite nominals including (personal) pronouns in English resist further modification or specification in general, as illustrated below :[8]

(18) a. *John's it
      b. *he that the policeman caught
      c. *that it
      d. *red it

If the above reasoning is basically on the right track, it seems plausible to maintain the Null External Head analysis of the HIRC in Japanese as an alternative to the Pure Internal Head analysis.

3.3. A-over-A Effects

On the basis of observations by Watanabe (1992 a, b) and Hoshi (1995),

Kuroda (1998, 1999 b) concludes that the HIRC construction in Japanese induces a kind of "intervention effects" and analyzes it as an instance of A-over-A effects caused by theta-role discharge/assignment from the matrix predicate to the internal head NP of the HIRC. This point is illustrated by the following paradigms in (19)–(20), which are originally due to Watanabe (1992 a, b) and Hoshi (1995), respectively) :

(19) a. ?*[[John-ga   [[Mary-ga **subarasii ronbun**-o   kaita toyuu]
          John-NOM   Mary-NOM excellent paper-ACC wrote COMP
       uwasa]-o   kiita] no]-ga   syuppansareta.
       rumor-ACC heard COMP-NOM   publish-PASS
       (Intended)'An excellent paper which John heard a rumor that Mary had
       written was published.'
   b. *[[John-ga   [[**subarasii ronbun**-o   kaita] hito]-o
          John-NOM   excellent paper-ACC   wrote person-ACC
       hometeita] no]-ga   syuppansareta.
       praised had COMP-NOM publish-PASS
       (Intended) 'An excellent paper which John had praised the person who
       wrote (it) was published.'
(20) a. ??Smith-sensei-wa [[[**seito**-no sakuhin]-ga   nyuusensita] no]-o
        Smith-teacher-TOP pupil-GEN work-NOM   was accepted COMP-ACC
       gohoobini   eiga-ni   tureteitteyatta   sooda.
       as a reward   move-to   took   I-heard
       (Intended) 'I heard that Mr. Smith took to the movie as a reward
       the pupil whose work was accepted (for the competition).'
   b. ??[John-ga   [[[**subarasii   aburae**-no   hyooban]-o
        John-NOM   magnificent   oil painting   rumor   ‐ ACC
        kikituketa] no]-ga   ima bizyututen-de   tenzisareteiru sooda.
        heard   COMP-NOM now art exhibition-at is displayed   I-heard
        (Intended) 'I was told that the magnificent oil painting of which John
        heard a rumor is now displayed at the art exhibition.'

    First, the readings forced in (19 a) and (19 b) are the ones in which the complex NPs *[[Mary-ga subarasii ronbun-o kaita toyuu] uwasa]* 'a rumor that Mary had written an excellent paper' and *[[subarasii ronbun-o kaita] hito]* 'the person who wrote an excellent paper' are construed as the internal semantic heads of the HIRCs instead of the bold-faced NPs, respectively, which results in

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semantic anomaly.

Likewise, in the cases of (20 a) and (20 b), the forced interpretations seem to be the ones in which the containing NPs *[seito-no sakuhin]* 'the pupil's work' and *[subarasii aburae-no hyooban]* 'a rumor of the magnificent oil painting' are understood as the internal semantic heads rather than the embedded NPs in bold.

Recall from section 2.1 that the Pure Internal Head analysis assumes that the internal semantic head of the HIRC is assigned a theta-role directly from the matrix predicate. Under this hypothesis, Kuroda (1998, 1999 b) explains the unacceptability in (19)–(20) by saying that the relevant theta-role cannot be assigned to the deeply embedded NP within the containing NP without violating the A-over-A constraint. This idea itself seems to be rather appealing in accounting for such "locality effects" in (19)–(20) (but see the discussion in section 3.4 below).

Although he does not adopt the Null External Head analysis himself, Kuroda (1998 : 25, 1999 b : 49) makes interesting remarks in this connection regarding the relation between the internal head NP and the putative null external head under the analysis in question. He notes that the relevant relation is similar to the one between PRO and its controller rather than the one between pro and its antecedent, since the putative null external head cannot be replaced with an overt pronominal element (see (22 c) below). He points out, however, that if the putative null external head is PRO and the internal head is its controller, then the former is not in a position to be c-commanded by the latter, which is strange under the standard assumption concerning PRO and its antecedent.[9, 10]

Notice that the A-over-A effects observed in (19)–(20) are related to the following structure :

(21) [[[... NP_i ...] NP_j ...] [e] *$_{i/j}$]

This is reminiscent of the Minimal Distance Principle (Rosenbaum 1967, 1970) in a reversed fashion. In (21), the anaphoric nominal element [e]$_j$ is co-indexed with a closer c-commandee NP_j. As Harada (1974 : 240 fn.6) suggests with regard to the HIRC in Japanese, one possibility for solving this problem of "backward obligatory control (BOC)" is to relate the HIRC to the so-called "Counter Equi NP Deletion" originally termed by Harada (1973).[11] In fact, the HIRC in Japanese exhibits some characteristics of BOC summarized in (22), adapted from Polinsky and Potsdam (2000 : 363) :[12]

(22) a. A biclausal structure is involved in which the higher non-overt NP is coindexed with the lower over NP.
  b. The coindexed interpretation is obligatory.
  c. The empty category does not alternate with an overt NP.
  Each point of (22) is illustrated by the following paradigm :

(23) a. Taroo-ga   [[**ringo**$_i$-ga   sara-no   ue-ni aru   no][e]$_i$]-o
     Taroo-NOM apple-Nom   plate-GEN   on   exist COMP-ACC
     totta.
     picked up
     'Taro picked up an apple which was on the plate.'
  b. ***ringo**$_i$-wa   Taroo-ga   [[akai ringo-ga   sara-no   ue-ni aru
     apple-TOP   Taroo-NOM red apple-NOM   plate-GEN   on   exist
     no][e]$_i$]-o   totta.
     COMP-ACC   picked up
     (Intended) 'As for apples, Taro picked them up where a red apple was on the plate.'
  c. *Taroo-ga   [[**ringo**$_i$-ga   sara-no ue-ni aru no] (-no)
     Taroo-NOM apple-NOM plate-GEN on exist COMP (-GEN)
     sore$_i$]-o   totta.
     it -ACC picked up
     'Taro picked up an apple which was on the plate.'

In order to explain the backward control phenomena in Tsez, Polinsky and Potsdam (2000) appeal to Hornstein's (1999) movement approach to obligatory control which employs theta-feature checking as a driving force for movement. In particular, they claim that backward control can be reduced to the process in which an NP moves to a theta-position of a matrix clause to check a theta-role of the matrix predicate at LF. This move appears to be attractive, but even if their thesis can be tenable in the empirical domain in Tsez, it is not possible to extend their approach to the HIRC in Japanese, since there is good reason to believe that the internal semantic head NP does not move to the external head position at LF (see Hoshi 1995 and Shimoyama 1999 for details of this point).

Be that as it may, whatever the exact mechanism of BOC may be, it seems to be the case that the relevant A-over-A effects could be couched along the lines of a reversed version of the Minimal Distance Principle under the Null External Head analysis. According to a minimalist assumption, "intervention effects" are

considered to be induced by the operation Agree (or feature checking) which is operative between a probe and a goal (Chomsky 1998, 1999 *inter alia*). In the relevant operation, the probe which is located at a functional element seeks the closest goal to check off uninterpretable formal features.

Suppose that an "Agree"-like operation is also at work in semantic interpretation for BOC in the sense that the null external head nominal element as a "probe" looks for the closest possible NP as its "goal" in order to determine its semantic content through "agreement." Note that the null external head nominal of the HIRC in Japanese is assumed to have only its nominal categorial feature and be devoid of its phonological features and possibly its inherent semantic features. Thus, it seems natural to assume that the principle of Full Interpretation (or legibility condition) at the LF interface requires some kind of "Agree"-like operation to turn such a semantically "unsatisfied" element into a fully "satisfied" one.
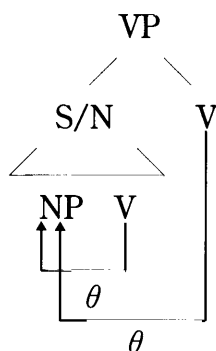
I speculate that this "Agree"-like operation is responsible for the observed A-over-A effects in (19)-(20). This seems to be compatible with the fact that *wh*-island effects are not observed with the HIRC in Japanese (Hoshi 1995, Shimoyama 1999, Kuroda 1998, 1999 b *inter alia*), since in looking down for a candidate of the semantic head NP, a *wh*-or Q-feature is irrelevant for the semantic interpretation of the null external head of the HIRC.[13]

If the above considerations turn out to be on the right track, it would indicate that a process of "Agree" is more general than is assumed now to the extent that it is operative not only in movement transformation but also in semantic interpretation in UG. Although Kuroda (1999 a, b) argues that theta-role assignment is subject to the A-over-A constraint, I would like to claim that "Agree" in semantic interpretation is regulated by such a constraint in the grammar.

3.4. Long-distance Theta-role Discharge/Assignment

Recall from section 2.1 that the Pure Internal Head analysis assumes that a theta-role can be directly discharged to the internal head argument from the matrix predicate across a clausal (or a nominal) boundary, as illustrated in (24) :

(24)

$$VP$$

```
            VP
          /    \
       S/N       V
      /    \     |
    NP     V     |
    ↑↑     |     |
    └──────┘     |
         θ       |
       └─────────┘
             θ
```

However, if the configurational approach to argument structure advocated by Hale and Keyser (1993, 1997) and Chomsky (1995) is basically on the right track, such a long-distance theta-role assignment is impossible in principle, since the relevant argument structure of a predicate is defined based on such local structural positions as specifier and complement within the projection of the predicate. Thus, this might pose a potential problem to the Pure Internal Head analysis of the HIRC in Japanese.[14]

Furthermore, if long-distance theta-role assignment/discharge from a matrix predicate to the internal head of the embedded clause of the HIRC is indeed operative as in (24), it would be needed to assume that theta-role could be "splitted" and be multiply assigned to more than one NP which functions as an internal head in the following well-known split-pivot example originally observed by Kuroda (1975-76):

(25) [[**zyunsa**-ga   **doroboo**-o kawa-no   hoo-e oitumete itta]-no]-ga
      policeman-NOM thief-ACC river-GEN   toward track-down went-NOM
      ikioi amatte   hutaritomo   kawa-no   naka-e tobikonda.
      power exceed   both-two   river-GEN   in   jumped
      'A policeman was tracking down a thief toward the river, who both, losing control, jumped into the river.'
                         (= his (32); bracketing and boldfacing by the author)

Kuroda observes that (25) can be (but not necessarily) interpreted in such a way that the subject *zyunsa* 'a policeman' and the object *doroboo* 'a thief' together make up a split pivot (= split internal head) of the HIRC, assuming the grammatical function 'the subject of' of the matrix predicate *tobikonda* 'jumped.'[15]

Nevertheless, such splitting assignment/discharge of a theta-role to more

than one argument does not occur in general, as illustrated in (26) below :[16]

(26) zyunsa-ga   doroboo-o   toorigakarinohito-to   tukamaeta.
     policeman-NOM thief-ACC   passer-by-with   caught
     'A policeman caught a thief with a passer-by.'

Note that if the Theme role of the predicate *tukamaeta* 'caught' could be splitted and assigned/discharged to the two argument NPs *doroboo* 'a thief' and *toorigakarinohito* 'a passer-by', (26) should be able to be interpreted as something like 'A policeman caught a thief and a passer-by,' contrary to fact. One might argue that (26) does not receive such an interpretation since the NP *toorigakarinohito* 'a passer-by' is already assigned a theta-role from the postpositon-*to* 'with' independently of the matrix predicate. However, exactly the same thing can be said with respect to (25). In (25), say, the NP *doroboo* 'a thief' is also already assigned a theta-role from the embedded predicate *oitumete itta* 'was tracking down.' Thus, such a counterargument cannot be justified.

Finally, if theta-roles discharged from a predicate are to be considered to be (partially) responsible for capturing selectional restrictions imposed upon its arguments by the predicate, long distance theta-role assignment in the Pure Internal Head analysis would lead to the conclusion that selectional restriction is an unbounded phenomenon, which is particular to the HIRC construction. This is quite mysterious in the first place given the fact that selectional restriction is in general a very local relation between a head and its complement (s) (and specifier (s)) (cf. Harada (1974) for an argument in support of the Null External Head analysis in terms of selectional restriction).

In sum, all the empirical and theoretical motivations for the Pure Internal Head analysis do not seem to be conclusive enough to choose it over the Null External Head analysis, since equally plausible alternative explanations are available under the latter analysis as well.[17]   In the next section, we will then turn our attention to some empirical motivations for the Null External Head analysis.

4. Motivations for the Null External Head Analysis

4.1. Locality Puzzle of Q-Float

It is well-known that there is a general restriction on Q (uantifier)-float in Japanese to the effect that a floating quantifier (FQ) and its associated argument

NP must be locally related (cf. Kuroda 1983, Ueda 1986, and Miyagawa 1989 *inter alia*).[18] Thus, in general, an FQ cannot occur outside of an embedded clause in which the associated argument NP is located, as illustrated by the contrasts in (27)–(30) below (adapted from Hoshi 1995 : 36–37 ; FQs and their associated argument NPs are in bold) :

(27) <Q-Float with a *koto*-complementation>
  a. Ken-wa [[Risa-ga   **gaikokugo-o**   **itutu** hanaseru] koto]-o
    Ken-TOP Risa-NOM foreign language-ACC five can speak fact-ACC
    omoidasita.
    recalled
    'Ken recalled the fact that Risa can speak five (of the) foreign languages.'
  b. *Ken-wa [[Risa-ga   **gaikokugo-o**   hanaseru] koto]-o **itutu**
    Ken-TOP Risa-NOM foreign language-ACC can speak fact-ACC five
    omoidasita.
    recalled
    'Ken recalled the fact that Risa can speak five (of the) foreign languages.'

(28) <Q-Float with a regular *no*-complementation>
  a. Risa-wa karaokebaa-de [[Ken-ga   tatetuzukeni **kayookyoku-o**
    Risa-TOP karaoke bar-at Ken-NOM in a row   pop songs-ACC
    san-kyoku utau] no]-o   bonyari miteita.
    three-tune sing COMP-ACC blankly was gazing at
    'At the karaoke bar, Risa was gazing blankly at Ken's singing three
    (of the) pop songs in a row.'
  b. *Risa-wa karaokebaa-de [[Ken-ga   tatetuzukeni **kayookyoku-o**
    Risa-TOP karaoke bar-at Ken-NOM in a row   pop songs-ACC
    utau] no]-o **san-kyoku** bonyari miteita.
    sing COMP-ACC three-tune blankly was gazing at
    'At the karaoke bar, Risa was gazing blankly at Ken's singing three
    (of the) pop songs in a row.'

(29) <Q-Float with a regular head-external relative clause>
  a. sono doroboo-wa [[**hooseki-ga mittu** [e]$_i$ kakusiteatta]   kinko$_i$]-o
    that thief-TOP   jewel-Nom three   had been hidden safe-ACC
    nusunda.
    stole
    'That thief stole the safe in which three (of the) jewels had been hidden.'
  b. *sono doroboo-wa [[**hooseki-ga** [e]$_i$ kakusiteatta]   kinko$_i$]-o **mittu**

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  that thief-TOP   jewel-NOM had been hidden safe-ACC three

  nusunda.

  stole

  'That thief stole the safe in which three (of the) jewels had been hidden.'

(30) <Q-Float with a free relative clause>

  a. sono doroboo-wa [[**hooseki**-ga **mittu** [e]$_i$ kakusiteatta] no$_i$]-o

   that thief-TOP   jewel-Nom three   had been hidden one-ACC

   nusunda.

   stole

   'That thief stole the one in which three (of the) jewels had been hidden.'

  b. *sono doroboo-wa [[**hooseki**-ga [e]$_i$ kakusiteatta] no$_i$]-o **mittu**

   that thief-TOP   jewel-NOM had been hidden one-ACC three

   nusunda.

   stole

   'That thief stole the safe in which three (of the) jewels had been hidden.'

The (a)-examples in (27)-(30) illustrate the case in which an FQ appears locally with respect to its associated NP within the embedded clause. They are all well-formed on the intended interpretations. On the other hand, the (b)-sentences in (27)-(30) exemplify the case where an FQ is located in the matrix clause, being far away from its associated NP which is itself located within the embedded clause. They are all ill-formed under the same interpretations as their counterparts in the (a)-examples.

  The above paradigms clearly show that there is some kind of locality constraint to be imposed on the structural relation between an FQ and its interpretively associated argument NP. Hoshi (1995 : 38) follows Ueda (1986) and Miyagawa (1989) in assuming the locality requirement on Q-Float as follows :

(31) *Locality Requirement on Q-Float :*

  FQs are licensed only when FQs and their host NPs in a mutual c-commanding relation.

The locality requirement on Q-Float in (31) nicely accounts for the fact that in general an FQ which is located in the matrix clause cannot be associated with an argument NP located within the embedded clause, because in such a configuration an FQ and its interpretively associated argument NP do not stand in a mutual c-command relation in the first place.

With this much in mind, let us next turn to Q-Float facts concerning the HIRC in Japanese.[19] First, observe the following paradigms in (32)–(33) (adapted again from Hoshi 1995 : 39–40) :

<Q-Float with a head-internal relative clause>
(32) a. sono doroboo-wa [[**hooseki-ga mittu** kinko-ni
  that thief-TOP   jewel-Nom three safe-in
  kakusiteatta] no]-o   nusunda.
  had been hidden COMP-ACC stole
  'Three (of the) jewels had been hidden in the safe and the thief stole them.'
   b. sono doroboo-wa [[**hooseki**-ga   kinko-ni
  that thief-TOP   jewel-NOM   safe-in
  kakusiteatta] no]-o   **mittu**   nusunda.
  had been hidden COMP-ACC three   stole
  'Jewels had been hidden in the safe and the thief stole three of them.'
(33) a. Ken-wa [[Risa-ga   teeburu-no ue-ni **ringo**-o   **mittu** oitekureta]
  Ken-TOP Risa-NOM table-GEN   on   apple-ACC three   had put
  no]-o   totte tabeta.
  COMP-ACC   picked up and ate
  'Risa had put three (of the) apples on the table and Ken picked up and ate them.'
   b. Ken-wa [[Risa-ga   teeburu-no ue-ni **ringo**-o   oitekureta]
  Ken-TOP Risa-NOM table-GEN   on   apple-ACC   had put
  no]-o   **mittu** totte tabeta.
  COMP-ACC   three   picked up and ate
  'Risa had put apples on the table and Ken picked up and ate three of them.'

The (a)-sentences in (32)–(33) show the case in which an FQ occurs locally with respect to its associated NP within the HIRC. They are both well-formed under the intended interpretations, which is expected since the locality requiremet on Q-Float in (31) is satisfied in these cases. On the other hand, the (b)-sentences in (32)–(33) exemplify the case where an FQ appears in the matrix clause, being far away from its associated argument NP located within the embedded clause. On the surface, the relevant locality requrement on Q-Float in (31) is not met in the (b)-sentences, thus it is expected that they should be unaccept-

able as well. However, the fact of the matter is that they are both well-formed on the intended interpretations. This is quite mysterious in light of the fact that in general long-distance Q-Float is not allowed in Japanese, as illustrated in the (b)-sentences in (27)-(30) above.

Hoshi (1995) claims that the Pure Internal Head analysis cannot account for the *prima facie* long-distance Q-Float with the HIRC observed above, since it does not admit an external nominal head at all in the matrix clause. Note that the Pure Internal Head analysis assumes that the theta-role of the internal head is assigned to it by the matrix predicate directly. But the manner of theta-role assignment has nothing to do with the licensing of FQs in Japanese, since FQs are licensed as long as it has a mutual c-command relation with its associated argument NP. According to Hoshi (ibid.), on the other hand, the Null External Head analysis can provide a rather straightforward explanation to the phenomenon at hand. Under this approach, there is in fact no locality violation of Q-Float in the (b)-sentences in (32)-(33), since there exists a phonologically null nominal argument [e] outside of the no-embedded clause (CP) of the HIRC and an FQ in the matrix clause is locally associated with the null nominal external head, satisfying the locality requirement on Q-Float in (31) by mutually c-commanding with each other.

4.2. Licensing of Secondary Predication

Hoshi (1995) provides another empirical argument for the Null External Head analysis on the basis of evidence bearing on secondary predication facts in Japanese. It is observed in the literature that for a secondary predicate to be properly associated with its antecedent, some local relation has to hold between the two elements (cf. Rothstein 1983, McNulty 1988, and Koizumi 1994 *inter alia*). To illustrate this point, let us consider the following sentences originally discussed by Koizumi (1994 : 27-28) (In the following examples, boldface is used to indicate secondary predicates and italics to indicate their antecedents) :

＜Subject-oriented secondary depictive predication＞
(34) a. Taroo-ga   hadaka-de hon-o   yonda. (＝his (3 a))
        Taroo-NOM naked   book-ACC read
        'Taro read a book naked.'
    b. Hanako-ga   kimono-sugata-de odotta. (＝his (3 b))
       Hanako-NOM kimono-dress   danced
       'Hanako danced in kimono.'

<Object-oriented secondary depictive predication>
(35) a. Taroo-ga   katuo-o   nama-de tabeta. (=his (4 a))
          Taroo-NOM   bonito-ACC   raw   ate
          'Taro ate the bonito raw.'
      b. Hanako-ga   kuruma-o tyuuko-de   katta. (=his (4 b))
          Hanako-NOM car-ACC   second-hand   bought
          'Hanako bought a car used.'

In (34 a, b), the subject-oriented secondary depictive predicates *hadaka-de* 'nude' and *kimono-sugata-de* 'in kimono' are predicated of the subject NP, respectively. In (35 a, b), on the other hand, the object-oriented secondary depictive predicates *nama-de* 'raw' and *tyuuko-de* 'second-hand' are predicated of the object NP, respectively.

In comparison with the above paradigm, Koizumi (1994) alludes to the following paradigm to show a locality constraint imposed upon secondary predication. Observe the following:

(36) a. *[[NP [NP Taroo]-no   kuruma]-ga hadaka-de kowareta. (=his (5 a))
              Taroo-GEN   car-NOM   nude   broke
          'Taro's car broke naked.'
      b. *Hanako-ga [NP [NP katuo]-no hako]-o   nama-de hakonda. (=his (5 b))
          Hanako-NOM   bonito-GEN box-ACC raw   carried
          'Hanako carried the box of the bonito raw.'
(37) a. *Taroo-ga [PP [NP Hanako]-kara] kimono-sugata-de (=his (6 a))
          Taroo-NOM   Hanako-from   kimono-dress
          ringo-o   moratta.
          apple-ACC   received
          'Taro received an apple from Hanako in kimono.'(=his (6 b))
      b. *Hanako-ga [PP [NP kuruma]-de] tyuuko-de   kita.
          Hanako-NOM   car-by   second-hand came
          'Hanako came by a car used.'

Koizumi notes that the unacceptability in (36)–(37) can be accounted for if we assume the following locality requirement:

(38) *Locality Requirement on Secondary Depictive Predication*
     The secondary depictive predicate must be at least m-commanded by

its associated NP (= antecedent) at D-structure.

(cf.Rothstein (1983) and McNulty (1988) *inter alia*)

Notice that in (36)–(37), the intended antecedent is embedded in an NP and a PP, respectively. As a result, it cannot m-command the secondary depictive predicate which is to be predicated of it.[20, 21]

Hoshi (1995) notes that Koizumi's hypothesis can be further strengthened by the following paradigms in (39)–(40) :

< Object-oriented secondary depictive predication with a regular *no*-complementation and a *koto*-complementation >

(39) a. Hanako-wa [[Taroo-ga   katuo-o   nama-de tabeteiru] no]-ni
       Hanako-TOP Taroo-NOM bonito-ACC raw   is eating COMP-DAT
       kizukanakatta.
       did not realize
       'Hanako did not realize that Taro was eating the bonito raw.'

   b. Taroo-wa [[Hanako-ga   kuruma-o tyuuko-de   katta] koto]-o
      Taroo-TOP Hanako-NOM car-ACC   second-hand bought fact-ACC
      siranakatta.
      did not know
      'Taro did not know (the fact) that Hanako bought a car used.'

(40) a. *Hanako-wa [[Taroo-ga   katuo-o   tabeteiru] no]-ni   nama-de
       Hanako-TOP Taroo-NOM bonito-ACC is eating COMP-DAT raw
       kizukanakatta.
       did not realize
       'Hanako did not realize that Taro was eating the bonito raw.'

   b. *Taroo-wa [[Hanako-ga   kuruma-o katta] koto]-o   tyuuko-de
      Taroo-TOP Hanako-NOM car-ACC bought fact-ACC   second-hand
      siranakatta.
      did not know
      'Taro did not know (the fact) that Hanako bought a car used.'

The sentences in (39 a, b) are well-formed under the intended interpretations because the locality constraint on secondary predication is met with the intended antecedent NP m-commanding its associated secondary predicate within the embedded clause. By contrast, the sentences in (40 a, b) are ill-formed on the intended readings, since the intended antecedent NP does not m-command its asso-

ciated secondary predicate which is located outside of the embedded clause.

If Koizumi's hypothesis on secondary predication is correct and if the configuration of the HIRC in Japanese was basically the same as the regular no-complement clause as advocated in the Pure Internal Head analysis (see section 2.1), the HIRC should be unacceptable on the intended interpretation, in which a secondary predicate in the matrix clause is to be associated with the internal head NP within the embedded clause of the HIRC. However, as Hoshi (1995) points out, this prediction is not borne out:

<Secondary depictive predication with the HIRC>
(41) a. Taroo-wa [[Hanako-ga   sara-no ue-ni katuo-o   oiteoita] no]-o
       Taroo-TOP Hanako-NOM plate-GEN on bonito-ACC had left COMP-ACC
       nama-de   tabetesimatta.
       raw   ate up
       'Taro ate up the bonito raw which Hanako had left on the plate.'
    b. Taroo-wa [[yasusoona   kuruma-ga   urinidasareteita] no]-o
       Taroo-TOP cheap-looking car-NOM   was on sale   COMP-ACC
       tyuuko-de   katta.
       second-hand bought
       'Taro bought a cheap-looking car used that was on sale.'
                                            (adapted from Hoshi 1995 : 57)

The sentences in (41) are well-formed on the intended interpretations. At surface, this paradigm seems to violate the locality condition on secondary predication in (38). Nevertheless, as the Null External Head analysis advocates, once we assume the existence of a phonologically null argument NP outside of the *no*-phrase of the HIRC, which serves as the local antecedent of the secondary predicate in the matrix clause, it would be possible to provide a straightforward explanation for the acceptability of the sentences in (41).

At this point, one might argue that the Pure Internal Head analysis could also fare well in accounting for the paradigm in (41) by saying that somehow the *prima facie* long-distance theta-role discharge/assignment to the internal head from the matrix predicate plays some role in licensing such secondary predication in the HIRC. Again, if Hale and Keyser's (1993, 1997) approach to theta structure is on the right track, such a non-local long-distance theta-role assignment is structurally impossible in the first place (see the discussion in section 3.4). Thus, unless the relevant non-local theta-role assignment is attested in empirical do-

mains other than the HIRC, the putative explanation based on the Pure Internal Head analysis is not warranted.

4. 3. *Maximalization Effects*

By closely looking into a cluster of relatives of the third kind that are different from restrictives and appositives, Grosu and Landman (1998) convincingly argue that the operation of *maximalization* takes place in this kind of relative clauses, where the (semantic) head noun is semantically interpreted CP-internally while syntactically the CP is part of a noun phrase (DP) containing CP -external material as well. Roughly speaking, maximalization is a semantic operation which takes place at a CP-level, yielding a singleton set of a maximal individual/degree as the meaning of the internal semantic head (see Grosu and Landman 1998 for the formal definition of the semantic operation of maximalization and other details of their proposals).

As a general constraint which governs the workings of such "maximalizing relatives," Grosu and Landman propose the following in (42) :

(42) Constraint : If the head is semantically CP-internal, no semantically independent CP-external material is allowed.

<div align="right">(= Grosu and Landman 1998 : 148)</div>

This constraint forces maximalizing relatives to have a structure in which whenever the (semantic) head noun is interpreted CP-internally, there exists CP-external material syntactically present.

As a case of such maximalizing relatives, Grosu and Landman take up HIRCs and point out that not all HIRCs are maximalizing relatives. They note that depending on whether or not a determiner (D) is overtly present as a CP-external element, there have been two types of HIRCs identified in the literature (cf. Basilico 1996 and references cited therein). One is the Lakhota-Mojave type in which the external D is overtly realized, and the other is the Quechua-Navajo-Japanese type where such a D is (phonologically or syntactically) absent. Grosu and Landman tease out an interesting correlation to the effect that whether HIRCs are restrictive or maximalizing appears to correlate with whether the D is overt or not.

In order to see their correlation, let us consider some examples of the two types of HIRCs here. Williamson (1987) observes that the definiteness of the entire HIRC in Lakhota is determined by the CP-external determiner (D) as a

result of intersective semantics of restrictive relatives, as illustrated in (43) :

(43) a. [[Mary owiza wa kage] **ki**] he ophewathu
        Mary quilt a make the Dem I-buy
        'I bought the quilt that Mary made.'
    b. [[Mary owiza wa kage] **cha**] he ophewathu
        Mary quilt a make Ind Dem I-buy
        'I bought a quilt that Mary made.'
                                   (adapted from Williamson 1987 : 171)

By contrast, in the case of Quechua HIRCs, which lack a CP-external determiner (D), the entire HIRC is always interpreted as definite, as pointed out by Dayal (1991) (cf. also Basilico 1996 : 506, fn.8). (44) illustrates this point :

(44) [nuna ishkay bestya-ta ranti-shqa-n] alli
     man two horse-ACC buy-PERF-3 good
     bestya-m ka-rqo-n
     horse-VAL be-PAST-3
     'The two horses that the man bought were good horses.'
     (*Not :* 'Two horses that the man bought were good horses.'
                           (adapted from Grosu and Landman 1998 : 163)

(44) is only compatible with a situation where the man bought just two horses and the two horses in question were good ones. If (44) could be understood as "two horses that the man bought were good horses," then it would be possible to describe a situation in which the man bought more than two horses, say, four horses, and two of them were good horses but the rest were bad ones. However, this is not the interpretation of (44), as the translation suggests.

    Grosu and Landman attributes the definiteness of HIRC in Quechua in (44) to the semantic operation of maximalization which takes place CP-internally when there exists a CP-external material in accordance with the constraint in (42). In fact, Hoshi (1995) also observes that such maximalization effects can be detected in Japanese HIRCs, which also lack a CP-external overt determiner (D) just as in Quechua, as illustrated in (45) below :

(45) John-wa [[Mary-ga sanko-no ringo-o muitekureta] no]-o
     John-TOP Mary-NOM three-GEN apples-ACC peeled COMP-ACC

tabeta.

ate

'Mary peeled three apples and John ate them all.'

(adapted from Hoshi 1995 : 131)

As the translation indicates, the interpretation of (45) is only compatible with a situation in which Mary peeled only three apples and John ate them all. This maximalization effects with HIRCs in Japanese can be more clearly demonstrated by the following paradigm taken from Hoshi (1995 : 132), which is attributed to Yoshihisa Kitagawa (p.c.) :

(46) a. #John-ga   [[Mary-ga   sanko-no ringo-o   muitekureta] no]-o
        John-NOM Mary-NOM three-GEN apples-ACC peeled   COMP-ACC
        tabeta atode, Bill-wa   sono nokori-no   ringo-o   tabeta.
        ate   after Bill-TOP   the remainder-GEN   apples-ACC ate
        '#Mary peeled three apples and John ate them. After that, Bill ate the
        rest of the three apples.'
    b. #John-ga   [[Mary-ga   sanko-no ringo-o   muitekureta] no]-o
        John-NOM Mary-NOM three-GEN apples-ACC peeled   COMP-ACC
        tabeta. Sikasi zituwa Mary-wa yonko-no ringo-o   muita no datta.
        ate   But in fact Mary-TOP four-GEN apples-ACC peeled COMP was
        '#Mary peeled three apples and John ate them. In fact, however, it was
        the case that Mary peeled four apples.'

(46 a) is not appropriate because of the contradictory situation : John ate all the three apples, which Mary peeled, and Bill ate the rest of the three apples. In such a case, Bill cannot possibly eat the rest of the three apples, since John has already eaten them all. By the same token, (46 b) sounds anomalous due to the incompatible situation : Mary peeled three apples in total and John ate them all. But in fact Mary peeled four apples, which is impossible in reality.

As the above examples clearly show, Japanese HIRCs also exhibit maximality effects as much as in the case of Quechua HIRCs. Accordingly, if Grosu and Landman's (1998) constraint holds cross-linguistically in general, it should be the case that HIRCs in Japanese have a CP-external null nominal head while lacking a determiner (D), which in turn supports the Null External Head analysis of the HIRC in Japanese.

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5. Conclusion

This article re-considered two kinds of nominalist approaches to the head-internal relative clause (HIRC) construction in Japanese : the Pure Internal Head analysis and the Null External Head analysis (cf. Kuroda 1998, 1999 a, b, *inter alia*). By closely re-examining motivations for the Pure Internal Head analysis including skewed distribution, non-modifiability, A-over-A effects, and long-distance theta-role assignment, it was demonstrated that none of them are quite decisive enough to choose one analysis over the other. Moreover, it was suggested that the Null External Head analysis is to be favored by looking into pieces of evidence concerning locality puzzle of Q-float, licensing of secondary predication, and maximalization effects. Although more detailed investigation is obviously required to finalize this debate, it is hoped that the present study has at least shown that this particular empirical domain of Japanese linguistics has still unexplored possibilities of much interest for further research in terms of both theoretical and empirical standpoints.

Notes

1 The HIRC construction has been observed in various languages other than Japanese. For a recent cross-linguistic survey, see Basilico (1996) and references cited therein among others.

2 Following Kuroda (1999 a), I will employ the terms "nominalist" and "adverbialist" in this article.

3 It is important to keep in mind that the nominalist approach recognizes the existence of genuine adverbial clauses homonymous with HIRCs in Japanese. See Kuroda (1998, 1999 a, b) for detail discussion on this point.

4 Kuroda (1998, 1999 b) supports and strengthens Hoshi's (1995) claim that the HIRC in Japanese does not involve any (overt or covert) movement with respect to the internal head NP (see also Shimoyama 1999 for further arguments in support of this position). In this article, I will not address this important issue, since it is orthogonal to the present concerns.

5 See Kuroda (1974, 1975–76, 1976–77, 1992) for discussion of interpretive differences between the HIRC and the regular head-external relative clause in Japanese.

6 Murasugi (1996 a) is the first to note the point illustrated in (11). See Tsubomoto (1981), Ohara (1994), Hoshi (1995), Murasugi (1996 b), and Tonosaki (1996) *inter alia* for some discussion concerning the points in (12)-(13).

7 For the semantics of the HIRC (as well as the head-external relative clause), see Hoshi (1995), in which he analyzes the interpretive process of the HIRC in Japanese as involving E-type anaphora in the sense of Evans (1980). See also Grosu and Landman (1998) and Shimoyama (1999) on this issue.

8 In this respect, Japanese (personal) pronouns behave differently. They can be modified by adjectives as in (i) (cf. Kuroda 1965), and they can be preceded by possessive pronouns or demonstrative pronouns as in (ii) and (iii), respectively (cf. Noguchi 1995, 1997) :

(i) a. tiisai kare   b. sinsetuna kanozyo
         small he   kind   she
         *'small he'   *'kind she'

(ii) a. watasi-no kare   b. anata-no kanozyo
          I-GEN he   you-GEN she
          *'my he'   *'your she'

(iii) a. kono kare   b. ano kanozyo
           this he   that she
           *'this he'   *'that she'

(adapted from Noguchi 1997 : 777)

See also Fukui (1986, 1995) for discussion on the differences of nominal system between English and Japanese. Note in passing that if it is correct to characterize the null external head nominal of the HIRC is a definite nominal, it has to be grouped together with English (personal) pronouns rather than regular Japanese (personal) pronouns. I have to leave for future research a full investigation of nominal systems in Japanese and English with regard to this issue.

9 Note that in this configuration the internal head NP (=R-expression) is c-commanded by PRO. One might wonder why the configuration of HIRC in Japanese does not produce a violation of Condition C in spite of the fact that the null external head c-commands the internal head NP in hierarchical terms? Suppose that binding conditions including Condition C applies phase-by-phase in the sense of Chomsky (1998, 1999). Since the null external head will be merged after the CP phase in which the internal head NP is contained, there should be no violation of Condition C, as desired. This assumption is needed independently in or-

der to prevent the external head NP of a regular head-external relative clause structure from binding its associated variable (＝R-expression), yielding a violation of Condition C (cf. Chomsky 1986 b : 85–86).

10　As for the status of the phonologically null nominal element at the CP-external position, I will stay neutral here, not committing myself to its being a PRO, following Hoshi (1995). See Kitagawa (1995) for some discussion on this issue.

11　See Kuroda (1965) for the first documentation of some phenomena in Japanese involving Counter Equi NP Deletion and Kuroda (1978) for further discussion of this operation.

12　See Polinsky and Potsdam (2000) for a minimalist analysis of BOC phenomena in Tsez, a minority language of the Caucasus.

13　See Landau (2001) for a recent proposal that an Agree relation in the sense of Chomsky (1998, 1999 *inter alia*) is involved in control phenomena. Note, however, that the "Agree"-like semantic operation in the text is a disparate notion in the sense that it does not involve feature checking between two functional categories.

14　See Watanabe (1999) for exploration of the possibility of multiple theta marking in the minimalist program. He argues that only overt movement can create an A-chain involving multiple theta marking. Note that the kind of "multiple theta marking" in the HIRC construction in Japanese proposed by Kuroda (1998, 1999 a, b) is different from the one in Watanabe (ibid.), since in the former there is no overt movement which creates a relevant A-chain. If Watanabe is on the right track, UG should not allow such an "in-situ" multiple theta marking in principle.

15　To be fairness, it should be in order to point out that Kuroda (1975–76) himself does not provide any explanation of the relevant split-pivot phenomenon with the HIRC in Japanese.

16　This used to be guaranteed by the Theta-criterion as formulated below :

> Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.
> $$(＝Chomsky\ (1981:36)\ (4))$$

By virtue of the latter half of the formulation of the Theta-criterion, splitting and multiple assignment/discharge of a single theta-role is prohibited. Although the Theta-criterion per se does not have any theoretical status in the minimalist pro-

gram, its effects must be somehow derived in a principled manner (but see Hornstein 1999 for a different view).

17 See Yoshida (2001) for an attempt to prove the existence of the phonologically empty head in the HIRC in Japanese from the standpoint of sentence processing in experimental psycholinguistics.

18 I will follow Ueda (1986) and Miyagawa (1989) among others in assuming the locality requirement on Q-float in (i) below in this paper:

(i) FQs are licensed only when FQs and host NPs are in mutual c-commanding relation.

The definition of c-command is as follows:

(ii) α c-commands β iff neither of α, β dominates the other and the first branching node dominating α also dominates β.

(cf. Reinhart 1976)

19 The relevant Q-float facts with the HIRC in Japanese was first documented in Kuroda (1975-76), as illustrated in the example sentence in (25) in the text.

20 The definition of m-command is as follows:

(i) α m-commands β iff α does not dominate β and every γ (= maximal projection) that dominates α dominates β.

(cf. Chomsky 1986)

21 Although strictly Koizumi's (1994) final version of the licensing condition on secondary predication is different from (38), it suffices for the present discussion.

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