

On Some Differences between Restrictive and Nonrestrictive Relative Clauses and the Parallelism between Head-Internal and Head-External Relative Clauses in Japanese*

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In Japanese relative clauses, nonrestrictive clauses have certain properties distinct from those of restrictive clauses. In particular, the differences in terms of their structural complexity and temporal interpretation imply their difference in syntax. The paper proposes that the outer layers of the extended projection of NPs are associated with features related to the interface with the discourse, and that the differences between restrictive and nonrestrictive clauses in temporal interpretation and in the occurrence of epistemic modals are attributed to their different merge positions. It also points out that in the so-called Head-internal relative clauses, the same kinds of differences between restrictive and nonrestrictive clauses are observed. Since there is no apparent categorial distinction among Head-internal relative clauses, the differences between restrictive and nonrestrictive clause cannot be attributed to a categorial difference, and they offer support for the proposed analysis based on the different merge positions, which in turn support the uniform structure for different types of relative clauses as proposed in Cinque (2003/8) and Cinque (2008).

Keywords: restrictive/nonrestrictive relative clause, Head-internal relative clause, tense in relative clause, temporal interpretation, the speaker feature

1. Introduction

In a language like Japanese, where there is no equivalent of relative pronouns and the difference between definite and indefinite nouns is not necessarily overtly marked, the distinction between restrictive and non-restrictive relative clauses is not apparent, but they differ from one another in certain properties. This paper takes up the issue of the occurrence of epistemic modals and the tense interpretation in relative clauses, and argues that nonrestrictive relative clauses are syntactically distinct from restrictive clauses so that only the former are identified by the speaker's coordinates features. In particular, it will be proposed that in the extended projections of NP, demonstratives mark the linking to discourse features and the constituents in the positions above Dem are identified by the speaker's coordinates features. In Section 2, we will go over some basic characteristics of Japanese relative clauses as a kind of prenominal clausal modifiers. The differences between restrictive and nonrestrictive clauses will be discussed in Section 3. In Section 4, it will be shown that the same kind of differences can be observed in the Head-internal relative clauses as predicted by the uniform structure for different types of relative clauses (cf. Cinque 2003/8, Cinque 2008). An analysis based on the different merge positions within the extended projection of NP and the uniform structure for both Head-internal and Head-external relatives will be presented in Section 5. Section 6 will conclude the paper.

2. No movement derivation of Japanese relative clauses as prenominal modifiers

In Japanese relative clauses (RCs), the relation between the gap and its antecedent is not constrained by locality condition as shown by the examples in (1) where a complex NP island intervenes between the Head of the relative and the gap represented as *e*.

- (1) a. [[[*e*_i kiteiru_{RC}] huku_{NP}] ga yogoreteiru_{RC}] sinsi_i
 wearing suit nom dirty gentleman

- (Lit.) 'the gentleman who [the suit [that he is wearing]] is dirty'
- b. [[[e_i yonda_{RC}] hito_{NP}] ga mina koohukuni naru_{RC}] hon_i
 read person nom all happy become book
 (Lit.) 'the book which [the people who [read it]] all become happy'

The effect of the subjacency violation is not observed in the examples in (1), suggesting that the relative 'Head' does not undergo movement. If movement is not involved in (1), the gap in the relative clause must be a null pronominal *pro* referring to the Head of the relative. The relation between the relative clause and its head is constrained only by what Kuno (1973) calls the 'aboutness relation', not by constraints on chains. A support for the presence of *pro* and the derivation without movement is found in the relativization of a reason/manner adjunct. Murasugi (2000) points out that if movement is involved in the derivation of RCs, the phrases like (2a) and (2b) are expected to be grammatical just as is the case in their English counterparts given as the translations, for the movement would cross no island.

- (2) a. *[Mary ga [John ga e_i kaetta to] omotteiru] riyuu; (=Murasugi's (8b))
 Mary nom John nom left Comp thinking reason
 'the reason (for which) Mary thinks that John left'
- b. *[Mary ga [John ga e_i mondai o toita to] omotteiru] hoo_{hoo}_i
 (=Murasugi's (9b))
 Mary nom John nom problem acc solved Comp thinking method
 'the method (by which) Mary thinks that John solved the problem'

The empty categories in these examples cannot be *pro* referring to the 'Head' since *pro* cannot be generated in an adjunct position¹. In fact, if, instead of *pro*, an overt resumptive proform is present as in (3a, b), the

resulting constructions are grammatical.

- (3) a. [Mary ga [John ga sore de kaetta to] omotteiru] riyuu
 Mary nom John nom it for left Comp thinking reason
 b. [Mary ga [John ga sore de mondai o toita to] omotteiru] hoohoo
 Mary nom John nom it with problem acc solved Comp think-
 ing method

The ungrammatical status of (2a, b) follows if movement is not possible, for the non-movement derivation is not available for them either.

The insensitivity to the locality effect and the intolerance of a gap in an adjunct position suggest that the relation between the gap and the Head of RC is that of *pro* and its antecedent. Murasugi points out that if RCs are not derived by movement and their relation to the 'Head' is constrained only by the 'aboutness relation', the relative clause constructions are akin to the complex NP constructions in (4), where no gap is present in the clausal modifier to be associated with the modified noun².

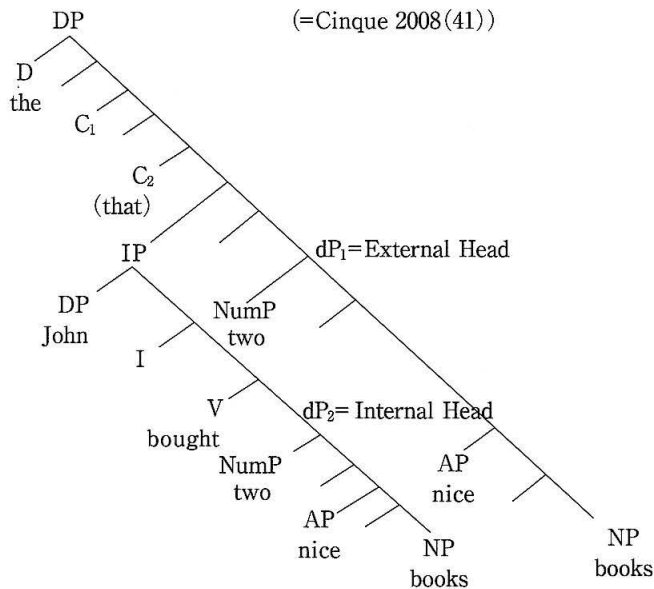
- (4) a. [sakana ga yakeru] nioi
 fish nom burn smell
 (Lit.) 'the smell that a fish burns'
 b. [doa ga simaru] oto
 door nom shut sound
 (Lit.) 'the sound that a door shuts'
 c. [syuusyoku ga muzukasii] buturigaku
 getting-job nom hard physics
 (Lit.) 'physics which is hard to get a job'

In support of Murasugi's point, let me point out that RCs and clausal modifiers in (4) share other properties than the absence of a gap. For instance, the clausal modifier in (4c) is ambiguous between a restrictive and a nonrestrictive interpretation. In one (probably more salient) reading, the field of physics in general is described as being a difficult field

to find a job; thus, a nonrestrictive reading. In the other possible reading, the difficulty in finding a job is a property restrictively applied to a certain subfield of physics, such as astrophysics, geophysics, and so on. Thus, the relation between the gapless clausal modifier and the modified noun parallels the relation between a RC and its Head, supporting the view that RCs and gapless clausal modifier constructions are derived in basically the same way. In the prenominal merge analysis of Cinque (2003/8), (2008), the uniform derivation of RCs and gapless clausal modifiers can be described straightforwardly.

Cinque (2003/8), (2008) proposes that relative clauses, like adjectives, are merged prenominally in one of functional projections of NP, giving rise to the Extended NP structure as shown in (5).

(5)



Cinque's prenominal analysis is motivated by the left-right asymmetry observed cross-linguistically, and an attempt to derive different

types of relative clause found in the languages of the world from one structure in Antisymmetry framework proposed in Kayne (1994). Assuming the prenominal merge position for RCs, the relation between the gapless clausal modifier and the modified noun in (4) is basically the same as the one between a relative clause and its Head. The difference between RCs and gapless clausal modifiers is that in the latter no deletion of the Head takes place because nothing in the modifying clause matches the External Head. Thus, the Japanese RCs are derived without the raising of the Head, and can be described as a kind of more general prenominal clausal modifiers. With this background, in the next section I will focus on some differences in properties between restrictive and nonrestrictive RCs.

3. Differences between restrictive and nonrestrictive relative clauses in Japanese

3.1 Difference in structural hierarchy

Based on his prenominal analysis of RCs and typological evidence, Cinque (class lecture 2011) suggests the structure shown in (6), where restrictive and nonrestrictive relative clauses are merged in different functional projections of NP.

- (6) [_{WP} RC_{nonrestrictive} [W [_{XP} Demonstrative [X ... [_{YP} RC_{restrictive} [Y [AP
[Y ... [_{NP} N]]]]]]]]]]

Japanese offers evidence to support the structural relation between restrictive and nonrestrictive RCs shown in (6). Kameshima (1989: 233) notes that when a restrictive and a nonrestrictive relative co-occur, the natural order is that a nonrestrictive precedes a restrictive relative. In (7) the prenominal clause *yoku hataraku* ‘work hard’ can be interpreted either a restrictive modifier or a nonrestrictive modifier.

- (7) *yoku hataraku nihonzin*
well work Japanese

'the Japanese that work hard'

'the Japanese, who work hard'

When we add another clause such as *megane o kaketeiru* 'wearing glasses', for which, under the normal circumstances, a restrictive interpretation is strongly favored, the difference in the order of the two relative clauses results in differences in their interpretation.

- (8) a. *megane o kaketeiru yoku hataraku nihonjin*
 glasses acc wearing well work Japanese
 'the glass-wearing Japanese that work hard' (both as restrictive clauses)
- b. *yoku hataraku megane o kaketeiru hihonjin*
 'the hardworking Japanese that wear glasses' (both as restrictive clauses)
 'the Japanese that wear glasses, who work hard' (nonrestrictive>restrictive>N)

When the relative clause *megane o kaketeiru* 'wearing glasses' is to the left of the other relative clause *yoku hataraku* 'work well' as in (8a), the latter can only be interpreted as a restrictive modification. When the order of the two relative clauses is reversed, the nonrestrictive interpretation for the clause *yoku hataraku* becomes available. These data suggest that a nonrestrictive clause can only occur in a position structurally higher than a restrictive clause, supporting the structure in (6).

In structure (6), restrictive and nonrestrictive relatives contrast in the structural position relative to demonstratives. The contrast manifests in Japanese in the relative order between a RC and the demonstrative *kono* 'this', *sono* 'that' or *ano* 'that'³. A support for this relative order is given from the observation of free relative constructions where the Head of relative is the pronominal *no* 'one'. Yuasa (2005) points out that when the Head is the pronominal *no*, the relative clause can only be interpreted as a restrictive modification.

- (9) *yoku hataraku no*
 well work one
 'the one(s) that works hard'

(9) contrasts sharply with (7) above for which both restrictive and nonrestrictive interpretations are possible. Demonstratives can precede a free relative clause, but cannot follow it as shown in (10).

- (10) a. *Sono yoku hataraku no o yatoitai.*
 that well work one acc hire-want
 '(I) want to hire that one that works hard.'
 b. **Yoku hataraku sono no o yatoitai.*

The contrast between (10a) and (10b) seems to conform to the claim that restrictive relative clause must follow a demonstrative. However, since *no* requires an immediately preceding modifier, the unacceptable status of (10b) may be due to this sequential constraint. If we add an adjective between the demonstrative and *no*, this will result in a possible string as in (11).

- (11) [[*Yoku hataraku*] [*sono [wakai no]*]] *o yatoitai.*
 well work that young one acc hire
 '(I) want to hire that young one that works hard.'

Notice that in (11), the relative clause preceding the demonstrative has only a nonrestrictive interpretation⁴. In this sentence, the relative clause provides a description of (a) particular individual/individuals denoted by *sono wakai no* 'that young one/those young ones', it does not have a function to restrict a particular set of young people to only (a) hardworking one/ones. This nonrestrictive interpretation is what is expected from structure (6), and it contrasts with the interpretation of the relative clause in (12), in which the demonstrative precedes rather than follows the relative clause.

- (12) [Sono [[yoku hataraku] [wakai no]]] o yatoitai.

In sentence (12) the relative clause is not a description of a definite individual; it restricts a set of unspecified young people to those hardworking ones contrasting with the restrictive interpretation for the RC in (11). The entire noun phrase refers to (a) particular individual/individuals pointed out by the demonstrative *sono* among the restricted set.

The distinction in the structural position as depicted in (12) also holds when two relative clauses are intervened by a demonstrative.

- (13) [[_{RC1} John ga purezento sita] [sono_{DEM} [_{RC2} Mary ga siteiru] yubiwa]] wa kare no hahaoya no katami da.

John nom present did that Mary nom doing ring top him gen mother gen keepsake be

(Lit) 'The ring that Mary is wearing, which John gave her as a gift, is a keepsake from his mother.'

(13) can describe a situation where Mary is wearing more than one ring and a particular ring is picked up by the demonstrative. RC₂ to the right of the demonstrative restricts set of rings to the ones that Mary is wearing, and RC₁ can only be interpreted as a nonrestrictive clause about the particular ring referred to by the demonstrative. Hence, the relative order of restrictive and nonrestrictive RCs and demonstratives confirms Cinque's structure in (6). It will be shown in the following that restrictive and nonrestrictive RCs in Japanese manifest other differences than the structural positions. It will be argued that these different properties of restrictive and nonrestrictive RCs can be attributed to the properties of their respective syntactic position.

3.2 Difference in the Left/Right-Periphery

Restrictive and nonrestrictive RCs in Japanese differ in the occurrence of epistemic modals. Masuoka (1997, 2008) points out that a topic phrase, epistemic modal expressions cannot occur in prenominal restric-

tive clausal modifiers since they constitute the category of propositions, which does not include modality⁵. In (14) restrictive clauses with the epistemic modal, *daroo*, which expresses a presumption by the speaker, are contrasted with those without the modal. The occurrence of the modal renders the sentences significantly degraded, if not totally unacceptable.

- (14) a. ?? [[Kondo no senkyo de rakusen suru daroo] kooho] wa koonin no taisyoo kara hazusareta⁶.
 next time gen election in lose-seat do Mod candidate top of-
 ficial subject from removed
- a'. [[Kondo no senkyo de rakusen suru] kooho] wa koonin no taisyoo kara hazusareta.
 'The candidate who would lose in the next election were removed from the endorsement list.'
- b. *John wa [[Mary ga kaita daroo] ronbun] o hihansita.
 John top Mary nom wrote Mod paper acc criticized
- b'. John wa [[Mary ga kaita] ronbun] o hihansita.
 'John criticized the paper that Mary wrote.'
- c. *[[igan no sooki hakken ni yuukoo dearoo] kensa] o syain zenin ga uke-nakereba naranai.
 stomach cancer gen early detection useful presumption examination acc employee all nom take-must
- c'. [[Igan no sooki hakken ni yuukoona] kensa] o syain zenin ga ukenakereba naranai.
 'All employees must undergo the examination that is useful for an early detection of stomach cancer.'
- d. *[[konotugi syusyoo ni naru daroo] hito] wa syoohizei zoozei nituite jyuudaina ketudan o sinakereba-naranai.
 next time prime minister to become Mod person top consumption tax increase about important decision acc do must
- d'. konotugi syusyoo ni naru hito wa syoohizei zoozei ni tuite jyuudaina ketudan o sinakereba naranai.

‘The person who will be the next prime minister has to make an important decision about the increase of the consumption tax.’

In contrast to the restrictive clauses, in the following nonrestrictive clauses, the occurrence of the epistemic modal *daroo* does not impair the acceptability of the sentences.

- (15) a. [[Kondo no senkyo de rakusen suru daroo] Tanaka kun] wa koonin no taisyoo kara hazusareta.
‘Mr. Tanaka, who will be defeated in the next election, was removed from the endorsement list.’
- b. John wa [[Mary ga kaita daroo] kono ronbun] o hihansita.
‘John criticized this paper, which was presumably written by Mary.’
- c. [[Igan no sooki hakken ni yuukoo dearoo] kono kensa] o syain zenin ga ukenakereba naranai.
‘All employees must undergo this examination, which presumably is useful for an early detection of stomach cancer.’
- d. [[konotugi syusyoo ni naru daroo] kimi] wa syoohizei zoozei ni tuite jyuudaina ketudan o sinakereba naranai.
‘You, who will be the next prime minister, have to make an important decision about the increase of the consumption tax.’

Another epistemic modal, *mai*, indicating negative presumption, shows similar contrasts.

- (16) a. *Mary wa zettaini kuru mai hito o zutto matteiru.
Mary top never come Mod person acc all the time waiting
- b. Mary wa zettaini kuru mai sono hito o zutto matteiru.
Mary top never come Mod that person acc all the time waiting
- ‘Mary has been waiting for a long time for the person, who

will not come on any account.'

There is a certain structural parallelism between restrictive and non-restrictive RCs in Japanese in terms of the nonoccurrence of an overt complementizer⁷. In Kayne (1994) the movement of the NP Head is attributed to the property of complementizers. His analysis predicts that in languages that allow only prenominal relative clauses, relative clauses lack complementizers, and thus, prenominal relatives are IPs (TPs). The nonoccurrence of a complementizer in Japanese RCs conforms to this general crosslinguistic tendency observed in prenominal relatives. However, the contrasts observed in (14)–(16) suggest that restrictive and nonrestrictive clauses are not on a par in terms of the periphery of the clause, i.e., nonrestrictive clauses involve Mod, the functional head hosting epistemic modals in the C-system as schematized in (17) below.

- (17) NP with a restrictive RC: [TP] N
 NP with a non restrictive RC: [[TP] ModP] Dem N

The feature of the epistemic modal such as *daroo* and *mai* must be identified by the feature of the speaker or, in embedded contexts by the feature of the subject of a propositional attitude verb. Since relative clauses cannot be the complement of a propositional attitude verb, the Mod feature in nonrestrictive RCs must be identified by the speaker feature. The point is confirmed in (15a–d), and (16b) above, where the presumption expressed by the modal *daroo* and *mai* is attributable to the speaker, not to the matrix subject. Furthermore, (18a) shows that even when the relative clause with the modal *daroo* is within the complement clause of a propositional attitude verb, the expressed presumption should be attributed to the speaker, not to the matrix subject. In contrast, (18b) shows that when *daroo* is not part of a relative clause, the expressed presumption should be attributed to the matrix subject.

- (18) a. Mary wa John wa [[Leonard ga kaita daroo] kono e] o kiniitta

to omotteiru.

Mary top John top Leonard nom drew Mod this painting acc
is-pleased C thinking

'Mary thinks that John is pleased with this painting, which
was presumably drawn by Leonard.'

- b. Mary wa [John wa atarasii keitaidenwa o kau daroo] to omotteiru.

Mary top John top new cell phone acc buy Mod C thinking
'Mary thinks that John will buy a new cell phone.'

Hence, while they are subordinate clauses, nonrestrictive clauses are similar to main clauses in allowing an epistemic modal that must be identified by the speaker feature.

3.3 Difference in tense interpretation

This section describes the fact that restrictive RCs and nonrestrictive RCs do not parallel in tense interpretation, and shows the same contrasts are observed in the so-called Head internal relative clauses.

Ogihara (1996) shows that in Japanese the tense in relative clauses is interpreted with respect to either the Utterance Time (UT) or the Event Time (ET) of the superordinate clause.

- (19) a. Taro wa [naitei-ru otoko] o mita.
Taro top crying-pres man acc saw
(Lit) 'Taro saw the man who is crying'
- b. Taro wa [naitei-ta otoko] o mita.
Taro top crying-past man acc saw
(Lit) 'Taro saw the man who was crying.'

In (19a), by the present tense in the relative clause, the time of the man's crying can be understood as being contemporaneous with either the time of Taro's seeing him, or the UT. In (19b), since the past tense in the relative clause orders its event time precedent to a reference point, the

time of the man's crying precedes either the time of Taro's seeing him (the shifted past reading) or the UT. The temporal dependence of the relative clause on the superordinate ET can be shown by the past-in-the-future reading of relative clauses as illustrated by the following example.

- (20) *Asu no siai de kat-ta hito ni wa kinmedaru ga jyuyo sareru desyoo.*
 tomorrow gen game in win-PAST person to top gold medal nom give-passive-Mod-polite
 (Lit) 'The person who won tomorrow's game will be given the gold medal.'

Due to the deictic time expression *asu* 'tomorrow', the winning the game can only be located in the future, thus, the past tense in the relative clause is forced to be interpreted with respect to the future event time denoted by the matrix VP, not with respect to the UT.

The shifted tense interpretation as observed above is not available for nonrestrictive RCs, however. (see also Yuasa 2005) In the following examples with nonrestrictive RCs, the tense in the relative clauses can only be interpreted relative to the UT, but not to the matrix ET.

- (21) a. *Siai de kat-ta ano sensyu ni wa kinmedaru ga jyuyo sareru desyoo.*
 game in win-past that athlete to top gold medal nom give-passive-Mod-polite
 (Lit) 'To that athlete, who won the game, will be given the gold medal.'
- b. **Asu no siai de kat-ta ano sensyu ni wa kinmedaru ga jyuyo sareru desyoo.*
 tomorrow gen game in win-past that athlete to top gold medal nom give-passive-Mod-polite
 (Lit) 'To that athlete, who won tomorrow's game, will be given

the gold medal.'

Sentence (21a) is felicitous only in a situation where the individual referred to by *sono sensyu* 'that athlete' won the game in the time prior to the UT. For this reason, sentence (21b), in which the expression *asu no* 'tomorrow's' forces the reading that the winner has not been determined at the UT, is ungrammatical. Similarly, the nonrestrictive RC in the present tense in (22a) cannot be interpreted as being contemporaneous with the time in the past denoted in the matrix clause, but must be interpreted as being contemporaneous with the UT. Hence, the sentence cannot be given a coherent interpretation. To be interpretable, the nonrestrictive clause must be in the past tense as in (22b). If the Head is indefinite and the RC is restrictive, the RC in the present tense receives a contemporaneous interpretation with the matrix ET as in (22c).

- (22) a. *John wa Mary ga yondei-ru sono hon o toriagete kaesa-nakat-ta.

John top Mary nom reading-pres that book acc taking-away
return-not-past

(Lit) 'John took away that book, which Mary is reading, and didn't give it back to her.'

- b. John wa Mary ga yondei-ta sono hon o toriagete kaesa-nakat-ta.

John top Mary nom reading-past that book acc taking-away
return-not-past

'John took away the book, which Mary was reading, and didn't give it back to her.'

(Lit) 'John took away that book, which Mary was reading, and didn't give it back to her.'

- c. John wa Mary ga yondei-ru hon o toriagete kaesa-nakat-ta.

John top Mary nom reading-pres book acc takeing-away
return-not-past

'John took away the book that Mary was reading and didn't

give it back to her'

Thus, in terms of temporal interpretation, nonrestrictive RCs behave as if they were independent clauses in that they can only be interpreted with their reference time anchored to the UT, the temporal location of the speaker. The UT-dependent temporal interpretation is not limited to nonrestrictive clauses whose Head is a proper noun or is preceded by a demonstrative used in the deictic sense. As the examples in (23) show, with a demonstrative in its anaphoric meaning, the temporal interpretation of nonrestrictive clauses must be the UT-dependent.

- (23) a. Mary wa raigetū no Taro no tanzūobi ni susi o takusan tuku-ru to yakusoku sita rasii.
 'Mary seems to have promised to make a lot of susi for Taro's birthday next month'
 Taro wa Mary ga tuku-ru /??tuku-ta [sono susi] o hotondo hitoride tabetesimau daroo.
 Taro top Mary nom make-present/??make-past that susi acc most alone eat-finish Mod
 (Lit) 'Taro will have eaten up by himself most of that susi, which Mary will make/??made.'
- b. John wa Mary ni totemo niaisoona doresu o mituketa node sore o katte yaru tumorida.
 'John found a dress that would look very good on Mary, and is going to buy it for her.'
 Mary wa John ga purezento su-ru/*si-ta [sono doresu] o kon-do no paatii de kiru daroo.
 Mary top John nom present do-present/*do-past that dress acc next time gen party at wear Mod
 'At the coming party Mary will wear the dress, which John is going to give her as a gift.'

In (23a) a particular set of *susi* is introduced in the conversational back-

ground by the first sentence, and the demonstrative in the second sentence is used to refer to this set of *susi*, which is not yet in existence at the UT. Since the present tense ending *-ru* in Japanese forces a future interpretation when attached to an eventive verb, the sentence is felicitous if the nonrestrictive clause is in the present tense. The same description applies to the anaphoric use of the demonstrative in (23b). These examples show that the past tense in the nonrestrictive clause does not produce the ‘past-in-the-future’ reading⁸. Thus, whether a demonstrative is used in the deictic or anaphoric sense, the temporal interpretation assigned to the preceding nonrestrictive RC is always dependent on the UT.

It may appear possible to attribute this difference in temporal interpretation to the difference in the structure of restrictive and nonrestrictive RCs in Japanese: the former is TP and the latter involves at least part of the C-system to accommodate epistemic modals. If lacking projections of the C-system in restrictive clauses is the reason for their nonobligatory association with the UT, the fact follows that the same contrast is not observed in languages where both restrictive and nonrestrictive RCs are CPs. Enç (1987) shows that in English, whose restrictive and nonrestrictive RCs are both CPs, the tense in relative clauses are interpreted relative only to the UT as though they are not embedded. In (24) the nonrestrictive relative clause in the present tense is unambiguously interpreted at the UT.

- (24) John insulted the man who is walking towards us. (=Enç 1987: (19))

(24) contrasts with the restrictive relative in (19a), whose present tense can be interpreted either at the matrix ET or at the UT. If a relative clause is headed by C, as is the case in English, its unvalued temporal argument feature, which is moved from T along with the one identified with the subordinate ET, must be identified with the speaker’s temporal coordinate (the UT). Since the relative CP is not selected by the superior-

dinate verb and the relativized DP intervenes, the association of the temporal argument feature of the relative clause C and the ET feature of the superordinate VP is not possible. To contrast, the temporal argument feature of the complement clause C can be valued by the ET feature of the superordinate VP, as shown by the shifted reading of the complement clause in (25).

(25) John found out that the Mary criticized his comments.

Thus, the time denoted in relative clauses in English are always interpreted with respect to the UT. If restrictive RCs in Japanese are TPs, as we have been assuming, they do not constitute a phase unlike relative CPs in English. Then, the temporal argument of a restrictive RC may be interpreted with respect to the superordinate ET in the next phase up. Alternatively, the UT-relative interpretation could be obtained if the restrictive clause is interpreted outside the containing clause due to covert movement as proposed by Ogihara (1996).

In terms of tense interpretation, Japanese nonrestrictive RCs are like English RCs, which always receive the UT-oriented interpretation. Suppose in nonrestrictive RCs, Mod being a head in the C-system functions as a phase head. Then, with the feature that must be identified by the speaker feature in the phase head, a nonrestrictive clause is interpreted independently of the matrix clause and always seeks the UT for their temporal reference point. Interestingly however, the same kind of difference in tense interpretation is observed in the relative clauses that arguably include the C-system with the Complimentizer *no*, suggesting that the UT-dependent interpretation for nonrestrictive clauses may be independent of the C-system projections.

4. The parallelism between Head Internal Relatives and Head External Relatives

Many authors, among others, Kuroda (1976), Hoshi (1995), Murasugi (2000), argue that *no* that occurs in Japanese Head Internal relative

clause (HIRC) constructions should be analyzed as a Complementizer, rather than a pronoun. Saito (2011) and Sato (2011) discuss the differences among the complementizers *to* and *no* in Japanese. In the latter, I argued that *no* is the lower complementizer that occurs in Fin, lower than Mod, while *to* occurs in a higher position than Mod.⁹ Taking *no* as occurring in Fin, the structure of HIRC will be as illustrated in (26).

- (26) Jiro wa [[[Taro ga ronbun_i o yatto kakiageta] no] pro_j] o yonda.
 Jiro top Taro nom paper acc finally write-finish-past no_{FIN} pro
 acc Jiro nom read-past
 'Jiro read the paper that Taro finally finished writing.'

Assuming Cinque's unified structure for relative clauses, HIRCs differ from Head external ones only in the spell-out position of the Head; in HIRC it is the internal Head, rather than the external Head, that is pronounced. The null hypothesis is that HIRCs, just like HERCs, can be either restrictive or nonrestrictive, and Japanese HIRCs do seem to manifest both restrictive and nonrestrictive varieties. The Head of HIRCs can be either an indefinite noun as in (26) above, or a definite noun as in (27) below,

- (27) Jiro wa [[[Taro ga sono ronbun_i o yatto kakiageta] no] pro_j] o yonda.
 Jiro top Taro nom that paper acc finally write-finish no_{FIN} pro
 acc read
 'Jiro read that paper, which Taro finally finished writing.'

As is the case for HERCs, HIRCs, either restrictive or nonrestrictive, are insensitive to islands and the locality, suggesting that the raising of the Head is not involved in the derivation. (28a. b) are examples of restrictive HIRCs. (28a) involves the stacking of two HIRCs, and the object of the matrix verb 'freed' is the outer HIRC, whose internal Head is within the internal HIRC. (28b), a sentence attributed to Yoshihisa Kita-

gawa in Hoshi (1995), is an example involving adjunct *wh*-island.

- (28) a. ?[[[Neko_i ga sakana_j o kuwaete nigeta no] pro_j] o John ga yatto tukamaeta no] pro_j] o ike ni hanasite yatta.
 [[cat nom fish acc worrying ran away no_{FIN} pro] acc John nom finally caught no_{FIN}] acc pond in let-go
 (Lit) '(I) freed in the pond the fish that a cat that John finally caught held in its mouth and ran away.'
- b. [Uti no ziisan ga [pro megane_i o dokoni okiwasureta ka] wasuresimatta no pro_j] o tyoito sagasite yatte kurenai ka. (Hoshi 1995: 100 fn.64)
 [our grandpa nom [pro glasses acc where left Q] forgot no_{FIN} pro] acc quickly look-for-give-give-not Q
 'Could you please look for the glasses which our grandpa forgot where he left behind?'

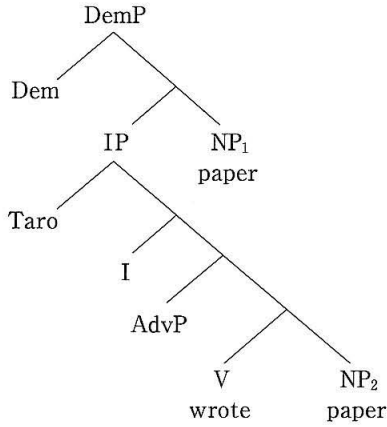
When a demonstrative precedes the internal Head to make it definite, the sentences are still acceptable.

- (29) a. [[Ano siroi neko_i ga sono sakana_j o kuwaete nigeta no] pro_j] o John ga yatto tukamaeta no pro_j] o ike ni hanasiteyatta.
 (Lit) '(I) freed in the pond that fish, which that white cat, which John finally caught, held in its mouth and ran away.'
- b. [Uti no ziisan ga [pro ano daizina megane_i o dokoni okiwasureta ka] wasuresimatta no pro_j] o tyoito sagasite yatte kurenai ka.
 'Could you please look for those cherished glasses which our grandpa forgot where he left behind?'

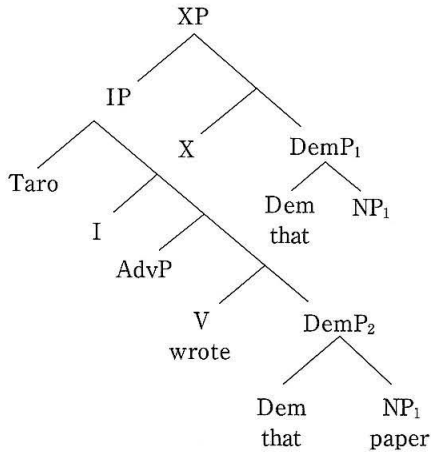
Examples (26-29) reasonably suggest that restrictive and nonrestrictive HIRCs are derived through the matching derivation, as their Head-external counterparts are. Adopting the uniform analysis for HIRCs and HERCs, the structure of the HIRCs in (26) and (27) can be illustrated as

shown in (30a) and (30b), respectively.

(30) a.



b.



To further illustrate that the parallelism between Head-internal and Head-external RCs, the following examples show that restrictive clauses and nonrestrictive ones differ in temporal interpretation in HIRC just

as is the case in Head-external RCs. The examples in (31) show that when the Head of HIRC is indefinite, the ET of a HIRC can be interpreted relative to the superordinate ET. For the sake of legibility, henceforth, the unpronounced External Head *pro* will not be represented in the examples; their presence must be assumed, nevertheless.

- (31) a. [Kondo Nana ga koinu o un-da no] o kitto Taro ga morau daroo.
 next time Nana nom puppy acc give-birth-past no_{FIN} acc
 probably Taro nom get Mod
 ‘Taro will probably have a puppy/puppies that Nana will give birth to next time. / Taro will probably have a puppy/puppies that Nana gave birth to this time.’
- b. [Konotugi Mary ga eigo de tegami o kaita no] o Keiko ga nihongo ni yakusite kureru daroo.
 next time Mary nom English in letter acc wrote no_{FIN} acc Ken nom Japanese to translate-give Mod
 ‘Keiko will translate the letter that Mary will write in English next time.’
- c. [Ryokootyuu ni kuruma ga kosyoo si-ta no] o John ga syuuri su-ru daroo.
 trip-during in car nom breakdown do-past no_{FIN} acc J nom repair do-pres Mod
 ‘John will repair the car that breaks down during the trip/
 John will repair the car that broken down during the trip.’

The temporal adverbial *kondo* in (31a) can mean either ‘next time’ or ‘this time’. When the word is interpreted in its future meaning, the containing HIRC is interpreted with a ‘past-in-the-future’ reading. When *kondo* refers to the present time, the ET denoted in the HIRC is interpreted with respect to the UT. Since the temporal adverbial *konotugi* in (31b) unambiguously refers to a future time, the ET denoted in the HIRC receives a shifted interpretation with respect to the superordinate

ET, i.e., a ‘past in the future’ reading.

In contrast, when the Head is preceded by a demonstrative, making it definite, the ET of a HIRC can only be interpreted with respect to the UT.

- (32) a. [Kondo Nana ga kono koinu o un-da no] o Taro ga morau daroo.
 this time (*next time) N nom this puppy acc give-birth-past
 no_{FIN} acc T nom have Mod
 ‘Taro will have this puppy, which Nana gave birth to this time.
- b. Mary wa Taro ni tegami o kakanakutewa naranai.
 ‘Mary will have to write a letter to Taro.’
 #[Mary ga asu eigo de sono tegami o kai-ta no] o Keiko ga nihongo ni yakusite kureru daroo.
 Mary nom tomorrow English in that letter acc wrote no_{FIN} acc Keiko nom Japanese to translate-give Mod
- c. [Ryokootyuu ni sono kuruma ga kosyoo si-ta no] o John ga syuuri su-ru daroo.
 trip-during in that car nom breakdown do-past no_{FIN} acc J nom repair do-pres Mod
 ‘John will repair the car, which broke down during the trip.

(32a) is comprehensible only if the word *kondo* is interpreted as referring to the present time. The second sentence in (32b) has no coherent meaning in the given context; the word *konotugi* has a future meaning while the ET of the HIRC must be located in the past with respect to the UT. Similarly, the HIRC in (32c) can only refer to a time in the past of the UT, in contrast to (31c) without a demonstrative preceding the Head.

Assuming that HERC and HIRC are derived from the same structure, for both HERC and HIRC a uniform analysis is also expected for the difference in temporal interpretation between the restrictive and nonrestrictive clauses. With the Comp-element *no* as Fin, the restrictive and

nonrestrictive HIRCs in (31), (32) must be all at least FinP. Then, the difference in the temporal interpretation cannot be attributed to whether the RCs include the C-system or not.

5. An analysis: the difference in temporal interpretation reflecting the different merge positions

As seen above in Section 3.1, restrictive RCs and nonrestrictive RCs differ in the order with respect to demonstratives: The former is merged below the demonstrative and the latter is merged above the demonstrative. Let us entertain the possibility that the difference in temporal interpretation is to be attributed to the difference in the structural relation to the demonstrative within the extended projection of NP.

Demonstratives *kono*, *sono*, *ano*, in either their deictic or anaphoric sense, determine the object being referred to by indicating spatial, temporal or psychological distance from the speaker or/and the hearer, and thus they are indexical by nature. The indexical property of the demonstratives requires that they be anchored to the speaker of the utterance. Let us assume that in the extended noun phrase structure, properties regarding the interface to the discourse are located to the outer layer of the functional projections, analogous to the left periphery of the clause structure. It follows from this assumption that a RC merged in a higher position than a demonstrative is interpreted with respect to the speaker's perspective along with the demonstrative. To put it differently, in the extended projections of NP, the position for demonstratives and those above demonstratives are reserved for constituents with the feature to be identified by the speaker feature; the positions lower than demonstratives are not accessible to the speaker feature. Hence, Dem marks the boundary of the interface to the discourse as illustrated in (33).

$$(33) \quad \underbrace{[_{WP} RC_{nonrestrictive} [_W [_{DemP} XP [_{Dem} X \dots [_{YP} RC_{restrictive} [Y [AP [Y \dots [_{NP} N]]]]]]]]]}_{\text{to be identified by the speaker F}}$$

to be identified by the speaker F

The identification by the speaker feature is reflected in HERCs as categorical differences. As discussed in Section 3.1, nonrestrictive HERCs constitute ModP while restrictive HERCs do not allow epistemic modals and constitute TP. Since $F_{[+speaker]}$ of Mod must be identified by the speaker feature, ModP can only be merged in a position higher than Dem. The constituents identified by the speaker feature are interpreted with respect to the speaker's temporal/spatial coordinates. Hence, nonrestrictive clauses receive the UT-dependent interpretation. If ModP are merged below Dem, its $F_{[+speaker]}$ remains unidentified. Thus, restrictive clauses cannot be ModP and they can be interpreted with respect to the ET of the containing clause¹⁰.

As for HIRC there is no independent evidence indicating the categorical difference between restrictive and nonrestrictive clauses as the one observed in HERCs; nonrestrictive HIRC project only up to FinP as do their restrictive counterparts. If FinP is merged above Dem, it must be interpreted with respect to the speaker's coordinates, and thus it receives the UT-dependent temporal interpretation. If FinP is merged below Dem, the anchoring to the speaker's coordinate is not required, and it is interpreted with respect to the superordinate ET¹¹. Thus, the differences in the temporal interpretation between restrictive and nonrestrictive clauses of both Head-external and Head-internal relatives are given the same structurally based analysis.

The difference between restrictive and nonrestrictive RCs in terms of the identification by the speaker feature also finds support in the distribution of the anaphor *zibun*. The following examples show that the matrix subject can be referred to either by a pronoun *kare* 'him', or the reflexive *zibun* 'self' in the restrictive RC.

- (34) a. John_i wa [[zibun_i o nikundeiru] onna] to kekkonsita.
 John top self acc hating woman with married
 b. John_i wa [[kare_i o nikundeiru] onna] to kekkonsita.
 John top him acc hating woman with married
 (Lit) 'John married a woman who hates him/self'

These sentences contrast slightly in meaning. While in (34b) John's awareness about the woman's feeling toward him is not specified, (34a) signifies that John was aware of the woman's feeling when he married her or he came to realize her feeling at a certain point after their marriage. Kuno (1973) notes that the reflexive *zibun* appears in subordinate clauses only when the clauses represent the internal feeling of the referent of *zibun*. Then, by having John as the antecedent of *zibun*, the relative clause in (34. a) represents the internal feeling of John (his awareness), and *zibun* is interpreted first-personally, or in other words, it receives the *de se* interpretation¹². Given the obligatory identification of nonrestrictive RCs with respect to the speaker's coordinate, a prediction is made that a reflexive in a nonrestrictive clause cannot refer to the subject of the matrix clause with the first-personal reading. The prediction seems to be confirmed by the following examples.

- (35) a. John_i wa [[zibun_i o nikundeiru] ano onna] to kekkonsita.
 b. John_i wa [[kare_i o nikundeiru] ano onna] to kekkon sita.
 (Lit) 'John married that woman, who hates self/him.'

The relative clause in (35a) cannot be interpreted as a report of the first-personal belief of John. The coreference between *zibun* and the matrix subject is only appropriate from the speaker's point of view (i. e., the *de re* reading). Since nonrestrictive clauses are interpreted with respect to the speaker's coordinates, the reflexive contained there can only be interpreted from the speaker's point of view. Consequently, (35a) is unambiguous as (35b) is, in terms of the awareness of John. Notice also that when the demonstrative precedes the RC as in (36a), the reflexive cannot receive the first-personal interpretation referring to John¹³.

- (36) a. John_i wa [ano [zibun_i o nikundeiru] onna] to kekkonsita.
 b. John_i wa [ano [kare_i o nikundeiru] onna] to kekkon sita.
 (Lit) 'John married that woman, who hates self/him.'

The coreference between John and *zibun* in (36a) is not appropriate as a report of the first-personal belief of John, but it is possible as a description from the speaker's point of view. Due to the indexical meaning of the demonstrative, the reflexive must be interpreted with reference to the speaker's coordinate.

Though slightly awkward, the examples in (37) show that the alternation between the pronoun and reflexive induces the same kind of contrast in restrictive HIRCs as the contrast observed in (34).

- (37) a. ?John wa [neko ga zibun o kiniitta no] o turetekaetta.
 John top cat nom self acc be-pleased noFIN acc brought-home
 b. ?John wa [neko ga kare o kiniitta no] o turetekaetta
 John top cat nom him acc be-pleased noFIN brought home
 (Lit) 'John brought home the cat that was pleased with self/him.'

In nonrestrictive HIRCs, where the Head is preceded by a demonstrative, the reflexive cannot receive the first-personal interpretation referring to the subject of the matrix clause. Again the coreference between *John* and the reflexive is possible only from the speaker's point of view. Thus, in terms of John's awareness, (38a) is on a par with (38b)

- (38) a. John_i wa [sono neko ga zibun_i o kiniitta no] o turetekaetta^{14,15}.
 b. John_i wa [sono neko ga kare_i o kiniitta no] o turetekaetta.
 (Lit) 'John brought home that cat, which was pleased with
 ?*self/him'

The interpretation of the reflexive in the above examples supports our analysis of the difference between restrictive and nonrestrictive clauses, and the uniform structure for HERCs and HIRCs.

6. Conclusion

In Japanese nonrestrictive relative clauses differ from restrictive clauses in terms of the obligatory UT-dependent tense interpretation and the occurrence of epistemic modals, suggesting that they are subject to the identification by the feature of the speaker's coordinates. The difference in tense construal cannot be attributed to the difference in category, i.e., TP vs. ModP since restrictive and nonrestrictive clauses in HIRCs are not categorially distinguished. These differences between restrictive and nonrestrictive clauses are correlated with their structural relation to demonstratives, i.e., nonrestrictives are structurally higher while restrictives are lower than demonstratives. The indexical nature of demonstratives requires that they are interpreted within the speaker's coordinate, and by postulating that functional heads above Dem also have features to be identified by the speaker feature. Hence, the different kinds of relative clauses in Japanese are the consequences of the difference in the position of merge (restrictive or nonrestrictive), and the choice of the Head to be pronounced (HERC or HIRC).

Notes

- * I thank the anonymous reviewers for their insightful comments. Needless to say, the final responsibility remains with the author.
- 1 Murasugi claims that since neither movement nor the occurrence of *pro* is possible for a reason/manner adjunct, in the grammatical constructions in (i) and (ii), no gap is present in the prenominal modifying clause, just like the complex NPs in (4).
 - (i) [Mary ga kaetta] riyuu
M nom left reason
'the reason (for which) Mary left'
 - (ii) [Mary ga mondai o toita] hoohoo
M nom problem acc solved method
'the method (by which) Mary solved the problem'
- 2 In Murasugi's analysis, Japanese RCs are base-generated in SpecDP, and a clausal modifier of N is moved from NP internal position to SpecDP.
- 3 The demonstratives *kono*, *sono*, *ano* are distinguished by the spatial, temporal or psychological distance from the speaker or/and the hearer. *Kono* is used for a ref-

erent that the speaker recognizes is close to himself; *sono* is used for a referent that the speaker recognizes is closer to the hearer than himself; *ano* is used for a referent that the speaker recognizes is far from both the speaker and the hearer.

4 Murasugi (1999) states that a nonrestrictive, but not restrictive relatives may modify a nominal that begins with a determiner-like element *sono* 'that'.

5 The topic phrase that occurs in nonrestrictive relative clause is limited to the contrastive topic, and the thematic topic interpretation seems unavailable.

(i) a. *nihon de yoku terebi ni deteiru hito o Pari de mikaketa.*

Japan in often TV in appear person Paris in saw

'In Paris I saw a person who often appears on TV in Japan.'

b. **nihon de wa yoku terebi ni deteiru hito o Pari de mikaketa.*

Japan in top

c. *nihon de wa yoku terebi ni deteiru Dave Spector o Pari de mikaketa.*

'In Paris I saw Dave Spector, who often appears on TV in Japan (but not other places).

6 In Masuoka (1997) the awkwardness of sentence (14a) is indicated by one question mark (?). Yuasa (2005) finds the degradation of this sentence worse than that expressed by one question mark, the sentence is marked with two question marks. My judgement is in accord with the latter.

7 In a clausal complement to a noun, Comp elements *toyuu*, *toitta*, or *to no* can optionally occur.

(i) [[[syotokuzei o go paasento genzei suru] ([to no/toyuu/toitta_C]_{CP}) teian_{NP}]

income tax acc five percent reduce do C proposal

the proposal to reduce the income tax by 5 percent

Toyuu and *toitta* in (i) cannot be analyzed as the sequence of [_C to]₊[_V yu 'say']₊ [_T {u, ta}]; the meaning of 'to say' is not present in the complement clause, and *toitta* does not convey the sense of the temporal anteriority, which would be the case if *itta* in the sequence were *yu*+past. *Toyuu* and *toitta* may appear in RCs as an example of restrictive RC shows in (ii), but they are not complementizers.

(ii) *Minsyutoo ga kinoo happyoo sita toyuu/toitta/*tono teian*

Democratic party nom yesterday announce did C say/said proposal

'The proposal that they say that the Democratic party announced yesterday./

The proposal that the Democratic party yesterday said that they announced.'

In (ii) the alternation between *yuu* and *itta* is reflected in the temporal interpretation of the clause and an argument corresponding to the 'sayer' is required. Thus, in RCs *yu* must be analyzed as a lexical verb, and the relative clause in (ii) has the biclausal structure: [[[[[..._{TP}] to_{CP}] yu_{VP}] {u, ta}_{TP}] N].

- 8 In (i) and (ii) if the demonstrative preceding the restrictive RC is used deictically, the UT-dependent reading is forced for the restrictive RC, and the ‘past-in-the-future’ reading is not felicitous. This is an expected result since in the ‘past-in-the-future’ reading, the *susi* and the dress in question have not necessarily come to existence at the UT, and this contradicts the deictic meaning of the demonstratives. If (i) and (ii) follow the first sentence in (23a) and (23b), respectively, and the demonstratives are used anaphorically, the sentences are acceptable in contrast to the nonrestrictive clauses with the ‘past-in-the-future’ reading.
- (i) Taro wa [sono [Mary ga tukut-ta] susi]] o hotondo hitoride tabetesimau daroo.
(ii) Mary wa [sono [[John ga purezento si-ta] doresu]] o kondo no paatii de kiru daroo.
- 9 Epistemic modals can occur in *to*-clause, but not in *no*-clause. They do not occur in HIRC either, suggesting that HIRC are smaller than ModP.
- 10 Since restrictive clauses optionally allow the interpretation with respect to the UT as well as the ET-relative interpretation, it must be postulated that restrictive clauses are interpreted either in the merged position or in the derived position.
- 11 Demonstratives never precede HIRC. With HIRCs their occurrence is restricted to the position adjacent to the internal Head. Presumably this is because demonstratives cannot modify an empty NP.
- 12 Since the presence or absence of awareness is at issue, the examples are only those with predicates describing psychological states, rather than those describing directly perceivable events and effects.
- 13 I would like to thank an anonymous reviewer for bringing up issues related to this sentence to my attention.
- 14 The slightly improved status of this sentence may be due to the fact that the same string allows the interpretation in which the relative clause modifies the null element denoting a situation: ‘John brought home that cat at the moment when it was pleased with him.’ In this case, the HIRC is not a nonrestrictive clause, but a restrictive clause over set of moments. It is known that when *no*_{Fin} in a HIRC can be substituted by the expression *tokoro* ‘moment’, the HIRC also allows the interpretation of a temporal adjunct.
- 15 An anonymous reviewer pointed out that for him HIRCs with a definite Head are possible only when they are interpreted as modifying a situation. However, my Japanese speaking informants and I find the sentences like (i) acceptable, where the situations described in the HIRC and the matrix clause are spatio-temporally separated and the HIRC cannot be construed as modifying a situation denoted in the matrix clause.
- (i) John ga kono ehagaki o rooma kara okutta no o Mary ga hantosi go ni uketot-

ta.

John nom this picture postcard Rome from sent noFIN acc Mary nom half-year after

'Mary received this picture postcard, which John sent from Rome, six months later.'

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