

**The Japanese-Korean connection:
A contrastive study of the inventory and properties of their IHRCs**

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1 Introduction

The earlier literature on the Internally Headed Relative Constructions (henceforth: IHRCs) of Japanese and Korean has generally assumed that these constructions exhibit the same characteristic properties in the two languages, and in particular, those that distinguish them from the IHRCs of other languages. However, the earlier literature has sometimes attributed incorrect properties to the IHRCs of each of these two languages, so that, depending on the studies that one reads, one may get the impression that significant differences exist between the IHRCs of the two languages. To take just one example, Shimoyama (2001, Chapter 3) proposes that the IHRCs of Japanese disallow proper names as internal heads (henceforth: IHs), and Kim (2007) provides numerous data in which putative IHRCs have precisely such IHs, thereby giving rise to the possible impression that the two languages differ in this respect. Grosu & Hoshi (this volume; henceforth: GH) undertake a detailed examination of various earlier proposals concerning the properties of Japanese IHRCs, and argue for specific conclusions, which we propose to view as correct. The central goal of this article is to check the extent to which the properties of Japanese IHRCs are also found in Korean IHRCs, and more generally, whether the two languages have the same inventory of subtypes of IHRCs. In so doing, we will take GH as point of departure and standard for comparison, and we will also assume, as background, the typology of IHRCs outlined in Grosu (2012), the IHRCs of Japanese being one of three types described in that paper. This article thus constitutes a follow-up to GH, and may in fact be viewed as a logical appendix to the latter. It will thus be helpful for the reader to take a look at GH before reading this paper.

By and large, GH argue that a number of earlier studies have incorrectly characterized some of the properties of Japanese IHRCs, in most, although not all, cases due to a failure to appreciate the full implications of the fact that some IHRCs are string-wise homophonous with adverbial clauses. We believe that a comparable, even if not entirely identical, state of affairs exists with respect to the earlier literature on Korean IHRCs, and we will attempt to rectify it in what follows. The conclusion that we will eventually reach is that, as far as we can tell at the moment, there are no significant differences in the inventory and properties of IHRCs in the two languages.

The judgments of the Japanese and Korean examples in this paper are primarily those of the authors whose names are listed second and third respectively, and they have so far been counter-checked with only a small number of additional speakers. In view of a certain amount of idiolectal variation that exists in both languages with respect to IHRCs, additional checking with greater numbers of consultants seems highly desirable.

2 The IHRC/Adverbial homophony

GH (section 2) point out that IHRCs like those in the (a) subcases of (1)-(2) have homophonous adverbial readings, shown in the corresponding (b) subcases. Note that

in the latter, the counterparts of the IHs function as the antecedents of a null definite pronoun in the matrix. This reading is facilitated by a slight intonational break after the adverbial clause containing a case-marker (which we indicate by "/"), and its reality is incontrovertibly demonstrated by data like the corresponding (c) subcases, where the antecedent is resumed by an overt definite pronoun or full DP.

- (1) a. [[Daidokoro-no mado-kara **siroi neko-ga** haitte-kita]-no]-ga
 kitchen-Gen window-from white cat-Nom come.in-Past-NML-Nom
 sakana-o totte nige-ta. ← **IHRC**
 fish-Acc taking run-Past
 'A **white cat** came in from the kitchen window and **it** stole
 a fish and ran away.'
- b. [[Daidokoro-no mado-kara **siroi neko-ga** haitte-kita]-no]-ga// *pro*
 kitchen-Gen window-from white cat-Nom come.in-Past-NML-Nom
 sakana-o totte nige-ta. ← **Adverbial**
 fish-Acc taking run-Past
 'As a **white cat** came in from the kitchen window, **it** stole a fish and ran away.'
- c. [[Daidokoro-no mado-kara **siroi neko-ga** haitte-kita]-no]-ga//
 kitchen-Gen window-from white cat-Nom come.in-Past-NML-Nom
soitu-ga/sono neko-ga sakana-o totte nige-ta. ← **Adverbial**
 it-Nom/that cat-Nom fish-Acc taking run-Past
 'As a **white cat** came in from the kitchen window, **it/that cat** stole a fish
 and ran away.'
- (2) a. Anthony-wa [[**doroboo-ga huta-ri** nige-teiru]-no]-o tukamae-ta. ← **IHRC**
 Anthony-Top **thief-Nom two-Cl** run.away-Prog-NML-Acc catch-Past
 'Two **thieves** were running away, and Anthony caught **them**.'
- b. Anthony-wa[[**doroboo-ga huta-ri** nige-teiru]-no]-o// *pro* tukamae-ta.
 ← **Adverbial**
 Anthony-Top **thief-Nom two-Cl** run.away-Prog-NML-Acc catch-Past
 'As **two thieves** were running away, Anthony caught **them**.'
- c. Anthony-wa[[**doroboo-ga huta-ri** nige-teiru]-no]-o//
 Anthony-Top **thief-Nom two-Cl** run.away-Prog-NML-Acc
soitura-o/sorera-no doroboo-o tukamae-ta. ← **Adverbial**
 they-Acc/those-Gen thief-Acc catch-Past
 'As **two thieves** were running away, Anthony caught **them/those two thieves**.'

The following data, which are translations of (1)-(2) into Korean, show that a comparable state of affairs exists in this language.

- (3) a. [pwuekh changmwun-ulo **huyn koyangi-ka** tuleo-n] key
 kitchen window-through white cat-Nom enter-Rel kes.Nom
 sayngsen-ul mwul-ko tomangkassta. ← **IHRC**
 fish-Acc hold.in.mouth-and ran.away
 'A **white cat** came in through kitchen window and it ran away
 with a fish in its mouth.'
- b. [pwuekh changmwun-ulo **huyn koyangi-ka** tuleo-n] key//
 kitchen window-through white cat-Nom enter-Rel kes.Nom
pro sayngsen-ul mwul-ko tomangkassta. ← **Adverbial**
pro fish-Acc hold.in.mouth-and ran.away

`As a white cat came in through kitchen window, it ran away with a fish in its mouth.'

- c. [pwuekh changmwun-ulo **huyn koyangi-ka** tuleo-n] key//
 kitchen window-through white cat-Nom enter-Rel kes.Nom
kukey/ku koyangi-ka sayngsen-ul mwul-ko tomangkassta. ← **Adverbial**
 it.Nom/the cat-Nom fish-Acc hold.in.mouth-and ran.away
 `A white cat came in through kitchen window and it/the cat ran away with a fish in its mouth.'

- (4) a. Anthony-ka [**totwuk-i twu-myeng** tomangka-nu-n] kel pwuthcapassta.
 A-Nom thief-Nom two-Cl run.away-Imperf-Rel kes.Acc caught
 'Two thieves were running away, and Anthony caught them.' ← **IHRC**
 b. Anthony-ka [**totwuk-i twu-myeng** tomangka-nu-n] kel // *pro* pwuthcapassta.
 A-Nom thief-Nom two-Cl run.away-imperf-rel kes.Acc *pro* caught
 `As two thieves were running away, Anthony caught them. ← **Adverbial**
 c. Anthony-ka [**totwuk-i twu-myeng** tomangka-nu-n] kel //
 A-Nom thief-Nom two-Cl run.away-Imperf-Rel kes.Acc
ku-nom-tul-ul pwuthcapassta. ← **Adverbial**
 the-guy-PL-Acc caught
 'As two thieves were running away, Anthony caught those guys.'

GH also provide two procedures for ensuring that a particular constituent is an IHRC, and not an adverbial. One procedure is to mark the constituent with Genitive Case and make it a proper subpart of a larger nominal; a second procedure is to place a numeral that can be part of the IH of an IHRC after the CP-external case marker, thereby obtaining a construction that GH call a 'split-headed relative construction' (SHRC), which is synonymous with the minimally different IHRC. GH note that the external numeral must not be preceded by any pause, because a pause induces a partitive interpretation.¹ A Japanese minimal pair consisting of an IHRC and a synonymous SHRC is shown in (5), and a comparable Korean pair is shown in (6). In what follows, we will use these procedures for zeroing in on IHRC construals.

- (5) a. John-wa [[Mary-ga **nempai-no happyoosya-o huta-ri** kuukoo-de
 John-Top Mary-Nom elderly-Gen speaker-Acc two-Cl airport-at
 mat-asete-oi-ta]-no]-o hoteru-e tureteit-ta.
 wait-Caus-Aux-Past-NML-Acc hotel-to take-Past
 'Mary had two elderly speakers waiting at the airport, and John took them to a hotel.'
 b. John-wa [[Mary-ga **nempai-no happyoosya-o** kuukoo-de
 John-Top Mary-Nom elderly-Gen speaker-Acc airport-at

¹ We surmise that a pause coerces, or at least strongly favors, a partitive reading, because it indicates that the numeral needs to be construed as external to the IHRC, so that the IHRC (carrying a null definite pronoun after the Case marker) is confined to the bracketed expression. The role of the pause is then, we assume, analogous to that of *of* in English partitive expressions like *three *(of) the thieves*. Furthermore, the complement of a partitive is typically definite, so that IHRCs are ideally suited to serve as partitive complements.

mat-asete-oi-ta]-no]-o **huta-ri** hoteru-e tureteit-ta.
 wait-Caus-Aux-Past-NML-Acc two-Cl hotel-to take-Past
 'Mary had two elderly speakers waiting at the airport, and John took
 them to a hotel.'

(6) a. John-un [Mary-ka cwungnyen-uy yensa-lul twu-pwun konghang-eyse
 J-Top M-Nom middle.age-Gen speaker-Acc 2-Cl airport-Loc
 kitali-key ha-n] kel hothel-lo mosikokassta.
 wait-Caus-Rel kes.Acc hotel-to took
 'Mary had two middle-aged speakers waiting at the airport, and John took them
 to a hotel.'

b. John-un [Mary-ka cwungnyen-uy yensa-lul konghang-eyse
 J-Nom M-Nom middle.age-Gen speaker-Acc airport-Loc
 kitali-key ha-n] kel twu-pwun hothel-lo mosikokassta.
 wait-Caus-Rel kes.Acc 2-Cl hotel-to took
 'Mary had two middle-aged speakers waiting at the airport, and John took them
 to a hotel.'

For completeness, we note that IHRCs can also be construed as nominalized verbal sentential complements in appropriate environments, but this fact was widely noted in the literature on both languages (for Japanese, see, e.g., Kuroda 1976-77, for Korean, see Kim 2009), and we have nothing to add on this score.

3 Island sensitivity

The issue of island sensitivity has been a controversial one in the earlier literature on Japanese IHRCs (see GH section 3). GH show, using the two procedures for eliminating adverbial construals that were noted in the preceding section, that these constructions, while allowing unbounded dependencies, as in (7), are sensitive to the Complex NP Constraint, as in (8)-(9), and to the Adjunct Island Constraint, as in (10)-(11). (12)-(16) are the Korean counterparts of (7)-(11), and as can be seen, the corresponding examples have the same acceptability values. Thus, Korean IHRCs exhibit the same sensitivity to islands that Japanese IHRCs do.

(7) a. Mary-ga [[[John-ga [zibun-no gakusei-ga **zyuuyoona kasetu-o**
 Mary-Nom John-Nom self-Gen student-Nom **important hypothesis-Acc**
 teian-si-ta to] zimansite-ita]-no]-no kekkan]-o siteki-si-ta.
 propose-do-Past Comp boasted-had-NML-Gen defect-Acc point.out-do-Past
 'John had boasted that his student proposed **an important hypothesis**
 and Mary pointed out a defect in **it**.'

(8) *Mary-ga [[[John-ga _[EHRC] [[e] **atarasii kasetu-o** teiansi-ta] *gakusei*]-o
 Mary-Nom John-Nom **new hypothesis-Acc** propose-Past student-Acc
 hidoku homete-ita]-no]-no akirakana kekkan]-o suguni siteki-si-ta.
 extravagantly praise-had-NML-Gen obvious defect-Acc promptly point.out-
 do-Past
 'John extravagantly praised the *student* [who had proposed **a new hypothesis**]
 and Mary promptly pointed out an obvious defect in **it**.'

- (9) ?*[[Kyoogyu-ga [_{EHR} [**daigakuinsei**-ga [e] kaita] ronbun]-o
 professor-Nom grad-student-Nom write-Past paper-Acc
 homete-i-ta]-no]-ga **huta-ri** kondo zyosyu-de saiyoosare-ru
 praise-Prog-Past-NML-Nom two-Cl now instructor-as hire-Pass-Pres
 koto-ni-nat-ta.
 come.to.be-Past
 'The professor praised the papers that two graduate students had written,
 and they (= the students) were appointed as instructors.'
- (10) ?*Mary-wa [[[_{ADV} John-ga [kare-no gakusei-ga **atarasii kasetu**-o
 Mary-Top John-Nom his student-Nom **new hypothesis**-Acc
 teiansi-ta]-node kanki-no koe-o age-ta]-no]-no
 propose-Past because joy-Gen voice-Acc raise-Past-NML-Gen
 akirakana kekkan-o suguni sitekisi-ta.
 obvious defect-Acc promptly point.out-Past
 'John shouted for joy because his student proposed **a new hypothesis**, and Mary
 promptly pointed out an obvious defect in it.'
- (11) ?* John-wa [[Mary-ga [imooto-ga **nempai-no happyoosya**-o kuukoo-de
 John-Top Mary-Nom sister-Nom **elderly-Gen speaker**-Acc airport-at
 mat-asete-oi-ta]-node totemo otituk-anakat-ta]-no]-o **huta-ri**
 wait-Caus-Aux-Past-because very stay.calm-Neg-Past-NML-Acc **two-Cl**
 hoteru-e tureteit-ta.
 hotel-to take-Past
 'Mary was very nervous because her sister had two elderly speakers waiting
 at the airport, and John took them to a hotel.'
- (12) Mary-ka [John-i [caki haksayng-i cwungyohan kasel-ul ceyanhayssta-ko]
 M-Nom J-Nom self student-Nom important hypothesis-Acc proposed-Comp
 calangha-n] kes-uy mwunceycem-ul cicekhayssta.
 boasted-Rel kes-Gen problem-Acc pointed.out
 'John boasted that his student proposed an important hypothesis and Mary
 pointed out a defect in it.'
- (13) *Mary-ka [John-i [saylowun kase-lul ceyanha-n] haksayng-ul chingchanha-n]
 M-Nom J-Nom new hypothesis-Acc propose-Rel student-Acc praise-Rel
 kes-uy mwunceycem-ul cicekhayssta.
 kes-Gen problem-Acc pointed.out
 'John praised the student who proposed a new hypothesis and Mary pointed
 out a defect in it.'
- (14) *[kyoswunim-i [tayhakwensayng-i [e] ssu-n] nonmwun-ul chingchanha-n]
 professor-Nom grad.student-Nom write-Rel paper-Acc praise-Rel
 key twu-myeng ipeney kangsa-lo pwuim-ul hayessta.
 kes-Nom 2-Cl this.time instructor-as being.newly.assigned-Acc did
 'The two grad students whose paper(s) the professor praised were newly
 assigned this time.'
- (15) *Mary-nun [[John-i [ku-uy haksayng-i say kasel-ul ceyanhay-se]
 M-Top J-Nom he-Gen student-Nom new hypothesis-Acc propose-because

kippum-uy thanseng-ul cilu-n] kes]-uy
 joy-Gen exclamation-Acc shout-Rel kes-Gen
 pwunmyenghan mwunceycem-ul cuksi cicekhayssta.
 obvious problem-Acc promptly pointed.out
 ‘John let out an exclamation of joy because his student proposed a new hypothesis, and Mary pointed out a defect in it.’

- (16) *John-un [Mary-ka [enni-ka cwungnyen-uy yensa-lul konghang-eyse
 J-Top M-Nom older.sister-Nom middle.age-Gen speaker-Acc airport.loc
 kitali-key hay-se] maywu pwulanhay ha-n]-kel twu-pwun hotheyl-lo
 wait-cause-because very nervous do-Rel kes.Acc 2-Cl hotel-to
 mosiko kassta.
 took
 ‘Mary was nervous because her older sister had two middle aged speakers waiting at the airport, and John took them to the hotel.’

4 The definiteness of IHRCs

GH (section 4) argue against Kubota and Smith (2007), who claimed that Japanese IHRCs can be either definite or indefinite, depending on the pragmatic context, on the basis of data like (17). The claim that an indefinite construal is possible, in conflict with earlier views expressed by Hoshi (1995) and Shimoyama (1999, 2001), was based on (17b), which is consistent with the possibility that various passengers may have had more than one ticket in their pocket. As can be seen, the pragmatic conditions are different in the two subcases: passengers are expected to put the entire content of their pockets on the tray, but only one coupon ticket in the checker.

- (17) a. (At the security check of an airport:)

Dono zyookyaku-mo [[pro poketto-ni **koin**-ga haittei-ta]-no]-o
 every passenger pocket-Dat coin-Nom in.be-Past-NML-Acc
 toridasi-te torei-ni nose-ta.
 pick.up tray-Dat put-Past
 ‘Every passenger had **coins** in (his/her) pocket and picked **them** up and put them on the tray.’

- b. (At the ticket gate of a train station:)

Dono zyookyaku-mo [[pro saihi-ni **kaisuken**-ga haittei-ta]-no]-o
 every passenger wallet-Dat coupon.ticket-Nom in.be-Past-NML-Acc
 toridasi-te kaisatu-ni ire-ta.
 pick.up ticket.checker-Dat put-Past
 ‘Every passenger had **a coupon ticket** in (his/her) wallet and picked **it** up and put it in the ticket checker.’

GH draw attention to the following facts: [A] Bare nouns are unmarked for singular/plural status in Japanese, so that the IH in (17a) is construable as plural and the one in (17b), as singular, in keeping with the pragmatic requirements of the context. However, when the IH is unambiguously plural, as in (18), the IHRC denotes the entire plurality denoted by the IH, even if this construal is in conflict with pragmatic requirements; [B] IHRCs have the semantics of minimally different discourses constrained by the Relevancy Condition, such as the English translations of

(17a-b); since the translation of (17b) is also compatible with situations in which at least some passengers have more than a single coupon-ticket in their wallets (for reasons discussed by GH), and since the resuming anaphor in the second sentence is definite, there are no grounds for viewing the IHRC in (17b) as anything other than a definite description. Ergo, the facts in (17) in no way argue against the view that IHRCs are definite in general.

(18) (At the ticket gate of a train station:)

Dono zyookyaku-mo [[*pro* sai^{hu}-ni **nizyuu-mai-no kaisuken-ga**
 every passenger *pro* wallet-Dat twenty-Cl-Gen coupon.ticket-Nom
 haittei-ta]-no]-o toridasi-te kaisatu-ni ire-ta.
 in.be-Past-NML-Acc pick.up ticket.checker-Dat put-Past
 'For every passenger x, x had **twenty coupon-tickets** in his/her pocket
 and put **them** in the ticket checker.'

We provide in (19)-(20) Korean data essentially parallel to (17)-(18). These point to the conclusion that Korean IHRCs may also be viewed as definite in general.

- (19) a. Bill-i [cwumeni-ey **tongcen-i** iss-te-n] kel kkenay thuleyi-ey ollyenohassta.
 B-Nom pocket-loc coin-Nom be-Past-Rel kes.Acc take.out tray-loc put.on
 'Bill had coins in his pocket and took them out and put them on a tray.'
 b. Bill-i [cwumeni-ey **phyo-ka** iss-te-n] kel kkenay cipphyoki-ey nehessta.
 B-nom pocket-loc ticket-nom be-Past-Rel kes.Acc take.out ticket.checker-loc
 put.in
 'Bill had a ticket in his pocket and took it out and put it into the ticket checker.'
- (20) Bill-i [cikap-ey **sumwu-cang-uy phyo-ka** iss-te-n] kel
 B-Nom wallet-loc 20-Cl-Gen ticket-Nom be-Past-Rel kes.Acc
 kkenay cipphyoki-ey nehessta.
 take.out ticket-checker-loc put.in
 'Bill had 20 tickets in his wallet and he took them out and
 put them into the ticket checker.'

5 The quantificational force of the IH

GH (section 5) observe that while the IH of a Japanese IHRC may be either indefinite, as in (21) (and the various examples brought up so far), or quantified, as in (22), definite referential IHs are relatively degraded, as in (23).

- (21) John-wa [[[Kathy-ga ofisu-ni **yagi-o 2-too** turete kita]-no]
 John-Top Kathy-Nom office-to goat-Acc 2-Cl brought -NML
 -no ke] -o katta.
 -Gen hair -Acc cut
 'Kathy brought two goats to the office and John cut their hair.'
- (22) a. Taro-wa [c_pYoko-ga reezooko-ni **kukkii-o {subete, hotondo}**
 Taro-Top Yoko-Nom refrigerator-loc **cookie-Acc {all, almost-all}**
 irete-oita]-no-o paatii-ni motte itta.
 put-Aux-NML-Acc party-to brought
 'Yoko put **{all, almost all} the cookies** in the refrigerator and Taro brought

them to the party.'

- (23)?*John-wa [[[Kathy-ga ofisu-ni **Sebastian**-o turete kita]-no]
 John-Top Kathy-Nom office-to Sebastian-Acc brought -NML
 -no ke] -o katta.
 -Gen hair -Acc cut
 'Kathy brought Sebastian to the office and John cut his hair.'

GH note a number of acceptable data that were brought up in the past literature and in which IHRCs seemed to be internally headed by a definite referential expression were in fact homophonous with adverbial constructions, in which definite antecedents in the adverbial clauses are unproblematic. Such homophony does not exist in (23), where the IHRC carries Genitive Case.

GH also discuss two examples of special interest, reproduced in (24)-(25).

- (24) [John-ga [Mary-ga **omosiroid ronbun**-o kaita-no]-o
 John-Nom Mary-Nom interesting paper-Acc wrote-NML-Acc
 {yonda, kaizensita-no]-ga sokuzani *LI*-ni zyurisareta.
 {read, improved}-NML-Nom unhesitatingly *LI*-Loc was-accepted
 [i]# 'Mary wrote an interesting paper, John {read, improved} it,
 and it was unhesitatingly accepted by *LI*.' ← **IHRC**
 [ii] 'Mary wrote an interesting paper, and John having {read, improved} it,
 it was unhesitatingly accepted by *LI*.' ← **Adverbial**
NOT! [iii] 'The interesting paper that Mary wrote that John {read, improved}
 was unhesitatingly accepted by *LI*.' ← **Restrictive**

- (25)?*[[[John-ga [[Mary-ga **omosiroid ronbun**-o kaita]-no]-o ni-hon
 John-Nom Mary-Nom interesting paper-Acc wrote-NML-Acc 2-CI
 {yonda, kaizensita}]-no]-no kekkan]-ga sokuzani siteki-sare-ta.
 {read, improved}-NML-Gen defect-Nom promptly point.out-Pass-Past
 'Mary wrote two interesting papers, John {read, improved} them,
 and their defects were promptly pointed out (by someone)'

(24) was brought up in Grosu (2012) where it was claimed it has the interpretation in [i], but not that in [iii], for the purpose of showing that stacked IHRCs in Japanese cannot have proper intersective import, as stacked restrictive relatives do; thus, while [iii] is most natural in a situation where Mary wrote more than one interesting paper, but John read/improved only one of them, and it was that paper that was accepted by *LI* (with John's improvements), the natural construal of (24) is that Mary wrote a single paper. GH observe, however, that (24) with the interpretation in [i] is unexpected, in view of the fact that the IH of the higher IHRC is the lower IHRC, a definite referential expression, and they propose that (24) is acceptable due to the availability of the interpretation in [ii], the interpretation in [i] being in fact unavailable. They support this claim with the unacceptable (25), in which both bracketed constituents are incontrovertible IHRCs, the lower, because it is an SHRC, the higher, because it carries Genitive Case.

The past literature on Korean also contains numerous examples of putative IHRCs with definite expressions, in particular, proper names, as IHs (see, e.g., Kim 2007),

but as far as we can tell, those examples were all homophonous with adverbial constructions. We provide in (26)-(30) Korean data parallel to (21)-(25).

- (26) John-un [[[Kathy-ka ophisu-ey yemso-lul twu-mali teulyeo-n] ke]-uy
 J-Top K-Nom office-to goat-Acc 2-Cl bring-Rel kes-Gen
 thel]-ul callassta.
 hair-Acc cut
 'Kathy brought two goats to the office and John cut their hair.'
- (27) Taro-ka [Yokho-ka nayngcangko-ey khwukhi-lul {ta, taypwupwun}
 T-Nom Y-Nom refrigerator-loc cookie-Acc all most
 nehenoh-un]-kel phathi-ey kaciko wassta.
 put.in-Rel kes.Acc party-loc brought
 'Yoko put **{all the, most} cookies** in the refrigerator and Taro brought
them to the party.'
- (28)??John-un [[[Kathy-ka ophisu-ey Sebastian-ul teulyeo-n]-ke]-uy
 J-Nom K-Nom office-to S-Acc bring-rel kes-Gen
 thel]-ul callassta.
 hair-Acc cut
 'Kathy brought Sebastian to the office and John cut its hair.'
- (29) [John-i [Mary-ka hungmilowun nonmwun-ul ssu-n] kel
 J-Nom M-Nom interesting paper-Acc write-Rel kes.Acc
 {ilku, kaysenha}-n] key palo LI-ey sillyessta.
 read, improve-Rel kes.Nom immediately LI-loc was.published
 [i]# 'Mary wrote an interesting paper, John {read, improved} it,
 and it was published in *LI* immediately.' ← **IHRC**
 [ii] 'Mary wrote an interesting paper, and John having {read, improved} it,
 it was published in *LI* immediately.' ← **Adverbial**
NOT! [iii] 'The interesting paper that Mary wrote that John {read, improved}
 was published in *LI* immediately.' ← **Restrictive**
- (30) ?*[John-i [Mary-ka hungmilowun nonmwun-ul ssu-n] kel twu-kay
 J-Nom M-Nom interesting paper-acc write-Rel kes.Acc 2-CL
 {ilku, kaysenha}-n] kes-uy mwunceycem-i palo cicektanghayssta.
 read, improve-Rel kes-Gen problem-Nom immediately was.pointed.out
 'Mary wrote two interesting papers, John {read, improved} them,
 and their defects were promptly pointed out (by someone).'

6 On change IHRCs

The literature on both Japanese and Korean IHRCs has prominently noted the existence of 'change IHRCs', in which the IH is not syntactically expressed, but is only semantically inferred from the content of the relative clause, possibly with the help of some pragmatic bridging (see, e.g., Hoshi 1995, Kim 2007), as in (27).

- (27) John-wa [[Mary-ga ringo-o sibottekure-ta]-no]-o

John-Top Mary-Nom apple-Acc squeeze-Past-NML-Acc
 hitoikide nomihosi-ta.
 in-a-gulp drink.up-Past
 ‘Mary squeezed apples and John drank it [= the juice
 produced by squeezing the apples] in a gulp.’

GH note that change IHRCs are sometimes homophonous with what are to be described as ‘gapless light-headed’ EHRCs. The light head is *-no*, which serves in this case as a pronoun with content (basically, it may denote inanimate objects or children, but not venerable humans, in contrast to incontrovertible IHRCs, where it is a semantically vacuous nominalizer, with the result that IHRCs may happily denote both objects and humans of all kinds). These gapless light-headed EHRCs raise a *prima facie* challenge to the existence of change IHRCs, due to the fact that they are only acceptable with change predicates (cf. (28a) with (28b), where the relative-internal predicates are of the change and stative type respectively), so that one may in principle entertain the suspicion that all the presumed change IHRCs of Japanese are in fact gapless EHRCs. Nonetheless, gapless (as well as gapped) light-headed EHRCs may be distinguished from IHRCs of all kinds by the fact that *-no* may be modified by adjectives, as in (28a), something that is not possible in incontrovertible IHRCs, and also by the fact, already noted, that they may not denote venerable humans.

- (28) a. John-wa [[[Sally-ga orenzi-o sibotte-oi-ta] oisisoona]-no]-o
 John-Top Sally-Nom orange-Acc squeeze-Aux-Past delicious-looking-one-Acc
 itadai-ta.
 have-Past
 ‘John had the delicious-looking orange juice such that Sally squeezed
 oranges (to obtain it).’
 b. *John-wa [[[sakana-ga sara-no ue-ni aru] sinsensoona]-no]-o tenitotta.
 John-Top fish-Nom plate-Gen on exist fresh-looking-NML-Acc picked up
 ‘John picked up the fresh-looking fish that was on a plate.’ [purported meaning]

GH demonstrate that change IHRCs exist independently of gapless light-headed EHRCs, by showing that an incontrovertible IHRC does not felicitously conjoin with an incontrovertible gapless light-headed construction, as in (29), where the light head is modified by an adjective, but does conjoin with a construction that can in principle be a change IHRC, as in (30). The contrast between (29) and (30) points to the conclusion that genuine change IHRCs do exist.

- (29) *Bill-wa [[[John-ga wain-o dasitekure-ta]-no] to
 Bill-Top John-Nom wine-Acc serve-Past-NML and
 [[[Mary-ga ringo-o sibottekure-ta] oisisoona]-no]]-o
 Mary-Nom apple-Acc squeeze-Past delicious-looking one-Acc
 zenbu non-da.
 all drink-Past
 ‘John served wine and Bill drank both all of it and all the delicious-looking
 apple juice such that Mary squeezed apples (to obtain it).’

- (30) Bill-wa [[[John-ga wain-o dasitekure-ta]-no] to
 Bill-Top John-Nom wine-Acc serve-Past-NML and
 [[Mary-ga ringo-o sibottekure-ta]-no]]-o zenbu non-da.

Mary-Nom apple-Acc squeeze-Past-NML-Acc all drink-Past
 ‘John served wine and Mary squeezed apples, and Bill drank all that
 = the served wine and the juice obtained by squeezing apples.’

As far as we know, the existence of change IHRCs in Korean has not so far been challenged in the literature, at least, not on the grounds on which the existence of such constructions in Japanese has been. Do gapless light-headed EHRCs exist in Korean? The answer appears to be yes, given the criteria by which they are identified in Japanese, i.e. adjectival modification of the external head and incompatibility with venerable human denotata, as illustrated in (31) and (32) respectively.

- (31) a. John-i [[Sally-ka oleynci-lul ccanohu-n] (?**masepsnun**) kel
 J-Nom S-Nom orange-Acc squeeze-rel **unsavory** kes.Acc
 ekcilo masiessta.
 reluctantly drank
 ‘John reluctantly drank **unsavory** orange juice such that Sally squeezed
 oranges (to obtain it).’
- b. John-i [sayngsen-i cepsi wi-ey iss-nu-n] (**pissan**) ke(s)
 J-Nom fish-Nom plate top-Loc exist-Imperf-Rel **expensive** kes
 mollay mekessta.
 secretly ate
 ‘John secretly ate the **expensive** fish that was on a plate.’
- (32) ??na-nun onul [**haksayng**-i com ttokttokha-n] (say) kes-ul kwuhaysse.
 I-Top today student-Nom a.little smart-Rel new kes-Acc found
 ‘??Today I got a (new) student who is a little smart.’

At the same time, adjectival modification of *kes* seems to cause some degradation, especially in constructions where the relative-internal predicate is one of change (cf. (31a) with (31b)). Note also that these constructions are possible, if not even preferable, with stative non-change predicates (see (31b), a state of affairs that contrasts with the one found in Japanese (cf. (31b) with (28b)); at the moment, we have no explanation for this intriguing difference between the two languages, and leave its investigation to later research.

Be this as it may, the contrast between the full and reduced version of (31) points to the possibility that the latter is fully acceptable **as an IHRC**, a conclusion supported by the full acceptability of (33), the counterpart of the Japanese example in (30).

- (33) Bill-un [John-i photocwu-lul taycepha-n] kes-kwa
 B-Top J-Nom wine-Acc serve-Rel kes-and
 [Mary-ka sakwa-lul ccanohu-n]-kel ta masyessta.
 M-Nom apple-Acc squeeze-Rel kes.Acc all drank
 ‘John served wine and Mary squeezed apples, and Bill drank {them, that} all.’

In sum, the gapless light-headed EHRCs pose no serious challenge to the view that change IHRCs exist in Korean, and we conclude, until proof to the contrary, that they do exist.

7 A different type of IHRC in Korean?

The conclusion that emerges from the preceding sections of this paper is that the kind of IHRCs that exist in Japanese exist in Korean as well, with comparable properties, and also that some IHRCs are string-wise homophonous with adverbials in both languages. Is the converse of the first part of this generalization also true? That is to say, do all the types of IHRCs found in Korean also exist in Japanese? In his presentation at the workshop on internally-headed relatives that took place in Berlin in November 2012, Jae-Il Yeom proposed that Korean has a type of IHRC with properties radically different from those of the 'standard' type, whose existence had not been signaled in the earlier literature on Korean, and certainly not in the earlier literature on Japanese. We propose to argue, however, that the constructions identified by Yeom are not IHRCs at all, but simply gapless light-headed EHRCs of the kind that was already illustrated in (31b).

Some of Jae-Il Yeom's data are presented below.

- (34) (taycheylo) [**cip-i** nac-un] kes-i cicin-ey kangha-ta.
 generally house-Nom low-Rel kes-Nom earthquake-at strong-dec
 'A house which is not tall is (generally) resistant to earthquakes.'
- (35) Inho-nun [**khal-i** cal tu-nu-n] ke(s)-(u)lo yangpha-lul sselessta.
 I-Top knife-Nom well cut-Imperf-Rel kes-with onion-Acc sliced
 'Inho sliced onions with {the, a} knife that is sharp.'
- (36) [**kkun-i** sinchwukseng-i iss-nu-n] kes-un il nyen hwuey-to
 string-Nom elasticity-Nom exist-Imperf-Rel kes-Top one year after-also
 an khunecil kesita.
 not will.be.cut
 '{The, a} rope that is flexible will not break even in a year.'

Now, note that just as in (31), adjectival modification of *kes* is in principle possible; for example, (35) remains basically acceptable if *say* 'new' is inserted before *kes*. That these constructions are EHRCs, not IHRCs, is also strongly suggested by the fact that unlike the latter, which are necessarily definite (see section 4, and GH's section 4 for detailed argumentation), the former may be construed as either definite or indefinite, a property shared by full-headed EHRCs that are not explicitly quantified in some way. For example, if (35) is uttered out of the blue, the natural construal of the *kes*-headed complex DP is indefinite, but in a context where there are two knives, one blunt and one sharp, the natural interpretation of that DP is definite.

The gapless light-headed EHRCs of both languages also contrast with IHRCs with respect to stacking options. As noted in section 5, incontrovertible IHRCs do not stack. The constructions at issue here do stack, however, as illustrated in (37) and (38) with respect to Japanese and Korean respectively.

- (37) Johni-wa [[pro_i [[[sakana-ga yaketesimat-ta] mazusoono]-no]-o
 John-Top fish-Nom burn-has unsavory-looking-one-Acc
 komakaku kizan-da] karakarana]-no]-o sibusibu tabe-ta.
 finely cut-Past dry-one-Acc reluctantly eat-Past
 'John reluctantly ate the finely cut unsavory-looking dry fish that was burned.'

- (38) [[**khemphyuthe-ka** cak-un] kes-i sengnung-kkaci coh-un] kes-ul sassta.
 computer-Nom small-Rel kes-Nom capacity-even good-Rel kes-Acc bought
 'I bought a/the computer that was small that performed well.'

One way in which (37)-(38) differ from the stacked restrictive relative constructions of English is that the two stacked constructions may not be construed as properly intersecting. (37) cannot be used to denote one or more finely cut fishes out of a greater plurality of fishes that were burnt, and (38) cannot be used to denote one well-performing computer out of a plurality of small computers; rather, the same sum of fishes was burnt and finely cut, and a single computer was small and performed well. We surmise that this state of affairs is somehow traceable to the fact that the embedded EHRC is not a CP, but a DP (as suggested by the pronominal nature of “no” or “kes” and by the presence of a Case marker on it), but we consider that a full explanation of this effect, as well as of the distinction between Japanese and Korean noted in relation to (28) versus (31), must await an explicit compositional analysis of the EHRCs at issue in the two languages, which we will not undertake here.

8 Conclusions

This paper has compared the inventory and properties of IHRCs in Japanese and Korean, taking as point of departure the more detailed study by Grosu & Hoshi (this volume). Our conclusion, based on the facts available to us at the moment, is that there are no significant differences. However, given the well-known cross-idiolectal variation in acceptability values of various subtypes of IHRCs in the two languages, we believe that our conclusions should be tested against the intuitions of much larger numbers of consultants, and if possible, under controlled experimental conditions. We hope that this project will be carried out sometime.

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