

RESEARCH

The *pro*-head analysis of the Japanese internally-headed relative clause

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The objective of this paper is two-fold. One is to advance the view (call it the *pro*-head analysis) that the so-called internally-headed relative clause (IHRC) in Japanese is a nonrestrictive relative clause whose external head position is occupied by *pro* functioning as an E-type pronoun. It demonstrates that this view provides a natural framework in terms of which sundry and significant phenomena associated with Japanese IHRCs can be accounted for, including their characteristic properties contrasting with the corresponding change relatives and the doubly-headed relatives. The *pro*-head analysis contradicts a currently popular claim propagated by a series of papers that rely on null operator movement leading to the thesis that: (i) Japanese IHRCs may exhibit a “change sub-variety” (i.e., “Change IHRC”) that is not reducible to gapless externally light-headed relatives; (ii) Japanese IHRCs are strictly island-sensitive; and (iii) they disallow definite referential semantic heads. The other objective of this paper, therefore, is to present this long overdue challenge by arguing that their claims (i) ~ (iii) are not empirically sustainable, although their claim (iii) presents some difficult issues that defy clear-cut treatment as yet.

Keywords: Internally-headed relatives; change relatives; doubly-headed relatives; gapless externally light-headed relatives; Japanese

1 Introduction

1.1 Objective

The purpose of this paper is two-fold. The first is to advance a view that the so-called “internally-headed” relative (IHR) in Japanese is a nonrestrictive relative clause whose external head $[_{DP}[_{NP} \textit{pro}_i] D]$ contains phonologically null pronoun *pro* as in (1) acting as an E-type pronoun.

- (1) $[_{DP/IHRC} \dots [_{CP/IHR} \dots \textit{NP}_i \dots V] \textit{no} [_{DP}[_{NP} \textit{pro}_i] D]] \Theta$ -Assigner
Where the Q-Assigner is either a syncategorematic noun (Kuroda 1999: 421–423, e.g., an inalienably possessed noun such as *sippo* ‘tail’, *kekkan* ‘defect’)¹ or a verbal predicate. (The construction marked by slanted brackets consisting of both IHR and the external head will be referred to as IHRC.)

I refer to the view represented by (1) as “the *pro*-head analysis” of Japanese IHRCs.² I intend to show that the *pro*-head analysis model provides a natural framework in terms of

¹ To quote Kuroda: “not all instances of XV-*no-no*-N, where XV-*no* is a head-internal relative clause, are ungrammatical”; “XV-*no-no*-N is grammatical just in case N is syncategorematic, that is, N is not conceptually independent and requires a complement. The most obvious types of such nouns are derived nominal and picture nouns.” He does not specifically refer to “inalienably possessed nouns.” I assume, however, that they fit his description.

² The view that the external head of a Japanese IHRC is *pro* is not new. It is assumed in Kitagawa (2005) that the external head of an IHRC is *pro*. More recently, Tsubomoto (2014; (30a)) acknowledges, departing from his earlier stance opposing it, that the external head of an IHRC can be *pro*.

which a number of empirical phenomena, including the IHRCs' distinct behaviors vis-à-vis those of the corresponding change relatives (Tonosaki 1998) and the doubly-headed relatives (Erlewine & Gould 2016), can be naturally accounted for. More importantly, in proposing the *pro*-head analysis, this paper presents the first substantial challenge against a claim recently put forward by a series of papers, including Grosu and Landman (1998), Grosu (2010), Grosu & Landman (2012), Grosu & Hoshi (2016), Landman (2016), and Grosu & Hoshi (2018). These works essentially share a claim that Japanese IHRCs involve a null operator movement *cum* lambda abstraction over the operator's trace. This core claim concerning the properties of IHRCs is expressed earlier in terms of the "maximalizing relative" thesis (Grosu 2012: 7) and has not been challenged in any critical manner since.

The second objective of this paper is thus to show that there are some empirical data which are consonant with the *pro*-head analysis but in fact disprove their null operator movement hypothesis. In this endeavor I especially focus on Grosu & Hoshi (2016) (henceforth "G&H"), as G&H profess that a principal goal of their endeavor is to put this particular null operator movement thesis "on a firmer basis" (Grosu & Hoshi 2016: 2). For, what happens upon closer examination is that careful review of G&H's argumentation actually has an effect of integrating the two objectives of this paper, as their empirically testable approach at the level of high clarity provides concrete venues to support the correctness of the *pro*-head analysis.

What G&H attempt to show is that the following three points are empirically sound:

- (2)
 - a. Japanese IHRCs are strictly island-sensitive;
 - b. They disallow definite referential heads (e.g., proper names); and
 - c. The "change" sub-variety they refer to as "Change IHRC" is a genuine IHRC.

I will take up each of those issues at some length.

The outline of the paper is as follows. In Section 2, I identify the notion "cospecifica-tion" based on Sells's (1986) view that the external head *pro* is a structurally conditioned E-type pronoun. Section 3 offers an account on the discourse function of the IHRC contrastive to that of the corresponding nonrestrictive "externally-headed relative clause construction" (henceforth EHRC), so as to shed light on the unique discourse characteristics of Japanese IHRCs. Sections 4 ~ 6 take up G&H's empirical claims articulated in (2). Section 4 examines G&H's assertion (2c) (i.e., "change IHRCs" are genuine IHRCs) to demonstrate that the relevant facts disprove their claim. Section 5 concerns G&H's point (2a), i.e., the claim that the Japanese IHRC is strictly island-sensitive. I argue that, while many native speakers exhibit the pattern G&H note, there are those who accept the kind of counter-examples that cannot be dealt with by G&H's analysis. Specifically, I show that the analysis that is called for is one that has a natural recourse in accounting for "repairs" that are possible even against the restrictions imposed by syntactic island constraints. The *pro*-head approach is shown to have such a recourse, whereas a G&H style analysis does not. Section 6 engages G&H's claim (2b), namely, that the IH cannot be a definite referential head (in particular, a proper name). I present clear counter-examples to this claim, although the core issue involved turns out to be difficult to fathom properly, as we will see. Section 7 offers a brief account on what Erlewine & Gould (2016) call "doubly-headed" relative clauses, to examine how the phenomenon of this particular construction type relates to our *pro*-head analysis of IHRCs. Section 8 concludes the paper.

1.2 Note on the acceptability judgment of example sentences

A systemic problem in dealing with Japanese IHRCs is that their acceptability judgments vary among native speakers. The acceptability status of some IHRCs is quite unstable, judgments ranging between totally acceptable, somewhat odd, and totally unacceptable. Let me, therefore, provide a brief note on the issue of what counter-examples mean, since what they mean can depend on what theoretical frame of reference may relate to them. With G&H, the null operator movement hypothesis they ascribe to dictates that IHRCs whose properties are at odds with their theory-based orientations must necessarily be illicit or infelicitous; all ill-formed examples they offer are provided with this particular design. But, what if those ill-formed examples are ill-formed not for the reasons ascribed by G&H but due to entirely different causes? This is, in fact, the line of argument I will take in many instances. Taking this view, it would not be at all surprising to find examples corresponding to G&H's ill-formed ones in all relevant respects, yet well-formed nonetheless, owing their well-formed status to satisfying some other sets of conditions. Such well-formed examples serve as counter-examples against G&H's theory-based claims, disproving hence the legitimacy of those claims.

With my *pro*-head analysis, the acceptability judgment is largely, though not entirely, a pragmatic matter along the line formulated by Kuroda's Relevancy Condition with its on-the-scene orientation. Admittedly, here we are on slippery ground. Kuroda's "Relevancy Condition" requires that it is necessary that an IHRC be interpreted pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause so that all the events expressed by the constituent and the matrix clauses be "pragmatically so connected that they may be considered as constituting one (super) event" (Kuroda 1975/1976: 86; 1998: 19). Kuroda's Relevancy Condition, therefore, is inevitably subject to idiosyncratic variation, requiring considerable effort on the side of the speech participants with respect to inference, context, and knowledge of the world.³ The pertinent data concerning Japanese IHRCs are therefore messy. But, this is a systemic problem that any studies of Japanese IHRCs must take into consideration (see Tsubomoto 2014 for an insightful discussion relating to this point). It is for this very reason that the importance of work such as advanced by G&H is enormous. Without rigorous and falsifiable theoretical hypotheses by means of which we may systematically examine data no scholarly advancement is ever possible. The other side of the coin is also critical, however, as Grosu (2010: 272) warns in his critique of Kim's (2007) analysis of Korean and Japanese IHRCs: "Granting that her account was elegant and *prima facie* attractive, empirical adequacy unquestionably takes precedence over technical elegance."

During the course of this paper, I use my own acceptability judgment for example sentences as a Tokyo-born native speaker of Japanese. In view of the critical importance of acceptability judgment involved, however, I have checked the acceptability of key examples in the present paper with eighteen linguistically sophisticated native speakers whose judgment I trust.⁴

³ See Huang (1984) and Hasegawa (1985) for *pro*'s versatility in interpretation, and Hoji (1998) and Tomioka (2003) for the question of formal mechanism underlying *pro*'s contextual adaptability.

⁴ I am thus enormously indebted to the following people, who have generously shared their acceptability judgments with me: Hideo Fujii, Yukie Horiba, Yasuo Ishii, Mieko Iventosch, Toshiko Kishimoto, Osamu Kamada, Noriko Kawasaki, Yuri Kumagai, Kozue Miyama, Mioko Miyama, Heizo Nakajima, Naoko Nemoto, Yutaka Ohno, Ikue Shingu, Noriko Taira, Atsuro Tsubomoto, Wako Tawa, and Akihiro Tsutsui. In the text, I will refer to them as consultants A ~ R, using arbitrary alphabetical designations. The scale of acceptability I had requested them to use is the following: (i) "OK" means that a given sentence is "perfectly acceptable"; (ii) "?" means "somewhat odd but more or less acceptable"; and (iii) "*" stands for "not acceptable." Whenever appropriate, I will cite their acceptability judgments for a given example in the footnote, identifying each consultant with her/his alphabetical designation (e.g., "OK": C, G, L; "?": A, K, ...; "*": B, Q,...).

1.3 Preliminary note on the external head *pro*

Given our representation of a Japanese IHRC as in (1), I follow, for the treatment of *no* and *pro*, Kitagawa & Ross's (1982) independently motivated analysis of Chinese and Japanese prenominal modification markers (i.e., Chinese *de* and Japanese *no*) that particle *no*, a semantically vacuous pre-nominal modification marker, is introduced by an independently motivated PF rule, as follows:

- (3) Pre-nominal modification (MOD) in Japanese:
- (i) MOD-Insertion: $[_{XP} Y X] \rightarrow [_{XP} Y \text{ MOD } X]$, where
 - (a) X is a nominal ([+N, -V] or [+D]) syntactic object;
 - (b) Y is any maximal projection modifying X; and
 - (c) MOD in Japanese is *no*.
 - (ii) *no*-Deletion: $[_{XP} Y \text{ no } X] \rightarrow [_{XP} Y X]$, where
 - (a) Y is tensed [+V], and
 - (b) X is lexically represented.

Rule (3i) specifies that, if the nominal head X is not lexically represented, MOD *no* appears in Japanese in the surface form. In (1), *pro* is not lexically represented; hence, *no* is present.⁵ Given (1), *pro* may well be replaced by a phonologically null Nominalizer or Complementizer.

2 Cospecification

It is generally understood that there is no clear syntactic device to distinguish nonrestrictive from restrictive relatives in Japanese (see Kuno 1973; Inoue 1976, among others). Kuroda makes the semantic distinction that (i) a restrictive relative clause narrows the notion expressed by the head noun phrase by adding attributes deriving a more complex noun phrase that identifies an entity, or entities, in a more limited domain of possible reference; that (ii) a nonrestrictive relative clause simply supplies “additional information to an entity, or entities, already identified by the referential function of the head noun phrase” (1992: 121); and that (iii) Japanese IHRCs are “nonrestrictive in a certain semantic sense” (1975–1976: 95; 1999: 427). Shimoyama (1999: 169) notes that IHRCs and nonrestrictive EHRCs do “share the property that an embedded clause is interpreted as if it were an independent sentence and is not composed with the rest of the DP it occurs in,” and that the two constructions “share another property” – that of “cospecificational/E-type anaphora relation” – with respect to the type of anaphoric relation involved.

Sells (1986: 435) claims that the cospecificational anaphora interpretation of the external head is “inescapable for a nonrestrictive relative clause,” enforcing the “maximality.” I accept this characterization by Sells on the inevitability of the cospecificational/E-type anaphora relation associated with nonrestrictive relatives. And I will henceforth adopt the term “cospecification” to describe the E-type anaphora relation involved in the Japanese IHRCs, assuming that the Japanese IHRC, as specified in (1), is a nonrestrictive relative, and that its external head is *pro* (or, more specifically, $[_{DP}[_{NP} \text{ pro}] D]$). Sells (1985) notes that cospecificational anaphora is only licensed when the antecedent is available in the discourse structure. I maintain that, for Japanese IHRCs, the relevant discourse structure is defined in terms of theta relation. Following Shimoyama (1999; 2001), I take the following points to be obvious: (i) the antecedent (IH) must be internal to the IHR; (ii) the IH must bear a thematic role within an eventuality described by the IHR; (iii) it is “in

⁵ One of the reviewers of an earlier version of this paper comments that it is not clear how case markers following *no* can be explained. A case marker attaches to the IHRC $[_{DP/IHRC} \dots [_{CP/IHR} \dots NP_i \dots V] \text{ no } [_{DP}[_{NP} \text{ pro}_i] D]]$ as in (1), not to “*no*” nor to “*no* $[_{DP}[_{NP} \text{ pro}_i] D]$ ” in isolation.

contrast to discourses, where the antecedent needs not be in the sentence that immediately precedes the anaphor”; and (iv) the antecedent needs not be explicitly present in earlier discourse at all.⁶

Grosu (2010: 234) correctly points out that Shimoyama’s (1999) and Kim’s (2007) E-type anaphora analyses “are constructed in a way that enables them to deal only with situations where the IH is in the highest clause of the relative.”⁷ I take this characteristic to be an inherent property of Japanese IHRCs. As a natural extension of this, I also incorporate into our analysis Grosu & Hoshi’s (2018: 7) semantic condition that the relative and the matrix clauses “share a thematic participant.”⁸ What all this means is that: (i) an IHRC takes the structural form represented as in (4a); (ii) the argument in the IHR (the highest clause in the IHRC) serving as the antecedent (IH) must necessarily be a theta-participant within that clause; and (iii) the cospecification operation does not extend beyond this linkage. (4b) exemplifies (4a).

- (4) a. $[_{DP/IHRC} \dots [_{CP/IHR} \dots [_{\Theta-PARTICIPANT} NP_i] \dots [_{\Theta-ASSIGNER} V]] [_{DP} [_{NP} pro_i] D]] [_{\Theta-ASSIGNER} N]$
 b. [Jun’ya_i-wa $[_{DP} [_{CP} [_{NP} Ayaka-ga kare_i-ni gesuto_j-o san-nin syookaisitekure-ta] no$
 J-TOP A-NOM he-to guest-ACC 3-CL introduce-PAST *no*
 $[_{DP} [_{NP} pro_j]] no$ hinnoyoi hurumai]-ni kantansi-ta.
no elegant behavior-at marvel-PAST
 ‘Ayaka introduced three guests to Jun’ya, and he marveled at their elegant behavior.’

⁶ For the record, let me provide a greatly simplified form of Shimoyama’s E-type account of the VP structure of IHRC (i-a) (Shimoyama: 1999: 156, (14), (14’)), as in (ii-b) (see Shimoyama 1999: 8, (39)).

- (i) a. Dono gakusei-mo_i [soitu_i-ga/pro_i kongakki paper-o 3-bon kaita]-no]-o kesa
 every student (s)he-NOM/pro this.semester paper-ACC 3-CL wrote.NM-ACC this.morning
 teisyutusita.
 turned.in
 ‘Every student wrote three term papers this semester and turned in *the term papers he or she wrote this semester* this morning.’
 b. $[_{VP} [_{DP} [_{CP} kongakki paper-o 3-bon kaita] [_{D'} [_{NP} [_{NP'} [_{DP} pro] N]]] [_{D} no]] [_{V} teisyutusi]]$
 this.semester term.paper-ACC 3-CL wrote NM turn.in

The N-position within the NP in (ib) is occupied by an unpronounced “proform that is a predicate that denotes an *n*-place property,” and remaining as a free variable it receives “its value from the context of utterance.” The bound variable *pro* “saturates the first argument of the relational noun” (Shimoyama 1999: 168). NM *no* is semantically non-vacuous, its function being “similar to that of the definite article *the* in English” (Shimoyama 1999: 169).

⁷ For the record, Kim similarly states her Interpretability Condition for Korean *kes* IHRC (Kim 2008: 108, K’s (14)) as follows:

In order for an IHRC to be interpretable, for events *e* and *e'* the embedded and the embedding clauses describe, respectively, and a temporary state *s*, an individual *k*, and thematic relations *P* and *Q*, and a relation *r*,

- (i) $s \leq e \ \& \ s \infty e'$;
 (ii) $P(k, s) \ \& \ Q(k, e')$; and
 (iii) $r < s, e' >$, where $r \in \{\text{circumstantial, cause-effect, concessive}\}$.

Here, ‘ \leq ’ indicates a part-whole relation, and ‘ ∞ ’ a temporal overlap.

To quote Kim (2008: 101) further:

“Informally, this formalization means that, for a sentence instantiating the IHRC construction to be judged acceptable, the embedded clause’s event *e* must have a stative subpart *s*, which temporally overlaps with the embedding event *e'*, and the relative clause’s semantic head noun’s denotation *k* must bear a thematic role (e.g., Agent or Theme), both in *s* and in *e'*.”

⁸ This condition is designed to counter what Grosu & Hoshi (2018) call the “full-set” interpretation possibility of an IHRC entertained by Erlewine & Gould (2016). I concur with Grosu & Hoshi (2018) on this issue.

- c. ?*Boku-wa [_{DP} [_{CP} [_{ISLAND} [Jun'ya-ni **gesuto**_i-o san-nin syookaisitekure-ta]
 I-TOP J-to guest-ACC 3-CL introduce-PAST
 Ayaka] -ga teityooni omotenasi-o si.tei-ru] *no* [_{DP} **pro**_i] *no* hinnoyoi
 A-NOM respectfully dealing-ACC do.ing-PRES *no* *no* elegant
 hurumai]-ni kantansi-ta.
 behavior-at marvel-PAST
 (Intended: 'Ayaka introduced three guests to Jun'ya, and I marveled at their
 (= guests) elegant behavior.')

The interpretation of the external head *pro* in (4b) works as follows: (i) *gesuto* 'guest' is a theta-participant in the IHR theta-assigned by *syookaisitekureta* 'introduced'; (ii) the external head *pro* is a theta-participant in the matrix clause theta-assigned by syncategorematic noun *hurumai* 'behavior'; and (iii) the external head *pro* is linked to IH *gesuto* 'guest' by means of cospecification with the IH being a theta-participant in the IHR, the highest clause of the IHRC.⁹

Notice that, with (4c) too, if the external head *pro* should be cospecified with *Ayaka* (with the sense 'I marveled at Ayaka for the elegant way she introduced three guests to Jun'ya'), it may serve as the IH, just like *gesuto* 'guest' in (4b), being an argument that is theta-assigned in the highest clause (IHR) of the IHRC. As it stands, however, the external head *pro* in (4c) with its intended sense cannot be cospecified with the IH *gesuto* 'guest' because it is not an argument that is theta-assigned in the highest clause (IHR) of the IHRC. It is critical to note that in this sense the cospecificational interpretive operation is island sensitive; it cannot "see" into a syntactic island. We may trace the failed interpretive process for (4c) with its intended sense as follows: (i) *gesuto* 'guest' is theta-assigned by *syookaisitekureta* 'introduced'; (ii) the external head *pro* is theta-assigned by *hurumai* 'behavior'; (iii) the external head *pro* looks for the individual available in the event discussed by the highest relative (IHR) within the IHRC, bearing some theta-role R with salient property P; but (iv) there is no such individual present in the relevant structural context; (v) hence, the interpretive effort fails (we will return to this issue of syntactic islands in Section 5).

It is in this manner that, in our *pro*-head analysis of Japanese IHRCs, the external head [_{DP} [_{NP} *pro*] D] in (1), an anaphoric definite, picks out a unique linguistic antecedent, be it a case of co-variation involving a QP or an individual of type *e*.¹⁰ To emulate Kim's (2007) brand of E-type strategy, what the cospecificational computation system would "see" is

⁹ Grosu (2010), referring to Watanabe (1992; 2003), notes that an IH may be embedded at an arbitrary depth, citing (i) (= (39a) in Watanabe 2003, reformulated to suit our format).

- (i) Mary-ga [[John-ga [[zibun no gakusei-ga zuuyoono kasetu_i-o teiansi-ta] **to**]
 M-NOM J-NOM self *no* student-NOM important hypothesis-ACC propose-PAST COMP
 zimansitei-ta] *no* [*pro*_i] *no* kekkan-o sitekisi-ta.
 boast-PAST *no* *no* defect-ACC point.out-PAST
 'John had boasted [that his student proposed an important hypothesis]], and Mary pointed out
 the defect in it.'

Here, I take it that the Complementizer (COMP) *to* is transparent for cospecificational operation. The required interpretation proceeds as follows: (i) the IH *kasetu* 'hypothesis' is theta-marked by *teiansi-ta* 'proposed'; (ii) the external head *pro* is theta-marked by syncategorematic noun *kekkan* 'defect'; (iii) the external head *pro* is linked to the IH via cospecification. In this operation, the presence of COMP is transparent, and not a factor.

¹⁰ If the antecedent of a pronoun is a referring expression, the configuration given in (1) may be considered to incur a violation of Condition C of the Binding Theory, which says that referring expressions must be free, meaning they should not be both c-commanded and coindexed by a noun phrase in the same binding domain. I follow Kameshima (1989) in taking advantage of Chomsky's (1986) multi-segmented category notion, given as follows:

- (i) (a) X c-commands Y iff X excludes Y and every element that dominates X dominates Y; and
 (b) X excludes Y iff no segment of X dominates Y.

the unique individual that bears some thematic role R in the event described by the clause that embeds the IHRC, having some salient property P. So this cospecificational operation picks out any individual that matches the description for *pro* as the IH, whether it is a proper name or a QP. Once some individual is picked out, pragmatic knowledge will come into play and the whole logical structure will be judged to make sense or not, depending on whether or not the resulting truth-conditions agree with our knowledge of the world.

As noted, there are two important E-type analyses of Japanese IHRCs, Shimoyama (1999; 2001) and Kim (2007). For the purpose of this paper, there is one critical difference between them. Shimoyama predicts that proper names do not appear as IHs, while Kim makes no such prediction. For Shimoyama, the use of proper names constitutes an empirically feasible test to show the superiority of her E-type anaphora analysis over the *pro*-head model in accounting for the Japanese IHRC. She states (1999: 174): “the fact that proper names do not sound good as internal heads falls out automatically in my analysis, in which what is recovered is a property, by means of N-proforms, but crucially not by means of *pros*, given the descriptive generalization that a restriction for the definite description in the matrix clause should obligatorily include a predicative part of the internal head.” Thus, while Shimoyama acknowledges as a non-controversial fact that “*pros* in Japanese are known to have varying semantic functions including an E-type pronoun use” (1999: 170), she makes a firm stance that *pro* cannot be the external head of a Japanese IHRC.

Her treatment of the proper name is quite similar to G&H’s, essentially ascribing to (2b) “Japanese IHRCs disallow definite referential heads (e.g., proper names).” Grosu & Hoshi (2016: 21–22) note that their analysis, while significantly different from Shimoyama’s in a number of ways, nonetheless makes a comparable assumption, namely, that the definiteness operator σ (which in Shimoyama’s analysis is denoted by *no* and in Grosu & Landman’s 2012 analysis is denoted by the null D which heads the complex DP) applies to a property formed by intersecting properties internal to the IH with the property restricted by the remainder of the relative clause. Empirically, however, as we will see in Section 6, their claims are not entirely feasible. I therefore follow the brand of E-type strategy adopted by Kim on this particular issue of proper names.¹¹

3 Discourse function of Japanese IHRCs

Shimoyama (1999: 179, footnote 28) states that, despite the similarities such as those pointed out in the preceding section, IHRCs cannot be equated with nonrestrictive EHRCs, because the content of an IHR supplies, albeit indirectly, a relevant restriction for the matrix clause, while a nonrestrictive relative only supplies additional information to its antecedent. Hoshi (1995: 127, fn.7) similarly argues that the property of a Japanese IHRC is “different from that of the nonrestrictive relative clause,” and asserts that the IHRC “provides necessary information to identify the relevant entity or entities as the reference of the head noun phrase, which is itself a kind of anaphora lacking its inherent reference.”

So viewed, the external head DP in (1) constitutes a segment of a double-segmented category, thus obviating the IH from the Condition C violation.

¹¹ The following factor however, needs to be kept in mind. A number of recent publications on Japanese and Korean IHRCs (e.g., Kim 2007; Grosu et al. 2013) assume that the IHRC formation in Japanese and Korean exhibit “the same characteristic properties” (Grosu et al. 2013: 1). One important fact about the Korean IHRC, however, is that its external head position is occupied by a grammaticalized formal noun *kes* (derived from fully lexical *kes* ‘thing’) acting as a quasi-pronominal. While I believe that Kim’s (2007) analysis is accurate for Korean IHRCs, I speculate, based on Horie (1993), that: (i) this quasi-pronominal *kes* is not entirely vacuous semantically but is associated with residual semantic properties affecting their anaphoric strength, thus following Hopper’s (1991) persistent principle, which says that when a lexical item undergoes grammaticalization to serve a grammatical function, the meaning and function of the derived item may be related to those of the source lexical item); (ii) *kes*, being not *pro* in a strict sense, cannot participate in repairing the island-sensitivity of an IHRC by means of coreference to be discussed in Section 5.4.

He comments that, in this sense, what is going on in the case of Japanese IHRC is “just the ‘opposite’ of that in the case of the nonrestrictive relative clause as defined by Kuroda.”

I propose to deal with the issue raised here by appealing to the difference in discourse function played by the occupants of the external head position. Thus, consider IHRC (5) in contrast with nonrestrictive EHRC (6).

- (5) Otoko-wa [_{DP}[Yuuzi_i-ga nige-yoo-to.su-ru] no [_{DP}pro_i]] no kata-o
 man-TOP Y-NOM escape-try-attempt-PRES no no shoulder-ACC
 wasizukami-ni si-te, hikimodosi-ta.¹²
 eagle.hold-by do-ing pull.back-PAST
 ‘Yuuji tried to get away, and the man clasped Yuuji’s shoulders with both hands and pulled him back.’
- (6) Otoko-wa [_{DP}[pro_i-ga nige-yoo-to.su-ru] [_{DP}Yuuzi_i]] no kata-o
 man-TOP escape-try-attempt-PRES Yuuzi no shoulder-ACC
 wasizukami-ni si-te, hikimodosi-ta.
 eagle.hold-by do-ing pull.back-PAST
 ‘The man clasped the shoulders of Yuuji, who tried to get away, with both hands and pulled him back.’

In IHRC (5) the external head is occupied by anaphoric definite *pro*, whereas in nonrestrictive EHRC (6) it is occupied instead by non-anaphoric *Yuuzi*. I suggest that the difference in discourse function played by these two external heads fits the pattern delineated by Johnson’s (2018: 7) following contrastive account (though he makes no reference to IHRCs):

- (7) What non-anaphoric definites do is presuppose the existence of some individual that has a property. What anaphoric definites do is presuppose a property that their referent has. When you use a non-anaphoric definite out of the blue, you are inviting your listeners to put in the context that identifies it. When you use an anaphoric definite out of the blue, you are inviting listeners to put into the context a property, by which your referent can be identified.

To apply Johnson’s (7) to example (5) and (6):

- (8) What anaphoric definite *pro* in the external head position of an IHRC like (5) does is presuppose the property (e.g., ‘trying to get away’) that its referent (e.g., *Yuuzi*) has. By the use of an anaphoric definite out of the blue, it invites listeners to put into the context such a property (e.g., ‘trying to get away’), by which the referent (e.g., *Yuuzi*) can be identified.

¹² As specified in footnote 4, “OK” means “perfectly acceptable,” “?” “not entirely natural but possibly acceptable,” and “*” “totally unacceptable.” For (5), the result is the following:

“OK”: M, N, Q.

“?”: A, F, G, E, H, J, K, L, O.

“*”: B, C, D, I, P, R.

Let me briefly describe our native speaker consultants. Consultants D, E, H, I, N, O and R are veteran Japanese language instructors teaching at colleges in the U.S. and Korea with either Masters or Doctorate degrees, some with considerable bodies of publication in the field. Consultant A is a computer programming specialist, whose Ph.D. dissertation in Computer Science has to do with a retrieval program involving transitivity alternation in Japanese. The rest are all professors in linguistics in the generative tradition – except one, Consultant Q – at colleges and universities in Japan and the U.S. Consultant Q is the foremost authority in the research field of Japanese IHRCs in a non-generative orientation. Consultant M is a formal semanticist, who is also one of the co-authors of the best selling Japanese language textbook in the world today. And, Consultant K is undoubtedly the foremost authority in the field of English linguistics in Japan.

- (9) What a non-anaphoric definite in the external head position of a nonrestrictive EHRC like (6) does is presuppose the existence of some individual that has a property (e.g., ‘*trying to get away*’). By the use of a non-anaphoric definite out of the blue, it invites listeners to put in the context all that may identify what this non-anaphoric definite can be.

I suggest that it is in this manner that the IHRC in Japanese is distinct in its discourse function from that of the corresponding nonrestrictive EHRC counterpart.

4 Change IHRCs and gapless light-headed EHRCs

G&H claim that the construction type they call “change IHRCs” are genuine IHRCs, and need to be viewed as “existing independently of homophonous gapless light-headed EHRCs” (Grosu & Hoshi 2016: 26). In this section I argue against that view, taking the position that what they call the “change IHRC” is nothing but an instance of the gapless light-headed EHRC.

4.1 Do “Change IHRCs” exist?

Following Hoshi (1995: 122, fn.5), G&H consider a construction marked by slanted brackets in (10) to be structurally ambiguous between the two different constructions: (i) the “change IHRC” in which the rightmost “nominalizer” *no* is semantically vacuous; and (ii) the “gapless light-headed EHRC” in which the rightmost *no* is a semantically non-empty “pronominal *no*” that may in principle be replaced by a nominal form such as *yatu* ‘guy, stuff’, *mono* ‘thing’, or, in the context of (10), *zyuusu* ‘juice’.

- (10) John-wa [[Mary-ga (gozentyuu-ni) ringo-o sibottekure-ta] no]-o (gogo-ni)
 J-Top M-NOM morning-in apple-ACC squeeze-PAST *no*-ACC afternoon-in
 hitoikide nomihosi-ta.
 in.a.gulp drink.up-PAST
 ‘Mary squeezed apples (in the morning), and John drank it [= the juice produced by squeezing the apples] in a gulp (in the afternoon).’

G&H’s term “change IHRC” is due to the fact that its denotatum is characterized not by a syntactically represented nominal within the relative, but rather by the result of a process of change described by the relative: e.g., (10) does not say that John drank apples. For Tonosaki (1998: 154), who first called our attention to this construction type with the nomenclature “change relative,” the salient entity (e.g., ‘apples’ in (10)) within the relative undergoes some property change denoted by the clause internal predicate; she maintains that the change relative is a pseudo-IHRC (see Matsumoto 1997 for a comprehensive discussion on the pseudo-relative constructions in Japanese), not an authentic IHRC. Grosu & Hoshi (2016: 5) claim, however, that the “change IHRC” (which on the surface may look like a regular gapless light-headed EHRC) is a variant of the true IHRC, though involving a change-of-state process. It is this assertion by G&H that we challenge in this section.

There are two assumptions, represented below as (11) and (12), that G&H rely on to make that claim:

- (11) (i) Adjectival modification directly preceding *no* works as a diagnostic tool, because it clarifies the categorical nature of *no*. As Grosu & Hoshi (2018: 5) put it, adjectival modification of *no* is “appropriate for pronominals but not for adverbial markers, nominalizers or complementizers”; and
 (ii) The “pronominal *no*” is intrinsically associated with a derogative sense, which renders it highly inappropriate to represent a venerable human.

- (12) The coordination test is sensitive to the categorical distinction separating the semantically empty Nominalizer *no* involved with an IHRC from the semantically non-empty pronominal *no* involved with a gapless light-headed EHRC.

G&H, assuming an acceptability contrast such as between sentences like (13) and (14), offer a tight-knit empirical argument to support their Change IHRC thesis, which I summarize in (15) before offering my rebuttal.

- (13) *Bill-wa [[[John-ga wain-o dasitekure-ta]-no] to [[[Mary-ga ringo-o B-TOP J-NOM wine-ACC serve-PAST-NML and M-NOM apple-ACC sibottekure-ta] **oisisoona**] no]]-o (san-bai) non-da.
squeeze-PAST delicious-looking one-ACC three-CL drink-PAST
'John served wine and Mary, the delicious looking stuff that she got by squeezing apples, and Bill drank {it, three glasses of them altogether} (= the wine and apple juice).'
- (14) Bill-wa [[[John-ga wain-o dasitekure-ta]-no] to [[Mary-ga ringo-o B-TOP J-NOM wine-ACC serve-PAST-NML and M-NOM apple-ACC sibottekure-ta] -no]]-o (san-bai) non-da.
squeeze-PAST -NML-ACC three-CL drink-PAST
'John served wine and Mary squeezed apples, and Bill drank {it, three glasses of them altogether} (= the wine and apple juice).'
- (15) (i) A regular EHRC and a gapless light-headed EHRC may conjoin (see G&H's (54));
(ii) Two non-change IHRCs may conjoin (see G&H's (55)); and
(iii) Non-change IHRC may not conjoin with a gapless light-headed EHRC as the ill-formed status of (13) (G&H's (57)) demonstrates. In (13) the first conjunct is a non-change IHRC and the second conjunct is gapless light-headed EHRC (because *no* in the second conjunct is modified by adjectival *oisisoona* 'delicious looking').
(iv) Sentence (14) (G&H's (58)) is well-formed. Its first conjunct is a non-change IHRC and the second is exactly the same as that of (13) – except that it lacks the adjectival modification. This fact should point to “the conclusion that the second conjunct can only be a Change IHRC,” because if it were a gapless light-headed EHRC, the coordination test would have marked (14) to be illegitimate as is the case with (13) (Grosu & Hoshi 2016: 26).

But, empirical facts clearly do not support the above argumentation. Like so many cases of IHRC examples in Japanese, the acceptability judgments involved are subject to many contextual pragmatic factors, as Kuroda (1998: 19) points out (recall our discussion in Section 1.2). In the case of (13), the construction seems to improve in acceptability if both conjuncts appear to coordinate to enhance a particular theme such as ‘the loving care taken by the hosts to entertain the guests’ as in (16).

- (16) Bokutati-wa [[[John-ga wain-o tuidekure-ta] no] to [[[Mary-ga ringo-o we-TOP J-NOM wine-ACC pour-PAST *no* and M-NOM apple-ACC sibottekure-ta] **oisisoona**] no]]-o non-de yatto kuturoi-da.¹³
squeeze-PAST delicious-looking *no*-ACC drink finally relax-PAST
'John served wine and Mary the very delicious looking stuff that she made by squeezing apples, and we relaxed finally.'

¹³ “OK”: A, B, E, J, M, Q.

“?”: D, F, G, H, I, L, N, O, P, R.

“*”: C, K.

Here is another example, which is also comparable to (13) in all relevant respects, but not necessarily unacceptable:

- (17) Bokura-wa [[[Haruko-ga onigiri-o katteki-ta] no] to [[[Akiko-ga
we-TOP H-NOM rice.ball-ACC buy-PAST] *no* and A-NOM
san'ma-o yaitekure-ta] oisisoona] no]-o tabe-te manzokusi-ta.¹⁴
mackerel.pike-ACC broil-PAST delicious-looking] *no*-ACC eat-and satisfied.be-PAST
'Haruko bought rice balls and Akiko broiled a mackerel pike, which looked
delicious, and we ate them and were satisfied.'

These examples demonstrate that G&H's critical assessment (15iii) ("a non-change IHRC may not conjoin with a gapless light-headed EHRC") is on the wrong track. The upshot of all this is that, contrary to G&H's claim, the coordination test does not necessarily tease out the construction type "change IHRC" as an authentic IHRC distinct from the gapless light-headed EHRCs. Accordingly, there is no proof that a distinct category "change IHRC" exists.

To pursue this issue a little further, consider example (18) (G&H's (11); Grosu & Hoshi 2016: 5, slightly modified); they provide this sentence – in which a modifying adjective *mizime-na* 'miserable-PRES' directly precedes *no* – in order to substantiate their claim that pronominal *no* causes conflict in register if used to represent a venerable human.

- (18) #[[[Syoo-gun-ga koros-are-te zutto hootis-are-tei-ta kekka
sho-gun-NOM kill-PASS-and for.long put-PASS-AUX-PAST result
hakkotukasite.simat-ta] mizime-na] **no**]-o kasin-ga hisokani maisoosi-ta.
become.skeletonized-PAST miserable-ADJ **one**-ACC vassal-NOM secretly bury-PAS
'Vassals secretly buried the miserable object [resulting from the fact] that the
sho-gun was killed a long time ago and his body has become skeletonized.'

This sentence is extremely odd, certainly. Note, however, that a comparable sentence like the following (represented in our format) is reasonably well-formed:

- (19) Murabitotati-wa [[keiaisu.ru sontyoo-ga terrorist-ni
villagers-TOP beloved village.chief-NOM terrorist-by
naburigorosi.ni.s-are-ta] mattaku hisanna.arisama-na] no
torture.to.death-PASS-PAST so tragical-be *no*
[*pro*]-o moohu-ni tutun-de, maisoosi-ta.¹⁵
blanket-by wrap-ing bury-PAST
'The villagers wrapped the horrendously shocking remains of their beloved village
chief, who had been tortured and killed by terrorists, and buried (the corpse).'

In (19), which clearly identifies the 'village chief to be loved and respected,' the presence of a modifying adjective *mattaku hisanna arisama-na* 'so horrendously shocking' occasions no conflict in register with the external head *pro* (their "pronominal *no*"). Note that in (19), *pro* can be replaced by (*sono* (*sontyoo no*)) *igai* '(that (village chief's)) corpse', but not by *sono sontyoo* '(that) village chief'.¹⁶ So, the construction in question in (19) is a change

¹⁴ "OK": A, F, J, M.

"?": D, G, E, I, L, N, O, R.

"*": B, C, H, K, P, Q.

¹⁵ "OK": A, H, L, M, N, Q.

"?": B, C, D, F, E, I, O, P, R.

"*": G, J, K.

¹⁶ With *sono sontyoo* 'that village chief' in the external head position, the sentence would constitute what Erlewine & Gould (2016) call "doubly-headed relative," which shows remarkable similarities to IHRCs in many significant respects. We return to this issue in Section 7.

relative, an instance of the gapless light-headed EHRC, which involves a change-of-state process. And, its well-formed status shows that the external head *pro*, whether or not it is modified by an adjective, is not intrinsically associated with a derogatory sense. This fact pre-empts G&H's point expressed in (15iv). For, there is in fact no basis for the second conjunct of the pivotal example (14) to be accorded any special status as a “change IHRC.”

4.2 Pronominal *no* and the derogatory sense

Let us now turn to the source of the derogatory sense itself that G&H associate with their “pronominal *no*.” Consider the following pairs:

- (20) a. Asoko-ni mo [[*pro*_i tabako-o suttei-ru] {*no pro*_i, *yatu*,
there-DAT also tobacco-ACC inhaling.be-PRES {*no* one, guy,
bakamono}] -ga i-ru.
fool}-NOM be-PRES
'There is another {one, guy, fool} over there who is smoking a cigarette.'
- b. #Asoko-ni mo [[*pro*_i tabako-o suttei-rassyar-u] {*no pro*_i, *yatu*,
there-DAT also one tobacco-ACC inhaling.be-HON-PRES {*no* one, guy,
bakamono}] -ga i-ru.
fool}-NOM be-PRES
(‘There is another {one, guy, fool} over there who is smoking a cigarette.’)
- (21) a. [Hen-na {*no pro*, *yatu*, *gakusei*}] -ga ku-ru.
odd-is {*no* one, guy, student}-NOM come-PAST
'A strange {one, guy, student} comes.'
- b. #[Hen-na {*no pro*, *yatu*, *gakusei*}] -ga i-rassyar-u.
odd-is {*no* one, guy, student}-NOM come-HON-PAST
(‘A strange {one, guy, student} comes.’)

Since Kuroda (1975/76), *no* occurring in examples like (20) and (21) has been widely assumed (e.g., Ito 1986; Hoshi 1995; Tonosaki 1998) to be a semantically non-empty pronominal intrinsically associated with a derogative sense which becomes obvious when used to represent a human as it creates dissonance with the use of honorific as in (20b) and (21b). A disconcerting aspect of this category “pronominal *no*” is its ad hoc character: i.e., the sole supporting evidence for its categorical identity is that it conveys a derogative sense when it refers to a human. I therefore follow Kitagawa (2005: 1259–1260) here, assuming that semantically empty “pronominal modification marker” (MOD) *no* is introduced as in (3i). So, the source of the derogatory sense in question must be associated somehow with the use of *pro* in the particular context such as provided by (20) and (21). What is critical with these *pro*'s is that they are associated with arbitrary references (i.e., equivalent to English indefinite pronoun *one*). It is precisely in such contexts that *pro* pragmatically acquires a derogatory sense. As Kuroda perceptively notes elsewhere (1965: 73, fn.3): “when one uses an indefinite noun to refer to an object, one conceives of that object as an arbitrary representative of the category denoted by that noun.” The derogatory connotation in question is thus a pragmatic effect of using an indefinite *pro* to refer to a specific human individual (or individuals). The *pro*'s that appear in the external head position in (20) and (21) are, therefore, merely *pro*'s with arbitrary references, far from being, for instance, “non-anaphoric definite.”

What is at work, therefore, is the following pragmatic principle:

- (22) A sense of deference cannot be read into *pro* if it represents an arbitrary reference.

This explains why the anaphoric definite [_{DP} [_{NB} *pro*]] in the external head of an IHRC is never associated with any such derogatory sense. Nor is there any mystery that the same situation obtains with a gapless light-headed EHRC such as (19), wherein the external head *pro* is interpreted with a specific and unique identity.

4.3 Two types of pros in the external head positions

With the issue of the derogatory sense out of the way, we may ask a new question: What kind of creature is the “light-head” *pro* in the external head position of a gapless light-headed EHRC? How can we account for some critical difference between the *pro* of this kind and the *pro* in the external head of an IHRC? With the light-head *pro* there is no formal link. And this *pro* may be replaced by such lexical items as *yatu* ‘stuff’, *mono* ‘thing’, or any contextually suitable lexical item like *zyuusu* ‘juice’ in (10) or *bakamono* in (20), thus contrasting radically with the case of the *pro* head of an IHRC.

Hoshi (1995) dealt with the light-headed gapless EHRC involving no formal link and, following Cooper (1979), postulates a free variable in his E-type strategy, the value of which is to be determined by the context of use, in terms of which the exact identification of the “salient entity” in question can be made precise without employing such a device as co-indexation. This approach may be proper for change relatives. Notice, however, that with this “Cooperian E-type strategy” the requisite property of the external head *pro* is that it works as a receptor – and not as an anaphor – for the “salient entity.” Thus, in the theoretical framework identified in (1) with the formal link clearly specified, Hoshi’s Cooperian E-type strategy cannot be recognized as representing cospecificational/E-type anaphora operation involved with Japanese IHRCs. In this I concur with Tonosaki in maintaining that the change relative is not an authentic IHRC. And I have nothing to say as to whether or not the change relative could be characterized as a nonrestrictive relative.

With this preamble, let us compare the following two sentences:

(23) IHRC:
Naomi-wa [[Ken-ga ringo_i-o katteki-ta] no [{*pro*_i, *mono}]]-o tabe-ta.
N-TOP K-NOM apple-ACC bought-PAST *no* thing-ACC eat-PAST
‘Naomi ate apples, which Ken had bought.’

(24) Gapless light-headed EHRC (= Change relative):
Naomi-wa [[Ken-ga ringo-o sibot-ta] [no *pro*, mono, zyuusu}]]-o
N-TOP K-NOM apple-ACC squeeze-PAST *no* thing juice-ACC
non-da.
drink-PAST
‘Ken squeezed apples, and Naomi drank {it, the stuff, the juice}.’

I maintain that there are two different types of *pros* involved here as follows:

- (25) a. The external head *pro* of an IHRC is anaphoric definite;
b. The external head *pro* of a gapless light-headed EHRC is non-anaphoric definite.

The *pro* in (25b) is a part-whole anaphora in Schwarz’s (2009) sense (I got into a car. The steering wheel was broken. Car ⇒ steering wheel), which uses the weak definite article in German. In Schwarz’s analysis, this type of bridging is non-anaphoric.¹⁷ Applying

¹⁷ I owe this characterization *a la* Schwarz to an anonymous reviewer of an earlier version of this paper.

Johnson's (2018: 7) dictum (7) to this pair, we have the following two distinct stories, differentiating the IHRC and the gapless light-headed EHRC:

- (26) What the anaphoric definite (i.e., *pro* in IHRC (23)) does is presuppose a property (i.e., 'Ken's buying (it)') that its referent (i.e., *ringo* 'apples' = *pro*) has. By the use of an anaphoric definite out of blue, it invites listeners to put into the context such a property ('Ken's buying'), by which the referent ('the apples') can be identified.
- (27) What the non-anaphoric definite (i.e., *pro* in gapless light-headed EHRC (24)) does is presuppose the existence of some individual (i.e., 'apples') that has a property (i.e., Ken's squeezing (them)). By the use of a non-anaphoric definite out of the blue, it invites listeners to put in the context all that may identify what this non-anaphoric definite can be.

The IHRC and the gapless light-headed EHRC can thus be distinguished in terms of the different types of the external *pro*-heads involved. This contrastive analysis comes naturally with our *pro*-head analysis of IHRCs and gapless light-headed EHRCs, the fact of which enhances the credibility of our approach.

5 Island constraints

A construction such as marked by the slanted brackets in (28) (see G&H's (2a)) is structurally ambiguous, as G&H observe: it may be an IHRC as in (29a), or it may be a string-wise homophonous adverbial as in (29b) masquerading as an IHRC with an extra *pro* occurring as an argument of the matrix predicate *tukamae* 'catch'.¹⁸

- (28) Anthony-wa [[doroboo-ga huta-ri nige-ru]-no]-o tukamae-ta.
A-Top thief-NOM two-CL escape-PRES-NML-ACC catch-PAST

- (29) a. Anthony-wa [[doroboo-ga huta-ri nige-ru]-no]-o tukamae-ta. ⇐ IHRC
'Two thieves were running away, and Anthony caught them.'

¹⁸ Commenting on a case like (ia,b), Kuroda (1999: 419) observes that they can be "structurally ambiguous, and in fact not redundantly, in principle; the head-internal relative reading does not imply a contrastive/concessive connotation, while the adverbial reading does."

- (i) a. Keikan-wa [_{VP} [_{DP} [otoko_i-ga te-o age-te deteki-ta] no [_{DP} *pro*_i]]-ni
cop-TOP man-NOM hand-ACC raise-and come.out-PAST no -DAT
taiatari-o-kurawase]-ta.
tackle-PAST
'A policeman tackled a man, who had come out with his hands up.'
- b. Keikan-wa [_{VP} [_{ADV} otoko_i-ga te-o age-te deteki-ta no-ni] *pro*_i
cop-TOP man-NOM hand-ACC raise-and come.out-PAST no-ni
taiatari-o-
tackle-PAST kurawase]-ta.
'A policeman tackled a man, as he came out with his hands up.'

With (i), involving the Dative Case marker *ni* that is requisite in a selected group of verbal predicates including *taiatari-o-kurawase* 'tackle' (see Kuroda 1978: 42), it is abundantly clear that there are undeniable prosodic and semantic differences between the IHRC (ia) and the adverbial (ib). There are many cases (particularly those involving accusative case marker *o*), however, where some formal diagnostic tests are called for to isolate real IHRCs from the corresponding adverbials masquerading as IHRCs.

- b. Anthony-wa [[doroboo-ga huta-ri nige-ru]-no] *pro* tukamae-ta. ⇐ Adverbial
'As two thieves were running away, Anthony caught them.'

G&H maintain that homophony arises due to the fact that the suffix *-no*, which has many functions in Japanese but functions as a semantically empty nominalizer (NML) in IHRCs, typically bearing a Case marker in such cases, sometimes gives rise to affixal sequences homophonous with adverbial markers.

The core idea espoused by G&H is proposed by Grosu & Landman (2012) and Landman (2016) as follows:

the IH is coupled with a 'co-argument', which plays, in the set of eventualities as the IH, the same thematic role, so that the two co-arguments define in effect a single thematic participant. This co-argument is contained in a PP adjoined to the IP *that most immediately contains the IH*, and constitutes the syntactic position from which the null operator is launched. Given the *local* relation between the two co-arguments, it follows that with respect to any island either both are internal to that island, or both external. Therefore, deviance is automatically predicted whenever the IH is internal to an island, because the movement of the null operator will necessarily cross that island's boundary. (Grosu & Hoshi 2016: 17–18)

It takes me too far afield to explain the formal apparatus Grosu & Landman (2012), Landman (2016) and G&H assume in characterizing Japanese IHRCs. For the purpose of this paper, let me take advantage of their claim that there are two kinds of telltale signs – which are identified as (2a) and (2b), now repeated as (30a, b) – that would unmistakably lead us to the “true Japanese IHRC.”

- (30) a. The IHRC is strictly sensitive to island constraints – in particular Complex NP Constraint (CNPC) and Adjunct Island Constraints (AIC) (Grosu & Hoshi 2016: 14–18);
b. The IH needs to be (existentially or otherwise) a quantified nominal with relative-internal scope. It cannot be a definite referential expression (in particular a proper name) (Grosu & Hoshi 2016: 21–24).

I examine the claim made in (30a) in this section, leaving the case of (30b) to Section 6. If these claims should turn out to be empirically unfeasible, the theoretical stance upon which these claims are made must also be unfeasible.

As G&H rightly point out (and I follow their lead), we need to identify the context in which only IHRCs are allowed, in order to identify the formal characteristics of IHRCs. They claim (Grosu & Hoshi 2016: 12) that there are two diagnostic tests to tease out the genuine IHRC unmistakably:

- (31) a. Only an IHRC can materialize as a “genitive argument” (this, in our terms, is the case of an IHRC licensed by a syncategorematic noun); and
b. Only an IHRC can occur as a “split headed relative construction” (SHRC).

Since G&H maintain that either of these tests would identify a real IHRC, I will not consider the (31b) option. The term “split” there refers to the fact that a numeral that may in principle occur within an IH may also occur outside CP immediately to the right of the Case

marker. As a diagnostic test with regard to proper names (to be discussed in Section 6), however, it is of questionable value. For, with specification of proper names, the number of persons involved is obvious; an SHIC case would violate the Gricean maxim of quantity (“Be parsimonious”).

5.1 What Landman (2016) says about island constraints and IHRCs

Landman (2016: 5) rightly notes that there are many IHRCs whose acceptability status is unstable, judgments ranging between totally acceptable, somewhat odd, and totally unacceptable. He asserts, however, that “there is no such variability” with respect to an example like (32) (L’s (7b)) where the IH *atarasii kasetu* ‘new hypothesis’ is inside a syntactic island (complex noun phrase): it is “judged infelicitous by everybody” (Landman 2016: 5).

- (32) *Mary-wa [John-ga [*atarasii kasetu*-o teiansita] gakusei-o]
 M-TOP J-NOM new hypothesis-ACC proposed student-ACC
 homete-ita]-no]-no kekkan-o sitekisita.
 praise-had-*no*-GEN defect-ACC pointed.out
 ‘Mary pointed out a defect in: [*the new hypothesis such that ...*] John had praised
 [the student who proposed *a new hypothesis*].’

Landman’s assertion is based on his view that the IHRC involves “null operator movement *cum* lambda abstraction over the operator ‘trace,’” as cited earlier (Grosu & Hoshi 2016: 17–18). In (33), where the IH is isolated in a syntactic island, such movement operation is blocked. That is to say, given the theoretical construct he assigns for Japanese IHRCs, the syntactic structure of the following form (now represented in our format), where the Q-Assigner is a syncategorematic noun, should be invariably illicit; the conclusion, he states, is fully collaborated by G&H who present extensive discussion eliminating challenges, showing “beyond doubt” that a Japanese IHRC thus violating an island constraint is invariably illicit (Landman 2016: 5–6).

- (33) * $[_{DP} [_{CP} \dots [_{\text{Syntactic Island}} \dots \text{IH}_i \dots] \dots] \text{no} [_{DP} [_{NP} \text{pro}_i] D]] \text{no} [_{N} \Theta\text{-Assigner}]$.

5.2 Empirical facts

Landman’s assertion, however, is not borne out empirically. The fact is that Japanese IHRCs violating an island constraint are not necessarily judged to be illicit “beyond doubt.” Rather, the result of questionnaires received from eighteen linguistically sophisticated native speakers’ judgment of IHRCs bearing the structural pattern (33) reveal that these IHRCs’ acceptability status is unstable, subject to idiosyncratic variation, judgments ranging between totally acceptable, somewhat odd, to totally unacceptable. While many native speakers indeed support G&H’s injunction (2a) (“Japanese IHRCs are strictly island-sensitive”), there are those who accept some counter-examples to (2a) – thus revealing an interesting phenomenon that requires explanation. What is called for is an analysis that may account for how these “repairs” are made. And, in this respect, the *pro*-head approach proves to have such a recourse, whereas a G&H style analysis does not.

IHRCs given in (34) ~ (36), for example, which bear the structural pattern (33) involving island constraint violation, are NOT “judged infelicitous by everybody” (Landman 2016: 5). They are subject to idiosyncratic variation, as our statistics in footnotes (19) ~ (21)

demonstrate. This fact disproves Landman's and G&H's prediction, because for them there can be "no such variability."

- (34) Boku-wa [_{DP} [_{ComplexNP} [sono toppina kaiketuhoo_i-o teiansi-ta] I-TOP that preposterous solution-ACC propose-PAST seibisi]-ga imadewa moo Amerika no kaisya-de erakunattei-ru] no engineer-NOM now already U.S. no company-in big.shot.be-PRES no [pro_i]] no habahiroi zituyoosei-ni imasaranagara kantansi-ta.¹⁹ no wide.ranged applicability-at again marvel.at-PAST
'I again marveled at the wide-range applicability of that (seemingly) preposterous solution, which the engineer, who is now a big shot in an American company, proposed.'
- (35) ?Dakara, boku-mo tuma-mo [_{DP} [_{ComplexNP} [pro_i sono kibatu-na ryoori_j-o so I-both wife-both that outlandish.be-PRES dish-ACC kooansi-ta] oyazi_i]-ga imawamoo itiryuuten-ni hikinuk.are.tei-ru] invent-PAST man-NOM now top.restaurant-by snatch.away.PASS-ASPECT-PRES no [pro_j]] no igaina oisisa-ni syoosan-o osim.ana-i.²⁰ no no unexpected delicacy-at praise-ACC spare-not-PRES
'So, neither I nor my wife spare praises for the delicacy of that outlandish dish that was invented by the man, who has now been snatched away by the top restaurant.'
- (36) Kono hukuro-ni-wa [_{DP} noomintati-ga [_{ComplexNP} [sono hatugasi-na-i this bag-in-TOP farmers-NOM that germinate-not-PRES wata_i-o kaihatusi-ta] kaisya]-ni mainen tagaku no okane-o harai-cotton-ACC develop-PAST company-to every.year huge no money-ACC pay-tuzuke.nakereba.narazu, kurusinde.i-ru] no [_{DP} pro_i]] no tane]-ga continue.must-PRES.and suffering.be-PRES no no seed-NOM haittei-mas-u.²¹ contain-POLITE-PRES
'Contained in this bag are the seeds of cotton that do not (prematurely) germinate, for which the farmers must pay a huge amount of money every year to the company that developed them.'

Notice, in this regard, that a case like (37), which does indeed involve WH-Operator movement in a structural context of the CNPC, is illicit for an overwhelming number of people, presenting sharp contrast with the comparable IHRC (38).

¹⁹ Acceptability judgments of the native speaker consultants:

"OK": N.

"?": A, E, H, I, M, P, Q.

"*": B, C, D, F, G, J, K, L, O, R.

²⁰ "OK":

"?": A, E, I, M, N, Q.

"*": B, C, D, F, G, H, J, K, L, O, P, R.

²¹ "OK": A, B, M.

"?": F, E, I, N, O, P.

"??": Q.

"*": C, D, G, H, J, K, L, R.

- (37) *Sorede, [[kyoozyu-ga [_{Complex NP} [dare-ga kai-ta] ronbun]-o hometei-ta]
 so.then professor-NOM who-NOM write-PAST paper-ACC praise-PAST
 no]]-ga kondo zyosyu-de saiyoos-are-ru kotoninat-ta no?²²
no-NOM now instructor-as hire-PASS-PRES come.to.be-PAST Q
 (Intended: ‘Who the Professor praised the paper he had written has been appointed
 as an instructor now?’)
- (38) [[Kyoozyu-ga [_{Complex NP} [sono insei_i-ga kai-ta] ronbun]-o
 professor-NOM that grad.student-NOM write-PAST *paper*]-ACC
 hometei-ta] no [*pro*_i]]-ga kondo zyosyu-de saiyoos-are-ru kotoninat-ta.
 praise-PAST *no* -NOM now instructor-as hire.PASS-PRES come.to.be-PAST
 ‘That graduate student of whom the professor praised the paper he had written
 has been appointed as an instructor.’

The Adjunct Island Constraint (AIJC) presents a similar picture. The following example in which the IHRC is a “genitive argument” may be odd and taxing to the imagination but not “judged infelicitous by everybody.”

- (39) [[_{ADJUNCT} [kyoosooaite no osiego-ga sono zyuuyoona kasetu_i-o
 rival no student-NOM that important.be hypothesis-ACC
 kokusaikaigi-de happyoosi-te koohyoo-o hakusi-ta] node]
 international.conference-at present-ing popularity-ACC gain-PAST because
 Yano-sensei-ga sukkari otikondesimat-ta] no [*pro*_i]] no syooryaku-nasi no
 Y-pro.-NOM greatly get.depress-PAST no no omission-free no
 purinto-ga kore des-u.²³
 copy-NOM this be-PRES
 ‘This is a complete copy of the important hypothesis, concerning which Prof. Yano
 was so greatly depressed because his rival’s student presented it at an international
 conference and received favorable responses.’

To reiterate, the point I want to make is not that these sentences are perfectly acceptable, but that their felicity status is not consonant with Landman’s (2016: 5–6) assertion that native speakers would invariably consider them to be illicit “beyond doubt.” The fact

²² “OK”:

“?”: J, O.

“??”: M.

“*”: A, B, C, D, F, G, E, H, I, K, L, N, P, Q, R.

²³ “OK”: A, E, M.

“?”: B, F, H, J, L, N, O.

“??”: Q.

“*”: C, D, G, I, K, P, R.

The following example, in which the IH is replaced by *nani* ‘what’ is illicit, as expected:

- (i) *[[_{ADJUNCT} [Kyoosooaite no osiego-ga nani_i-o kokusaikaigi-de happyoosi-te
 rival no student-NOM that what-ACC international.conference-at present-ing
 koohyoo-o hakusi-ta] node] Yano-sensei-ga sukkari otikondesimat-ta] no [*pro*_i]] no
 popularity-ACC gain-PAST because Y-prof.-NOM greatly get.depress-PAST no no
 syooryaku-nasi no purinto-ga kore des-u.
 omission-free no copy-NOM this be-PRES
 (Intended: ‘This is a complete copy of what, concerning which Prof. Yano was so greatly depressed
 because his rival’s student presented it at an international conference and received favorable
 responses?’)

that these sentences exhibit “a systematic variation among speakers” with respect to their acceptability status indicates quite clearly that, with Japanese IHRCs, we are NOT dealing with null operator movement as Landman and G&H claim.

5.3 How repairs are done

The question we should ask now is why these IHRCs are acceptable at all. Recall that we specified that the IH isolated in a syntactic island cannot be part of our cospecificational operation. Consider again the structural representation of IHRC in (34) and (36) repeated here as (40) and (41).

- (40) Boku-wa [_{DP} [_{ISLAND} [sono toppina kaiketuhoo_i-o teiansi-ta] seibisi] -ga
I-TOP that preposterous solution-ACC propose-PAST engineer-NOM
imadewa moo Amerika no kaisya-de erakunattei-ru] no [*pro*_i] no
now already U.S. no company-in big.shot.be-PRES no no
habahiroi zituyoosei-ni imasaranagara kantansi-ta.
wide.ranged applicability-at again marvel.at-PAST
'I again marvel at the wide-range applicability of that (seemingly) preposterous
solution, which the engineer, who is now a big shot in an American company,
proposed.'
- (41) Kono hukuro-ni-wa [_{DP} noomintati-ga [_{ISLAND} [sono hatugasi-na-i wata_i-o
this bag-in-TOP farmers-NOM that germinate-not-PRES cotton-ACC
kaihatusi-ta] kaisya]-ni mainen tagaku no okane-o harai-
develop-PAST company-to every.year huge no money-ACC pay-
tuzuke.nakereba.narazu, kurusinde.i-ru] no [_{DP} *pro*_i] no tane]-ga
continue.must-PRES.and suffering.be-PRES no no seed-NOM
haittei-mas-u.
contain-POLITE-PRES
'Contained in this bag are the seeds of cotton that do not (prematurely) germinate,
for which the farmers must pay a huge amount of money every year to the company
that developed them.'

The external head *pro*'s here are theta-marked by syncategorematic noun *zyuuyoosei* 'applicability' in (40) and *tane* 'seed' in (41). But, concerning the referent of *pro*'s, the computation system cannot “see” either the IH *sono toppina kaiketuhoo* ‘that preposterous solution’ in (40) nor the IH *sono hatugasi-nai wata* ‘the cotton (the seeds of) which do not (prematurely) germinate’ in (41), because those IH's are isolated in a syntactic island. An IHRC, however, still requires that a formal link be established between the IH and the external head, to meet the specification of (1). So, some repairs are necessary for those IHRC cases to make any sense. And, the acceptability of (40) and (41) reveals that such a repair is available for those native speakers who consider (40) and (41) to be not necessarily illicit “beyond doubt.” The same story goes with (35) as well.

So, how is the repair done? I suggest that it is accomplished by means of “coreference” (Reinhart 1983), which is not encoded in syntax. We can test this hypothesis because referential properties are prerequisite for coreference (Dechaine & Wiltschko 2002: 420). If they are cases of coreference, the replacement of the referential antecedents by indefinite expressions would render those examples incoherent. This prediction is borne out, as exemplified by such “indefinite” versions of (34)/(40), (35), and (36)/(41), here represented as (42) ~ (44).

- (42) *Boku-wa [_{DP} [_{ComplexNP} [**nanraka** **no** kaiketuhoo_i-o teiansi-ta] seibisi]-ga
 I-TOP some.kind.of *no* solution-ACC propose-PAST engineer-NOM
 imadewa moo Amerika no kaisya-de erakunattei-ru] no [*pro*_i]] no
 now already U.S. *no* company-in big.shot.be-PRES *no* *no*
 habahiroi zituyoosei-ni imasaranagara wide.ranged
 kantansi-ta. applicability-at again marvel.at-PAST
 ('I again marveled at the wide-range applicability of some kind of solutions, which
 the engineer, who is now a big shot in an American company, proposed.')
- (43) *Dakara, boku-mo tuma-mo [_{DP} [_{ComplexNP} [*pro*_i **nanraka** **no** ryoori_j-o kooansi-ta]
 so I-both wife-both some.kind.of *no* dish-ACC invent-PAST
 oyazi_i]-ga imawamoo itiryuuten-ni hikinuk.are.tei-ru] no
 man-NOM now top.restaurant-by snatch.away.PASS-ASPECT-PRES *no*
 [*pro*_j]] no igaina oisisa-ni syoosan-o osim.ana-i.
no unexpected delicacy-at praise-ACC spare-not-PRES
 ('So, neither I nor my wife spare praises for the delicacy of some kind of dishes that
 were invented by the man, who has now been snatched away by the top restaurant.')
- (44) *Kono hukuro-ni-wa [_{DP} noomintati-ga [_{ComplexNP} [**nanraka** **no** hatugasi-na-i
 this bag-in-TOP farmers-NOM some.kind.of *no* germinate-not-PRES
 wata_i-o kaihatusi-ta] kaisya]-ni mainen tagaku no okane-o harai-
 cotton-ACC develop-PAST company-to every.year huge *no* money-ACC pay-
 tuzuke.nakereba.narazu, kurusinde.i-ru] no [_{DP} *pro*_i]] no tane]-ga
 continue.must-PRES.and suffering.be-PRES *no* *no* seed-NOM
 haittei-mas-u.
 contain-POLITE-PRES
 ('Contained in this bag are several kinds of cotton seeds that do not (prematurely)
 germinate, for which the farmers must pay a huge amount of money every year to
 the company that developed them.')

In (34)/(40), (35), and (36)/(41), but not in (42) ~ (44), the IH's are referential expressions, assisted furthermore with the presence of demonstrative *sono* 'that' directly preceding the IH's, as if to flag where the IH candidate is located. The fact that the coreference relation such as this is possible in turn supports the correctness of our *pro*-head analysis. Having an IH with a specific referential property as the antecedent, the external head *pro* as an anaphoric definite is interpreted to be that unique referent. It is this structural context that the *pro*-head analysis provides that permits such a coreference relation to be formed. This is the recourse not available with a G&H type analysis. The *pro*-head analysis, in fact, is the only model available at present that accommodates this coreference phenomenon, which, even crossing a syntactic island barrier, may relate the external head *pro* to the IH, thereby accounting for the felicity status of the relevant examples above (see footnote 11 for the case of Korean IHRCs). Of course, successful interpretation of the IHRCs still needs to satisfy such a pragmatic condition as Kuroda's "Relevancy Condition." Only, more so. Nothing structural, however, prevents the external head *pro* from having a coreference relation to the antecedent IH in these cases.

6 What proper name issues tell us about Japanese IHRCs

I referred to the telltale signs that G&H employ to tease out the "true" Japanese IHRCs in (30a, b). I repeat them as in (45a, b).

- (45) a. The IHRC obeys island constraints – in particular CNPC and AIC;
 b. The IH needs to be (existentially or otherwise) a quantified nominal with relative-internal scope. It cannot be a definite referential expression (in particular, a proper name).

In this section I focus on the issue presented in (45b), keeping in mind G&H's syntactically definable diagnostic test that only an IHRC can occur as a "genitive argument."

G&H offer the following as supporting evidence for their claim (45b) (see Grosu & Hoshi 2016: 21–22, (44b) and (46b)).

- (46) ?*Ken-wa [[[Naomi-ga ofisu-ni {Lucky, sono haiiro no neko}-o
 K-TOP N-NOM office-DAT {L, that grey cat}-ACC
 tureteki-ta]-no]-no ke]-o kat-ta.²⁴
 bring-PAST-NML-GEN hair-ACC cut-PAS
 'Naomi brought {Lucky, that grey cat} to the office and Ken cut **her** hair.'

But, we have in fact already seen in (5), repeated here as (47), a case of a proper name appearing to be reasonably acceptable as the IH of an IHRC licensed by a syncategorematic noun *kata* 'shoulders'.

- (47) Otoko-wa [[[Yuuuzi-ga nigeyoo.to.su-ru] no [pro_i]] no kata]-o tukan-de,
 man-TOP Y-NOM try.to.escape-PRES *no* *no* shoulder-ACC grab-and
 hikimodosi-ta.²⁵
 pull.back-PAST
 'The man, grabbing the shoulders of Yuuji, who was trying to run away.'

Two more examples in the same vein follow:

- (48) Syukyoo-wa [_{DP}[Jean Valjean_i-ga tome-yoo-to.su-ru] no [_{DR}pro_i]] no
 bishop-TOP JV-NOM refuse-try-attempt-PRES *no* *no*
 te-o tor-i, sono te-ni gin no syokudai-o mot-ase-ta.²⁶
 hand-ACC take-and that hand-into silver *no* candlestick-ACC hold-CAUS-PAST
 'Jean Valjean made a gesture to refuse, but the bishop took his hand, and put the silver candlestick into his hand.'

²⁴ The acceptability of (46) is G&H's. Incidentally, G&H (2016: 7) comment:

There is no complex DP in English with the exact semantic properties of Japanese IHRC (as amply noted in the literature; see, e.g., Grosu & Landman 2012), and we thus content ourselves with a fluent translation [...] that makes use of E-type anaphora, **the IH serving as antecedent of a definite anaphor**. In so doing, we follow the practice adopted by Shimoyama (1999; 2001), without, however, adopting her theoretical analysis of IHRCs, which made direct use of the E-type strategy used in discourse [...].

²⁵ "OK": M, N, Q.

"?": A, F, G, E, H, J, K, L, O.

"*": B, C, D, I, P, R.

²⁶ "OK": H, L, M, Q.

"?": A, F, E, I, J, N, O.

"*": B, C, D, G, K, P, R.

- (49) Zyuui-wa [[[[kodomo-ga isoide **Lucky_i-o** hakondeki-ta] no [pro_i]] no
veterinarian-TOP child-NOM in.hurry L-ACC bring-PAST *no no*
sippo to asi]-o tukande, sinsatudai no ue-ni nekase-ta.²⁷
tail and leg-ACC held.and examination.table *no* top-DAT lay.down-PAST
'The veterinarian took hold of **Lucky's** tail and legs, whom the children hurriedly
brought in, and laid **her** down on the examination table.'

These reasonably felicitous examples, though certainly subject to idiosyncratic variation, contradict G&H's claim (45b).

I must admit, however, that there are two types of native speaker reactions to examples like those given above. Two of my native speaker consultants, L and N, have commented to me that, while they give "OK" (i.e., "the sentence is perfectly acceptable") or "?" (i.e., "the sentence is somewhat odd but more or less acceptable") to (5)/(47), (48) and (49), they would normally be inclined to reject sentences involving proper name IHs. On the other hand there are definitely native speakers, including Consultant M (p.c.) and the present author, who accept proper name IHs without any qualms. So, we have an issue to deal with: How can this inconvenient fact be accounted for?

Let me first of all, however, present the argumentation employed by G&H concerning the contrast between IHRC (50) and the corresponding nonrestrictive EHRC (51) (see Grosu & Hoshi 2016: 21–23, their (44b)/(46b) and (48), modified here to suit our format).

- (50) ?*Ken-wa [[Naomi-ga ofisu-ni {**Lucky, sono haiiro no neko**}-o tureteki-ta]
K-TOP N-NOM office-DAT {Lucky, that gray *no* cat}-ACC bring-PAST
no [pro]] no ke]-o kat-ta.
no no hair-ACC cut-PAST
'Naomi brought {Lucky, that gray cat} to the office, and Ken cut her hair.'
- (51) Ken-wa [[[Naomi-ga ofisu-ni [e] tureteki-ta] [{**Lucky, sono haiiro no neko**}]
K-TOP N-NOM office-DAT bring-PAST {Lucky, that gray *no* cat}
no ke-o kat-ta.
no hair-ACC cut-PAST
'Ken cut the hair of {Lucky, the gray cat}, which Naomi had brought to the office.'

G&H contend that the IHR in (50) in its entirety has the same denotation as the IH, namely 'Lucky' or 'that gray cat'. They thus suggest that the infelicity of IHRC (50) "is due to the definite referential status of IH, which makes the contribution of the property defined by the remainder of the relative clause vacuous" (p.22). To quote G&H (2016: 22–23) further:

What this means in effect is that the IH could have been used instead of the relative, the remaining material within the latter having at most the status of a pre-suppositional check. Such a meaning can be straightforwardly expressed by means of an **apositive** EHRC [e.g., (51)], but not by means of an IHRC.

I cite their claim (Grosu & Hoshi 2016: 22, their (47)) in (52):

²⁷ "OK": M, Q.

"?": A, G, E, H, J, L, O.

"*": B, C, D, F, I, K, N, P, R.

- (52) CP minus the internal head must contribute in a *non-vacuous* way to the building up of the DP interpretation. Hence, the infelicity of IHRC (50), which “is due to the definite referential status of IH.”

A natural question that presents itself here is the following: Why, given this condition, aren't examples like (5)/(47), (48), and (49) utterly infelicitous? I do not profess to have a satisfactory explanation for this as yet. Let me take the following position for the present.

There are two native speaker types, I and II. With the native speaker type I, represented by native speakers such as Consultants L and N, the discourse roles of the protagonists associated with the proper names as in (5)/(47), (48), and (49) are felt to be transparent²⁸ – *Yuuzi* is an escaper, *Jean Valjean* is a scared thief, *Lucky* is a very sick pet; what counts is what kind of role is played by the protagonist, not who the name refers to. Viewed thus, the proper names used as IHs do not necessarily function as definite referential entities, and (52) can be maintained as is. This view, then, would explain where Consultants L and N – and the native speakers who share their intuition – stand.

On the other hand, for the native speaker type II, represented by people like Consultant M and the present author (and the native speakers who share their intuition), examples like (5)/(47), (48), and (49) present no conflict at all. Proper name IHs can be felicitous in principle. For this group, then, neither condition (52) nor the concept of discourse role aspect of proper names figure as a critical factor in the acceptability judgment of those sentences. And Kim's (2007) brand of E-type strategy adopted in Section 2 applies straightforwardly.

7 Doubly-headed relatives

Erlewine and Gould (2016; E&G hereafter) present an interesting analysis of a heretofore understudied construction type they refer to as the “doubly-headed relative clause” (DHRC hereafter). In their view, Japanese relative clause constructions come in three types as in (53) (Erlewine & Gould 2016: 2, (1), here represented with slight modification), the DHRC being (53c).

- (53) a. + external, -internal (head-external):
 Junya-wa [_{EHRC} Ayaka-ga mui-ta *ringo*]-o tabe-ta.
 J-TOP A-NOM peel-PAST apple-ACC eat-PAST
 ‘Junya ate the *apples* that Ayaka peeled.’
- b. -external, + internal (head-internal):
 Junya-wa [_{IHRC} Ayaka-ga *ringo*-o mui-ta *-no*]-o tabe-ta.
 J-TOP A-NOM apple-ACC peel-PAST *-no*-ACC eat-PAST
 literally ‘Junya ate [that Ayaka peeled *apples*].’
- c. + external, + internal (doubly-headed):
 Junya-wa [_{DHRC} Ayaka-ga *ringo*-o mui-ta *sono ringo*]-o tabe-ta.
 J-TOP A-NOM apple-ACC peel-PAST that apple-ACC eat-PAST
 literally ‘Junya ate [*those apples* that Ayaka peeled *apples*].’

E&G claim that, syntactically, their “novel DP head-raising derivation for relative clauses that takes advantage of the Copy Theory of movement and the late-merger of relative clauses” allows for a unified account of these three types of relative clause constructions. In this section, I present a brief review of their claim. I will then examine some empirical facts about the DHRCs, to see how this construction type relates to our *pro*-head analysis of IHRCs.

²⁸ I owe the point made here to one of the reviewers of an earlier version of this paper.

The core of E&G's unification proposal is the following (see E&G 2016; 10):

[...] in each of these relatives there is movement in the narrow syntax of the head DP from a position within the relative clause CP to a position outside of it. [...] we assume that this movement results in there being multiple *copies* of the head DP (cf. Chomsky 1993; 1995). Support for this proposal comes from the various systematic options that exist for the pronunciation and interpretation of these copies. If only the highest copy is pronounced, the result is a head-external relative, and if only the lowest copy is pronounced, what results is a head-internal relative. Crucially, it is also possible for both high and low copies to be pronounced, resulting in a doubly-headed relative.

Note that, in their argumentation, the phenomenon of three different types of relativization is itself offered as the support for the unification analysis, their major attention (E&G, Section 3 in particular) directed to show how the theoretical apparatus offered in Chomsky's Copy Theory may be called upon to accommodate their objective.

This intriguing unification proposal happens to be contrary to a view shared widely by researchers in the field (e.g., Hoji 1985; Kuno 1973; Murasugi 1991; Matsumoto 1997; Davis 2006), the generally accepted view being that Japanese has no movement-derived EHRCs, to which I myself subscribe. For the purpose of this paper, let me follow Davis's arguments. For, although neither he nor E&G have anything to say about nonrestrictive relative clauses, he presents relevant evidence showing that Japanese does not have the option of movement-derived (= Head Raising) relative clauses. Empirical examinations of DHRCs will be given in Section 7.2.

7.1 Davis (2006)

Davis notes that (54) (Davis 2006: 3, D's (7)) is ambiguous:

- (54) The first book [that John said [that Tolstoy wrote]] (Bhatt 2002)
- a. *High Reading*: the λx first [book, x] [John said that Tolstoy had written x]
= the first book about which John said that Tolstoy had written it
 - b. *Low Reading*: the λx [John said that [first [Tolstoy had written [book, x]]]]
= the x s.t. John said the first book Tolstoy had written was x

He points out that the ambiguity in (54) can only be derived under a Head-Raising analysis, because, as Bhatt (2002) claims, if the Head-Raising analysis were unavailable, only the high reading would be possible.²⁹ He calls our attention to the fact that the corresponding phrase in Japanese (his (8), here slightly modified) only gets the high reading:

- (55) [[Mishima-ga kai-ta to] sensei-ga osietekure-ta] saisyo no hon
M-NOM write-PAST C teacher-NOM teach-PAST first *no* book
'the first book that the teacher told us that Mishima wrote'
- a. *High Reading*: the λx first [book, x] [teacher said that Mishima wrote x]
= the first book about which the teacher said that Mishima had written it
 - b. **Low Reading*: the λx [teacher said that [first [Mishima had written [book, x]]]]
= the x s.t. the teacher said the first book Mishima had written was x

Further noting that multiple embedding can create multiply ambiguous sentences in English, as seen in (56) (p.4, his (9)), he points out that Japanese, unlike English, can only get the highest reading. Japanese (57) (his (10)) shows again that the Head-Raising analysis is unavailable.

²⁹ English is thus a language that exploits movement (Head Raising) in a context where Japanese would use a silent pronoun *pro* in lieu of movement.

- (56) (This is) the first book [John said [that the teacher said [that Tolstoy wrote]]].
- This is the first book John ever said that the teacher said that Tolstoy wrote.
= the first book s.t. John said that the teacher said that Tolstoy wrote it
 - This is the first book that John said that the teacher ever said that Tolstoy wrote.
= the x s.t. John said that x was the first book about which the teacher said that Tolstoy wrote it.
 - This is the first book that John said that the teacher said that Tolstoy ever wrote.
= the x s.t. John said the teacher said the first book that Tolstoy wrote was x .
- (57) [[[[Mishima-ga kaita to] sensei-ga osietekureta to] John-ga itta] saisyo
M-NOM write-PAST C teacher-NOM teach-PAST C J-NOM first first
no hon
no book
= the λx first [book, x] [John said that [teacher said that Mishima wrote x]]
 \neq the λx [John said that [first [book, x] [teacher said that Mishima wrote x]]]
 \neq the λx [John said that [teacher said that [first [Mishima wrote [book, x]]]]]

These facts strongly suggest that no head-raising is involved in the formation of Japanese EHRCs (for further evidence, see Davis 2006), thus discrediting E&G's analysis.

7.2 Some empirical facts about DHRCs

E&G, however, has done a great service to the field by calling attention to this truly understudied construction type, the DHRC, about which hardly anything substantial has been said in literature, although it certainly constitutes a possible, if somewhat esoteric, construction type in Japanese. One thing, though, is abundantly clear. There is a significant degree of parallelism in terms of the meaning and the acceptability status between IHRCs and the corresponding DHRCs. Consider DHRC (58) and (59) corresponding to IHRC (34) and (39) respectively.

- (58) Boku-wa [_{DP} [_{ComplexNP} [toppina kaiketuhoo_i-o teiansi-ta] seibisi]-ga
I-TOP preposterous solution-ACC propose-PAST engineer-NOM
imadewa Amerika no kaisya-de erakunattei-ru] sono (toppina)
now U.S. no company-in big.shot.be-PRES that preposterous
kaiketuhoo_i] no habahiroi zituyoosei-ni imasaranagara kantansi-ta.
solution no wide.ranged applicability-at again marvel.at-PAST
'I again marvel at the wide-range applicability of that (seemingly) preposterous
solution, which the engineer, who is now a big shot in an American company,
proposed.'
- (59) [[[[Kyoosooaite no osiego-ga zyuyyoona kasetu-o
rival no student-NOM important.be hypothesis-ACC
kokusaikaigi-de happyoosi-te koohyoo-o hakusi-ta] node]
international.conference-at present-ing popularity-ACC gain-PAST because
Yano-sensei-ga sukkari otikondesimat-ta] sono (zyuyyoona) kasetu/ no
Y-pro.-NOM greatly get.depress-PAST that important hypothesis no
syooryaku-nasi no purinto-ga kore des-u.
omission-free no copy-NOM this be-PRES
'This is a complete copy of that important hypothesis, concerning which Prof. Yano
was so greatly depressed because his rival's student presented the (important)
hypothesis at an international conference.'

In the case of infelicitous IHRC (42), the DHRC version (60) seems just as infelicitous (recall that referential properties are prerequisite for coreference):

- (60) *Boku-wa [_{DP} [_{ComplexNP} [**nanraka** **no** kaiketuhoo_i-o teiansi-ta] seibisi] -ga
 I-TOP some.kind.of *no* solution-ACC propose-PAST engineer-NOM
 imadewa moo Amerika no kaisya-de erakunattei-ru] sono **nanraka**
 now already U.S. *no* company-in big.shot.be-PRES that some.kind.of
no kaiketuhoo_i] no habahiroi zituyoosei-ni imasaranagara kantansi-ta.
no solution *no* wide.ranged applicability-at again marvel.at-PAST
 ('I again marveled at the wide-range applicability of some kind of solutions, which
 the engineer, who is now a big shot in an American company, proposed.')

On the other hand, it is interesting to observe that the parallelism is lacking with the following pair:

- (61) a. IHRC (= (32))
 *Mary-wa [[John-ga [atarasii kasetu_i-o teiansita] gakusei-o]
 M-TOP J-NOM new hypothesis-ACC proposed student-ACC
 homete-ita] no [**pro**]- no kekkan-o sitekisi-ta.
 praise-had *no* *no* defect-ACC point.out-PAST
 'Mary pointed out a defect in: [*the new hypothesis such that ...*] John had
 praised [the student who proposed a new hypothesis].'
- b. DHRC
 ?Mary-wa [John-ga [atarasii kasetu_i-o teiansita] gakusei-o]
 M-TOP J-NOM new hypothesis-ACC proposed student-ACC
 hometei-ta] sono (atarasii) kasetu no kekkan-o sitekisi-ta.
 praise-PAST that new solution *no* defect-ACC point.out-PAST
 'Mary pointed out a defect in that new hypothesis that John had praised the
 student who had proposed the new hypothesis (in question).'

The reason for this is clear enough. Recall that, as noted in Section 5.1, (61a) (= (32)) is the example offered by Landman (2016) to be a type of construction that is judged by every native speaker to be decisively illicit. I argued in Section 5.4 that its unacceptability is due to its difficulty of satisfying pragmatic Relevancy Conditions to achieve a “coreference” repair link. The fact that the corresponding DHRC (61b) is better in acceptability indicates that our argument is on the right track, since we now have the following supporting argument available: with its lexical external head, DHRC (61b) does not have any necessity of satisfying the Relevancy Condition to achieve a “coreference” link, which its IHRC counterpart has to satisfy.

It is likely in fact that the general discourse function of a DHRC resides in disambiguation. Note that the external head *pro* of IHRC (62) is three-way ambiguous. With the corresponding DHRC versions – namely, (63a, b, c) – there is no room for such “ambiguation.”

- (62) ?Sue-ga [[koinu no Poti_i-ga ikakus-ru Mikeh_j-o kamawootosu-ru] no
 S-NOM puppy *no* P-NOM threaten-PRES M-ACC engage.try-PRES *no*
 [**pro**_{i,j,i-j}]] no sippo-o tukan-de hikihanasi-ta.
no tail-ACC grab-ing separate-PAST
 'Pochi, a puppy, tried to engage Mikeh, who threatened him, into play, and Sue
 separated them by grabbing {his, her, their} tail(s).'

- (63) a. Sue-ga [[koinu no **Poti**_i-ga ikakus-ru Mikeh_j-o kamawootosu-ru] sono
S-NOM puppy *no* P-NOM threaten-PRES M-ACC engage.try-PRES that
Poti_i] no sippo-o tukan-de hikihanasi-ta.
P *no* tail-ACC grab-ing separate-PAST
'Pochi, a puppy, tried to engage Mikeh, who threatened him, into play, and
Sue separated them by grabbing Pochi's tail.'
- b. Sue-ga [[koinu no Poti,-ga ikakus-ru **Mikeh**_i-o kamawootosu-ru] **sono**
S-NOM puppy *no* P-NOM threaten-PRES M-ACC engage.try-PRES that
Mikeh_i] no sippo-o tukan-de hikihanasi-ta.
M *no* tail-ACC grab-ing separate-PAST
'Pochi, a puppy, tried to engage Mikeh, who threatened him, into play, and
Sue separated them by grabbing Mikeh's tail.'
- c. Sue-ga [[koinu no **Poti**_i-ga ikakus-ru **Mikeh**_j-o kamawootosu-ru] **sono**
S-NOM puppy *no* P-NOM threaten-PRES M-ACC engage.try-PRES that
Poti_i to **Mikeh**_j] no sippo-o tukan-de hikihanasi-ta.
P and M *no* tail-ACC grab-ing separate-PAST
'Pochi, a puppy, tried to engage Mikeh, who threatened him, into a play, and
Sue separated them by grabbing Pochi's and Mikeh's tails.'

7.3 Structural similarity between the IHRC and the DHRC

Recall that felicitous IHRC examples discussed in Section 5.4 (e.g., (34) ~ (36), (39)) all take the form given in (64a) (cf. (33)), while the corresponding DHRC would assume the form as in (64b).

- (64) a. $[_{DP/IHRC} [_{CP} \dots [_{\text{Syntactic Island}} \dots \text{sono IH}_i \dots] \dots] no [_{DP} [_{NP} \text{pro}] D]]$
b. $[_{DP/DHRC} [_{CP} \dots [_{\text{Syntactic Island}} \dots \text{NP}_i] \dots]] [_{DP} \text{sono} [_{NP} \text{NP}_i] D]]$

More generally, we may represent the contrastive picture as follows without limiting ourselves to the cases where the presence of syntactic island factors is prominently:

- (65) a. IHRC (see (1)): $[_{DP/IHRC} \dots [_{CP} \dots \text{NP}_i \dots V] no [_{DP} [_{NP} \text{pro}] D]]$
b. DHRC: $[_{DP/DHRC} \dots [_{CP} \dots \text{NP}_i \dots V] [_{DP} \text{sono} [_{NP} \text{NP}_i] D]]$

It is tempting to suggest that the Japanese IHRC (65a) is the pronominal external head version of the DHRC (65b), granting at the same time that the DHRC has its own discourse function distinct from the IHRC. Any responsible characterization of DHRCs vis-à-vis IHRCs, however, must await more rigorous future investigations. Nonetheless, it is clear even at this point that there exists a very significant meaning and acceptability parallelism, coupled with distinct discourse functions, between the IHRCs and the corresponding DHRCs. And this parallelism is what would be predicted by our *pro*-head analysis of IHRCs, whose external head *pro* is anaphoric definite, as discussed in particular in Sections 2, 3, and 5.4.

8 Conclusion

I advanced in this paper the view that the Japanese IHRC is a nonrestrictive relative clause whose external head position is occupied by *pro* as represented in (1) acting as an E-type pronoun. In this view, as argued in Section 2, the external head $[_{DP} [_{NP} \text{pro}] D]$ is an anaphoric definite, to pick out via cospecification a unique linguistic antecedent, be it an individual of type *e* or a case of co-variation involving some quantificational context. The

IHRC's nonrestrictive status is defended in Section 3 by appealing to Johnson's (2018) contrastive account given in (7) regarding the anaphoric definite status of the IHRC's external head *pro* and the non-anaphoric definite status of the nonrestrictive EHRC's lexical external head. The *pro*-head analysis model of a Japanese IHRC fits well into this picture, indirectly supporting the correctness of the model itself. Following this line of analysis, I demonstrated in Section 4 that the difference between the IHRC and the gapless light-headed EHRC is reducible to that between the anaphoric definite *pro* (for the IHRC) and the non-anaphoric definite *pro* (for the gapless light-headed EHRC) both occupying the external head position. To further promote the *pro*-head analysis, I presented arguments in Section 5 against the view represented by G&H and Landman (2016) that Japanese IHRCs, involving a null operator movement, are strictly island-sensitive. I have shown in Section 5.4 that the *pro*-head analysis is the only model available at present to account for the coreference phenomenon, which may, even crossing a syntactic island barrier, relate the external *pro* head to the IH. In Section 6, I attended to the problem of proper names occurring as the IH of an IHRC, suggesting directions where future investigations may profitably follow. And, in Section 7, I presented a brief account on the meaning and acceptance parallelism between IHRCs and the corresponding DHRCs – the parallelism that would be predicted by our *pro*-head analysis of an IHRC.

In pursuing some of those issues, I focused primarily on G&H because their empirically testable approach at the level of high clarity provides concrete venues to examine sundry and significant phenomena associated with Japanese IHRCs.

Abbreviations

ACC = accusative case, AUX = auxiliary, CAUS = causative, CL = classifier, complementizer = COMP, DAT = dative case, GEN = genitive case, HON = honorific element, IH = relative internal semantic head, IHR = internally-headed relative, IHRC = internally-headed relative clause construction, NML = nominalizer, NOM = nominative case, PAST = past tense, POLITE = politeness marker, PRES = present tense, Q = question particle, TOP = topic marker.

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Competing Interests

The author has no competing interests to declare.

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