

Head Internal Relative Clauses and WH-Q

Takashi IMAI

0. Introduction

The relative clause formation strategy varies from language to language in which we would capture some different similarities and some similar differences. In relativization, it is clear that there exists a relationship between the item in a subordinate clause and another item outside of the subordinate clause no matter how they manifest. Cartographic observation on relative clauses (which I use in a broad sense) identifies what kind of relativization strategy a language may use in terms of the relation between the elements in the matrix and subordinate clauses. There are two major kinds of relative clause constructions in typology. The one is a relative clause which the head noun either precedes or follows and either the gap or resumptive pronoun may appear in the subordinate clause. The other one is a relative clause whose head is inside and the head position is phonetically empty in usual cases. The former type is called the Head External Relative Clause (HERC), and the latter one, the Head Internal Relative Clause (HIRC). There is yet another type that can be characterized as the Correlatives in which there is a relative pronoun in-situ which relates to its corresponding determiner like element in the matrix clause¹. We should also pay attention to “aboutness” relative clauses (as van Riemsdijk (2003) called) in which there is no gap nor resumptive pronoun in subordinate clauses. In this paper, we will observe the Japanese HIRC constructions as to what kind of nominals may take as internal heads and examine the islandhood of HIRC in the case of Wh-interrogative involved. The organization of the paper is as follows: In section 1, we will consider the characteristics of HIRC in Japanese; section 2 considers the cases of various numeral phrases as internal heads; section 3 deals with Wh-phrases inside of HIRC. Section 4 concludes the paper.

1. Head Internal Relative Clauses

In recent years, Head Internal Relative Clauses (or Internally Headed Relative Clauses) are extensively attracted attention from the syntactic as well as semantic approaches. Hoshi (1996a, 1996b), Murasugi (1994), Shimoyama (1999), Watanabe (2004), Yoshida and Sano (2001) Imai (2012) among others argue the function and mechanism of the Head Internal Relative Clauses from different perspectives. Grosu and Ladman (1998) extensively investigate different kinds of relative clauses besides the standard relative clauses. In this paper, we will investigate the peculiar HIRC construction in Japanese from the syntactic approach. Though semantic approach to HIRC should not be ignored, I will not get into semantic consideration here.

In the Head External Relative Clauses (henceforth, HERC), there are two types based on the selection of the head which a language may have in the way of the head initial or head final option. The HIRC construction has a head nominal element inside the relative clause and the head position is overtly or covertly a pronominal-like element. Consider the following structures:

(1) HERC

- a. Head [CP X [TP Y]]
- b. [CP X [TP Y]] Head

HIRC

- c. [CP [TP Y-Head] Z] X

In (1a-b), X is a relative pronoun and Y is its original position, usually a gap or in some cases, a resumptive pronoun. (1c) is an HIRC structure where Y is a head and X is normally a phonetically empty element. In addition, there is Z which is an element of nominal marker or scope marker or a similar kind.

The diagnostics of Japanese relativization are shown as in (2):

- (2) a. No relative pronoun
- b. HERC in which the head noun follows a relative clause
- c. Multiple relativization (stacking relative clauses), hence island-free
- d. No distinction between restrictive and non-restrictive RCs
- e. HIRC

Sentence (3) is an instance of HERC.

- (3) Tom-wa [[Mary-ga [e] katte- kita] ringo]- o tabeta.
 Topic Nom buy-come Past apple(s) Acc eat Past
 “Tom ate (an) apple(s) that Mary bought and brought home.”

Note that [e] stands for the gap, possibly a small *pro* which corresponds to the head, *ringo* (apple)². The sentence in (4) is a HIRC version of (3):

- (4) Tom-wa [[Mary-ga ringo- o katte-kita] no]-o tabeta.
 Topic Nom apple(s) Acc buy-come Past NO Acc eat Past
 (NO= nominalizer, which we will use the upper case letters for abstract sense.)
 “Tom ate (an) apple(s) that Mary bought and brought home.”

It sounds more natural when the subject is topicalized in the matrix sentence. Thus, “Tom-ga

(Nom)” is quite possible in the sense that Tom is focused. Here, “ringo (apple)” appears in the gap position in sentence (3). The embedded clause is followed by “no”, often analyzed as nominalizer. But the status of this element is problematic and it is homophonous with the Genitive Case marker and a pronominal, to which we will return. Murasugi (2000) and Watanabe (2004) for example consider it as complementizer. This element is in fact [+nominal] feature occupied in the C-head position. It seems superficially that the item is Case-marked as seen in (4), where Accusative Case is marked. It could be somewhat similar to English complementizer “that” since the sentential subject is possible as in (5):

(5) [that John stole something] is obvious.

In (5), Nominative Case is assigned to CP-Head of “that,” which is a complementizer.

In the similar account, it is not so impossible to assume that null pronominal, say, a small *pro* appears after “no” which licenses the noun phrase in the embedded clause as its Head. Let us consider the following structure:

(6) [DP [CP [TP Head] no] *pro*] +Case

The question arises as to the overt Case which attached to *pro*, an empty pronominal. The case checking is done when the substantive nominal receives a Case, which is pronounced at PHON³. The Case of empty pronominal need not be pronounced at PHON. In Japanese the adjective phrase is followed by “no” to nominalize it as in (7):

(7) akai no
 red pronominal =one
 “red one”

It is also the case that when emphasized, i.e. focused on the head of HIRC, another “no” appears in the final position in (6). Consider the structure (8):

(8) [DP [CP [TP Head] no] **no**] +Case
 [+stress]
 focus

Thus, example (4) would become something like (9):

(9) Tom-wa [[Mary-ga ringo- o katte-kita] no] **no**]-o tabeta.
 Topic Nom apple(s) Acc buy-come Past NO NO Acc eat Past
 “Tom ate (an) APPLE(S) that Mary bought and brought home.”

In (9), “no” in D-Head position is a pronominal, in fact it is not so impossible to assume that “no” in D-Head position is overt realization of D, which licenses the noun phrase as head in the embedded clause. Now, let us move on to see how example (4) is derived. The sequence “no no” is presumably reduced to a single occurrence of “no” by the process of haplology, which van Riemsdijk (2003) advocates in the sequence of “wo wo” in Swiss German (more specifically, Züritütsch) relative clauses. The “wo” is an invariable complementizer in one hand, and it is also functioned as locative “wo” on the other. When the “wo” is introduced in relative clauses, there is no wh movement and island free. The situation is similar to Japanese relative clauses. That is, “no” in C-Head is a complementizer, and “no” in D-Head is a pronominal and the former is deleted. Then, the structure for (4) is as follows:

- (10) [DP [CP [TP Head] ~~no~~] no] +Case
 Haplology applies: no + no → **no**

Therefore, it is plausible to account for the Case assignment (checking) and the Case overtly appears (in other words, the Case is pronounced) at PHON. Note that the Case checking (Case assignment) is an operation at Φ .

What we have so far observed has a couple of consequences in that even though the determiner system such as an English type does not exist in Japanese, nouns are not really bare unlike the proposal of Fukui and Takano (2000), Fukui and Sakai (2003) on nonexistence of DP and consequently other Functional Categories. Yet we have to be careful with reaching a conclusion that Japanese lacks of most of the Functional Categories. As far as we have seen, Japanese nominal phrases seem to be DPs.

2. Numeral Phrases in HIRCs

In this section, we will consider nominal phrases as Head in HIRC. Shimoyama (1999) argues that not all of the nouns occupy the internal head position. There must be some indefiniteness restriction. As illustrated in the following set of examples, proper names and nouns with [+definite] feature cannot be the head in IHRCs⁴.

- (11)
 a. [[Daidokoro-no mado-kara neko-ga haitte kita] no]-ga
 kitchen Gen window-from cat Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away

“A cat came in from the kitchen window and it stole a fish and ran away.” (D= D-head with definite feature)

b. [[Daidokoro-no mado-kara siroi neko-ga haitte kita] no]-ga
 kitchen Gen window-from white cat Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away

“A white cat came in from the kitchen window and it stole a fish and ran away.”

c. ?* [[Daidokoro-no mado-kara Lucky-ga haitte kita] no]-ga
 kitchen Gen window-from Lucky Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away

“Lucky came in from the kitchen window and it stole a fish and ran away.”

(from Shimoyama 1999)

d. ???[[Daidokoro-no mado- kara Tom no neko-ga haitte kita] no]-ga
 kitchen Gen window-from Tom's cat Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away

“Tom's cat came in from the kitchen window and it stole a fish and ran away.”

e. ??[[Daidokoro-no mado-kara neko no Dayan-ga haitte kita] no]-ga
 kitchen Gen window-from cat Gen Dayan Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away

“Dayan the cat came in from the kitchen window and it stole a fish and ran away.” (

Neko no Dayan Appositive)

cat Gen Dayan

Shimoyama (1999) mentions that the head in the object position in HIRC soften the restriction of nouns⁵. It seems that proper nouns and definite nouns would be better as compared with the examples in the subject position.

(12)

a. Taro-wa [Hanako-ga ringo-o katte kita] no]-o sudeni tabeta
 Taro Top Hanako Nom apple Acc bought returned D Acc already ate
 “Taro has already eaten Fuji that Hanako bought and returned home.”

b. ?Taro-wa [Hanako-ga Fuji-o katte kita] no]-o sudeni tabeta
 Taro Top Hanako Nom name Acc bought returned D Acc already ate
 of the apples

“Taro has already eaten Fuji that Hanako bought and returned home.”

- c. ?Taro-wa [Hanako-ga Tanaka no ringo-o katte kita] no]-o
 Taro Top Hanako Nom Tanaka Gen apple Acc bought returned D Acc
 sudeni tabeta
 already ate
 “Taro has already eaten Tanaka’s apples that Hanako bought and returned home.”

Let us consider the cases of numeral phrases and partitive and pseudo-partitive constructions.

Following Kobuchi-Philip’s (2003), classification of these numeral phrases, we have 6 possibilities.

(13)

- a. [[Daidokoro-no mado- kara neko-ga 3 biki haitte kita] no]-ga
 kitchen Gen window-from cat Nom 3 Cl came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away (Cl= Classifier)
 “Three cats came in from the kitchen window and they stole a fish and ran away.”

- b. [[Daidokoro-no mado-kara neko-ga [3 biki haitte kita]]no]-ga
 kitchen Gen window-from cat Nom 3 Cl came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away (Cl= Classifier)
 “Three cats came in from the kitchen window and they stole a fish and ran away.”
 (Contrastive Focus goes to neko-ga.)

- c. [[Daidokoro-no mado-kara 3 biki neko-ga haitte kita] no]-ga
 kitchen Gen window-from 3 Cl cat Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away (Cl= Classifier)
 “Three cats came in from the kitchen window and they stole a fish and ran away.”
 (Focus goes to 3 biki)

- d. [[Daidokoro-no mado-kara 3 biki no neko-ga haitte kita] no]-ga
 kitchen Gen window-from 3 Cl Gen cat Nom came in D Nom
 sakana-o totte nigeta
 fish Acc steal ran away (Cl= Classifier)
 “Three cats came in from the kitchen window and they stole a fish and ran away.”
 (There exist other animals.)

- e. [[Daidokoro-no mado-kara neko 3 biki -ga haitte kita] no]-ga
 kitchen Gen window-from cat 3 Cl Nom came in D Nom

sakana-o totte nigeta
 fish Acc steal ran away (CI= Classifier)

“Three of cats (but not other animals) came in from the kitchen window and they stole a fish and ran away.”

f. ?*[[Daidokoro-no mado-kara neko-no 3 biki ga haitte kita] no]-ga
 kitchen Gen window-from cat Gen 3 CI Nom came in D Nom

sakana-o totte nigeta
 fish Acc steal ran away (CI= Classifier)

“Three of the cats came in from the kitchen window and they stole a fish and ran away.”

There is not a sharp contrast in these cases, but (13f) sounds worse which is a partitive construction. Notice that a partitive construction has +definite feature.

Shimoyama (1999) concludes that proper nouns (names) become worse because “no” has a definite feature as D, which is a head of the relative clause, and it licenses the head of embedded clause. Thus, the head of HIRC must be [-definite].

3. Wh-phrases in HIRCs

Let us consider the Wh-phrases as head of HIRC.

(14)

a. [[Daidokoro-no mado-kara neko-ga nan biki haitte kita] no]-ga
 kitchen Gen window-from cat Nom what CI came in D Nom

sakana-o totte nigeta no (ka)?
 fish Acc steal ran away Q (CI= Classifier)

“How many cats came in from the kitchen window and they stole a fish and ran away?”

b. [[Daidokoro-no mado-kara neko-ga [nan biki haitte kita]]no]-ga
 kitchen Gen window-from cat Nom what CI came in D Nom

sakana-o totte nigeta no (ka)?
 fish Acc steal ran away Q (CI= Classifier)

“How many cats came in from the kitchen window and they stole a fish and ran away?”

c. [[Daidokoro-no mado-kara nan biki neko-ga haitte kita] no]-ga
 kitchen Gen window-from what CI cat Nom came in D Nom

sakana-o totte nigeta no (ka)?

fish Acc steal ran away Q (CI= Classifier)

“How many cats came in from the kitchen window and they stole a fish and ran away?”

d. [[Daidokoro-no mado-kara nan biki no neko-ga haitte kita] no]-ga
kitchen Gen window-from what CI Gen cat Nom came in D Nom

sakana-o totte nigeta no (ka)?

fish Acc steal ran away Q (CI= Classifier)

“How many cats came in from the kitchen window and they stole a fish and ran away?” (There exist other animals.)

e. [[Daidokoro-no mado-kara neko nan biki -ga haitte kita] no]-ga
kitchen Gen window-from cat what CI Nom came in D Nom

sakana-o totte nigeta no (ka)

fish Acc steal ran away Q (CI= Classifier)

“How many of cats (but not other animals) came in from the kitchen window and they stole a fish and ran away?”

f. ?[[Daidokoro-no mado-kara neko-no nan biki ga haitte kita] no]-ga
kitchen Gen window-from cat Gen what CI Nom came in D Nom

sakana-o totte nigeta no (ka)?

fish Acc steal ran away Q (CI= Classifier)

“How many of the cats came in from the kitchen window and they stole a fish and ran away?”

All the examples seem to be fine, vaying degree of acceptability though. As is predicted in section 3, “no,” D licenses the head of embedded clause as [-definite], since Wh must be [-definite], hence indefinite.

4. Concluding Remarks

Here are the points that we have so far observed.

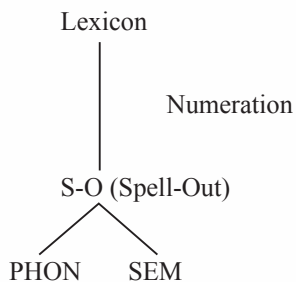
1. HIRC has a pronominal element as D. This would be an overt realization of D.
2. Japanese has an impoverished DP but in a different system from languages as English.
3. Since the pronominal “no” in D has a [+definite] feature and it licenses the head noun in the embedded clause, the head should be [-definite], i.e. indefinite.
4. The partitive construction has a [+definite] feature, which conflicts with the pronominal “no” in D.

5. For further problem to be solved: It is not confirmed that DP is a Phase. Chomsky (2004) considers vP and CP are Phases, but DP may not be. It might be the case that DP would be a weak Phase, which we will observe in the future research.

Notes

An earlier version of this paper was written while I was on sabbatical and affiliated as a visiting scholar with Universiteit van Tilburg, the Netherlands in 2003-04. Many thanks go to Henk van Riemsdijk, Hans Broekhuis and László Molnárfi for valuable comments. Remaining errors are mine.

1. Many languages take a relative-corerelative option. Take Hindi for example. See Imai (1991).
2. No subjacency effect is observed in HIRCs in Japanese. Thus, displacement is not likely to be involved in HIRCs.
3. The minimalist model is illustrated as follows:



(Sensory-motor System) (Intensional-Conceptual System)

Cf. Chomsky (1995) among others.

4. Definiteness effects can distinguish the definite nominals from indefinite ones even in languages without determiners like Japanese. See Imai (1996).
5. This could imply the fact that there is an asymmetry of Subject and Object, similar to the extraction asymmetry of Wh from the Subject position and Wh from the Object position.

References

Chomsky, N. 1995 *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, N. 2004 "Beyond Explanatory Adequacy," In Belletti, A. ed. *The Cartography of*

Syntactic Structures. Vol. III: Structures and Beyond, Oxford: Oxford University Press, 104-131.

Fukui, N. and Y. Takano 2000 “Nominal Structure: An Extension of the Symmetry Principle,” in Svenonius, P. ed. *The Derivation of VO and OV*, Amsterdam: John Benjamins, 219-254.

Fukui & Sakai 2003 “The Visibility Guideline for Functional Categories: Verb Raising in Japanese and Related Issues” *Lingua* Special Issue, 113, 321-375.

Groussu, A. and F. Landman 1998 “Strange Relatives of the Third Kind,” *Natural Language Semantics* 6, 125-170.

Hoshi, K. 1996a. “The Head-Internal Relative Clause in Japanese: An Empty Head Noun Approach,” In Akatsuka, N., S. Iwasaki, and S. Strauss (eds.), *Japanese/Korean Linguistics* 5, 253-268.

Hoshi, K. 1996b. “Multiple Case-Checking in the Head-Internal Relativization in Japanese,” In Sauerland, U. and M. Koizumi (eds.), *Formal Approaches to Japanese Linguistics* 2, MIT Working Papers in Linguistics 29, 21-40.

Imai, T. 1981 “Some Observations on Relativization in Hindi,” *Gengo Kenkyu*, 79, 70-95. (The journal of the Linguistic Society of Japan).

Imai, T. 1996 “Definite/Indefinite Licensing of NPs in Determinerless Languages,” In Ahn, H-D. et al. eds. *Morphosyntax in Generative Grammar: Proceedings of 1996 Seoul International Conference on generative Grammar*. Seoul: Hankuk Publishing Co., 181-189.

Imai T. 2012 “Graft as Merge and Head Internal Relative Clauses,” *Tsuru Studies in English Linguistics and Literature*, No. 16, 15-52.

Kobuchi-Philip, M. 2003 *Distributivity and the Japanese Floating Numeral Quantifier*. Ph.D. dissertation, the City University of New York.

Murasugi, K. 1994 “Head-internal Relative Clauses as Adjunct Pure Complex NPs,” In Chiba, S. ed. *Synchronic and Diachronic Approaches to Language*. Tokyo: Kaitakusha, 425-437.

Riemsdijk, H. van 1989 “Swiss Relatives,” in Jaspers, D. W. Klooster, Y. Putseys and P. Seuren (eds.) *Sentential Complementation and the Lexicon. Studies in Honor of Wim De Geest*, Dordrecht: Foris Publications, 343-354.

Riemsdijk, H. van 1998 "Syntax Driven (Crazy) by Morphology: Morphological Effects in the Choice of Relativization Strategies in Zurich German," in Bruyn, A. and J. Arends (eds.) *Mengelwerk voor Muysken bij Zijn Afscheid van de Universiteit van Amsterdam*, Amsterdam: Algemene Taalwetenschap, Universiteit van Amsterdam, 67-74.

Riemsdijk, H. van 2003 "East Meets West: Aboutness Relatives in Swiss German," in Koster, J. and H. van Riemsdijk (eds.) *Germania et Alia: A Linguistic Webschrift for Hans den Besten*.
<http://odur.let.rug.nl/~koster/DenBesten/contents.htm>

Sauerland, U. and K. Yatsushiro 2003 "A Silent Noun in Partitives," a talk at NELS, Stony Brook University, NY, November 7-9, 2003. abstract in *NELS Handbook*, 62-63.

Shimoyama, J. 1999 "Internally Headed Relative Clauses in Japanese and E-type Anaphora," *Journal of East Asian Linguistics* 8, 147-182.

Watanabe, A. 2004 "Parametrization of Quantificational Determiners and Head-Internal Relatives," *Language and Linguistics*, 5:1, 59-97.

Wiltschko, M. 1998 "On the Syntax and Semantics of (Relative) Pronouns and Determiners," *Journal of Comparative Germanic Linguistics* 2, 143-181.

Yoshida, M. and T. Sano 2001 "Psycholinguistic Studies on Japanese Head Internal Relative Clauses," in Cuevo, M. C., D. Harbour, K. Hiraiwa, and S. Ishihara (eds.) *Proceedings of Formal Approaches to Japanese Linguistics 3 (FAJL 3)*, MIT Working Papers in Linguistics No. 41.

