THE GENESIS OF ENGLISH HEAD-INTERNAL RELATIVE CLAUSES: A DYNAMIC VIEW

KAZUO NAKAZAWA

Aoyama Gakuin University

Contrary to the received view that English does not allow head-internal relative clauses, I point out that it does in fact have such clauses. After giving a detailed syntactic description of the construction, we argue that head-internal relatives are made possible through three adjacent successive stages: first, the stage of head-external relatives, second, the stage of a bridge construction with double analysis available, i.e., there is a head-external relative that allows for a head-internal interpretation, and finally, the stage of pure head-internal relatives. This process is characteristically a type of extension in grammatical dynamism. It is shown, furthermore, that this analysis encompasses another domain of data and that it is theoretically rich and constrained.*

Keywords: *head-internal relative clause, clause introducer, conspiracy, quantification, double analysis, bridge construction*

1. Introduction

From a typological point of view, relative clause structure is divided into two types: head-external relative clause (hereafter HERC) and head-internal relative clause (hereafter HIRC). Japanese allows both types,

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as seen in below (head is underlined):

- (1) a. Taro wa [[sara no ue ni atta]ringo]o totte,
Taro-Nom [[plate on was]apple]-Obj took,
pocketto ni ireta. (HERC)
pocket-Goal put
'Taro picked up an apple which was on a plate and put it in a pocket.'
- b. Taro wa [[ringo ga sara no ue ni atta] no]o
Taro-Nom [[apple-Nom plate on was] Comp]-Obj
totte, pocketto ni ireta. (HIRC)
took, pocket-Goal put
'Taro picked up an apple which was on a plate and put it in a pocket.'

((1a, b) are from Kuroda (1976: 269-270).)

It has been claimed, on the other hand, that English is a type of language that does not allow HIRCs, both from an empirical and a theoretical point of view. Thus in English, (2a) is the only permissible relative clause structure while (2b) is illegitimate.

- (2) a. [_{NP_i} NP_i [_{S'} WH_i [_S ...t_i...]]] (HERC; Head is underlined)
b. [_{NP_i} [_{S/S} ...NP_i...]] (HIRC; Head is underlined)

As regards factual matters, Comrie (1989) does not refer to English HIRCs, nor does Keenan (1985). And, as regards theoretical issues, Cole (1987) argues for the theoretical consequence of the nonexistence of English HIRCs. Kayne (1994: 95-97) is essentially in line with Cole (1987) in dealing with HIRCs. According to Cole (1987), there are four types of nominal structure having a relative clause attached either on the left side or on the right side, as shown below:

- (3) Left-branching structure with head on the right, i.e. a relative on the left
a. [_{NP} [_{S'} ...[_{NP_i} (lexical)]...] [_{NP} e_i]]
b. [_{NP} [_{S'} ...[_{NP} e_i]...] [_{NP_i} (lexical)]] (Cole (1987: 284))
- (4) Right-branching structure with head on the left, i.e. a relative on the right
a. *[_{NP} [_{NP} e_i] [_{S'} ...[_{NP_i} (lexical)]...]]
b. [_{NP} [_{NP_i} (lexical)] [_{S'} ...[_{NP} e_i]...]] (Cole (1987: 285))

The structure of (3a) is exemplified by a Japanese HIRC like (1b), and the structure of (3b) is illustrated by a Japanese HERC like (1a). While English has a HERC based on the structure of (4b), it lacks a HIRC of the structure (4a). Cole (1987) attempts to explain this typo-

logical asymmetry by resorting to the principle in (5):

- (5) An anaphor cannot both precede and command its antecedent. (Cole (1987: 283))

In (3a) and (4b), an anaphor [_{NP} e_i] does not precede its antecedent [_{NP_i} (lexical)], so (5) does not block (3a) nor (4b). In (3b), although [_{NP} e_i] does precede the antecedent [_{NP_i} (lexical)], the former does not command the latter. So (5) does not block (3b). In (4a), an anaphor [_{NP} e_i] both precedes and commands the antecedent [_{NP_i} (lexical)], so (5) blocks the structure of (4a). In this way, (4a) is the only structure that is ruled out by principle (5).

It should be noted that Cole (1987: 285–286) would not adopt such structures as in (6), simply because if he were to do so, he would fail to account for the absence of English HIRCs. If the structures in (6) were adopted, the principle (5) would have no way to prohibit them, since there is no anaphor in (6a,b).

- (6) a. [_{NP} [_{S'} ..._{NP} (lexical)...]]
 b. [_{NP} [_{S'} ..._{NP_i}(lexical)...] [_{NP_j}]] (i≠j)
 (Cole (1987: 281–282))

Therefore, for the possible structures of relative clauses, Cole (1987) posits an adsentential head NP, either lexical or anaphoric, and concludes that HIRCs are in fact HERCs.

The aim of this paper is as follows: First, we show that English does have HIRCs; second, we give a detailed syntactic description of English HIRCs; third, we explore the process through which English HIRCs are made possible; fourth, we try to identify the structural requirements for the English HIRC construction; and finally, we argue for a dynamic interpretation of the genesis of English HIRCs.

2. Putative HIRCs

A number of linguists are in favor of the position that there is no English HIRC, but Nagahara (1990) and Takonai (1994) claim that closer observation reveals that there are indeed candidates for the English HIRCs or, at least, their look-alikes. Their examples include the following:

- (7) a. John invited [you'll never guess how many people] to his party. (Lakoff (1974: 321))
 b. The police came bursting in the door and talked to me as if I were [I don't know what] and then looked

in the bedroom. (Nagahara (1990: 58))

- c. He sat by the telephone for [he did not know how long]. (Nagahara (1990: 58))

The underlined phrases in (7a-c) are the heads of their respective bracketed expressions, so the bracketed clauses themselves may well be regarded as HIRCs. If this observation is correct, we would have to conclude that English should have HIRCs. But as Nagahara remarks on the grammatical status of these bracketed clauses (Nagahara (1990: 59)), this construction looks as if it were forged by the extragrammatical, i.e. discourse-oriented, factors. In other words, we can analyze the sentences in (7a-c) in discourse-oriented terms, just as Lakoff (1974) and Tsubomoto and Whitman (2000) do. Thus, consider, for example, the structure (8a):

- (8) a. He sat by the telephone for [some period of time, but he did not know it was *x*-long(how long)]
 b. He sat by the telephone for [some period of time, but he did not know how long it was]
 c. He sat by the telephone for [some period of time, but he did not know how long]

We may take (8a) as the base structure to be converted to (7c). Applying WH-Movement to the bracketed portion of (8a) derives (8b), to which Ross's (1969) Sluicing now applies. The result is (8c). Grammatical components are responsible up to this derivation. Next comes a kind of pragmatic reduction of the discourse, which suppresses the sequence "some period of time, but" in (8c). The outcome is (7c). If this way of deriving (7c) from (8a) is basically correct, then (7c) is no longer an illustration of a genuine HIRC. One reason for this conclusion is that in a genuine HIRC, the head should stay where it originally was, as is the case with a Japanese genuine HIRC in (1b). Clearly, the purported head "how long" in (7c) has been WH-moved from its original position. For another reason, a discourse-oriented reduction rule has been involved in the derivation of (7c), which means that (7c) is not a product solely of the grammatical components, but rather of the combination of the grammatical and the pragmatic components. Consequently, we must conclude that (7a-c) are not genuine HIRCs.¹

¹ There is a whole variety of exceptions to the grammatical rules, a few of which

3. Genuine HIRCs

In the last section, we have concluded that sentences in (7) are not instances including genuine HIRCs. So what are the genuine HIRCs? The answer is that they are the bracketed expressions in the following:

- (9) A friend of mine once passed out from heat on a downtown street, falling into the gutter. [The closest anyone came to him] was the man who leaned over, just as my friend was coming to, and said: "Hey, you're blocking my car."
(Royko (1987a); Royko (1987b))
- (10) Mrs. Clinton did not manage to utter the magic words, "not true," and neither, really, has anyone else. [The closest anyone has come] is the ubiquitous Bruce Lindsey, who, rather early in the breaking scandal, was asked directly by the Associated Press whether Mr. Clinton denied having troopers assist any affairs. "Yes, he has," Mr. Lindsey responded.²
(*The Washington Times* (1993); *Sekai Nippou* (1993))
- (11) Michael Howard was in Delhi, defending arms sales to Saudi Arabia. Kenneth Clark was touring Latin America, touting for privatisation business for Britain's merchant bankers. Michael Heseltine was [the nearest any of them got to the heart of Europe], slamming Mr Blair from the Italian holiday resort of Amalfi. John Major, meanwhile, had his head in his fish pond in Huntingdon, trying to avoid the flak flying so wantonly around the world.

(*WordbanksOnline*)

In what follows, I will give a detailed syntactic description of HIRCs, i.e. features [A] through [G] that characterize this construction.

are (7a-c). Another case of exception to the grammar is the bracketed portion in (i), which will be of interest to those who are looking for regularities in what seems to be a case of anacoluthia or nonce word.

- (i) Prior to this past season, however, Medina had only 10 Major League homers with the Indians (six in 1988 and four in 1989). His agent, promoting the player's desire to work in Japan, sent a video tape to Japanese teams, and the tape contained 10 scenes: all of his big league homers and nothing else. He must be terrific if [that's all he does] is hit the ball out of the park all the time.
(Graczyk (1992))

² I am indebted to Takao Ito for this example.

[A] The head is internal to the relative clause.

The second sentence in (9) that includes a bracketed HIRC has a meaning such that “among those who came close to the man, Mr. X was the closest to him, and Mr. X was the man who leaned over.” As is evident from this interpretation, the head of the bracketed clause is a human being represented by the phrase *anyone* but will never be something represented by the phrase *the closest*. The same type of interpretation applies to (10) and (11), as well. Thus I call these clauses HIRCs.

[B] There are HERCs that share a family resemblance with HIRCs.

There are a group of HERCs that have a close family resemblance to HIRCs in that the surface word order is exactly the same between the two constructions, i.e., both have the surface form *[[the+Superlative]+NP+VP]*. But there is one crucial difference between the two constructions: While in HERCs, the head is *[the+Superlative]*, in HIRCs the head is the NP that follows *[the+Superlative]*. Observe the following instances of HERC:

- (12) [The closest Miles had been to a job in three weeks of searching] had been as a kitchen helper in a third-rate, crowded Italian restaurant. (Nagahara (1990: 123))
- (13) The Monte Carlo Challenge is [the closest anyone gets these days to recapturing the magic of the 1950s and 1960s] when it was regarded as one of the supreme tests of car and driver. (WordbanksOnline)
- (14) [The closest any of them came to admitting it] was at one place where the personnel person told me that he'd love to hire me, but he couldn't. (Royko (1990))

The sentence in (12) has a meaning such that “Miles had been searching a job for three weeks and what seemed to be the best job for him had been as a kitchen helper in a third-rate, crowded Italian restaurant.” As is evident from this interpretation, the head in the bracketed clause in (12) is some kind of job represented by *the closest* but will never be the human represented by *Miles*. The same type of interpretation applies to (13) and (14), as well. Thus I identify the bracketed clauses in (12)–(14) as HERCs.

[C] The head of HIRC is an indefinite NP.

As the grammatical judgements in (15) show, the head of HIRC must be an indefinite NP.

- (15) The closest {anyone/?someone/?a man/*the man/*John} came

to him was the man who leaned over.

This qualification stands in sharp contrast with that in the case of HERCs, because in HERCs, the NP that follows [*the*+Superlative] can be a definite NP *Miles* as in (12), as well as an indefinite NP *anyone* as in (13) and (14). Related to this characteristic seems to be the indefiniteness restriction for the HIRCs in Lakhota, one of the Dakotan dialects spoken by the Sioux Indians in North America. Williamson (1987: 169) states that “the internal head [=the head of HIRC in Lakhota—K.N.] must be indefinite.” From the viewpoint of Universal Grammar, this kind of indefiniteness restriction is of profound interest, for English and Lakhota have never been said to be related to each other in any typological and historical aspect. For all the unrelatedness between the two languages, they have in common the indefiniteness restriction on HIRCs, which we could argue is one of the linguistic universals.

[D] Comparison and contrast between HIRCs and Free Relative Clauses (FRCs)

There are two types of FRCs: One is indefinite FRCs with *-ever* and the other is definite FRCs without.³ The distribution of HIRCs is the same as that of indefinite FRCs in what Nakau (1977) calls “kakuteiteki (referentially fixed)” context. See below:

- (16) Terry must have read {*whatever/what} Leah wrote, namely an article on penguins. (Baker (1989: 173))
- (17) {*Whatever/What} John bought, which cost a lot, was broken two days later. (Cf. Akmajian (1979: 81))
- (18) *The closest anyone came to him, namely John Smith, was the man who leaned over.
- (19) *The closest anyone came to him, who was wearing a hat, was the man who leaned over.

In the “referentially fixed” context seen above, HIRCs and indefinite FRCs have neither an appositive phrase nor a non-restrictive relative clause following them. On the other hand, definite FRCs allow either of them to follow.

Now it is clear that HIRCs and indefinite FRCs have a formal prop-

³ This terminology follows Baker (1989). In Baker’s (1995) terminology, however, the clause headed by *what* is called a definite FRC, while the one headed by *whatever* is called a conditional FRC.

erty in common: in both of them, their heads are indefinite NPs.

[E] The head in a relative clause is quantified.

Consider the following commonplace HERC:

(20) John read [the book_i [which(WH)_i [Mary bought t_i for him]]]

In the structure of (20), the head in the relative clause is in the form of trace that is bound by the quantifier WH, this binding being guaranteed by co-indexing. That the trace is bound by the quantifier means that the trace is quantified. In other words, the head noun in the relative clause is quantified. Now observe the HIRCs in (9)–(11), relevant portions of which are repeated below:

(9) [The closest anyone came to him] was the man who leaned over.

(10) [The closest anyone has come] is the ubiquitous Bruce Lindsey.

(11) Michael Heseltine was [the nearest any of them got to the heart of Europe].

The head nouns in these HIRCs are of the form *anyone* or *any*. It is customary in predicate logic to take *any* as a realization of the (universal) quantifier. So, in this case, too, the head in the relative clause is quantified. Thus, whatever type the relative clause may be, the head in the relative clause is quantified.

[F] Finite subordinate clauses are headed by clause introducers (CIs).

What typically functions as a CI in English is a syntactic category called subordinate conjunction, but that is not all that count as CIs. In English, there are a variety of finite subordinate clauses. English finite subordinate clauses include embedded declaratives, indirect questions, indirect exclamations, and HERCs, among others. Below is a short list of the types of finite subordinate clauses and their respective CIs:

- (21) a. Subordinate declaratives headed by *that* or $\emptyset$.
(I think {that/ $\emptyset$ } John is a genius.)
- b. Indirect questions headed by interrogative WHs.
(I don't know who you're going to see. / I don't know where you met John.)
- c. Indirect exclamations headed by exclamatory WHs.
(John told us how beautiful the sunset was.)
- d. HERCs headed by relative WHs, *that*, or $\emptyset$.
(John read the book {which/that/ $\emptyset$ } Mary bought for him.)

In addition to such ordinary conjunctions as *that* and $\emptyset$ in (21a), we have other CIs that are WH pronouns or WH adverbs as in (21b-d). Furthermore, there are still other syntactic categories than those in (21) that do function as CIs. Observe the following:

- (22) [Immediately John entered the room], Mary burst into tears.
- (23) We should have gotten off the plane [the second we overheard the pilot say he's an ex-Blue Angel].
(McPherson (1997))
- (24) [The more you get], the more you want.
- (25) The state's economy is [the worst it has been in recent history].
(Schwartz (1992))
- (26) [The best the computer can do to improve] is accept software refinements from human programmers. (Gates (1996))
- (27) [The closest Miles had been to a job in three weeks of searching] had been as a kitchen helper in a third-rate, crowded Italian restaurant. (= (12))

In (22), an adverb *immediately* functions as a CI, and in (23), the NP *the second* bears the function of CI. In (24), [*the*+Comparative] functions as a CI, while in (25)–(27) [*the*+Superlative] acts as a CI. So, it is noteworthy that CI comprises a whole variety of different syntactic categories.

One thing is concluded from the above facts and observations: For all their syntactic categorial differences, it is clear that conjunctions, WH pronouns, WH adverbs, certain NPs, comparatives and superlatives all conspire to assume one specific syntactic function, i.e. to lead a finite subordinate clause. As Kisseberth (1970) once pointed to the conspiracy in phonology, so we could also speak of a conspiracy in syntax, leading to a syntactico-functional category CI.⁴

Now, HIRCs are finite subordinate clauses, so their observance of the principle of CI conspiracy is expected to be borne out, and it turns out to be the case as seen in (9)–(11), where [*the*+Superlative] introduces the finite subordinate clauses.

[G] Double analysis is possible where there is a structure that bridges HERCs and HIRCs.

We noted previously that there is a family resemblance between

⁴ For other cases of syntactic conspiracy, see Kajita (1974).

HIRCs and the HERC structures in (12)–(14). And there is a crucial difference between the two constructions, the difference in the interpretation of the head. In one case, the head is *anyone* or *any*, but in the other the head is [*the*+Superlative]. Though it may seem that the two constructions are distinctly different from each other, there is a case where we have a HERC that allows for a head-internal interpretation. Observe the sentence in (28):

- (28) [The nearest any western fighting technique has come to the eastern martial arts], is in the French art of “la Savate.”

(BNC)

In (28) the head of the bracketed clause can be interpreted as either *the nearest* or *any western fighting technique*. Here, it is very important to note that in either case, the meaning of the entire sentence is virtually the same. The sentence of (28) is, as it were, a bridge construction that relates HERC and HIRC. Thus the bridge construction is a construction with double analysis available. Before we look into the structure and interpretation of (28), a re-examination of the meanings of HERC and HIRC is in order.

First, consider the meaning of (12) as shown below in (29):

- (29) The meaning of (12):

- (12) [The closest Miles had been to a job in three weeks of searching] had been as a kitchen helper in a third-rate, crowded Italian restaurant.

Miles → → → → → → (the closest point)

[~ A JOB] ————— + ——— [A JOB]
(a kitchen helper)

The scale in (29) shows a gradience of job-likeness, where the right extreme indicates a full-time job, perhaps honorable and well-paid, and the left extreme the state of having no job at all. The illustration means that when Miles had come closest to a full-time job, he was on the spot marked by “+” on the gradience scale and the job was as a kitchen helper in a third-rate, crowded Italian restaurant. Thus the head of the bracketed clause of (12) means the job on the scale. And the head is represented by *the closest*, which evidently shows that the bracketed clause is HERC.

Next, let us consider the meaning of (9) as shown below in (30):

- (30) The meaning of (9):

- (9) [The closest anyone came to him] was the man who leaned over.

Person A → → → →

Person B → → → → → →

Person C → → → → → → → →

(Person C was the man who leaned over.)

[away from HIM]————— + ———[HIM]

The scale in (30) shows a gradience of distance from “the man,” i.e. HIM. The right extreme of the scale indicates the place where “the man” is, and the left extreme the point far away from “the man.” The illustration means that among those who came close to the man, Person C was the closest to the man, and Person C was the man who leaned over. Thus the head of the bracketed clause of (9) means the entity that moved along the scale and came closest to “the man.” And the head is represented by *anyone*, which evidently shows that the bracketed clause is HIRC.

Finally, consider the meaning of (28) as shown below in (31):

(31) The meaning of (28):

(28) [The nearest any western fighting technique has come to the eastern martial arts], is in the French art of “la Savate.”

Western fighting technique → → → → → → (the nearest point)

[~EMA]————— + ———[EMA]

(the French art of “la Savate”)

The scale in (31) shows a gradience of eastern-martial-arts-likeness, where the right extreme indicates the typical eastern martial arts [EMA], e.g. karate, judo, and the left extreme the non-eastern martial arts [~EMA]. The illustration means that when some western fighting technique has come nearest to the eastern martial arts, it is on the spot marked by “+” on the gradience scale and the type of the martial arts is in the French art of “la Savate.” Thus the head of the bracketed clause of (28) means the type of the martial arts on the scale. And the head is represented by *the nearest*, which evidently shows that the bracketed clause is HERC.

On the other hand, (28) allows another interpretation. Observe (32):

(32) The meaning of (28):

(28) [The nearest any western fighting technique has come to the eastern martial arts], is in the French art of “la Savate.”

Western fighting technique A $\rightarrow \rightarrow$
 Western fighting technique B $\rightarrow \rightarrow \rightarrow \rightarrow$
 Western fighting technique C $\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$ (the nearest point)
 [~EMA] ————— + ——— [EMA]
 (the French art of “la Savate”)

The illustration in (32) means that among those western fighting techniques that have come near to the eastern martial arts, western fighting technique C is the nearest to it, and western fighting technique C is in the French art of “la Savate.” Thus the head of the bracketed clause of (28) means the entity that moves along the scale and comes nearest to the eastern martial arts. And the head is represented by *any western fighting technique*, which evidently shows that the bracketed clause is HIRC. Note here that the head-external interpretation illustrated in (31) and the head-internal interpretation illustrated in (32) have virtually the same meaning.

Now consider the import that the construction (28) bears on our analysis. The construction (28) is a HERC and allows for a head-internal interpretation, which means that double analysis is possible as regards the construction (28). In this sense, the construction (28) is a bridge construction that makes it possible for us to have access to both HERC and HIRC.

4. The Genesis of HIRC

The main concern of this section is to explore the process through which English HIRCs are made possible. We propose the following three stages that are vital to the reinterpretation of the heads in the relative clauses.

(33) The Genesis of English HIRC

Stage 1: HERC as the base structure

Stage 2: Existence of a bridge construction: HERC with double analysis available

Stage 3: Genuine HIRC made possible

At Stage 1, we have HERCs in the form of *[[the+Superlative]+NP+VP]*, such as those in (12)–(14), as repeated below:

- (12) [The closest Miles had been to a job in three weeks of searching] had been as a kitchen helper in a third-rate, crowded Italian restaurant.

- (13) The Monte Carlo Challenge is [the closest anyone gets these days to recapturing the magic of the 1950s and 1960s] when it was regarded as one of the supreme tests of car and driver.
- (14) [The closest any of them came to admitting it] was at one place where the personnel person told me that he'd love to hire me, but he couldn't.

These HERCs distinctly have head-external interpretations such that the head is the phrase [*the*+Superlative], and no head-internal interpretation is allowable in these instances. We regard this construction as the base structure.

At Stage 2, we have a HERC in the form of the base structure, but this HERC allows for a head-internal interpretation. The very structure at this stage is (28), which is repeated below:

- (28) [The nearest any western fighting technique has come to the eastern martial arts], is in the French art of "la Savate."

In (28), the bracketed clause has the head-external interpretation, and at the same it gives way to the head-internal interpretation, as we observed in the last section regarding the feature [G]. Thus, Stage 2 is the stage when we have a bridge construction like (28), and this construction allows for double analysis.

Once the breakthrough of double analysis has been made possible at Stage 2, we could expect the existence of genuine HIRCs, and this is in fact the case at Stage 3. In genuine HIRCs as in (9)–(11), which I repeat below, the only interpretation possible is the head-internal interpretation.

- (9) [The closest anyone came to him] was the man who leaned over.
- (10) [The closest anyone has come] is the ubiquitous Bruce Lindsey.
- (11) Michael Heseltine was [the nearest any of them got to the heart of Europe].

As outlined above, the genesis of HIRCs is an outcome of the step-by-step process that goes from Stage 1 through Stage 3. In other words, HIRCs are impossible up to Stage 1, and they are made possible only after Stage 2. From a theoretical point of view, this type of analysis can be termed as "process-oriented," which is the notion Kajita (1997, 2002) characterizes as opposed to "output-oriented." We will turn to a theoretical discussion in section 8.

5. The Structure of the English HIRCs

Let us now consider how English HIRC are derived and what their structures are like. The structure that underlies such a HIRC as (9) is (34):

- (34) [NP [S' [CI] [S [Quantified Head NP anyone] came (the) closest to him]]] was the man who leaned over.

This underlying structure is converted to (35) by moving the phrase *the closest* to the clause-initial position, this position being reserved for the clause introducer (CI) in a finite subordinate clause.

- (35) [NP [S' [CI the closest] [S [Quantified Head NP anyone] came to him]]] was the man who leaned over.

The movement of *the closest* is motivated by the two independent grammatical considerations. One is the principle of CI conspiracy mentioned in the previous section regarding the feature [F]. According to this principle, finite subordinate clauses have a CI and the phrases of the form [*the*+Superlative], in particular, conspire to assume a CI function. The other motivation that activates the movement of *the closest* is a typological tendency such that "postnominal relatives [=relative clauses that follow the nominal head, such as English relatives—K.N.] may be preceded by a morphologically invariant complementizer (Keenan (1985: 160))." This tendency forces the phrase *the closest* to precede the finite relative clause, resulting in the movement of *the closest* from its sentence-internal position to the sentence-initial position. Now we have arrived at the structure (35), a surface structure of a HIRC.

Next, let us consider the structural requirements for the HIRC, as well as for the HERC. A typical, commonplace HERC is like (20), which is repeated here:

- (20) John read [the book_i [which(WH)_i [Mary bought t_i for him]]]

So it is clearly the case that both HERCs and HIRC have the same structural requirements as shown in (36) and (37), respectively.

- (36) The structural requirements for the English HERCs:

- a. The relative clause is headed by CI.
- b. The head in the relative clause is quantified.

- (37) The structural requirements for the English HIRC:

- a. The relative clause is headed by CI.
- b. The head in the relative clause is quantified.

The very sameness of the structural requirements in these two structures strongly suggests that HIRC is a natural extension from HERC.

6. Other Data Explained

If the analysis thus far presented is more or less on the right track, it can accommodate another domain of data that has been regarded as a long standing puzzle. Observe the following:

(38) ?[Anybody does that] ought to be locked up.

(Quirk et al. (1985: 1250))

(39) *[The table stands in the corner] has a broken leg. (ibid.)

Quirk et al. (1985) seek to explore the condition that permits the deletion of subjective relative pronouns. According to them (Quirk et al. (1985: 1251)), the ungrammaticality of (39) is perhaps due to the failure of perception, i.e., sentence processing fails when a reader/hearer encounters *has* in (39). If their account is correct, (38) should be judged as bad as (39). But, as Quirk et al. (1985: 1250) admit, the fact is that (38) is found in very informal speech though it is questionable or doubtful. They only hint at the difference between (38) and (39) such that in (38) “the antecedent is an indefinite pronoun (Quirk et al. (1985: 1250)).” But they give no further discussion.

In our analysis, the bracketed portions in (38) and (39) are both HIRC. Now, recall the structural requirements in (37). In the case of (38), the head NP *anybody* is quantified, as is evident from the morphological composition of the phrase [*any*+one], and this clause lacks a CI. Hence the “?” judgment. In the case of (39), the head NP *the table* is not quantified, and the clause lacks a CI. Hence the “*” judgment. Thus our analysis accommodates the data in (38) and (39) quite straightforwardly.

Next, consider the example below:

(40) a. [Anyone knowing his whereabouts] should contact the police. (Huddleston and Pullum (2002: 1188))

b. If anyone knows his whereabouts, he/she should contact the police.

N. Nakazawa (2005: 74) leaves open the problem of how the subject NP of (40a) arrives at a conditional interpretation as in (40b). Apart from this problem, we see a family resemblance in (40a) and (38). In (38), the bracketed clause is a HIRC, while the bracketed portion in (40a) may be a clause or a phrase. Our analysis shows, however, that the bracketed portion in (40a) is “sentential,” but it is nonfinite. Recall that finite subordinate clauses require a CI, but the nonfinites never do so. The head of the bracketed clause in (40a), i.e. *anyone*, is quanti-

fied, but the clause itself does not need a CI because of its nonfiniteness. Thus (40a) is perfectly grammatical. Our analysis proceeds straightforwardly in this case, too.

7. Possible Counterarguments

It is conceivable that one might argue against our analysis that the phrase structure of (9) is not what we presented in (35), but rather should look like the following:⁵

- (41) [NP [S [NP The closest anyone] came to him]] was the man who leaned over.

There are a number of defects in the proposed structure of (41). One is that we never have a form “*the closest anyone.”

Second, if the structure in (41) is permissible, we immediately encounter the same problem that Quirk et al. (1985) did, regarding the grammaticality diversity among (41), (38) and (39): They are “perfectly OK,” “?” and “*,” respectively. If we suppose that all three of them are derived by way of subject relative pronoun deletion, why is it the case that such a diversity in grammaticality is possible? Quirk et al. (1985) might be tempted to say that the indefiniteness of the subject pronoun would be the key feature that distinguishes “grammatical/questionable” from “ungrammatical.” But they would fail to explain the difference between “perfectly OK” in (41) and “?” in (38).

Third, deletion of the subject relative pronouns is a highly restricted phenomenon, as is discussed in Lambrecht (1988), Ukaji (2003) and N. Nakazawa (2006). Subject relative pronoun deletion is only permitted in the following two types of grammatical environments (the antecedents of the deleted subject relative pronouns are underlined):

- (42) This is the guy we think is the leading figure of the ring.
One such environment is “NP+[relative pronoun]+NP.” When a relative pronoun is in this environment, irrespective of whether it is subjective or objective, it can be deleted. In the case of (42), the sequence “[NP the guy]+[relative pronoun]+[NP we]” qualifies for the deletion of a relative pronoun, which account is responsible for the absence of a relative

⁵ This type of counterargument has actually been made several times. One such occasion was at the 23rd Conference of the English Linguistic Society of Japan held at Kyushu University in November, 2005.

pronoun in (42). Note incidentally that this environment is also found in the case of (20), where deletion of the objective relative pronoun is possible. But observe (41), where the structure prior to the deletion of a subject relative pronoun looks like “[_{NP} the closest anyone]+[relative pronoun]+[_V came].” This sequence does not qualify for the intended deletion, so the proposal for the structure in (41) fails.

The other environment in which subject relative pronoun deletion is permitted is as follows:

- (43) a. There was a farmer had a dog.
 b. This is the girl wants to see you.
 c. Here's the boy'll fix it for you.
 d. I have a brother works in Dublin.
 e. I'm the only one knows how to act.
 f. It's Simon did it. (N. Nakazawa (2006: 71–72))

Phrases before the underlined antecedents in (43) all function to introduce into the discourse a certain referent that bears new information. In other words, subject relative pronoun deletion is possible only in what might be termed the presentational context. But observe the case of (41). It does not make any sense to say that *the closest anyone* in (41) is a presentational context. So, we argue that (41) is not eligible for subject relative pronoun deletion, and, therefore, that the subject NP of (41) does not have the structure depicted in (41).

Fourth, if the structure in (41) is tenable, we would not expect any phonological break between “the closest” and “anyone.” But the fact is that there is the same type of phonological break between “the closest” and “anyone” in (41), be it perceivable to our ears or not, as there is between “the more” and “you” in (24), between “the worst” and “it” in (25), between “the best” and “the computer” in (26), and between “the closest” and “Miles” in (27). This shows that there is in fact a structural break that we have between a CI and the following subject NP in the case of (41).

Fifth, the proponents of the analysis presented in (41) must note the fact that the number of genuine HIRCs is quite small, in fact as small as four, including the bridge construction (28). These four instances are all I have found so far in the raw data. If the structure of (41) is a standard type of nominal structure, we would expect a huge number of occurrences of this construction. But this is not the case. The minor status of HIRC can only be explained through a step-by-step “process-oriented” analysis, as given in section 4.

For all the reasons given above, the structure of (41) is judged far away from the correct nominal structure.

We may expect some other form of counterargument such that all the instances in (9)–(11) are in fact ungrammatical structures. If so, how is it possible to explain the grammaticality diversity found in (9)–(11), on the one hand, and (38) and (39), on the other? Our analysis is ready to do the job. In addition, we could accommodate another type of structure, i.e. (40). Furthermore, the native informants I consulted all agreed that sentences like (9)–(11) are fine, and some gave me additional examples of their own making, some of which are as follows:

- (44) a. The closest I was to Princess Diana was at the reception party held during her stay in Japan.
- b. The closest any president came to me was George Bush, Sr.

When asked about the construction of (9), an informant I consulted provided me with (44a). He is not a linguist but kindly showed me (44a) to further illustrate the construction at issue. Notice that (9) is a HIRC and (44a) a HERC, but he thinks that (9) and (44a) are of the same type of construction. His observation confirms our “process-oriented” approach to the genesis of HIRCs, in which we assume that HIRCs are possible forms of extension from HERCs. Another informant I consulted, who is a linguist, gave me (44b) as an additional example of HIRC.

These considerations above suggest the grammatical productivity of English HIRCs for native speakers of English, however unconscious they may be of the rules that produce them. Therefore, the counterargument that (9)–(11) are all ungrammatical does not have any substantial basis.

8. Theoretical Issues

In this section, we are concerned with the characterization of our analysis from a theoretical point of view.

First of all, as regards descriptive adequacy, any grammar failing to describe English HIRCs should be judged descriptively inadequate. Our analysis, on the other hand, is, needless to say, descriptively adequate, since one of the objectives of this paper is to indicate the existence of the English HIRCs, and so we did.

In section 1, we referred to the theoretical prediction made by Cole (1987) and Kayne (1994) such that English does not have HIRCs. One

of the structures they excluded as theoretically impossible is (6a), among others, which is repeated below:

- (6) a. [NP [S' ...NP (lexical)...]]

Now it is clear that there are English HERCs that have the very structure of (6a). Let us repeat them below:

- (12) [The closest Miles had been to a job in three weeks of searching] had been as a kitchen helper in a third-rate, crowded Italian restaurant.
- (13) The Monte Carlo Challenge is [the closest anyone gets these days to recapturing the magic of the 1950s and 1960s] when it was regarded as one of the supreme tests of car and driver.
- (14) [The closest any of them came to admitting it] was at one place where the personnel person told me that he'd love to hire me, but he couldn't.

We have no idea of how Cole (1987) and Kayne (1994) would analyze the structures in (12)–(14), but certainly *the closest* is both the CI of the clause and the head of the respective subject NPs in (12)–(14).

Another point of interest is that HERCs in (12)–(14) share a family resemblance with the genuine HIRCs, whose basic structure is that of (6a), the latter structure being abandoned by Cole (1987) and Kayne (1994).

Our analysis intending to account for the genesis of English HIRCs has assumed three adjacent successive stages. The process develops this way: Stage 1 is presupposed for Stage 2 to be made possible, and Stage 2 is presupposed for Stage 3 to be made possible. This type of analysis conforms to the general theory format shown in (45):

- (45) If the grammar of a language L at stage i, G(L,i), has property P, then the grammar of the language at the next stage, G(L,i+1), may have property P'. (Kajita (2002: 161))

Any theory incorporating (45) as one of its components is called a theory of grammatical dynamism, or sometimes a dynamic theory (of grammar), or grammatical dynamism for short. Thus, it is argued that our analysis is one possible instantiation of the theory format in (45). Thus English HERCs of the structure (6a) are the prerequisite for the bridge construction (28). The bridge construction (28) is the prerequisite for the genuine HIRCs. Our analysis proposed in this paper provides a step-by-step treatment of the variety of the relatives that come into our view, some of which Cole (1987) and Kayne (1994) would cer-

tainly fail to accommodate, and it moves along the theory format of (45). In this sense, our analysis argues for Grammatical Dynamism.

The English HIRC has a number of construction-particular characteristics. One is that this construction seems to be a very minor construction; in other words, it will find its own place on the periphery of English grammar. Related to this is the fact that the number of observed instances of English HIRCs is so small, as we mentioned in the last section.⁶ Another characteristic is that this construction seems to have emerged by way of item-specific extension. Superlatives used in the genuine HIRCs are confined to *closest* and *nearest*, and quantifiers used to quantify the head in the relative clause are, in reality, confined only to *any*. But item-specific extension itself is not uncommon, for children in the earlier stages of language acquisition would say, "Mommy come!" but would never say, "*Linguist come!" The Noun *linguist* is one of the least probable words for them. This is because it seems reasonable to suppose that children would acquire the syntactic category of Noun through an item-specific process, i.e. first, the family members' names, kinship terms, toys and cartoon characters, and so on, and finally such abstract nouns as *realism*, *democracy*, *underdevelopment*. If this process of acquiring Nouns is for the most part correct, the item *linguist* would never emerge in the early stages of acquisition because this Noun has nothing to do with children's daily concerns and activities. Thus the absence of "*Linguist come!" in the earlier stages of acquisition can be explained in terms of the item-specific extension in the acquisition of Nouns. As the rarity of the Noun *linguist* in childhood is due to item-specific extension, so the characteristic regarding both the small variety of the superlatives and the de facto only one instance of the quantifier *any* in HIRCs is due to the same principle. All of these construction-particular characteristics will fit so well in the dynamic view of grammatical extension, outlined in (45).

We believe that our analysis describes the process leading to the genesis of English HIRCs in the way it really is: No overgeneration is expected, nor is any undergeneration observed. Thus it is claimed that the theory on which our analysis is based is adequately rich and properly constrained.

⁶ I consulted such electronic databases as *BNC* and *WordbanksOnline*. I used a variety of superlatives and quantifiers as key words in searching for HIRCs, but nearly every effort was unsuccessful.

REFERENCES

- Akmajian, Adrian (1970) *Aspects of the Grammar of Focus in English*, Doctoral dissertation, MIT. [Published by Garland, New York, 1979.]
- Baker, Carl L. (1989) *English Syntax*, MIT Press, Cambridge, MA.
- Baker, Carl L. (1995) *English Syntax*, 2nd ed., MIT Press, Cambridge, MA.
- Cole, Peter (1987) "The Structure of Internally Headed Relative Clauses," *Natural Language and Linguistic Theory* 5, 277–302.
- Comrie, Bernard (1989) *Language Universals and Linguistic Typology*, 2nd ed., University of Chicago Press, Chicago.
- Huddleston, Rodney and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.
- Kajita, Masaru (1974) "Henkeibunpo (Transformational Grammar)," *Bunporon* (Grammar) II, by Akira Ota and Masaru Kajita, 163–647, Taishukan, Tokyo.
- Kajita, Masaru (1977) "Towards a Dynamic Model of Syntax," *Studies in English Linguistics* 5, 44–76.
- Kajita, Masaru (1997) "Some Foundational Postulates for the Dynamic Theories of Language," *Studies in English Linguistics: A Festschrift for Akira Ota on the Occasion of His Eightieth Birthday*, ed. by Masatomo Ukaji, Toshio Nakao, Masaru Kajita and Shuji Chiba, 378–393, Taishukan, Tokyo.
- Kajita, Masaru (2002) "A Dynamic Approach to Linguistic Variations," *Proceedings of the Sophia Symposium on Negation*, ed. by Yasuhiko Kato, 161–168, Sophia University.
- Kayne, Richard (1994) *The Antisymmetry of Syntax*, MIT Press, Cambridge, MA.
- Keenan, Edward (1985) "Relative Clauses," *Language Typology and Syntactic Description* II, ed. by Timothy Shopen, 141–170, Cambridge University Press, Cambridge.
- Kisseberth, Charles W. (1970) "On the Functional Unity of Phonological Rules," *Linguistic Inquiry* 1, 291–306.
- Kuroda, Shige-Yuki (1976) "Headless Relative Clauses in Modern Japanese and the Relevancy Condition," *BLS* 2, 269–279.
- Lakoff, George (1974) "Syntactic Amalgams," *CLS* 10, 321–344.
- Lambrecht, Knud (1988) "There Was a Farmer Had a Dog: Syntactic Amalgams Revisited," *BLS* 14, 319–339.
- Nagahara, Yukio (1990) *Kankeisetsu* (Relative Clauses), Taishukan, Tokyo.
- Nakau, Minoru (1977) "Eigo ni okeru Huteimeishiku to Hiseigenteki Kankeisetsu (Indefinite NPs and Non-restrictive Relative Clauses in English)," *Bungei Gengo Kenkyu: Gengohen* (Studies in Language and Literature: Language) 2, 27–68, The University of Tsukuba.
- Nakazawa, Kazuo (1991) "Eigo no Shuyobu-Setchu Kankeisetsu (English Head-Internal Relative Clauses)," *Gendai Eigogaku no Shoso: Ukaji Masatomo Hakushi Kanreki Kinen Ronbunshu* (Aspects of Contemporary English

- Studies: A Festschrift for Masatomo Ukaji on the Occasion of His Sixtieth Birthday), ed. by Shuji Chiba, Akira Ogawa, Yasuaki Fujiwara, Norio Yamada, Osamu Koma and Takao Yagi, 351–361, Kaitakusha, Tokyo.
- Nakazawa, Noriko (2005) “V-ing: Domeishi to Genzaibunshi no Bunrui o Megutte (V-ing: On the Classification of Gerunds and Present Participles),” *Eibeibungaku Ronso* (Daito Bunka Review) 36, 49–75, Daito Bunka University.
- Nakazawa, Noriko (2006) “*There* Sesshokusetsu to Kankeidaimeishi no Kenzaika (*There* Contact Clauses and the Emergence of Relative Pronouns),” *Kindai-Eigo Kenkyuu* (*Studies in Modern English*) 22, 71–91.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*, Longman, London.
- Ross, John Robert (1969) “Guess Who?” *CLS* 5, 252–286.
- Takonai, Kensuke (1994) “Notes on Internally-Headed Relative Clauses,” *Metropolitan Linguistics* 14, 36–50, Tokyo Metropolitan University.
- Tsubomoto, Atsuro and John Whitman (2000) “A Type of Head-in-Situ Construction in English,” *Linguistic Inquiry* 31, 176–183.
- Ukaji, Masatomo (2003) “Subject Zero Relatives in Early Modern English,” *Current Issues in English Linguistics*, ed. by Masatomo Ukaji, Masayuki Ike-Uchi and Yoshiki Nishimura, 248–277, Kaitakusha, Tokyo.
- Williamson, Janis S. (1987) “An Indefiniteness Restriction for Relative Clauses in Lakhota,” *The Representation of (In)definiteness*, ed. by Eric J. Reuland and Alice G. B. ter Meulen, 168–190, MIT Press, Cambridge, MA.

Sources of Examples

The British National Corpus (BNC)

- Gates, Bill (1996) “Computer Will Be Chess Champ, but so What?” *The Japan Times* 18 March.
- Graczyk, Wayne (1992) “Baseball Bullet-In,” *The Japan Times* 6 November.
- McPherson, John (1997) A Cartoon, *The Japan Times* 9 November.
- Royko, Mike (1987a) “Some Good Reasons to Keep Walking,” *Chicago Tribune* 1 October.
- Royko, Mike (1987b) “Woman Gives Aid and Gets AIDS?” *The Japan Times* 30 October.
- Royko, Mike (1990) “Age is No Asset in U.S. Job Market,” *The Japan Times* 3 August.
- Schwartz, Mira (1992) “Fee Agreement,” *The Daily Californian* 29 January.
- Sekai Nippou* (1993) 30 December.
- The Washington Times* (1993) 22 December.
- WordbanksOnline*

Department of English and American Literature
Aoyama Gakuin University
4-4-25 Shibuya, Shibuya-ku
Tokyo 150-8366
e-mail: koigakub@cl.aoyama.ac.jp