What Triggers Movement of the Head Nominal in the Relative Clause?

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1 Introduction

This paper shows similarities between scrambling of adjuncts and movement of head nominals in relative clauses (henceforth, RCs) in Japanese, mainly focusing on the availability of idiomatic interpretations. Then, I argue that movement of head nominals in RCs in Japanese is scrambling (Morita 2013). Below, the relationship between idiomatic interpretations and two derivations of RCs will be introduced.

Derivations of RCs have been controversial. Although there is no consensus on how head nominals of RCs are derived, the analyses can be divided in two types of approaches. One is where a head nominal is base-generated in a matrix clause. This is called the head external analysis (Chomsky 1977, among others).

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(1) I bought the book_i [$_{RC (CP)}$ Op_i/which_i John wrote t_i] (head external analysis)

In this structure, the RC in which the operator moves to Spec,CP is adjoined to the matrix clause. The other type is where a head nominal directly moves to its surface position. This is called the head raising analysis (Schachter 1973, Vergnaud 1974, among others).

(2) I bought the [RC(CP)] book_i John wrote t_i] (head raising analysis)

Contrary to (1), (2) straightly captures the close relationship between the verb in the RC and the head nominal. The raising structure gives an explanation why idiomatic readings are available only in *that*-RCs. Examine the following sentences:

- (3) a. ?? The careful track which she's keeping of her expenses pleases me.
 - b. ?? The headway which Mel made was impressive.
 - c. The careful track that she's keeping of her expenses pleases me.
 - d. The headway that Mel made was impressive.

(Aoun and Li 2003:110)

The sentences contain the idioms *keep track of* meaning 'to be aware of something' or *make headway* meaning 'to make progress.' In order to obtain the idiomatic readings, a verb and an idiomatic noun need to be in a close relationship such as a head-complement relationship. This condition requires an idiomatic noun to be base-generated at the complement of the verb in a RC and to be moved from inside the RC to its surface position after establishing the relationship. The contrast between *wh*-RCs and *that*-RCs shows that the latter involves movement of a head nominal (head raising analysis) while the former does not (head external analysis). In other words, the availability of idiomatic readings serves as a test to distinguish which of the two analyses should be applied to RCs. Japanese RCs also exhibit the same behavior as *that*-RCs, which I will show in the next section.

The present paper is organized as follows. Section 2 considers derivations of RCs in Japanese. In Section 3, I present new data, which shows similarities between scrambling of adjuncts and movement of head nominals in RCs in Japanese. Section 4 concludes this paper.

2 Movement of Head Nominals in Japanese RCs

committed.'

RCs can have idiomatic readings in Japanese as that-RCs can in English.

(4) Sono eiga-wa [Mary-ga e_i watatta] abunai <u>hasi</u>_i-o that movie-TOP Mary-Nom crossed dangerous bridge-ACC migotoni saigensita. elegantly reconstructed.
'That movie elegantly reconstructed the dangerous action Mary

(Morita 2006:120)

(5) Raibaru-wa [John-ga mizukara e_i hotta] boketu_i-o totemo rival-TOP John-NOM himself dug grave-ACC very yorokonda.

'The ruin John himself brought about made his rival happy.'

(Kitao 2009:33)

- (4) and (5) involve the idiomatic nouns abunai hasi from abunai hasi-o wataru (dangerous bridge-ACC cross) meaning 'to make a risky attempt' and boketu from boketu-o horu (grave-ACC dig) meaning 'to bring about one's own ruin' respectively. The availability of the idiomatic readings in (4) and (5) indicates that head nominals consisting of idiomatic nouns move from inside RCs to their surface positions after establishing idiomatic relationships. The examples suggest that the head raising analysis is applied to Japanese RCs. However, the situation become complicated when we consider long-distance RCs. Here, long-distance RCs mean a head nominal in the surface position and its base-generated position are separated by more than two clause boundaries. Compare the following examples of long-distance RCs with (4) and (5).
- (6) Sono eiga-wa [John-ga [Mary-ga t_i watatta to] that movie-TOP John-NOM Mary-Nom crossed COMP omotta] abunai hasi_i-o migotoni saigensita. thought dangerous bridge-ACC elegantly reconstructed 'That movie elegantly reconstructed the dangerous bridge that John thought that Mary crossed.'

(7) Raibaru-wa [Mary-ga [John-ga mizukara t_i hotta to] rival-TOP Mary-Nom John-NOM himself dug COMP omotta] boketu_i-o totemo yorokonda. thought grave-ACC very happy 'The rival was very happy about the grave that Mary thought that John himself dug.'

(Ikeda 2021:165-166)

The long-distance RCs do not retain the idiomatic interpretations. Thus, the head external analysis is applied to (6) and (7), contrary to (4) and (5). Why can head nominals not move from inside RCs in the case of long-distance RCs? This is a problem to be solved in this paper. Long-distance RCs in English also exhibit the same phenomenon, but they will be omitted here. In the next section, I will present several examples of scrambling to illustrate its similarities with movement of head nominals in RCs in Japanese.

3 The Similarity between Scrambling of Adjuncts and Movement of Head Nominals in RCs

3.1 Scrambling of Adjuncts

In Japanese, word order is relatively free as long as a verb comes at the end of a sentence. However, scrambling of adjuncts is an exceptional case.

(8) a. Yukkurito $_i$ John-ga t_i booru-o nageta. slowly John-NOM ball-ACC threw 'John slowly threw a ball'
b. Kyuuni $_i$ John-ga t_i nakidashita. suddenly John-NOM started-to-cry 'John suddenly started crying'

(Sugisaki 2000:387)

The sentences indicate that short-distance (clause-internal) scrambling of adjuncts is possible. We predict that long-distance scrambling of adjuncts is equally possible from their base-generated positions, but this is not necessarily true.

- (9) a. Yukkurito Mary-ga [John-ga booru-o nageta to] itta. slowly Mary-NOM John-NOM ball-ACC threw that said '*Mary said that John slowly threw a ball'
 - 'Mary slowly said that John threw a ball'
 - b. Kyuuni Mary-ga [John-ga nakidashita to] itta. suddenly Mary-NOM John-NOM started-to-cry that said '*Mary said that John suddenly started crying'
 - 'Mary said that John suddenly started crying'

(Sugisaki 2000:387)

The adverbs in the sentence-initial positions cannot be associated with the verbs in the embedded clauses in (9) and (9) unlike (8) and (8). Adjuncts are interpreted only in matrix clauses in the case of long-distance scrambling. Since Saito (1985), this peculiar behavior of adjuncts has been noted. The key point here is the commonality that long-distance movement is impossible for both adjuncts and head nominals in RCs. In the next subsection, I will show further similarities between scrambling of adjuncts and movement of head nominals.

3.2 Driving Forces of Movement

Long-distance scrambling of adjuncts is not totally banned. It becomes possible when adjuncts are assigned additional elements such as the superlative expression *itiban* (the most).

(10) <u>Itiban yukkurito</u> Mary-ga [John-ga *t*_i booru-o nageta to] the-most slowly Mary-NOM John-NOM ball-ACC threw that itta.

said

'Mary said that John threw a ball most slowly.'

In the examples above, the adjuncts are interpreted inside the embedded clauses. Interestingly, long-distance movement of head nominals also become possible with the expression. Compare the sentence below with (6).

(11) Sono eiga-wa [John-ga [Mary-ga t_i watatta to] that movie-TOP John-NOM Mary-NOM crossed COMP omotta] itiban abunai hasi-o_i migotoni saigensita. thought the-most dangerous bridge-ACC elegantly reconstructed 'That movie elegantly reconstructed the most dangerous action that John thought Mary committed.'

The idiomatic reading is available in (11), which suggests that the head nominal move long-distance from the base-generated position. Based on those similarities, I claim that movement of head nominals in RCs is scrambling. It is not implausible to assume that idiomatic nouns and adjuncts have some characteristics in common because the former, as Chomsky (1981) argues, is not a true argument (quasi-argument). Scrambling is semantically-vacuous movement, and assumed to be non-feature-driven (Saito 2004). Hence, there is no trigger of movement of head nominals in Japanese RCs.

However, why does adding superlative expressions make it possible to move head nominals and adjuncts long-distance? In (10) and (11), adding the phrase induces a reading of a specific event or a situation. *Itiban abunai hashi* in (11), for instance, refers to the most dangerous attempt among other dangerous attempts. Thus, the head nominal with the superlative expression is considered to be contrastively focused. *Abunai hashi* in (4), on the other hand, refers to a dangerous attempt in a general sense, not a specific event. On the basis of this consideration, I claim that head nominals with superlative expressions bear a feature like a focus-feature. If this reasoning is correct, then there are two types of movement of head nominals in Japanese RCs. One is feature-driven movement of head nominals. The other is non-feature-driven movement, which is scrambling. Hence, adjuncts may also have different type of movement other than scrambling. The next section will conclude this paper.

4 Conclusion

In this paper, I have presented similarities between scrambling of adjuncts and movement of head nominals in RCs in Japanese. Based on the observation, I have claimed that movement of head nominals in RCs is scrambling. The last part of Section 3 has raised the possibility that scrambling is not the only way of movement of head nominals in Japanese RCs.

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