

HONNIN: A Critical Application of Katada' (1991) LF Representation of Anaphors to Another Japanese Reflexive

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1. Introduction

This paper is an application of Katada's (1991) LF representation of anaphors to a Japanese reflexive, *honmin*.¹ First, Katada's system will be described briefly with special attention to the extended concept of anaphoric/pronominal expressions proposed by Sportiche (1986). Second, Katada's system will be examined in terms of the application of her system to this particular nominal expression. Through this validation, some potential problems of her system with regard to the limitation of *operator raising* will be discussed. To address these problems, two possible solutions (the "accessible specifier" approach, and the "R-expression" approach) will be proposed using the concepts of "trace of the head", "the transparency of the specifier position", and the binding condition C.

The current paper is significant for three reasons. First, the present paper still employs Chomsky's (1981) Government and Binding (GB) as its basic theoretical framework. It is certainly true that *Minimalism* (Chomsky, 1992, 1995) is said to have replaced GB as the major theoretical framework in generative linguistics. It is also true, however, that GB is still used in many studies in various fields. In fact, *Linguistics and Language Behavior Abstracts* contains about 2300 abstracts referring to GB, and the years 1998 and 1999 alone abstracted at least twenty five such articles (see e.g. Quintana, 1998 on the necessary revision of Principle A regarding the difference between reciprocals and reflexives; Philip and Avrutin, 1998 on agrammatic aphasia; and Crain and Thornton, 1998 on children's ability on the truth value judgment regarding the condition of R-expression).

Also, in the field of computational linguistics, some researchers engaged in software implementation of linguistic theories still prefer GB to Minimalism. This is

mainly due to GB's relatively well-established formalism, which facilitates GB's actualization in computer environment (see e.g. Matsumura, 1992, and Hattori, 1999, on Prolog-based computer programs).

Furthermore, it is said that Minimalism has not changed the theoretical framework drastically with regard to substantial parts of GB including its Binding theory and Logical Form (cf. Abe, 1999). It is true that Binding theory has been criticized in several ways. For instance, it has been pointed out that Binding theory lacks the non-circular definitions of the three key entities; i.e., 'anaphor', 'pronoun', and 'R-expression' (see Franks and Schwartz, 1994). On the role of Spec-Head Agreement in anaphor identification, Lidz (1993) explored some theoretical and empirical problems with long-distance reflexives focusing on R-expression. Iwakura (1991) indicated that Principle C must be revised together with the Empty Category Principle with regard to CP-Trace. On the other hand, even within the framework of Minimalism, Fox (1995), for instance, defended Condition C claiming that the principle could be obviated only if antecedent-contained deletion construction is provided. In addition, some strong empirical evidence for Principle C has been reported by Lust, Eisele, and Mazuka (1992), reviewing substantial number of studies on L1 acquisition and children's observation of Principle C. Thus, it still seems worth trying to conduct research on anaphors and R-expressions within the framework of GB.

Second, Katada's (1990, 1991) work on Japanese reflexives has not lost its significance. Many papers still refer to her system as one major proposal on the classification of Japanese reflexives (see Okada, 1998, on the possibility of split antecedents of anaphors; Noguchi, 1977, for the alternate categorization of pronouns for different languages; Fujita, 1996, on double objects and causatives; White et al., 1996, for the varying degrees of acceptance of the long-distance binding of *zibun*; Franks & Connell, 1996, on the acceptance of long-distance bindings with L1, and White et al., 1996, for the L2 developmental perspectives). Mihara (1994), in particular, emphasizes the importance of Katada's system in that there has been no other research accounting for the internal structure of Japanese anaphors made of the complex noun phrases, such as *zibun-zisin* and *kare-zisin*.

In addition, it should be noted that Sportiche's (1986) analysis on *zibun* as one of the predecessors of Katada's (1991) maintains its potential influence over the studies of anaphors, as well. As one example of its direct application, Wali and Subbarao (1991), for instance, utilized Sportiche's system to analyze *zibun*-like long

distance anaphors of Marathi and Telugu. Thrainsson's (1991) wider system of NP classification also could be regarded as an elaboration of Sportiche (1986) because it claims a new feature, i.e., [+/- independent reference] should be added to the traditional features such as, [+/- anaphoric], [+/- pronominal] and [+/- R-expression].

Finally, virtually no attempt has been made on the particular Japanese word 'hon-ing'. Though Katada (1991) and Mihara (1994) deal with *mizukara*, which is another Japanese reflexive, neither of them mentions 'honnin' as a closely related expression. The three grounds mentioned above make it reasonable to critically reassess Katada (1991) for the application of its system to 'honnin'.

1.1. Binding principles

According to the standard binding theory, which was proposed first by Chomsky (1981), every nominal expression falls into one of three categories. The three categories are called "anaphors", "pronominals", and "R-expressions". The nature of these categories is at least partly described by the three propositions corresponding to each category.

They are roughly summarized as follows:

Binding Principles:

- (A) An anaphor must be bound in its governing category.
- (B) A pronominal must be free in its governing category.
- (C) An R-expression must be free (everywhere).

As far as English is concerned, the three categories and the three principles seem to work well with the actual data in terms of identifying the category of any nominal expression including phonologically null entities, such as PRO, and traces.

1.2. Japanese reflexives and their "misbehaviors"

Unfortunately, however, the standard binding principles do not provide any necessary and sufficient condition for each of the three categories. Thus, it is theoretically impossible to determine the nature of all nominal expressions strictly based on the binding principles. Thus a priori knowledge plays a vital part in determining to which category a nominal expression belongs.

What is more, once we start looking at some other languages like Japanese, there seems to be a great gap between the binding principles and the behavior of words which are thought to be anaphors or pronominals. A Japanese reflexive "zibun"

is a well known example of this kind. Though this word has been traditionally regarded as an anaphor, many linguists have reported various “violations” of binding principles (A) and (B). (e.g. Fukui (1984), Ikawa (1989)) According to these studies, the antecedent of ‘zibun’ does not have to be within its governing category as long as it is a subject. Not only that, Fukui (1984) points out that antecedents can be the head of the relative clause and topics. Legitimate sentences (1) and (2) show a case of an antecedent being a long distant subject and that of a topic marked phrase.

- (1) Taro_i ga [Ziro_j ga zibun_{i/j}-no kako o Hanako-ni katatta to]
 Taro-SB Ziro-SB SELF -GN past-DO Hanako-IO told that

itta.
 said

Taro said that Ziro told his past to Hanako.

- (2) [TOPIC Hanako_i-wa [S Taro-ga [S Ziro-ga zibun_i-o semeta] to]
 Hanako-TOPIC Taro-SB Ziro-SB SELF_i -DO blamed that

itta]
 said

Hanako said that Taro said that Ziro blamed SELF

Taro in (1) is the subject of the matrix clause while the governing category of ‘zibun’ in (2) should be the lower clause. This is because the clause is a tensed clause with an accessible subject (i.e., Ziro and a governor, the genitive case marker -NO), which together satisfy the necessary conditions of a governing category. Thus, binding principle (A) predicts that this anaphor must be bound within the lower clause. Yet, sentence (1) is quite acceptable even if ‘zibun’ is coindexed with Taro, the matrix subject, and not with Ziro, the clause-mate subject of ‘zibun’. This is a clear example of “misbehavior” of ‘zibun’ in terms of the standard binding theory.

The ‘zibun’ in (2) also violates binding principle (A), at least in that ‘zibun’ is coindexed with Hanako which is topicalized by the topic marker *-wa* and which is located even higher than the matrix clause subject. Notice that similar to (1), the lowest clause should be the governing category of ‘zibun’ and that ‘zibun’ should

be bound within this clause according to the binding principle.

Of course, various attempts have been made to account for the contradictory behaviors of Japanese anaphor-like expressions. Among those attempts, Katada (1990), (1991) concluded that Sportiche's (1986) fundamental modification of the standard binding theory is one of means of incorporating the data against the standard binding theory.

1.3. Arch-nominal approach

Sportiche's (1986) system provides an elegantly unifying approach to understanding the nature and the behaviors of the anaphors and pronominals of various languages including some behaviors of 'zibun' which have been puzzling researchers in terms of the standard binding theory.

One of the cardinal characteristics of Sportiche system is its two-dimensional matrix which categorizes the various types of reflexives. Focusing on the nature of the antecedence, his system defines the two dimensions as follows:

- (3) a. Must A bind X or not?
 b. Must some (anti) locality condition hold for the pair (A, X)?
 where X is a member of an anaphor/pronominal system and A is a some antecedent of x. (Sportiche 1986, p. 370)

Also it should be noted that in addition to these two major dimensions, Sportiche pointed out the necessity of further differentiating dimensions, such as the possible number of antecedents and/or grammatical features such as subjects.

Based on the two major categorization dimensions, Sportiche (1986) provides the following table as a description of the English anaphor/pronominal system. (Table 1 of Sportiche, 1986)

Table 1: English Locality Conditions

	C-command required	C-command not required
Locality condition (required)	Anaphors	not known
Antilocality condition (required)	Pronouns as variables	Referential pronouns

Note that in this table (3)(a) is now slightly narrowed down to the necessity of c-command for the antecedence, though at least theoretically it is a little bit ambiguous whether or not “*c-command not required*” means no need of antecedence at all.

One particular strength of the Sportiche system is in its recognition that the lexicalization of this system depends on a language. This could mean two things. One is that what is known as anaphor or pronominal at an individual language level is a mere reflection of more abstract and more “perfect” anaphors and pronominals at the UG level. Since it is a reflection or rough approximation of “core” types of anaphor and pronominals, it is natural that individual anaphoric words may deviate somewhat from the perfect behavior of core anaphors.

Another interpretation may be closer to Sportiche’s (1986) original idea. According to this interpretation, there is no such thing as anaphors or pronominals at the UG. Instead, what exists at the UG level is just a system where in every language has its own way of lexicalizing by freely choosing either column wise, or row-wise, or, each cell-wise, or ultimately, even diagonal-wise from the system matrix. Thus, what are usually called anaphors or pronominals are just one way of lexicalizing this system. Sportiche (1986) states that the English language *happens to choose* the row of the table as a unit of lexicalization yet theoretically a language could lexicalize the feature bundles of the system in column-wise.

Sportiche (1986) proposes that in fact Japanese is one such language in which the lexicalization of its anaphor/pronominal system is column-wise rather than row-wise. Therefore ‘zibun’ can function sometimes as an “English-type” anaphor and sometimes as an “English-type” bound pronominals, as long as it has a c-commanding antecedent. This recognition of the discrepancy between anaphor or pronominal as abstract entities and their language specific lexicalization is one of the most powerful ideas in his system.

Because of Sportiche’s redefinition of the meaning of anaphor and pronominals, ‘zibun’ and many other Japanese reflexive nominal expressions, including ‘honin’, are now recognized as a kind of new entity, having unlike English, c-commanding antecedents as their common feature instead of antecedents with locality or antilocality condition. Katada (1990, 1991) understands this point and in fact she gives this new category a new name. She calls it an arch-nominal, though the Katada (1991) system does not seem to emphasize enough this new category and the importance of c-command as a vital condition of ‘zibun’ and other reflexives.

2. Katada's system: A Three-way taxonomy of reflexives

Taking Sportiche's (1986) UG level anaphor/pronominal chart into consideration, Katada (1990, 1991) shows a three-way taxonomy of three Japanese morphologically distinguished reflexives: 'zibun', 'zibun-zisin', and 'kare-zisin'. Besides being morphologically distinguishable, these three reflexives have the features necessary to classify themselves into three different groups. The first feature is the locality of the antecedent. This refers to the characteristics of antecedents with regard to whether a long distance binding is possible. A long distance binding indicates the ability to be bound by an antecedent residing outside of the governing category determined by the standard binding principles (see Lasnik and Uriagereka, 1988, for example). The following example shows a case in which 'zibun' could be bound by both the clause-mate subject or the matrix subject.

- (1) Taro_i ga [Ziro_j ga zibun_{i/j} no kako o Hanako-ni katatta to]
 Taro-SB Ziro-SB SELF -GN past-DO Hanako-IO told that
 itta.
 said

Taro said that Ziro told SELF's past to Hanako.

As has already been noted above, Taro in (1) is the subject of the matrix clause while the governing category of 'zibun' in (1) should be the lower clause. Yet, sentence (1) is quite acceptable even if 'zibun' is coindexed with Taro, which is the matrix subject, and not with Ziro, which is the clause-mate subject of 'zibun'.

The second feature of the taxonomy is subject orientation. This refers to the tendency of a reflexive to choose a subject, rather than any other non-subject, for its antecedent.

- (4) Taro_i ga Mary_k -ni [Ziro_j ga zibun_{i/j/*k} no kako-o
 Taro-SB Mary-IO Ziro-SB SELF -GN past-DO
 Hanako-ni katatta to] itta.
 Hanako-IO told that said

Taro told Mary that Ziro told Hanako SELF's past (history).

Though *Mary-ni* is added to (1) in (4), this word cannot function as the antecedent of ‘zibun’ in (4). Native speaker competence as well as the explanation below excludes the reading in which Mary is coindexed with ‘zibun’. This is an example of the subject orientation of ‘zibun’.

Using these two features, Katada organizes the three Japanese reflexives into a three-way taxonomy. She emphasizes her finding that ‘zibun-zisin’ has the feature of [–long, +subject]. Also notice that the negative sign for the long distance feature means that any reflexive with that sign would not allow such a long distant antecedent. Table 2 shows Katada’s three-way taxonomy of the three Japanese reflexives.

Table 2: The three-way taxonomy of Japanese reflexives
(Katada (1990), Nakamura (1986))

reflexives	long distance	subject orientation
zibun	+	+
zibun-zisin	–	+
kare-zisin	–	–

In short, the essence of the Katada system is that the ‘zibun’ type reflexive is [+long, +subject oriented], the ‘zibun-zisin’ type is [–long, +subject oriented], and the ‘kare-zisin’ type is [–long, –subject oriented].

3. The mechanism of the three different reflexives

According to Katada (1990, 1991), the [+long] feature of ‘zibun’ and similar reflexives is due to the fact that the trace left at the original place of ‘zibun’ would not cause any Empty Category Principle (ECP) violation. What makes ‘zibun’ immune to potential ECP violation lies in that the trace of ‘zibun’ could be lexically governed either by the verb of the IP in which ‘zibun’ is base-generated or by genitive case markers, such as -NO in Japanese, e.g., *zibun no imoto* (SELF’s sister).

Secondly, the [+subject oriented] feature of ‘zibun’ and similar reflexives is due to their (a) [+operator] feature, which in return requires raising at the LF level and (b) the necessity of having a c-commanding antecedent. The latter necessity is deduced from the important framework on ‘zibun’ and other Japanese anaphor/

pronominal expressions proposed by Sportiche (1986).

The subject orientation is explained as follows. First, Katada assumes that [+operator] items have to be raised to an A-bar position as long as other principles let them do so. Thus, 'zibun' as a [+operator] item would be raised to an NP, which is adjoined to the original VP, forming a Chomsky-adjoined VP (see Figure 1). Being raised up to this position, 'zibun' is no longer c-commanded by the object in the original clause. The only remaining c-commanding NP which can play the role of antecedent for the raised NP is the subject of the original clause. This nature is attributed to the subject's higher position, i.e., the Spec of IP in the tree structure of a clause. Therefore, the subject is the only choice a raised 'zibun' can take as its antecedent. In this way, the subject orientation of 'zibun' can be explained.

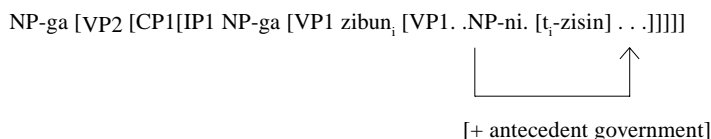
Figure 1. The mechanism of [+long] feature of 'zibun' (Katada, 1991, p. 296)

NP1-ga	[VP1 zibun	[VP2	NP2-ni	[CP*	t-CASE]]]
SB			IO		+lexically governed

Where CP* represents multiple numbers of CPs including zero CP as its option.

Unlike 'zibun' as an independent NP, 'zibun' in 'zibun-zisin' is [-long] or [+local]. This is because the trace of 'zibun' created in the NP ('zibun-zisin') can not be lexically governed either by the verb of the clause to which this NP belongs or by some case markers such as -NO in Japanese. The absence of lexical government can be best described through schematic representation. (See Figure 2). 'Zibun' in the NP 'zibun-zisin' is different from 'zibun' as an independent NP in that the former is inside a larger NP, 'zibun-zisin'. Being inside a larger NP, 'zibun' would leave a trace inside of the larger NP if it undergoes raising. Such a trace would be left ungoverned lexically. Because of the lack of the possibility of lexical government, its trace can only avoid the ECP violation by having antecedent government by 'zibun' itself even after undergoing raising. Thus, if 'zibun' in 'zibun-zisin' is raised to a higher position than the NP adjoined to the original VP, under which the 'zibun-zisin' was base-generated, then this VP would work as a barrier against the antecedent government of the trace from the raised 'zibun'. Hence, ECP violation would be inevitable. Consequently, 'zibun' in 'zibun-zisin' (and thus, 'zibun-zisin' as a whole) cannot have a [+long] feature, unlike 'zibun' as a independent lexical NP.

Figure 2. The mechanism of [-long] of 'zibun-zisin' (Katada, 1991, p. 297)



On the other hand, [+subject orientation] is maintained by 'zibun-zisin' as well as 'zibun'. This is due to the fact that 'zibun' as [+operator] element undergoes raising up to the point of the NP adjoined to the VP within which the smallest clause contains 'zibun-zisin'. When an element is raised up to this point, objects in the original VP can no longer c-command the element. Only the subject of the matrix clause, i.e., the Spec of IP which contains both the original VP and the raised element, can c-command the raised element. Thus, 'zibun-zisin' can not help choosing the subject as its c-commanding antecedent.

Third, 'kare-zisin' is different from 'zibun', and 'zibun-zisin', since 'kare-zisin' has no element of [+operator], such as, 'zibun', which could undergo raising. Since there is no raising involved, the antecedent has to be found within the smallest clause containing 'kare-zisin'. This results in its [-long] nature. For further discussion on the mechanism of the Katada system, see Katada (1990, 1991).

At the same time, 'kare-zisin' remains in its base-generated place so that the object as well as subject of the smallest clause can c-command 'kare-zisin'. This means objects also can function as 'kare-zisin's antecedent. Thus 'kare-zisin' does not show any [+subject orientation].

4. Application of Katada's system to 'honnin'

It is worth investigating the possibility of applying Katada's (1991) analysis of the three Japanese reflexives, i.e., 'zibun', 'zibun-zisin', and 'kare-zisin' to another set of Japanese reflexives 'honnin', 'honnin-zisin', and NP-honnin (hereafter 'Taro-honnin' as its representative case) in order to see the generalizability of her theory and make possible improvements.

4.1. 'honnin' as an operator

Unfortunately, none of Katada's works in 1990 and 1991 present a necessary

and sufficient condition to identify a certain nominal expression as an operator. However, it seems natural to regard 'honnin' as another operator according to Katada's system. One key characteristic in her argument is what is called "semantic range". She pointed out the fact that at least most of the well-known operators, such as quantifiers and wh-phrases, do have this feature.

Roughly speaking, semantic range could be interpreted as the non-fixed nature of the NPs with regard to co-indexation or binding. In this respect, kare and 'kare-zisin' have clearly fixed features of third person, singular, and masculine, while 'zibun' does not have such fixed features (see (5)). Katada maintains that 'zibun' is an LF operator unlike kare or 'kare-zisin', since 'zibun' has the necessary semantic range, whereas kare or 'kare-zisin' do not.

- (5) Mike_i-ga zibun_i-o semeta.
 Mike-SB self-DO blamed.

Mary-ga / Mike to Mary-ga / Watashi-ga / Anata-ga / Watashi-tachi-ga
 Mary Mike and Mary I You We

Mike blamed SELF.

Similar to 'zibun', 'honnin' also seems to have semantic range, though it looks somewhat narrower than that of 'zibun' (see (6)). The narrower semantic range of 'honnin' may be widened to some extent when it is given a richer discourse (see (6) (B)). Based on the non-fixed nature of semantic range, 'honnin' seems to have a [+operator] feature.

- (6) Taro-ga honnin-o hihan-sita.
 Taro-SB Self-DO blame-PAST

Hanako-ga (Taro-SB)
 ?Anata-ga (you)
 ??watasi-ga (I)
 Taro to Hanako-ga (Taro and Hanako)
 ?Anatatachi-ga (you plural)
 ??Watasitachi-ga (we)

Taro blamed SELF.

- (6) (b) Anata-wa honnin-o hihan-sita,
 You-SB self-DO blame-PAST
- sikasi, Taro-wa kankyo-o hihansita.
 but Taro-SB the environment-DO blame-PAST

You blamed yourself, but Taro blamed the environment.

Another reason for setting “+” to the value of the [? operator] feature of ‘honnin’ is that Katada (1990, 1991) implicitly assumes the long distance raising at LF level as one of the characteristics of [+operator] expressions. In other words, if a reflexive expression allows a long distance antecedent, then the expression is an operator. ‘Zibun’ certainly has this feature. As the following data indicates, ‘honnin’ also allows this kind of long distance antecedence as well as subject orientation. (7) is a modified (3) in Katada (1991). In (7), original ‘zibun’ is replaced with ‘honnin’. Thus, this data also suggests that ‘honnin’ should be regarded as a [+operator] reflexive expression like ‘zibun’ since ‘honnin’ is [+long] as well.

Satisfying these two conditions, ‘honnin’ should be regarded as [+operator]. This, in turn, means that as long as other principles are not violated, ‘honnin’ as an operator should be raised from the original position.

- (7) Taro_i-ga Hanako_j-ni [Ziro_k-ga Mary_l-ni
 Taro-SB Hanako-IO Ziro-SB Mary-IO
- honnin_{i/*j/k/*l}-no koto-o hanasita to] itta
 self -GN matter-DO told that told

Taro told Hanako that Ziro told Mary about SELF’s matter.

4.2. ‘honnin’ and ‘honnin-zisin’: Valid cases of the Katada system

‘Honnin’ as lexical NP seems to have basically the same nature as ‘zibun’ as an independent NP. That is, ‘honnin’ as well as ‘zibun’ are both [+long], [+subject oriented]. The data seems to confirm this classification.

- (8) Taro_i -ga [Ziro_j -ga Hanako_k -ni honnin_{i/j/*k} -o
 Taro_i -SB Ziro_j -SB Hanako_k -IO self_{i/j/*k} -DO

syokai-sita to] itta.
introduce-PAST that said

Taro said that Ziro introduced SELF to Hanako.

- (9) Taro_i -ga [Ziro_j -ga Hanako_k -ni [honnin_{i/j/*k} -no imouto-o]
Taro_i -SB Ziro_j -SB Hanako-DO self_{i/j/*k} -GN sister-DO
shokai sita to] itta.
introduce-PAST that said

Taro said that Ziro introduced SELF's sister to Hanako.

In these two sentences, 'honnin' can have both the Spec of IP of the matrix clause and the Spec of IP of the inner clause as its c-commanding antecedent. Thus, the [+long] feature is observed by 'honnin' as well. At the same time, the fact that Hanako either cannot be or is less likely to be coindexed with 'honnin' indicates that 'honnin' is [+subject oriented] just like 'zibun'. In these two sentences, the trace of 'honnin' can be lexically governed either by the verb of the same clause, as 'honnin' is originated, or by the genitive case marker -NO.

'Honnin-zisin' seems to have a distribution pattern very similar to 'zibun-zisin'. That is, 'honnin-zisin' has [+local] [+subject oriented] as its features. The following data seem to confirm this point.

- (10) Taro_i -ga [Ziro_j -ga honnin-zisin_{i/j/*k} -o Hanako_k -ni
Taro_i -SB Ziro_j -SB self_{i/j/*k} -DO Hanako_k -IO
syokai-sita to] itta.
introduce-PAST that said

Taro said that Ziro introduced SELF to Hanako.

In this sentence, 'honnin-zisin' can never be coindexed with Hanako. Thus, the subject orientation of 'honnin-zisin' is relatively clear. Though it might be possible to coindex Taro as the subject of the matrix clause with 'honnin-zisin', Ziro as the subject of the inner clause seems to be much better coindexed with 'honnin-zisin'. Thus, 'honnin-zisin's [+local] feature also seems to be satisfied.

5. “Taro-honnin”: A potential problematic case for Katada system

5.1. Justification of choosing ‘Taro-honnin’

Unlike ‘honin’ and ‘honin-zisin’, ‘Taro-honnin’ can be regarded as a potential problem. “Problematic” here means that the behavior of ‘honin’ in ‘Taro-honnin’ could be different from what the Katada system predicts about this nominal expression. One possible reason for such a difference could be that it represents a new type of arch NP. First, ‘zibun’ and ‘honin’ are different in that ‘Taro-honnin’ is a legitimate expression while ‘*Taro-zibun’ is impossible. Second, -zisin and -‘honin’ are different in that the former can never be an independent lexical item while the latter can. This means that ‘-honin’ in ‘NP-honin’ can be a different type of Japanese reflexive, belonging to neither the ‘zibun’ type nor the ‘zibun-zisin’ type (nor the ‘kare-zisin’ type). Thus, these structural differences could result in a deviation from the behavior predicted for ‘honin’ by the Katada’s system.

Of course, it has to be pointed out that to classify this nominal expression (namely ‘Taro-honnin’) as an anaphor or even a kind of reflexive could be problematic, since Taro is definitely an R-expression. (An argument related to R-expression will be examined later in this paper.) Also, it could be regarded as unfair to include ‘Taro-honnin’ in evaluating Katada’s system if this NP is regarded as nothing but an emphatic way of an R-expression Taro. The reservation is due to the fact that Katada (1991) limits her analysis only to non-emphatic uses.

Nevertheless, there seem to be at least two reasons to treat ‘Taro-honnin’ in the same framework as Katada’s framework for ‘zibun’, ‘zibun-zisin’, and ‘kare-zisin’. The major reason is that at least the ‘honin’ part of ‘Taro-honnin’ seems to have too many features in common with ‘-zisin’ of ‘zibun-zisin’ as well as ‘zibun’ as a lexical NP to deny any potential relationships among them. Therefore, it is worthwhile attempting to treat “-honin” in ‘Taro-honnin’ in a unified framework in which all these mutually related expressions are treated in a somewhat integrated manner.

Another related reasons is that “-zisin” in ‘zibun-zisin’ and ‘kare-zisin’ are treated as a kind of anaphorizer in Katada (1990), (1991). Similar to this, -‘honin’ can be regarded as another anaphorizer/pronominalizer (see Sportiche’s (1986) approach.) Just as -zisin itself does not mean anything without an antecedent, -‘honin’ itself does not mean anything without an antecedent. For these reasons, ‘Taro-honnin’ will be investigated as a test case of the applicability of Katada’s system to other similar expressions.

5.2. The Problematic cases of 'Taro-honnin'

As stated before, the core problem is as follows: (A) The Katada system assumes that [+operator] expressions such as 'zibun' and 'honnin' undergo raising unless other unsatisfied conditions prevent them from doing so. (B) As for such conditions, the Katada system mainly uses (a) the existence of c-commanding antecedents for the raised element at the final landing site, and (b) the appropriately governed trace left at the original place of 'honnin'. (C) Putting (A) and (B) together, 'honnin' in 'Taro-honnin' has to be raised since neither B(a) nor B(b) seem to prevent its raising. (D) Yet, 'Taro-honnin' should not be raised since 'honnin's antecedent clearly seems to be Taro. (E) Thus, the Katada system cannot explain the data provided by 'honnin'.

The following sentences illustrate these points.

- (11) Ziro-GA Taro-honnin-O hihan-sita.
 Ziro_i-SB Taro_j-self_{*i/j}-DO blame-PAST

Ziro blamed Taro SELF.

- (12) * Taro-GA Taro-honnin-O hihan-sita.
 Taro_i-SB Taro_j-self_{*i/j}-DO blame-PAST

Taro blamed Taro-SELF.

- (13) ?* Taro_i-ga [Ziro_j-ga Taro_k-honnin_{?*i/*j/k}-o hihan-sita
 Taro_i-SB Ziro_j-SB Taro_k-SELF_{?*i/*j/k}-DO blame-PAST

to] itta.

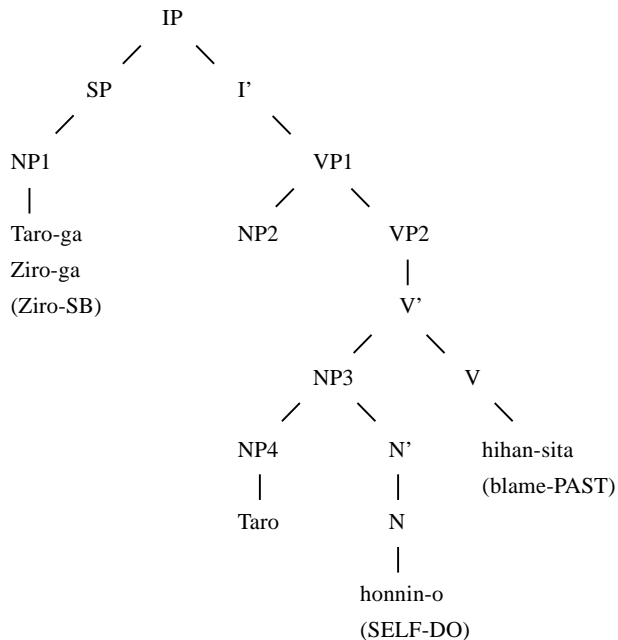
that said.

Taro said that Ziro blamed Taro-SELF.

Sentence (11) is fine according to Katada's system. In this sentence, the only possible antecedent for 'honnin' is Ziro if 'honnin' were raised to the VP adjoined position. This is because the Spec of IP is the only NP which is high enough to c-command the raised 'honnin'. However, Ziro is clearly not the most suitable antecedent since 'Taro-honnin's 'honnin' is obviously referring to Taro himself. In other words, there is no c-commanding antecedent for the raised 'honnin'. Thus, the un-

desirable raising can not take place.

Figure 3. The structural representation of sentences containing Taro-honnin



On the other hand, Sentence (12) is a problematic case according to the Katada system. Katada's system relies on the availability of c-commanding antecedents for raised operators and the avoidance of a possible ECP violation. The former condition is satisfied even if the 'honnin' part of 'Taro-honnin' is raised to the VP adjoined position (NP2 in Figure 3.) just like 'zibun' in 'zibun-zisin'. The 'honnin' at the VP adjoined position (NP2) would be still c-commanded by Taro (NP1) of the matrix clause. As long as this Taro and Taro (NP4) in 'Taro-honnin' is assumed to be the same person, Taro at the higher place can still be regarded as a proper antecedent for the 'honnin' raised at the VP adjoined position (NP2).

Similarly, the latter condition of an ECP violation would be met because according to Katada's system the VP adjoined NP(NP2), to which 'honnin' in 'Taro-honnin' would be raised, has already been defined as a safe position in terms of potential ECP violation. The main reason for the safety of this position lies in Katada's interpretation of the definition of the barriers. According to her system, up until this NP, neither the original VP dominating the 'Taro-honnin' nor the NP

'Taro-honnin' including the trace of 'honnin' would work as a barrier against the antecedent government of the raised 'honnin'.

In this way, Sentence (12) would satisfy the two conditions by which the Katada system explains the different characteristics of the three Japanese reflexives. Consequently, Sentence (12) should be regarded as a grammatical sentence on condition that Katada's system can be applied to this reflexive.

However, it is clear to native speakers' that Sentence (12) is less appropriate than Sentence (11), though the degree of illegality may vary among individuals. This means that Katada's system at least needs some improvement if the system is expected to incorporate 'Taro-honnin' type reflexives into the range of its theoretical coverage.

6. Specifier approach

6.1. Special status of the Specifier approach

One such improvement might be obtained through the special nature of specifiers. (Hereafter, the Specifier approach). Roughly speaking, this approach claims that the legality of sentences like (10) is not because every NP adjoined to the VP can give antecedent government to the trace left at the original position of 'zibun' in 'zibun-zisin', but because the trace is at the Spec of IP position, which is transparent with regard to the outside government. Thus, the trace at the 'zibun' in 'zibun-zisin' can be governed by the raised 'zibun' as an antecedent governor from the VP adjoined position. On the other hand, the trace of 'honnin' in 'Taro-honnin' cannot be governed by the raised 'honnin' as an antecedent governor. This is because the 'honnin' in 'Taro-honnin' is not at the Spec of an NP but at the head of NP. Therefore, as long as the Spec of NP (and IP) is regarded as a special position, as explained above, Sentences like (10) are grammatical while Sentences like (12) are not.

(14) I believe [John to be clever].

One supportive argument for the Specifier approach is that the special status of specifiers of NP (and IP) is not limited to this phenomenon. One such special status of specifiers can be seen in a phenomenon known as Spec-Head agreement.

Another more relevant example is the exceptional case marking (see (14)). In Sentence (14), ‘John’ is receiving a CASE from ‘believe’ in spite of the existence of IP between ‘believe’ and ‘John to be clever’. This kind of exceptional case marking is not possible if ‘John’ is not at the Spec of the IP position. As these examples show, giving specifiers a special status does not seem to be limited to the situation described as in the case of ‘Taro-honnin’.

6.2. Some deficiencies of the Specifier approach

Utilizing the difference of the position of ‘zibun’ in ‘zibun-zisin’ (at the Spec of the NP) and -‘honnin’ in ‘Taro-honnin’ (at the head of the NP), the Specifier approach seems to successfully elucidate the difference between sentences like (11), (12), and (10). They are repeated here as (15), (16), and (17), respectively.

(15) Ziro-GA Taro-honnin-O hihan-sita.
 Ziro_i-SB Taro_j-self_{*i/j}-DO blame-PAST
 Ziro blamed Taro SELF.

(16) * Taro-GA Taro-honnin-O hihan-sita.
 Taro_i-SB Taro_j-self_{*i/j}-DO blame-PAST
 Taro blamed Taro-SELF.

(17) Taro_i -ga [Ziro_j -ga honnin-zisin_{i/j/*k} -o Hanako_k -ni
 Taro_i -SB Ziro_j -SB self_{i/j/*k} -DO Hanako_k -IO
 syokai-sita to] itta.
 introduce-PAST that said

Taro said that Ziro introduced SELF-SELF to Hanako

The Specifier approach, however, has the following deficiencies. Besides being an additional stipulation to Katada’s system, a more serious problem is that it cannot explain sentences like the following:

(18) Taro-ga [_{NP} [_{AP}okubyona] [_{NP}zibun-o]] hihansita.
 Taro-SB coward SELF-DO blame-PAST
 Taro blamed coward SELF.

This sentence is a perfectly grammatical one. Yet, 'zibun' in this sentence is now at the head of NP as the direct object. This means there is no locational difference between Sentence (18) and (16) with regard to specifier/ head position. Therefore the specifier approach would wrongly predict Sentence (18) as well as Sentence (16) to be grammatical sentences.

Note that the trace of NP ('Taro-honnin') and that of NP ('kako-NO zibun') would be both lexically governed by VP if these big NP were raised as [+operator] item. Since there is no difference between sentence (16) and (18) on this point, the Specifier approach cannot be saved by this line of argument either.

7. R-expression approach

7.1. R-expression approach

The other alternative solution is what the present author calls the R-expression approach. This approach focuses on a fact which has been only briefly touched upon in the whole argument so far. That is, it is an undeniable fact that 'Taro-honnin' as a whole is an R-expression. Being an R-expression, 'Taro-honnin' has to obey the binding condition C, which prescribes that any R-expression must be free without setting any limit on its governing category.

In terms of the binding condition C, sentence (16) is illegal because 'Taro-honnin' at the lower clause is coindexed with Taro at the specifier of the matrix clause. Besides that, sentence (15) is legal because there is no coindexing antecedent for 'Taro-honnin' in it. Sentence (18) also imposes no problem since there is no R-expression in it providing that 'kako-NO zibun' as a whole is a Japanese reflexives (either anaphor or pronominal, as explained in Sportiche, 1986). It should be noted that if we interpret 'kako-NO zibun' in sentence (18) as an R-expression, then this sentence would be predicted to be illegal based on condition C of the binding theory. Nevertheless, any native speaker of Japanese would regard this sentence as a perfectly grammatical one. Based on this analysis, 'kako-NO zibun' in sentence (18) cannot be an R-expression.

So far, the R-expression approach seems to be better than the Specifier approach in at least two ways. First, it can explain the given data sentences (15), (16), and (18), while the specifier approach can not explain sentence (18). Second, the R-expression approach is more parsimonious than the specifier approach, since the

former requires no addition to the standard binding theory (and consequently to Katada's system) while the latter needs to stipulate the specifier as a special position.

7.2. Remaining problem with the R-expression approach

However, the R-expression approach is, unfortunately, not a perfect solution. Sentence (19) creates another problem. According to the R-expression approach, this sentence should be regarded as grammatical just like (16), because 'Taro-honnin' in (19) is coindexed with Taro in the same sentence. This is a clear violation of condition C. Therefore, Sentence 4 should be as illegal as Sentence 2. Nevertheless, it seems that these two sentences are different in the degree of their ungrammaticality.

- (19) ? Taro_i-ga [Ziro-ga [Saburo-ga Taro-honnin_i-o
Taro_i-SB Ziro-SB Saburo-SB Taro-SELF_i -DO
hihan-sita] to itta.] to itta.
blame-PAST that said that said

Taro said that Ziro said that Saburo blamed Taro-SELF.

Concretely speaking, however, both of the sentences are ungrammatical, Sentence (19) is somewhat less illegal than Sentence (16) according to native speaker's competence.

Furthermore, Japanese word order is far more flexible than English. When a scrambled version of (19) is examined, the different degree of the illegality between sentences (16) and (20) seems to widen.

- (20) ? [_{TOPIC} [_{TOPIC} Taro-honnin_i-o] [Saburo-ga hihan-sita to]
Taro-SELF-DO Saburo-SB blame-PAST
Ziro-ga itta to] Taro_i-ga itta.
Ziro-SB said that Taro-SB said

Taro said that Ziro said that Saburo blamed Taro-SELF.

Note that though a more grammatical translation of (20) is given above, the topicalization in original (20) would be roughly equivalent to something like

(“Taro-SELF, Saburo blamed”, Taro said that Ziro said.)

The R-expression approach should predict (20) to be ungrammatical just as it finds sentence (16) illegal. Such a prediction is inevitable because ‘Taro-honnin’ as an R-expression is still coindexed with Taro in (20) as well as in sentence (16). (Or Taro is coindexed with ‘Taro-honnin’ in (20)). Thus, (20) is another violation of the binding condition C. Native speaker’s competence, on the other hand, would judge that sentence (20) is far better than sentence (16). This fact tells us that the R-expression approach is not a perfect answer either.

The differentiation of illegality cannot be explained by the Specifier approach either. This is because (16) and (19) are the same from the view point of the relationship between the raised ‘honnin’ at the adjoined position and the trace left inside of ‘Taro-honnin’.

The differing degree of the ungrammaticality of the sentences might be explained by the physiological limitation of the memory. The distance between the Taro as the subject of the matrix clause and the inner most embedded clause might be the source of this differentiation. Even if formal syntax rejects both sentences as illegal, the difficulty of holding the subject in the working memory of the human brain may be the cause of the feeling that sentences (19) and (20) are less severely illegal. A psycholinguistic explanation of this kind, needless to say, needs thorough verifications through appropriate experiments.

8. Conclusion

The core problem of the present paper was the examination of Katada’s (1990) (1991) system on three Japanese reflexives as applied to another Japanese anaphor-like expression, ‘honnin’. Special attention was paid to NP-honnin represented by ‘Taro-honnin’. One of the conclusions reached by the analysis of sentences containing ‘Taro-honnin’ was that the Katada system was not able to account for the ungrammaticality of sentences like sentence (16).

This was due to the fact that sentences like (16) satisfy the two conditions which Katada’s system requires for grammatical sentences. Both conditions — the c-commanding antecedent and the avoidance of an ECP violation by the trace left at the raised item (in this case - ‘honnin’ in ‘Taro-honnin’) — were met, so the Katada system could not help but judge those sentences as grammatical in spite of the fact

that they were ungrammatical according to native speaker's competence.

In order to improve Katada's system, two approaches (of the Specifier approach and the R-expression approach) were proposed. The examination of the data found that the R-expression approach was better than the Specifier approach due to the wider coverage of the data sentences and the parsimonious nature of the approach. Finally, however, the R-expression approach turned out to imperfect since it could not account for the different degree of ungrammaticality between a sentence containing a coindexed R-expression and its scrambled version (see sentences (19) and (20). This problem alone suggests the necessity of further studies.)

Note

1. The theoretical framework of this paper has not incorporated Chomsky's newest work, in which mainly PF, LF, and their interfaces are concerned.

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