BINDING AND REFLEXIVES IN ENGLISH AND JAPANESE

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Contents

Acknowledgments iv

1 Introduction 1

2 Backgrounds: Binding Theory and Reflexivity 5
   2.1 Binding Theory: Chomsky (1981) ............................... 5
   2.1.1 Binding Principles ........................................... 5
   2.1.2 Empirical Problems within the Binding Theory ............. 8
   2.2 Reflexivity: Reinhart and Reuland (1993) .................... 10
      2.2.1 Another Approach to Anaphors ............................ 10
      2.2.2 Explanations for the Binding Theory Problems .......... 16

3 Japanese Reflexives 19
   3.1 Basic Properties of Japanese Reflexives ..................... 19
      3.1.1 Basic Properties of Zibun ............................... 21
      3.1.2 Basic Properties of Zibun-zisin .......................... 24
      3.1.3 Basic Properties of Kare-zisin ............................ 25
   3.2 Syntactic Analyses of Zibun Binding .......................... 27
      3.2.1 Zibun as a Pronoun ....................................... 28
      3.2.2 Zibun as an Anaphor ..................................... 29
      3.2.3 Zibun based on Reinhart and Reuland (1993) .............. 30
   3.3 Syntactic Analyses of Zibun-zisin Binding .................... 32
      3.3.1 Unified Analysis of the Three Reflexives .................. 32
      3.3.2 Zibun-zisin based on Reinhart and Reuland (1993) .......... 33

4 Reflexivity in Japanese 37
   4.1 Principles and Conditions ................................. 37
4.2 Reflexive-marking in Japanese ............................................. 39
  4.2.1 Reflexivizer in Japanese ............................................. 39
  4.2.2 Inherent Reflexivity .................................................. 42
  4.2.3 Inherently Reflexive Predicates .................................... 44
4.3 Properties of Predicates .................................................. 47
  4.3.1 Doubly Listed Predicates ............................................. 47
  4.3.2 Non-reflexive Predicates ........................................... 52
4.4 Zibun and Zibun-zisin in Non-argument Position ....................... 55
  4.4.1 Analysis by Aikawa (1993) .......................................... 56
  4.4.2 Analysis based on Reinhart and Reuland (1993) .................. 57

5 Concluding Remarks ...................................................... 61

Bibliography ............................................................... 66
Chapter 1  Introduction

The term ‘reflexive’ is usually associated with so-called ‘reflexive anaphors.’ For example, *himself* and *herself* are reflexive anaphors in English.

(1) John$_i$blames himself$_i$.

(2) John$_i$blames him$_j$.

In (1), the reflexive anaphor *himself* shares the same reference with *John*, as indicated by the index $i$. In (2), in contrast, the antecedent of the pronoun *him* is not *John*. Thus we may ask the question: what causes such a difference in the antecedents? The clear contrast between (1) and (2) is that the antecedent *John* of the anaphor *himself* appears inside the same sentence in (1), while the pronoun *him* does not have an antecedent inside the same sentence in (2). Nevertheless, pronouns may have their antecedents in the same sentence, as is shown in (3).

(3) Bob$_j$thinks that [John$_i$blames him$_{i/j}$].

(4) Bob$_j$thinks that [John$_i$blames himself$_{i/j}$].

In (3), *Bob* can be the antecedent of *him* though *Bob* and *him* are inside the same sentence. In contrast, *Bob* in (4) is in the same sentence with *himself*, but *Bob* cannot be the antecedent of *himself*. Does this observation imply that reflexive anaphors must have antecedents inside their local domains and pronouns must have antecedents outside their local domains?

To regulate the distribution of anaphors and pronouns, Chomsky (1981) develops Principles A and B in the grammar framework of Government and Binding. Principle A states that an anaphor is bound in its binding category and Principle B says that a pronominal is free (i.e., not be bound) in its binding category. We will see the details of Chomsky’s (1981) theory in 2.1.1.

Even if we agree that Chomsky’s Principle A regulates the distribution of reflexive anaphors, Principle A cannot account for all phenomena concerning reflexives. Let us consider (5).

(5) John behaves.

Although it does not have a reflexive anaphor, (5) induces reflexive interpretation. From this observation, we can conclude that reflexive reading is not solely due to reflexive anaphors. The presence of reflexive anaphors is not a necessary condition for a reflexive interpretation. Then what induces
the reflexive interpretation in (5)? When do reflexive anaphors occur and when do they not? We need a theory, other than Principle A, to account for reflexive phenomena.

Reinhart and Reuland (1993) propose a new approach to reflexives. Their theory gives an answer to the questions that we have asked above. Reinhart and Reuland (hereafter R&R) insist that a predicate and its coargsments constitute a reflexive domain, and they focus on the domain. In addition, they insist that the properties of predicates affect the reflexive interpretation and the distribution of anaphors. Under their analysis, there are three kinds of predicates. The first kind is inherently reflexive. The second has two properties: both reflexive and non-reflexive. And the third is non-reflexive. Moreover, R&R suggest that anaphors are classified into two types based on their properties. One type of anaphor has the ability to compensate for the lack of reflexivity of a non-reflexive predicate if used as the argument of the predicate. R&R call these anaphors ‘reflexivizers.’ The other kind of anaphor does not have this property. R&R suggest that inherently reflexive predicates take non-reflexivizer anaphors, while inherently non-reflexive predicates take reflexivizer anaphors. Predicates that have the dual property take reflexivizer anaphors if they are used as non-reflexives, and they take non-reflexivizer anaphors when used as reflexives. We will see R&R’s theory in 2.2.1.

Next we will consider reflexive elements in Japanese. As we have observed in (1) and (2), English has one type of reflexive anaphor and one type of pronoun. Does Japanese have the same distinction?

(6) John\textsubscript{1} -ga kare\textsubscript{3} -o semeta.
\qquad \text{-NOM him} \quad \text{-ACC blamed}
\qquad ‘John blamed him.’

(7) a. John\textsubscript{1} -ga zibun\textsubscript{1} -o semeta.
\qquad \text{-NOM} \quad \text{-ACC blamed}
\qquad ‘John blamed himself.’

b. John\textsubscript{1} -ga zibun-zisin\textsubscript{1} -o semeta.
\qquad \text{-NOM} \quad \text{-ACC blamed}
\qquad ‘John blamed himself.’

c. John\textsubscript{1} -ga kare-zisin\textsubscript{1} -o semeta.
\qquad \text{-NOM} \quad \text{-ACC blamed}
\qquad ‘John blamed himself.’

Japanese has pronouns that behave in parallel with English pronouns. *Kare* ‘him’ in (6) is a pronoun in Japanese. The reference of *John* and *him* must be different in the English example (2);
similarly, the reference of the subject John and the object kare ‘him’ must be different in Japanese. Japanese has three kinds of ‘reflexive elements’ as in (7): zibun, ziben-zisin and kare-zisin. The literal translation of these three are ‘self,’ ‘self-self’ and ‘he-self.’ The reason we use the term ‘reflexive elements’ rather than ‘reflexive anaphors’ is that the grammatical status of zibun (namely, whether it is a pronoun or an anaphor) is controversial. We will argue that the status of ziben-zisin depends on that of zibun, because ziben-zisin is a compound made of zibun and -zisin ‘-self.’ We call zibun and ziben-zisin ‘reflexive elements’ at this point. That kare-zisin is an anaphor is generally accepted without controversy. We use kare-zisin as the representative of a kind of compound anaphor that consists of a pronoun and the -zisin ‘-self’ element. Kare-zisin is composed of the pronoun kare- ‘he’ and -zisin. If the pronoun is kanojo ‘she,’ the reflexive anaphor is kanojo-zisin ‘herself.’

As will be argued in Chapter 3, these reflexive elements: zibun, ziben-zisin and kare-zisin, have three contrasting functions, and they fall into different categories. English, however, has a counterpart of only one of these three categories. Hence it seems impossible for a single theory to account for reflexive elements in both English and Japanese. For, if a theory assumes that the language has only one category of reflexive anaphors, as is the case in English, then how can it deal with the two other categories in Japanese? Moreover, this categorization of reflexive anaphors or elements is not the only task of an adequate account of reflexives. As we have seen in (5), reflexive interpretations are not fully determined by reflexive anaphors or elements. Therefore we also have to clarify what else makes interpretation reflexive.

As mentioned above, R&R classify predicates into three types based on their inherent properties, and categorize reflexive anaphors into two kinds based on their properties. Their classification of reflexive anaphors will apply to zibun and ziben-zisin, and Japanese predicates may also be classified into three kinds. R&R insist that the distribution of reflexive elements as arguments of predicates depends on the inherent properties of the predicates. Reflexive interpretations are determined by the reflexivity that predicates and reflexive anaphors as their arguments induce. We will see that R&R’s analysis will apply to Japanese reflexives in Chapter 4. We will discuss the Conditions proposed by R&R to account for zibun and ziben-zisin in non-argument positions as well as those in argument positions.

The goal of this thesis is to show that the analysis on reflexives proposed by Reinhart and Reuland (1993) can give a better account of reflexives in Japanese, especially for the binding of reflexive elements zibun and ziben-zisin, than the analysis in the Binding Theory developed by Chomsky (1981). We aim to demonstrate that the binding of zibun and ziben-zisin depends on both the inherent properties of predicates that occur with these elements and the positions where the elements occur. In addition, we will suggest that the inherent properties of predicates affect reflexive
interpretations and the distribution of anaphors in Japanese.

In Chapter 2, as a background for our discussion in later chapters, we will introduce and compare the two theories: the Binding Theory by Chomsky (1981) and Reinhart and Reuland's (1993) theory. In Chapter 3, we will first investigate the basic properties of the Japanese reflexive elements: zibun, zibun-zisin and kare-zisin. Then, we will overview three existing accounts for these elements. The first two accounts are based on the Binding Theory, one regarding zibun as a pronoun, the other regarding it as an anaphor. The third account also regards zibun as an anaphor, but it is based on the theory proposed by R&R. Finally, in Chapter 4, we will argue that Reinhart and Reuland’s (1993) theory gives a better account of Japanese reflexives than the Binding Theory.
Chapter 2  Backgrounds: Binding Theory and Reflexivity

2.1  Binding Theory: Chomsky (1981)

2.1.1  Binding Principles
The Binding Theory is one of the six subsystems of core grammar framework of the Government and Binding (hereafter GB) developed in Chomsky (1981). The Binding Theory is concerned with the relations of nominal expressions to possible antecedents. The antecedent binds a nominal, or to put it the other way round the nominal is bound, and this determines the interpretation of the nominal. A nominal that is not bound is free. (8) - (10) show the standard definitions of bind, c-command and coindexing, respectively.

(8)  \( \alpha \) binds \( \beta \) if and only if \( \alpha \) c-commands \( \beta \) and \( \alpha \) and \( \beta \) are coindexed.

(9)  \( \alpha \) c-commands \( \beta \) if \( \alpha \) does not dominate \( \beta \) and every \( \gamma \) that dominates \( \alpha \) dominates \( \beta \).

(10)  Two NPs are said to be coindexed if they have the same index.

Within the GB framework, it is assumed that nominal expressions fall into some categories depending on the two features: [Anaphor] and [Pronominal]. An element marked [+Anaphor] functions referentially only in interaction with its antecedent in the same sentence; the reference of an element with [+Pronominal] may be, but is not always, determined by an antecedent. By the two properties, Chomsky classifies nominal expressions into some types. As in (11), anaphors are [+Anaphor] and [-Pronominal], and pronominals are [-Anaphor] and [+Pronominal]. The nominals that have [-Anaphor] and [-Pronominal] are R-expressions.

(11)  (i)  anaphors: [+Anaphor] and [-Pronominal]

(ii)  pronominals: [-Anaphor] and [+Pronominal]

(iii)  R-expressions: [-Anaphor] and [-Pronominal]

Chomsky (1981: 188) proposes the principles of binding that regulate the relation between nominals and their possible antecedents as in (12). These principles are well-known as the Binding Conditions, but we choose to use the term principle instead of condition in this thesis to distinguish
them from other conditions proposed by Reinhart and Reuland (1993) that we will examine in the sections that follow.

(12) a. Principle A: An anaphor is bound in its governing category.
   b. Principle B: A pronominal is free in its governing category.
   c. Principle C: An R-expression is free.

Here, we need to understand the notion of the governing category (hereafter GC). There are two versions of the definition proposed in Chomsky (1981). One is (13a) in which the core notion of GC is defined as the minimal NP or S containing anaphors, and the other is (13b) explained in terms of the notion SUBJECT and accessibility. The definition of SUBJECT is (14a), and (14b) shows the potential SUBJECTs. Accessibility is defined as in (15).

(13) a. \( \alpha \) is a governing category for \( \beta \) if and only if \( \alpha \) is the minimal category containing \( \beta \), and a governor of \( \beta \), where \( \alpha = \text{NP or S} \)  

    \( \text{(Chomsky 1981: 188)} \)

   b. \( \beta \) is a governing category for \( \alpha \) if and only if \( \beta \) is the minimal category containing \( \alpha \), a governor of \( \alpha \), and a SUBJECT accessible to \( \alpha \)  

    \( \text{(Chomsky 1981: 211)} \)

(14) a. The SUBJECT of a category is its most prominent nominal element (including the agreement features on the verb in finite clauses).
   b. (i) Agr (agreement element) 
      (ii) subject in an ordinary sense 
         (a) the subject of a finite and an infinitive clause 
         (b) PRO subject of an infinitive clause 
         (c) the subject of an NP

(15) a. \( i \)-within-\( i \) condition
   \( *[ \gamma \ldots \delta \ldots ] \), where \( \gamma \) and \( \delta \) bear the same index.
   b. \( \alpha \) is accessible to \( \beta \) if and only if \( \beta \) is in the c-command domain of \( \alpha \) and assignment to \( \beta \) 
      of the index of \( \alpha \) would not violate (15a).  

    \( \text{(Chomsky 1981: 212)} \)

Chomsky finally simplifies the definition of GC given in (13b) as (16), dropping the reference to government and introducing the obvious change in terminology, binding category (hereafter BC).
(16) \( \beta \) is a binding category for \( \alpha \) if and only if \( \beta \) is the minimal category containing \( \alpha \) and a SUBJECT accessible to \( \alpha \). \hspace{1cm} \text{(Chomsky 1981: 220)}

Correspondingly, Principles A and B of the Binding Theory (12) are restated as in (17), and a new notion for BC is added as in (18).

(17) a. Principle A: An anaphor is bound in its binding category.

b. Principle B: A pronominal is free in its binding category.

(18) A root sentence is a binding category for a governed element. \hspace{1cm} \text{(Chomsky 1981: 220)}

From now on, we will take (17) as the Binding Principles in the Binding Theory.

Now that we know the Principles of the Binding Theory (17) and the set of definitions such as (14), (15) and (16), let us examine how these can regulate anaphoric relations with some concrete examples.

(19) a. John\(_i\) hates himself\(_i\).

b. *John\(_i\) hates him\(_i\).

(20) a. *John\(_i\) thinks that Mary hates himself\(_i\).

b. John\(_i\) thinks that Mary hates him\(_i\). \hspace{1cm} \text{(Reuland & Everaert 2001: 637 (9))}

c. [Mary\(_i\)'s father]\(_j\) hates herself\(_j\). \hspace{1cm} \text{(Reuland & Everaert 2001: 636 (8b))}

d. [Her\(_j\) father]\(_j\) hates Mary\(_j\).

e. [Her\(_j\) father]\(_j\) hates Mary\(_j\).

(22) a. *Mary\(_i\) hates Mary\(_j\).

b. *Mary\(_i\) hates Mary\(_j\)'s father.

In (19), the BC of each himself and him is the whole sentence that contains the nominal and a SUBJECT accessible to it (in this case, Agr). Himself in (19a) is bound by the antecedent John in its BC, so Principle A rules in the anaphor. On the other hand, him in (19b) is not allowed. The
pronoun *him* is bound by the antecedent *John* within its BC, so Principle B is not satisfied. The BCs in (20) are the embedded clauses. In (20a), Principle A rules out *himself*, and Principle B rules in *him* in (20b). (19) and (20) show the complementary distribution between anaphor and pronominal. The BCs of the anaphors in (21) are the whole sentences. In (21a), the anaphor *himself* is bound by the antecedent *Mary's father* within its BC, so Principle A allows the binding of the anaphor by the antecedent. In (21b) with the same antecedent *Mary's father* as (21a), the anaphor herself is not bound. Therefore, (21b) is ruled out by Principle A. In (21c), the antecedent *Mary's father* does not bind the pronoun *her* in the BC, so Principle B rules in (21c). (21d) and (22) illustrate the effect of Principle C. The R-expression *Mary* in (21d) is not bound by the pronoun *her*, so the binding does not violate Principle C, and (22) shows that the R-expression *Mary* must be free no matter whether their antecedents are outside or inside of their BC.

2.1.2 Empirical Problems within the Binding Theory

The Principles in the Binding Theory (17) provide a simple description for binding relations and explain the basic complementarity between anaphors and pronouns. There are, however, some empirical problems that have arisen with the standard concept of the Binding Theory, and we cannot help exploring alternative ideas of binding and anaphors. In the remainder of this section, we will study some empirical issues in the Binding Theory Principles. We will discuss some of them in 2.2.2.

First, (23) indicates the absence of complementary distribution between anaphors and pronouns, though Principles A and B predict the complementarity.

(23) John\(_i\) saw a snake [NP near [himself\(_i\) / him\(_i\)]].

(24) John\(_i\) saw [NP pictures of [himself\(_i\) / him\(_i\)]].

If the PP in (23) and the NP in (24) are assumed to be the BC for *himself* and *him*, the occurrence of *himself* with its antecedent outside the BCs should be ruled out due to Principle A. On the other hand, if the PP or the NP is assumed not to be the BC, the occurrence of *him* that with its antecedent inside the BCs would violate Principle B. Chomsky himself, who defines Principle A and B, observes that pronominals in locative PPs may be bound in their BCs violating Principle B, though he does not refer to NPs. These examples show that there are some contexts where the complementarity between anaphors and pronouns breaks down.

Second, there are a variety of contexts in which anaphors are free in their BCs violating Principle A. As (25a) and (25b) illustrate, there are many cases that first and second person SELF-anaphors (anaphors that morphologically contain the -self part) occur without antecedents in the same sentence.
(25) a. There were five tourists in the room apart from myself.
   b. Physicists like yourself are a godsend.
   c. Max, boasted that the queen invited Lucie and himself for a drink.

(Reuland & Everaert 2001: (27a-c))

Principle A cannot explain why the reflexive anaphors in (25) are allowed. This usage is known as logophoric, which is assumed to interact with ‘point of view.’ These anaphors are one type of discourse anaphor.

Third, there are cases where focus anaphors, the other type of discourse anaphors, occur. This usage has been labeled emphatic. As focus, a free SELF-anaphor can occur even in an argument position at S-structure, though such examples are harder to find and are more marked.

(26) a. This letter was addressed only to myself.
   b. Bismarck’s impulsiveness has, as so often, rebound against himself.

(Reinhart & Reuland 1993: (27a/c))

Fourth, there are some cases where Principle B cannot account for the difference of grammatical between two structurally parallel sentences. In (27), the structure of (a) and (b) sentences is parallel, but only the (a) sentence is grammatical and the (b) sentence is not allowed.

(27) a. We elected me.
   b. *We voted for me.

(Reuland & Everaert 2001: (29a-b))

The ill-formedness of (27b) shows that we need more than just a notion of coindexing to explain a Principle B-like effect.

Fifth, there are crosslinguistically many anaphors that take antecedents essentially beyond their BCs. These cases are called as long-distance binding (hereafter LD-binding). They are accounted for as relaxations of the notion of BC, or the anaphors involved are exceptionally classified as long-distance anaphors. Principles A and B cannot explain these situations.

(28) a. Jon, bad oss hjelpe seg,. (Norwegian)
   ‘John asked us to help him.’
   b. Bill, -wa [John -ga zibun , -o semeta to] omot-ta. (Japanese)
   ‘Bill thought that John blamed him.’

(Reuland & Everaert 2001: (28a-b))

These empirical problems illustrate that we need to have alternative ways to capture the notion of anaphor and binding.
2.2 Reflexivity: Reinhart and Reuland (1993)

2.2.1 Another Approach to Anaphors

Reinhart and Reuland (1993) propose that there are two modules regulating the distribution of anaphors and pronouns: (i) the domain of reflexivization is defined over predicates without making reference to syntactic structure, (ii) configurational effects are due to chain formation.

First of all, one of the characteristic points of R&R’s theory is their claim that there is no simple distinction between anaphors and pronouns. They describe two properties [SELF] and [R] that classify NPs into some groups. If an element is marked [+SELF], it is able to reflexivize the predicate. To put it another way, the element has a reflexivizing function that imposes identity between coarguments of a predicate. We will use the term reflexivizer to refer to that kind of element with the reflexivizing function. When an element is marked [+R], ‘R’ represents ‘referentially independent’, which means it is fully specified for phi-features.

R&R partition NPs into some classes by the [SELF] and [R] properties. They introduce two types of anaphors: SELF-anaphors and SE(Simple Expression)-anaphors. SELF-anaphors are morphologically complex anaphors such as *zichzelf* in Dutch or *sichselbst* in German. On the other hand, SE-anaphors are morphologically simple. *Zich* in Dutch or *sich* in German are SE-anaphors. These two anaphors show a difference regarding the two properties: [SELF] and [R]. SELF-anaphors are [+SELF, –R] and they can function as reflexivizers, while SE-anaphors, with the [–SELF, +R] property, cannot function as reflexivizers. NPs with [–SELF, +R] properties are pronouns and R-expressions. In this thesis, we will focus on anaphors and pronouns, so we will not pay attention to R-expressions. Here, we should notice that R&R compare anaphors and pronouns with a three-way distinction: SELF-anaphors, SE-anaphors and pronouns. By contrast, the Principles in the Binding Theory distinguish them in only two way: anaphors and pronouns, as we have seen in (17). This contrast is one of the characteristics that cause the differences between R&R’s theory and the Binding Theory. (29) presents the distinction among the three kinds of anaphors and pronouns that R&R propose.

\[
\begin{array}{|c|c|c|c|}
\hline
 & \text{SELF-anaphor} & \text{SE-anaphor} & \text{Pronoun} \\
\hline
[\text{SELF}] & + & - & - \\
\hline
[R] & - & - & + \\
\hline
\end{array}
\]

Now, let us observe the sentences in Dutch (30) - (34) that illustrate the distribution of SE-anaphors and SELF-anaphors.
(30) Max$_i$ gedraagt [zieh$_i$ /*ziehzelf$_i$].
    behaves [SE /*SELF]
    ‘Max behaves.’

(31) Max$_i$ haat [ziehzelf$_i$ /*zieh$_i$].
    hates [SELF /*SE]
    ‘Max hates himself.’

(32) Max$_i$ wast [zieh$_i$ / ziehzelf$_i$].
    washes [SE / SELF]
    ‘Max washes himself.’

(33) Max$_i$ legt het boek achter zieh$_i$.
    puts the book behind SE
    ‘Max puts the book behind him.’

(34) Max$_i$ voelde [zieh$_i$weggliden].
    felt [SE slide away]
    ‘Max felt him slide away.’

(Reuland & Everaert 2001: 655-656)

SE-anaphors appear as a bound argument of a verb as in (30) and (32), a bound argument of a locative or directional PP as in (33), and a bound subject of an Exceptional Case-marking (ECM) construction as in (34). SELF-anaphors are allowed as a bound argument of a verb as in (31) and (32). What makes the contrastive distribution between SE-anaphors and SELF-anaphors in (30) - (32)?

As we have seen in (29), only the SELF-anaphor functions as a reflexivizer, and the SE-anaphor does not. In (30), only the SE-anaphor zieh is permitted and the SELF-anaphor ziehzelf is not. On the other hand, only the SELF-anaphor ziehzelf is allowed and the SE-anaphor zieh is not accepted in (31). These contrasting behaviors of SELF-anaphors and SE-anaphors lead us to predict that there are two types of predicates: reflexive and non-reflexive, depending on their inherent property. Predicates that are labeled as lexically reflexive require SE-anaphors as their arguments. These predicates have reflexivity inherently, so they call for anaphors that do not have the property to reflexivize a predicate. To the contrary, predicates that take SELF-arguments are inherently non-reflexive. They require SELF-anaphors that function as reflexivizers as their arguments to compensate for the lack of inherent reflexivity in the predicates. The inherently reflexive predicate gedraagt ‘behave’ in (30) needs the SE-anaphor zieh, while the non-reflexive predicate haat ‘hate’ in (31) requires the SELF-anaphor ziehzelf, a reflexivizer. Ziehzelf reflexivizes haat. What gives rise to reflexivity is
the property of predicates that is licensed inherently or such that it takes a SELF-anaphor as its argument. We will refer to this licensing either by the inherent reflexive property of the predicate or by taking SELF-anaphors as reflexive marking.

As we have seen, the distribution of the two types of anaphors follows from the properties of predicates. Coindexing, however, also relates to the reflexivity. Coindexing does not cause a predicate to be reflexive as the ungrammatical cases in (30) and (31) show. Coindexing just marks a pair or set of coindexed elements as reflexive.

R&R compose a set of definitions given in (35). These definitions contain the notions that we have studied: reflexive in (35c) and reflexive marked in (35d). Moreover, new notions syntactic predicate and semantic predicate in (35a) and (35b) are also included. The distinction between syntactic predicate and semantic predicate is necessary to comprehend R&R’s analysis. We will see the distinction later with more concrete examples.

(35) a. The syntactic predicate of (a head) P is P, all its syntactic arguments, and an external argument of P (subject). The syntactic arguments of P are the projections assigned theta-role or Case by P.

b. The semantic predicate of P is P and all its arguments at the relevant semantic level.

c. A predicate is reflexive iff two of its arguments are coindexed.

d. A predicate (of P) is reflexive-marked iff either P is lexically reflexive or one of P’s arguments is a SELF-anaphor.

(Reinhart & Reuland 1993: 678)

With these conditions, we can now formulate R&R’s conditions on reflexive predicates as follows.

(36) a. Condition A: A reflexive-marked syntactic predicate is reflexive.

b. Condition B: A reflexive semantic predicate is reflexive-marked.

(Reinhart & Reuland 1993: 678)

Conditions A and B should be read as conditionals: equivalent to ‘If a syntactic predicate is reflexive-marked, then the predicate is reflexive’ and ‘If a semantic predicate is reflexive, then the predicate is reflexive-marked.’ As these are material implications, the whole statement holds true if the antecedent clause (if-clause) is not true, regardless of the truth of the consequent clause. If antecedent clauses are false, the Conditions vacuously rule in the whole sentences that contain the clauses. In other words, if a predicate is not reflexive-marked, then Condition A vacuously rules in the sentence that contains the predicate, and if a predicate is not reflexive, Condition B vacuously applies.
Let us reexamine the example sentences (30) - (34) with R&R’s Conditions. In (30), the predicate *gedraagt* ‘behaves’ is lexically reflexive, so it is reflexive marked as the definition (35d) says. Moreover, its arguments *Max* and *zich* are coindexed, so it is reflexive according to the definition (35c). Therefore, Conditions A and B are satisfied. The predicate *haat* ‘hates’ in (31) is reflexive marked if the SELF-anaphor *zichzelf* is chosen, as the condition (35d) states. *Zich* is not allowed because the predicate would then be reflexive but not reflexive marked. The predicate in (32) *wast* ‘washes’ has two properties with regard to reflexivity, it is either lexically reflexive and non-reflexive. R&R call these kind of predicates ‘doubly listed predicates.’ If such a predicate of that kind functions as inherently reflexive, it takes a SE-anaphor *zich*. If a predicate is taken as non-reflexive, a SELF-anaphor *zichzelf* is required. In (33), the predicate is the preposition *achter* ‘behind’. Prepositions of locative and directional PPs form their own predicates. The predicate in (34) is the embedded verb *wegglijden* ‘slide away’. The predicates in (33) and (34) are not reflexive marked, so Condition A does not apply. Condition B does not apply either because their arguments are not coindexed and the predicates are not reflexive. Both Conditions vacuously rule in (33) and (34).

We have some problematic cases that Conditions A and B cannot account for. Condition B correctly rules out (37) and rules in (38a) and (39a), but it incorrectly rules in (38b) and (39b). What principle of grammar could be involved to explain the ungrammaticality of (38b) and (39b)?

(37)  
a. *Max* haat *zich*;
    hate SE

b. *Max* haat hem;
    him
    ‘Max hates himself.’

(38)  
a. Max gedraagt zich;
    behaves SE

b. *Max* gedraagt hem;
    him
    ‘Max behaves.’

(39)  
a. Max voelde [zich wegglijden].
    felt [SE slide away]

b. *Max* voelde [hem wegglijden].
    him
    ‘Max felt him slide away.’
    (Reuland & Everaert 2001: 660-661)
A crucial difference between *zich* and *hem* is that the pronominal *hem* is fully specified for phi-features, whereas the anaphor *zich* is underspecified, that is, it lacks a specification for number and gender. To give an explanation for these puzzling cases, R&R accept the notion of a syntactic chain (40) following Chomsky (1986a,b). That can be extended so as to include any appropriate sequence of coindexation.

(40) Generalized Chain definition

\[ C = (\alpha_1, \ldots, \alpha_n) \] is a chain iff \( C \) is the maximal sequence such that

i. there is an index \( i \) such that for all \( j \), \( 1 \leq j \leq n \), \( \alpha_j \) carries that index, and

ii. for all \( j \), \( 1 \leq j \leq n \), \( \alpha_j \) governs \( \alpha_{j+1} \)

Under the definition, all syntactic domains in which a moved NP can bind its trace instantiate A-chains. R&R argue that A-chains must obey the condition that their tail is underspecified for at least one phi-feature. In other words, what grammatical A-chains have in common is that the tail consists of [-R] NPs. They propose the Condition on A-chains as in (41) based on the definition (40). The Condition on A-chains is applied to the cases that Conditions A and B incorrectly rule in, and accounts for the ungrammaticality of these cases.

(41) A maximal A-chain \( (\alpha_1 \ldots \alpha_n) \) contains exactly one link -\( \alpha_1 \)- that is both +R and Case-marked.

(Reinhart & Reuland 1993: 696)

Here we return to the problematic cases (38) and (39) that Conditions A and B incorrectly rule in. The Condition on A-chains can rules them out properly. The predicate *gedraagt* ‘behave’ in (38) is inherently reflexive, so it needs an NP with the [-SELF] property as its argument. Though both the SE-anaphor and the pronoun are [-SELF], the pronoun *hem* that has the [+R] property is ruled out due to the Condition on A-chains as in (38b), whereas the SE-anaphor *zich* with the [-R] is allowed in (38a). In (39b), the pronoun *hem* with [+R] is an A-chain tail position, so the Condition on A-chains rules it out. The condition does not apply to (39a) because the SE-anaphor is [-R].

Moreover, we will have another case. R&R’s version of Conditions A and B cannot explain the difference of the acceptability in (42).

(42) a. Max criticized himself.

b. *Himself criticized [Max / him].

(Reinhart & Reuland 1993: 713)

A reflexive anaphor is in the subject position in a simple sentence as in (42b), because Condition B rules it in. The coarguments of the predicate *praised: herself* and *her*, are coindexed, so the predicate is reflexive. In addition, one of its arguments is SELF-anaphor, so the predicate is
reflexive-marked. Therefore, (42b) is incorrectly ruled in. The Condition on A-chains rules out (42b), because her is in the tail position of the chain. On the other hand, (42a) is correctly ruled in by only Condition B. As the coarguments are coindexed and one of the arguments is a SELF-anaphor, the reflexive predicate is reflexive marked in (42a).

The Condition on A-chains can also account for the ungrammaticality of the sentences that contain [+R] non-head chains in so-called ECM and ‘raising’ constructions such as (43).

(43) a. Max heard [himself criticize Lucie].

   b. Max expects [himself to pass the exam].

(Reinhart & Reuland 1993: (99)-(100))

The subject in ECM structures and small clauses is a syntactic argument of the matrix predicate, because it is assigned its Case by the matrix predicate. In (43), Max and himself are coarguments of the matrix predicates. As they are coindexed, Condition A rules in the sentences. However, (43a) and (43b) are simultaneously ruled out by Condition A. The anaphors himself are also syntactic arguments of the embedded predicates and reflexive-mark the predicates, but the predicates are not reflexive. R&R account for the grammaticality of (43) by proposing VP-raising of the lower predicates as in (44).

(44) a. Max [criticize\textsubscript{1}-hear\textsubscript{1}] [himself t\textsubscript{1} Lucie]

   b. Max [to-pass\textsubscript{1}-expect\textsubscript{1}] [himself t\textsubscript{1} the exam].

(Reinhart & Reuland 1993: (101)-(102))

In English, the VP-raising occurs covertly in LF. The anaphor himself is no longer the syntactic argument, and it does not reflexive-mark a lower predicates. Himself is the argument of the new complex predicate. The anaphor is coindexed with the matrix subject Max, so Condition A is met.

(45) a. *Lucie\textsubscript{1} considers [her\textsubscript{1} smart].

   b. *Lucie\textsubscript{1} expects [her\textsubscript{1} to leave soon].

(Reinhart & Reuland 1993: (106))

R&R explain the ungrammaticality of (45) in terms of the Condition on A-chains. They say that the ECM subject is not a semantic argument of the matrix predicate. Condition B vacuously rules in (45), but the Condition on A-chains correctly rules out (45). Both (45a) and (45b) contain [+R] non-head chains, so the two sentences are not allowed.

Two of the crucial differences of R&R’s theory from the Binding Theory are the distinction of anaphors and the conditions on binding. One difference is that R&R focus on the three-way distinction: SE-anaphors, SELF-anaphors and pronouns, while there is a two-way distinction: anaphors and pronouns, in the Binding Theory. The other is that R&R define two alternative conditions on binding and anaphors as in (36). R&R’s conditions focus on the relation between a predicate and
its coarguments. This is different from the Binding Theory idea that focuses on the binding relation. In addition to the two conditions, the definitions (35) and the Condition on A-Chains (41) are necessary to understand their analysis.

### 2.2.2 Explanations for the Binding Theory Problems

In this section, we will investigate how R&R's theory accounts for the problematic cases that the Principles in the Binding Theory cannot explain. We reconsider the following example sentences discussed in the previous section.

First, we will study the case where the complementarity of anaphors and pronouns breaks down. Here we will repeat (23) in (46) and (24) in (47).

(46) John\textsubscript{i} saw a snake \([PP \text{ near } \text{himself}_i / \text{him}_i]\).

(47) John\textsubscript{i} saw \([NP \text{ pictures of } \text{himself}_i / \text{him}_i]\).

R&R argue that what the anaphors \textit{himself} in (46) and (47) have in common is that none of them is a syntactic argument of the predicate. For example, \textit{himself} is a part of an adjunct PP 'near himself' in (46), and \textit{himself} in (47) is a part of the object argument NP 'picture of himself.' R&R argue that these anaphors are not syntactic arguments, so Condition A, which is stated in terms of syntactic predicates, does not apply. Hence, Condition A is vacuously satisfied, and the sentences in (46) and (47) are grammatical. The same explanation is given for logophoric anaphor cases that we have seen in (25), repeated in (48).

(48) a. There were five tourists in the room apart from myself.

b. Physicists like yourself are a godsend.

c. Max\textsubscript{i} boasted that the queen invited Lucie and himself\textsubscript{i} for a drink.

In (48), \textit{myself} is a part of PP 'apart from myself,' \textit{yourself} is a part of the subject argument 'physicists like yourself,' and \textit{himself} is a part of the object argument 'Lucie and himself.' All of them are non-arguments of the predicates, so Condition A vacuously rules in these anaphors.

Second, focus anaphors are also exempt from Condition A. We have (26b) as (49).

(49) Bismarck's impulsiveness has, as so often, rebounded against himself.

If we assume that Condition A applies at LF and a focus expression undergoes movement at LF, the focus anaphor \textit{himself} raises to the position shown in (50). (50) is the LF representation of (49). In (50), \textit{himself} is no longer in an argument position, the syntactic predicate at LF is not reflexive-marked. Thus the focus anaphor is exempt from R&R's Condition A.
(50) himself [Bismarck's impulsiveness has, as so often, rebounded against e]

In (49) as well as (46) - (48), reflexive marking at the syntactic level, which is relevant for Condition A, accounts for these problematic cases.

Third, we will consider the case in which Principle B cannot account for the contrastive grammaticality between two structurally parallel sentences. (27) is repeated in (51).

(51) a. We elected me.
    b. *We voted for me.

In (51), Condition B, which is defined to operate on semantic predicates, comes into play. The grammaticality depends on a property of predicates. The predicate 'elect' in (51a) forces a collective interpretation only. The interpretation of it is estimated as in (52).

(52) We (λx (x elect me))

The reflexive predicate is not formed at the semantic level, so Condition B vacuously rules in (51a). On the other hand, the predicate 'vote for' in (51b) prefers a distributive reading of a plural set. If the reference of 'we' consists of Max, Lucie and other people and I, the interpretation of (51b) is thought of as (53).

(53) Max (λx (x vote for me)) & Lucie (λx (x vote for me)) & . . . & I (λx (x vote for me))

One of the predicates (x vote for me) in (53), namely (I vote for me), is reflexive, but it is not reflexive marked because neither 'vote' is a lexically reflexive predicate nor does it have a SELF-anaphor as its argument. Therefore, Condition B rules out (51b).

Regarding collective and distributive readings, let us look into another pair.

(54) a. Max and Lucie talked about him.
    b. *Both Max and Lucie talked about him. (Reinhart & Reuland 1993: (36))

In the case of (51), the property of predicates makes the difference between collective and distributive readings, while in the case of (54), both makes the distinction for the interpretation. In (54a), the preferred interpretation is the collective one that suggests an act of mutual talking. In (54b), both forces the distributive reading, so it entails two separate acts of talking by Max and by Lucie. The interpretation of (54a) and (54b) are approximated in (55a) and (55b).

(55) a. Max and Lucie (λx (x talked about him))
    b. Max (λx (x talked about x)) & Lucie (λx (x talked about x))
Under the collective interpretation in (55a), the predicate is not distributed over the two NPs in the subject, but rather, they are taken as one set. This way, no reflexive predicate is formed and Condition B vacuously rules it in. Under the distributive interpretation in (55b), one of the predicates (\(x\) talked about \(x\)) is reflexive. None of its arguments has been reflexive marked, so Condition B blocks the derivation.

Finally, as for long-distance binding such as (28), repeated as (56), we do not deal with the issue in this section. We will investigate the analysis of the Japanese anaphor zibun that based on R&R’s theory as the representative of LD-binding analyses in the following chapter.

(56)  a. Jon\(_1\) bad oss hjelpe seg\(_1\).
      ‘John asked us to help him.’

       b. Bill\(_1\) -wa [John -ga zibun\(_1\) -o semeta to] omot-ta.
            -TOP        -NOM him    -ACC blamed    thought
      ‘Bill thought that John blamed him.’

As we have observed in this subsection, R&R’s alternative analysis on reflexive accounts for the problematic cases in the analysis of the Binding Theory. The Principles of the Binding Theory that regulate the distribution of anaphors and pronouns cannot deal with all the phenomena of reflexive anaphors and pronouns. It is beneficial and in fact indispensable to adopt R&R’s analysis, especially the Conditions that regulate the domain of the reflexivity of a predicate.
Chapter 3  Japanese Reflexives

3.1 Basic Properties of Japanese Reflexives

Japanese makes a four-way distinction among anaphors and pronouns.

(57)  a. pronouns: kare ‘he,’ kanojo ‘she,’ karera ‘they,’ sore ‘it’

   b. complex anaphors: kare-zisin ‘himself,’ kanojo-zisin ‘herself,’ karera-zisin ‘themselves,’
      sore-zisin ‘itself’

c. simplex anaphor: zibun ‘self’

d. complex anaphor: zibun-zisin ‘self-self’

Regarding the phi-feature specification, the four kinds of elements in (57) show different behaviors. The pronouns shown in (57a) and the complex anaphors in (57b) require phi-feature agreement (person, gender, and number) with their antecedents, while the anaphors in (57c) and (57d) do not. As seen in (58), Japanese pronouns behave in the same way as English pronouns, though Japanese pronouns can appear in nominative, genitive and accusative positions in the same form, for example kare, with different case particles, -ga, -no, and -o. These pronouns follow Principle B of the Binding Theory, and they are not bound by their c-commanding antecedents in the binding categories (BCs). From the behavior, we regard pronouns in (57a) as the counterpart of English pronouns.

(58)  a. Kāre -ga Mary -no musuko da.
      he -NOM -GEN son is
      ‘He is Mary’s son.’

      b. Mary -wa kare -no hahaoya da.
      -TOP his -GEN mother is
      ‘Mary is his mother.’

      c. Mary -wa kare -o aiseiteiru.
      -TOP him -ACC love
      ‘Mary loves him.’
As (59) and (60c) illustrate, all the three anaphors in (57) are used to express reflexive readings. Both *zibun* and *zibun-zisin* lack phi-features, whereas the complex anaphors in (57b) agree in person, gender, and number. In addition, the anaphors in (57b) are morphologically analogous to English reflexive anaphors. For example, *kare-zisin* 'himself' is composed of the pronoun *kare* 'he' with the [+third person, +male, +singular] properties and *-zisin* 'self.'

    -NOM self -ACC blamed
    ‘Johni blamed selfi.’

b. Johni -ga zibun-zisini -o semeta.
    -NOM self-self -ACC blamed
    ‘Johni blamed self-selfi.’

We call the complex anaphors in (57b) the *kare-zisin* type anaphors, hereafter. One difference of the *kare-zisin* type anaphors and English ones is that Japanese complex anaphors appear in nominative and genitive positions as in (60a) and (60b), as well as in accusative positions as in (60c).

(60) a. Johni -ga kare-zisin -ga soko-e itta to itta.
    -NOM he-self -NOM there went -COMP said
    ‘John said that he-self, not anybody, went there.’

b. Are -ga kare-zisin -no ie da.
    that-is his-self -GEN house is
    ‘That is his-self house.’

    -NOM him-self -ACC blamed
    ‘Johni blamed him-selfi.’

In this thesis, we consider *zibun* as an anaphor, though it is not really analogous to English anaphors such as *himself* or *herself*. Rather, they show more differences than similarities. We will see the details in the following subsections 3.1.1 and 3.1.2. Although English has only one kind of anaphoric expression such as *himself* and *herself*, many languages have richer reflexive anaphor systems. For example, Dutch has three different reflexive forms *zich, zichzelf*, and *`m zelf* ‘himself.’ Using this classification, we assume Japanese also has three kinds of reflexive anaphors: *zibun*, *zibun-zisin* and *kare-zisin*. As regard *zibun-zisin*, we classify it as an anaphor as well. *Zibun-zisin* is a compound word composed of *zibun* and *-zisin* ‘-self,’ and we can imagine that *zibun-zisin* behaves in the same way as *zibun* in some points, and it behaves in the same way as the *kare-zisin* type anaphors in
some points. We need to distinguish the contrastive properties between the three anaphors: \textit{zibun}, \textit{zibun-zisin} and \textit{kare-zisin}.

In this chapter, we will observe the basic behavior of the three anaphors compared with English reflexives. In addition, we will see the previous studies on syntactic analyses of \textit{zibun} and \textit{zibun-zisin}.

### 3.1. Basic Properties of \textit{Zibun}

Let us look into the basic properties of \textit{zibun} along with Tsujimura (1996) and Aikawa (2001). There are only two properties that \textit{zibun} and English reflexive elements such as \textit{himself} have in common: both \textit{zibun} and English reflexives must often be c-commanded by their antecedents as in (61), and both of them are incapable of taking a split antecedent as in (62).

(61) a. \([\text{John}_i \text{-no sensei}_j]\) -ga \textit{zibun}_i\text{-j} -o \textit{hihansita}.
   -\text{GEN teacher} -\text{NOM self} -\text{ACC criticized}
   ‘[John\textsubscript{i}’s teacher] criticized himself\textsubscript{i,j}.’

b. \([\text{John}_i \text{’s teacher}_j]\) criticized himself\textsubscript{i,j}.

(62) a. *\text{John}_i -\text{ga} \text{ Bob}_j -\text{ni} \textit{zibun}_i\text{j} -\text{-no koto} -\text{nuitite hanasita}.
   -\text{NOM} -\text{DAT self} -\text{GEN things about} -\text{told}
   ‘John\textsubscript{i} told Bob\textsubscript{j} things about self\textsubscript{i,j}.’

b. *\text{John}_i told Bob\textsubscript{j} about themselves\textsubscript{j,i}.

Next, we will consider the differences between \textit{zibun} and English reflexives. They show various contrasts. First, no agreement in person, gender, and number is required between \textit{zibun} and its antecedent. Regardless of the property of a subject: first or second or third, male or female, singular or plural, \textit{zibun} is used as in (63). If the antecedent is plural, the suffix for plural -\textit{tai} is optionally attached to \textit{zibun} as (63c) illustrates. (63d) with the suffix -\textit{tai} attached to the subject noun is also possible, although the meaning is different. (63c) has the group reading, while (63d) has only the individual reading. On the other hand, English reflexives have to agree in person, gender, and number with their antecedents as the translations of each sentence in (63) indicate. If the subject is third person, male and singular, then the reflexive anaphor must be \textit{himself} as in (63a), while if the subject is third, female and singular, then it should be \textit{herself} as in (63b).

(63) a. \text{John}_i -\text{ga} \textit{zibun}_i -\text{o} \textit{hihansita}.
   -\text{NOM self} -\text{ACC criticized}
   ‘John\textsubscript{i} criticized himself\textsubscript{i}.’
b. Mary\textsubscript{j} -ga zibun\textsubscript{j} -o hihansita.
  \text{NOM self} \quad \text{ACC criticized}
  'Mary\textsubscript{j} criticized herself.'

c. Gakusei -ga zibun-tati -o hihansita.
  \text{NOM self-pl.} \quad \text{ACC criticized}
  'The students criticized themselves.'

d. Gakusei-tati -ga zibun -o hihansita.
  \text{NOM self-pl.} \quad \text{ACC criticized}
  'Each students criticized himself / herself.'

Second, the antecedent of \textit{zibun} is restricted to a subject. This phenomenon is its so-called ‘subject orientation.’ Let us see English first. In English, reflexives must have their antecedents within the same clause due to the ’clausemate condition’ as in (64a). English reflexive anaphors do not have the property of subject orientation, so anaphors can be bound by either the subject or object nominals if the antecedent is in the same clause with the anaphor. The index \(i\) in (64b) shows the subject NP-binding to \textit{zibun}, and the index \(j\) illustrates the object NP-binding. By contrast, in Japanese, the antecedent is restricted to the subject. However, the clausemate condition need not be met in Japanese. Japanese allows for the long-distance binding (LD-binding) of \textit{zibun} with the index \(i\), as well as the local binding with the index \(k\) in (65). So, subjects of either matrix or embedded clauses can be the antecedents of \textit{zibun}.

(64) a. John\textsubscript{i} said to Bob\textsubscript{j} that [Mary\textsubscript{k} criticized self\textsubscript{ij/k}].

b. John\textsubscript{i} told Bob\textsubscript{j} a rumor about himself\textsubscript{ij}.

(65) John\textsubscript{i} -ga Bob\textsubscript{j} -ni [Mary\textsubscript{k} -ga zibun\textsubscript{ij/k} -o hihansita] to itta.
  \text{NOM} \quad \text{DAT} \quad \text{NOM self} \quad \text{ACC criticized} \quad \text{COMP said}
  'John\textsubscript{i} said to Bob\textsubscript{j} that Mary\textsubscript{k} criticized self\textsubscript{ij/k}.'

Third, the antecedent of \textit{zibun} must be animate while ‘self’ is not limited this way in English. Compare (66) with (67). In addition to the requirement of animate antecedents, these examples tell us about another property of \textit{zibun}: \textit{zibun} can appear in the possessive position with a genitive marker \textit{no} as in (66). To the contrary, English reflexives cannot be in the possessive position marked genitive as ‘*itself’s.’

(66) *Kuruma\textsubscript{i} -ga zibun\textsubscript{i} -no syako -no hoo-e hasirasita.
  \text{car} \quad \text{NOM self} \quad \text{GEN garage} \quad \text{GEN direction-to began-to-run}
  'The car began to run to self’s garage.'
3.1. BASIC PROPERTIES OF JAPANESE REFLEXIVES

(67) The car placed to [its / itself]'s garage.

Fourth, zibun allows for a discourse oriented antecedent. Zibun does not have to find its antecedent within the same sentence. English reflexives, by contrast, cannot participate in discourse binding as the ungrammaticality of the translation in (68B) shows.

(68) A: John -ga dareka -o gakkoo ni ik-ase -ta n-desu ka.
   "NOM ACC school -to go-made it -is Q
   ‘Did John make someone go to the school?’

B: Iie, zibun -ga itta -n-desu.
   ‘No, self (= John) went.’
   ‘*No, himself (= John) went.’

Fifth, unlike English reflexives shown in (69b), zibun can be modified by some other elements as (69a) shows.

(69) a. Mary -wa itumo akarui zibun -ga suki -da.
   ‘TOM always cheerful self NOM like
   ‘Mary always likes herself.'

b. * ‘Mary always likes cheerful herself.’

Sixth, zibun can be nominatively marked in the subject position of an embedded clause as in (70a). English reflexive anaphors cannot, as in (70b).

   ‘NOM self NOM should -be -blamed COMP thought
   ‘Mary thought that self should be blamed.’

b. * ‘Mary thought that herself should be blamed.’

Seventh, zibun can be used as the first or the second person pronoun in some dialects of western Japan as in (71) or in military terms as in (72).

(71) Zibun nani siten -nen.
   ‘What are zibun (= you) doing?’

(72) Zibun -ga simasita.
   ‘Zibun (= I) did it.’
As we have observed, *zibun* behaves very differently from the English reflexive elements. However, it behaves differently from pronouns also. The nature of *zibun* is very paradoxical and puzzling.

### 3.1.2 Basic Properties of Zibun-zisin

*zibun-zisin* shares many properties with *zibun* that we have seen in 3.1.1. For example, *zibun-zisin* shows subject orientation, it lacks the specification of phi-features (person, gender and number), and it can occur in the nominative position of an embedded clause, as (73) shows.

(73) a. John\(_i\) -ga Mary\(_j\) -ni zibun-zisin\(_{ij}\) -no hanasi -o sita.
   -NOM -DAT self-self -GEN story -ACC told
   ‘John\(_i\) told to Mary\(_j\) the story about self-self\(_{ij}\).’

b. [John\(_i\) / Mary\(_j\)] -ga zibun-zisin\(_{ij}\) -o hihansita.
   -NOM self-self -ACC criticized
   ‘[John\(_i\) / Mary\(_j\)] criticized self-self\(_{ij}\).’

c. Mary\(_j\) -ga [zibun-zisin\(_{ij}\) -ga semer-aruru-beki-da] to omotta.
   -NOM self-self -NOM should-be-blamed -COMP thought
   ‘Mary\(_j\) thought that self-self\(_{ij}\) should be blamed.’

Although there are many properties shared by *zibun* and *zibun-zisin*, they have some differences in their behavior. First, *zibun-zisin* has to find its antecedent within the same clause as in (74a). On the other hand, *zibun* allows long-distance binding as in (65), here repeated as (74b). In other words, the clausal mate condition must be satisfied in the case of *zibun-zisin* as with English reflexives.

(74) a. John\(_i\) -ga Bob\(_j\) -ni [Mary\(_k\) -ga zibun-zisin\(_{ij/k}\) -o hihansita] to itta.
   -NOM -DAT -NOM self-self -ACC criticized -COMP said
   ‘John\(_i\) said to Bob\(_j\) that Mary\(_k\) criticized self-self\(_{ij/k}\).’

b. John\(_i\) -ga Bob\(_j\) -ni [Mary\(_k\) -ga zibun\(_{ij/k}\) -o hihansita] to itta.
   -NOM -DAT -NOM self -ACC criticized -COMP said
   ‘John\(_i\) said to Bob\(_j\) that Mary\(_k\) criticized self\(_{ij/k}\).’

Second, *zibun-zisin* cannot be used to refer to the first and second person pronouns, even in the dialects that we have seen in (71) or in military terms.

(75) *Zibun-zisin -ga simasita.
   self-self -NOM did
   *‘Self-self (=I) did it.’
3.1. BASIC PROPERTIES OF JAPANESE REFLEXIVES

(76) *Zibun-zisin nani siten-nen.
    self-self what doing
*'What are self-self (=you) doing?'

Third, zibun-zisin cannot take any kind of modifier as in (77), unlike zibun in (69a).

(77) *Mary1 -wa itumo akaniu zibun-zisin1 -ga sukida.
    -TOP always cheerful self-self  -NOM like
*'Mary likes self-self who is always cheerful.'

Through these observations, we notice that zibun-zisin has a greater similarity to English reflexive pronouns than zibun does. We have argued that zibun-zisin has some properties shared with zibun due to the zibun part of zibun-zisin. Remember that Japanese has two kinds of morphologically complex reflexive elements: one is zibun-zisin and the other is the kare-zisin type anaphors. We assume zibun-zisin might share some properties with the kare-zisin type anaphors as well, because of its -zisin part. The comparison between zibun-zisin and kare-zisin will make clear the different properties of the three kinds of anaphors.

3.1.3 Basic Properties of Kare-zisin

First of all, the kare-zisin type anaphors have a clear similarity with zibun-zisin: both include the -zisin 'self' part. The kare-zisin type anaphors are composed of a pronoun kare ‘he’ and -zisin ‘self,’ and zibun-zisin is composed of zibun and -zisin ‘self.’ Besides this similarity, kare-zisin and zibun-zisin have two properties in common. One similarity is that both of them commonly require c-commanding antecedents like zibun.

(78) a. [John1 -no sensei]1 -ga kare-zisin1[\textsubscript{\text{ui}}] -o hihansita.
    -GEN teacher -NOM he-self -ACC criticized
    ['John1’s teacher]1 criticized he-self[\textsubscript{\text{ui}}].'

b. [John1 -no sensei]1 -ga zibun-zisin1[\textsubscript{\text{ui}}] -o hihansita.
    -GEN teacher -NOM self-self -ACC criticized
    ['John1’s teacher]1 criticized self-self[\textsubscript{\text{ui}}].'

The other similarity is that two of them do not allow LD-binding, unlike zibun, as we have seen in (62) in 3.1.1.

    -NOM -NOM he-self -ACC blamed -COMP said
    'John1 said that Bob[\textsubscript{2}] blamed he-self[\textsubscript{\text{ui}}].'
b. John$_i$ -ga [Bob$_j$ -ga zibun-zisin$_{i/j}$_k -o semeta] to itta.
   -NOM -NOM self-self -ACC blamed -COMP said
   ‘John$_i$ said that Bob$_j$ blamed self-self$_{i/j}$.’

Next, we will see different properties between kare-zisin and zibun-zisin. They differ in three points: (i) agreement in phi-features, (ii) subject orientation, and (iii) QP (quantifier phrase) antecedent-binding. First, kare-zisin requires phi-feature agreement with its antecedent as in (80a), while zibun-zisin requires no agreement as in (80b). This difference can be ascribed to the difference in phi-feature specification between the kare part of kare-zisin and the zibun part of zibun-zisin. Kare bears the phi-features [+3rd person, +singular, +male], whereas zibun-zisin lacks phi-feature specification. Therefore in (80a), John with the phi-features [+3rd person, +singular, +male] is the only possible antecedent. With regard to phi-feature agreement, kare-zisin is the same as the English reflexive anaphor ‘himself.’

(80) a. [John$_i$ / Mary$_j$ / [John to Mary]$_k$] -ga kare-zisin$_{i/j/k}$ -o semeta.
   and -NOM he-self -ACC blamed
   ‘John$_i$ / Mary$_j$ / [John and Mary]$_k$ blamed he-self$_{i/j/k}$.’

b. [John$_i$ / Mary$_j$ / [John to Mary]$_k$] -ga zibun-zisin$_{i/j/k}$ -o semeta.
   and -NOM self-self -ACC blamed
   ‘John$_i$ / Mary$_j$ / [John and Mary]$_k$ blamed self-self$_{i/j/k}$.’

Second, kare-zisin is not subject-oriented, while zibun-zisin is subject-oriented. This contrast can also be ascribed to the difference between the two parts: kare and zibun. The pronominal kare is not subject-oriented, while zibun is subject-oriented. Regarding subject-orientation, kare-zisin is parallel to the English anaphor ‘himself.’

(81) a. John$_i$ -ga Bob$_j$ -ni kare-zisin$_{i/j}$ -nituite hanasita.
   -NOM -DAT he-self about told
   ‘John$_i$ told Bob$_j$ about he-self$_{i/j}$’

b. John$_i$ -ga Bob$_j$ -ni zibun-zisin$_{i/j}$ -nituite hanasita.
   -NOM -DAT self-self about told
   ‘John$_i$ told Bob$_j$ about self-self$_{i/j}$’

Third, kare-zisin cannot take a QP antecedent, while zibun-zisin can. This contrast is also because of the difference in lexical properties between kare and zibun. As pointed out in Ueda (1986), kare cannot be a bound variable, whereas zibun can be. We will see the details of the ‘bound variable’ zibun in 3.2.1. The English anaphor ‘himself’ accepts the QP-antecedent binding, so ‘Everyone criticized himself.’ is allowed as the translation sentences in (82a) and (82b) indicate.
(82) a. *Daremo\textsubscript{1} -ga kare-zisin\textsubscript{1} -o hihansita.
   everyone -NOM he-self -ACC criticized
   'Everyone\textsubscript{1} criticized he-self\textsubscript{1}.'

   b. Daremo\textsubscript{1} -ga zibun-zisin\textsubscript{1} -o hihansita.
   everyone -NOM self-self -ACC criticized
   'Everyone\textsubscript{1} criticized self-self\textsubscript{1}.'

   Now that we have observed that kare-zisin behaves identically with the English reflexive anaphor
   'himself' except for the one way that 'him' independently differs from kare, we regard the kare-zisin
   type anaphors as the counterpart of English reflexives. Although zibun and zibun-zisin exhibit not a
   few differences, we still categorize them as anaphors. What makes zibun-zisin have more similarities
   with English reflexive anaphors than zibun is the property peculiar to the -zisin part of zibun-zisin,
   a morpheme that means 'self.' That part is shared by the kare-zisin type anaphors as well. What is
   the function of the -zisin part? We might expect that the -zisin part relates to the reflexive functions.
   In addition to the reflexive function, the suffix -zisin has a function as an intensifier. The -zisin part
   can attach not only to zibun and a pronominal, but also to a proper noun with the function of an
   intensifier of that noun as in (83).

   (83) Mary -ga John-zisin -o hihansita
   -NOM -ACC criticized
   'Mary criticized John himself, not anybody related to him.' (Nakamura 1995: 206 (1a))

   As the summary of this section, we have a chart that compares the three reflexives on phi-feature
   specification, long-distance (LD-) binding and subject orientation. All of these three are categorized
   as reflexive anaphors, yet each shows some difference in properties.

   (84)
   \begin{tabular}{|c|c|c|c|}
   \hline
   & Phi-feature Specification & LD-binding & Subject-Orientation \\
   \hline
   Zibun & - & + & + \\
   Zibun-zisin & - & - & + \\
   Kare-zisin & + & - & - \\
   \hline
   \end{tabular}

\subsection*{3.2 Syntactic Analyses of Zibun Binding}

As we have seen in 3.1.1, zibun has a paradoxical nature: it shares properties with both an anaphor
and a pronoun in English. While a large number of studies have been made on the status of zibun,
it has been unclear whether zibun is to be categorized as a pronoun or an anaphor. For example,
Faltz (1985) argues that zibun is a compound anaphor or a pronoun, but he cannot reach a definitive

32.1 Zibun as a Pronoun

We will study Ueda’s (1986) analysis in this subsection. Ueda proposes that *zibun* should be categorized as a pronoun because the properties of *zibun* cannot be analyzed identically with English reflexives. In his analysis, *zibun* follows Principle B of the Binding Theory. He claims that there are two types of pronominals in Japanese: *zibun* ‘self’ and *kare* ‘him,’ depending on the property [bound]. In his analysis, *zibun* is a bound variable that has the properties [-anaphor, +pronominal, +bound], while *kare* is an unbound variable with [-anaphor, +pronominal, -bound]. As the evidence for his ‘bound-variable *zibun*’ analysis, he presents two sets of data: (i) *zibun*-binding by a quantifier phrase (QP) antecedent, and (ii) sloppy identity allowed by *zibun*.

First, let us consider (85a), which contains a QP antecedent, *daremo* ‘everyone.’


   everyone -NOM self -NOM that exam. -DAT pass -COMP believe

   ‘Everyone believes that he will pass that exam.’


   everyone -NOM self -NOM that exam. -DAT pass -COMP believe

   (Aikawa 2001: 163; originally from Ueda 1986)

In general, QPs do not refer to any specific individuals, and pronominals cannot be coreferential with them. Thus, if a QP occurs as the antecedent of a pronoun, the pronoun has to be construed as a bound variable. Ueda observes that *zibun* in (85a) must be construed as a bound variable, but *kare* in (85b) cannot. So, he proposes that *zibun* is a [+bound] pronominal and *kare* is a [-bound] pronominal.

Second, we will consider the sloppy identity reading allowed by *zibun*. (86) is ambiguous depending on the interpretation of the pronoun *his*. If *his* is taken as a bound variable, it induces the sloppy reading as in (87a). On the other hand, coreference of *his* induces a strict (or non-sloppy) reading as in (87b).

(86) John1 called his1 mother, and Bob did too.

(87) a. John called John’s mother, and Bob called Bob’s mother, too.

   b. John called John’s mother, and Bob called John’s mother, too.
Ueda applies the sloppy identity test to Japanese *zibun* and *kane* in (88). He insists that *zibun* can induce the sloppy reading, so *zibun* is a [+bound] pronominal.

   \[\text{self -NOM keep-ing dog -ACC hit when also so did} \]
   \[\text{‘When John hit the dog he kept, Bob did so, too.’} \]
   (sloppy) When John hit the dog that John kept, Bob hit the dog that Bob kept too.
   (strict) When John hit the dog that John kept, Bob also hit the dog that John kept.

   \[\text{he -GEN car-in rode also so did} \]
   \[\text{‘John got in his car. Bob did so, too.’} \]
   (sloppy) *John got in John’s car. Bob got in Bob’s car too.
   (strict) John got in John’s car. Bob also got in John’s car. (Ueda 1986: 97)

Ueda analyzes *zibun* as a pronoun, so *zibun* must follow Principle B. However, he observes that *zibun* participates in local binding in some cases, thus violating Principle B as (89a) illustrates. Compare (89a) and (89b).

(89) a. John₁ -wa zibun₁ -o [nikunde-iru / semeta].
   \[\text{-TOP -ACC [hate / blamed]} \]
   \[\text{‘John₁ [hates/ blamed] himself₁.’} \]

b. *John₁ -wa zibun₁ -o [nagutta / ketta].
   \[\text{-TOP -ACC [hit / kicked]} \]
   \[*\text{John₁ [hit / kicked] himself₁.} \]
   (Ueda 1986: 105)

(89a) and (89b) show that sometimes local binding of *zibun* is good, but sometimes unaccepted. Ueda argues what gives the contrast of grammaticality in local binding of *zibun* is the semantic difference between verbs, admitting that local binding of *zibun* is problematic. We will see the details in chapter 4.

### 3.2. *Zibun* as an Anaphor

Both Katada (1988) (1991) and Aikawa (1993) characterize *zibun* as an anaphor and suggest LF-analyses of *zibun*. There are, however, notable differences between their analyses. One difference is that Katada proposes LF-movement of *zibun*, namely VP-adjunction, while Aikawa insists on no LF-movement. Aikawa claims that the feature specification of *zibun* is through the binding by Agr(=INFL). The other difference is that Katada accepts the Principles of the Binding Theory (Chomsky 1981), whereas Aikawa follows Reinhart and Reuland (1993).
In Katada’s (1991) analysis, *zibun* is an operator anaphor that raises to higher position(s) through VP-adjunction at LF. Two types of *zibun*-binding: local and long-distance (LD) binding, are seen in (90). In the case of local-binding, the LF-raising of *zibun* to the VP of the embedded clause occurs as (91) illustrates. (91) indicates the coindexation between *Bob* and *zibun*. In contrast, LD binding of *zibun* involves the LF-raising to the VP of the matrix clause. (92) shows the coindexation between *John* and *zibun* at LF.

(90) John*;* -ga Bob*;* -ga Mary*;* -ni zibun*;* ]*;* -k -no koto -o hanasita to omotte-iru.

\[ \text{NOM} \quad \text{NOM} \quad \text{-DAT self} \quad \text{-GEN things -ACC told} \quad \text{-COMP thinks} \]

‘John thinks that Bob told Mary things about self.’

(91) \[ [\text{S}John; -ga [\text{S} Bob; -ga [\text{VP} zibun; [\text{VP} Mary; ni \ldots t_i \ldots ] ] ] ] ] \]

(92) \[ [\text{S} John; -ga [\text{VP} zibun; [\text{VP} [\text{S} Bob; -ga \ldots [\text{VP} Mary; ni \ldots t_i ] ] ] ] ] ] \]

In both cases, *zibun* is bound by the closest c-commanding antecedent, namely *Bob* in (91) and *John* in (92). Both *zibun*-binding by *Bob* and *zibun*-binding by *John* satisfy Principle A of the Binding Theory. Katada also accounts for the subject orientation property of *zibun* in terms of VP-adjunction. After having adjoined to the matrix VP, *zibun* is c-commanded by the matrix subject, and c-commanded by the subject of the embedded clause if it adjoined to the embedded VP. Hence, only subject NPs can be the antecedents of *zibun*.

3.2.3 *Zibun* based on Reinhart and Reualand (1993)

Unlike Katada, Aikawa (1993) claims that there is no LF-movement of *zibun*. The lack of phi-feature specification in *zibun* forces *zibun* to be associated with Agr (=INFL) at LF because Agr is the only head that can provide phi-features for *zibun*. *Zibun* is to be bound to the first accessible Agr at LF so that it can receive phi-features. Her analysis is based on Reinhart and Reualand (1991).

Though she is not committed to the assumption that *zibun* is SE-anaphor, she applies R&R’s SE-analysis to *zibun*-analysis. What is different from R&R’s analysis is that Aikawa argues that no LF-movement is involved while R&R propose LF-movement of SE-anaphors.

Let us now see R&R’s analysis that involves the association of SE with Agr.

(93) SE-heads adjoin to Agr at LF. \hspace{1cm} (Reinhart & Reualand 1991: (40))

R&R assume that SE anaphor raises to Agr at LF to receive phi-features for its interpretation. SE-anaphor can move to Agr through head-to-head movement. According to R&R, the head-to-head
3.2. SYNTACTIC ANALYSES OF ZIBUN BINDING

movement of SE-anaphor to Agr at LF is done as follows: SE first adjoins to V. However, it does not have an effect on the V-grid because SE-anaphors lack a reflexivizing function. The V may not provide phi-features, so the SE still has to look for the assigner of phi-features. Then, the whole component of [SE-V] moves up to Agr, and there SE may receive its phi-features for interpretation. Here, we will see the case that Aikawa (1993) has applied R&R’s LF-analysis of SE-anaphors to zibun as in (94). Zibun first moves to V₀ (Aikawa uses V₀ to indicate what R&R call V), and then the complex [zibun-V₀] moves to Agr to receive phi-features.

(94)

\[
\begin{array}{c}
\text{Agr} \\
\text{NP} \\
\text{Agr'} \\
\text{VP} \\
\text{Agr-[zibun, V₀]}
\end{array}
\]

\[
\begin{array}{c}
\text{t} \\
\text{[V₀-zibun]}
\end{array}
\]

(Aikawa 1993: 109 (3b))

It seems that R&R’s proposal may apply to the LF-analysis of zibun, but it cannot account for the LD-binding of zibun because R&R’s analysis prohibits the LF-movement of anaphors across Tense(s). So, Aikawa proposes an alternative approach for the LF-analysis of zibun as in (95).

(95)

\[
\begin{array}{c}
\text{Agr} \\
\text{NP} \\
\text{Agr} \\
\text{t} \\
\text{Agr} \\
\text{VP} \\
\text{Agr} \\
\text{zibun} \\
\text{V₀}
\end{array}
\]

(Aikawa 1993: 127 (24))

There is a difference between the analysis by R&R and that by Aikawa. Under R&R’s analysis, the association of an SE with Agr is done by the SE raising to Agr. Under Aikawa’s, the association of zibun with Agr is done through coindexation. Aikawa argues that Agr first receives the index of the
subject NP through spec-head agreement. The referential index of the subject can be percolated into the Agr if the subject is quantifier-raised (=QRed). Then, this index is assigned to zibun by virtue of zibun being bound to Agr. Unlike the case in which R&R's LF-analysis is adopted for zibun shown in (94), Aikawa's analysis can account for LD-binding as well as local binding.

(96) [Johni -ga [Bobj -ga Maryk -ni zibunij/iks -no koto -o hanasita] to omotte-iu.]
   -NOM   -NOM   -DAT self   -GEN things -ACC told   -COMP thinks
   'John thinks that Bob told Mary things about self.'

(97) [Johni Agr2 [Bobj Agr1 Maryk zibunij/iks V ] V ]

The local binding of zibun in (96), namely when the antecedent is Bob, can be accounted for by the coindexing between Agr and zibun in (95) or by the Agr1-zibun relation in (97). The index j of Bob is assigned to Agr1 through Spec-Head agreement between Bob and Agr1, and then zibun is bound by the first accessible Agr (Agr1 in this case). With regard to the LD-binding analysis, Aikawa proposes that Agrs in Japanese are anaphoric to each other, and they can form the 'Agr-chain' that allows the index of a remote antecedent to be transferred from the Agr that is closest to zibun. The relation between Agr1 and Agr2 is the Agr-chain. John and zibun are coindexed, and the index i is assigned to Agr2, then Agr2 binds zibun. Aikawa explains the subject orientation property of zibun by arguing that dative NP such as Mary in (96) is not in spec-position of Agr1, so there is no way for zibun to receive the index of the dative NP.

3.3 Syntactic Analyses of Zibun-zisin Binding

In this section, we will see two zibun-zisin-analyses based on the idea that regards zibun as an anaphor. One is proposed by Katada (1988), and the other is by Aikawa (1993), the latter being based on the ideas of Reinhart and Reuland (1992).

3.3.1 Unified Analysis of the Three Reflexives

Katada (1988) (1991) proposes a unified analysis of the three reflexive anaphors: zibun, zibun-zisin and kare-zisin. She distinguishes the complex reflexives zibun-zisin and kare-zisin from zibun on the basis of their internal structure. Zibun is taken as a lexical anaphor, while zibun-zisin and kare-zisin are characterized as phrasal anaphors as in (98).

She argues that there are differences in binding behavior among the three reflexives based on the idea of LF-movement. As we have seen in the last subsection, she supposes that zibun raises to a higher position in LF through VP-adjunction. She gives accounts for the LF-analysis of the two complex anaphors as follows: only the zibun part out of zibun-zisin raises at LF, and kare-zisin does
not undergo any LF-movement because it possesses the specified phi-features [+3rd, +singular, +male]. \textit{Kare-zisin} must be interpreted in situ.

\begin{align}
(98) \quad \begin{array}{c|c|c}
\text{NP} & \text{NP}_1 & \text{NP}_1 \\
\hline
N' & \text{Spec} & N' \\
\hline
N & \text{NP}_2 & N \\
\hline
\text{zibun} & \text{zibun} & \text{zisin} & \text{karē} & \text{zisin}
\end{array}
\end{align}

(Katada 1991: 294 (12))

Katada claims that the long-distance binding of \textit{zibun-zisin} is impossible because LF-raising of \textit{zibun} out of \textit{zibun-zisin} is limited to the embedded VP, as the trace must be antecedent-governed as in (99a). She accounts for the subject orientation of \textit{zibun-zisin} on the basis of the asymmetric c-command relation displayed between a subject NP and a nonsubject NP with respect to the landing site of the \textit{zibun} part of \textit{zibun-zisin}. In addition, Katada says that in the case of (bare) \textit{zibun}, LF-raising is unlimited. Since the trace can be lexically governed, \textit{zibun} can adjoin to the matrix VP too and LD-binding is allowed. She says the long-distance binding of \textit{kare-zisin} is impossible because it is interpreted in situ, and \textit{kare-zisin} shows no property of subject orientation, since both a subject NP and a dative NP can bind \textit{kare-zisin} as in (100).

(99) a. \textit{John}_i-\text{ga} [\text{Bob}_j-\text{ga} \text{zibun-zisin}_{i,j} -\text{to} \text{semeta}] \text{to} \text{itta}.

\begin{tabular}{llll}
  \text{-NOM} & \text{NOM self-self} & \text{-ACC} & \text{blamed} \\
  \text{-COMP} & \text{said}
\end{tabular}

\begin{quote}
‘\text{John}_i \text{ said that } \text{Bob}_j \text{ blamed self-self}_{i,j}.’
\end{quote}

b. \text{[s John-\text{ga} zibun \text{[VP}_2 \text{[s Bob-\text{ga} zibun}_i \text{[VP}_2 \text{[t-zisin \text{]} \text{V \text{]} \text{]} \text{]} \text{]} \text{]} \text{]} \text{]} \text{]} \text{]} \text{]} \text{].}

(100) \ldots \text{NP}_i-\text{ga} [\text{VP} \ldots \text{NP}_j-\text{ni} \ldots [ \text{karē-zisin}_{i,j} \ldots \ldots ] \ldots

3.3.2 \textit{Zibun-zisin} based on Reinhart and Reuland (1993)

Aikawa (1993) analyses \textit{zibun-zisin} based on Reinhart and Reuland’s (1991) LF-analysis of SELF-anaphors. Under R&R’s analysis, a SELF part of an anaphor moves to the head of the predicate (V) when it occurs as an argument of a predicate. Then, the SELF part reflexive-marks the predicate by imposing an identity relationship on the co-arguments of the predicate \((x=y)\). For example (101b), which shows the LF-analysis of the sentence (101a), the SELF part of \textit{herself} moves to \text{V} \text{(adores)}, and it reflexivizes the predicate. In R&R’s proposal, LF-movement of a SELF is done through head-to-head movement. Thus, the LF-movement of a SELF is subject to the standard constraints
on head-to-head movement. This requires a SELF to land in the first available head-position (i.e., V) because of the head movement constraint or relativized minimality. A SELF occurring in a grid position of a predicate is destined to be amalgamated with the V. This explains the strict locality of SELF-anaphors. The pronoun part of a SELF anaphor, on the other hand, saturates an argument position of a predicate. For instance, the pronoun *her of herself* in (101b) saturates the theta position \( x \) of the predicate. *Lucie* \( y \) and *her* \( x \) are specified as being identical by the SELF at V, resulting in the reflexive interpretation.

(101) a. Lucie\(_y\) adores herself\(_y\).

b. 

```
             IP
          /    \    
        Lucie\(_y\)  VP
             /   \   /  \   
            V    NP\(_x\)
              \   /  /  
            SELF\(_{<x,y}\)  V\(_{<y,x}\)
               \   \     
                 adores
```

(Reinhart & Reuland 1991: 291 (18))

Here, we will see how Aikawa applies R\&R’s LF-analysis of SELF-anaphors to *zibun-zisin.*

The structures are as in (102).

(102)

```
             AgrP
          /    \    
        NP  Agr'  
          /   \   /  \   
         VP    Agr-[zibun\(_k\)-V\(^0\)-zisin\(_j\)]\(_k\)
                 /   
               \[V\(^0\)-zibun\(_k\)-zisin\(_j\)]\(_k\)
```

(Aikawa 1993: 109 (3a))
In the Japanese case in (102), the whole complex *zibun-zisin*, unlike the English case in which only the SELF part moves in (101b), first moves to $V^0$ from the complement position of $V^0$. In the *zibun-zisin* analysis as well as the *zibun* analysis, Aikawa uses $V^0$ instead of $V$. The *zibun* part is amalgamated with the $V^0$, and the sequence \([zibun_1-V^0-zisin_j]\) is made. Reflexive-marking of the predicate by *zisin* cannot be done at this point because *zibun* does not yet qualify as an argument. *Zibun* needs to receive phi-features from Agr, so the whole \([zibun-V^0-zisin]\) moves up to Agr. There, *zibun* receives phi-features and qualifies as an argument, and then *zisin* reflexivizes the predicate. The LF-movement of *zibun-zisin* shows a difference from that of the English SELF-anaphor *herself* in (101b): the LF-movement of *zibun-zisin* involves the movement of the SE part (namely, the *zibun* part) of *zibun-zisin*, whereas English *herself* does not involve the pronoun part *her* in movement. This difference derives from the fact that the *zibun* part of *zibun-zisin* lacks phi-features but the *her* part of *herself* has its phi-features.

Aikawa (1993) regards the direct application of R&R’s SELF-analysis to *zibun-zisin* as inappropriate, so she proposes an alternative LF-analysis of *zibun-zisin*-binding. She claims that the *zibun* part of *zibun-zisin* raises to $V^0$ at LF through head-to-head movement. The *zibun* part is bound to Agr by coindexation as in (103), and Aikawa explains the subject orientation of *zibun-zisin* on the basis of this binding relation. The LF-movement of *zibun-zisin* suggested by Aikawa in (103) is almost the same as the LF-movement analysis of a SELF-anaphor proposed by R&R. In (103), the SE part, namely *zibun*, of *zibun-zisin* moves to $V^0$, and then reflexive-marks the predicate. Aikawa proposes that the *zibun* part associates with Agr through coindexation, unlike the LF-raising of *zibun* in R&R’s proposal. Analogous to the case of *zibun*, the *zibun* part of *zibun-zisin* requires the subject to undergo QR under her analysis.

(103)

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(Aikawa 1993: 139 (40))
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Aikawa’s (1993) analysis of *zibun* and *zibun-zisin* raises a couple of questions. For one thing, what is the motivation for the QR of subject NPs? She needs more motivation for why subject NPs have to undergo QR. The other thing, why does she apply *zibun-zisin* to R&R’s analysis of an English type SELF anaphor, as we have seen in (101b)? There is a difference between English reflexive anaphors and *zibun-zisin*. English anaphors have phi-feature specification, while *zibun-zisin* does not. It is natural that this SELF-analysis does not exactly apply to *zibun-zisin* in (102). She should have assumed the SELF-analysis of languages that have the counterpart to SE-anaphors, unlike English.

However, we agree with Aikawa (1993) in a sense. Her analysis is based on R&R’s theory that focuses on two types of anaphors: SE- and SELF-anaphors, and the relation between these anaphors and predicates in reflexive domains. Japanese has a multi-way distinction among anaphors, namely *zibun, zibun-zisin* and *kare-zisin*. Therefore, we predict that R&R’s analysis would give a better account for Japanese reflexives than the analysis based on the Binding Theory. In the following chapter, we will apply Reinhart and Reuland’s (1993) analysis to Japanese reflexives, referring to Aikawa (1993). We turn thumbs up to her analysis in some senses, but turn thumbs down on it in other senses.
Chapter 4  Reflexivity in Japanese

4.1 Principles and Conditions

As we have argued, we regard both *zibun* and *zibun-zisin* as anaphors rather than pronouns. They are then expected to follow Principle A of the Binding Theory. ¹ That is, *zibun* and *zibun-zisin* must be bound in their binding categories (BCs). However, the distribution of *zibun* and *zibun-zisin* is not always regulated by Principle A of the Binding Theory. Compare (104a) and (104b).

(104) a. John₁ -ga  zibun₁ -o  [semeta / hihan-sita].
   -NOM   -ACC blamed criticized
   ‘John₁ [blamed / criticized] self₁.’

   b. John₁ -ga  zibun₁ -o  [nagutta / tataita / ketta].
   -NOM   -ACC hit hit kicked
   ‘John₁ [hit / hit / kicked] self₁.’

   (Aikawa 2001: (61))

In each sentences, the BC is the whole sentence, and John could be the antecedent of *zibun*. However, only (104a) is grammatical and (104b) is unaccepted. Why is the *zibun* binding by *John* accepted only in (104a)? Why is the *zibun* binding in (104b) not accepted? Principle A of the Binding Theory cannot explain the difference of the grammaticality between (104a) and (104b). By contrast, R&R’s analysis can account for it. ² In (104a), the predicates are inherently reflexive, and the coarguments of these predicates are coindexed. Following the definitions proposed by R&R, the predicates are reflexive-marked, and reflexive. Therefore, R&R’s Condition A rules in (104a).

¹Remember Principles in Chomsky’s (1981) Binding Theory that we have studied in 2.1.1:
   A: an anaphor must be bound in its binding category (BC).
   B: an anaphor must be free (not bound) in its binding category.

²Remember Conditions and the definitions proposed by Reinhart and Reuland (1993) that we have studied in 2.2.1:
   A: A reflexive-marked syntactic predicate is reflexive.
   B: A reflexive semantic predicate is reflexive-marked.

Definitions in R&R’s analysis
   (c) A predicate is reflexive iff two of its arguments are coindexed.
   (d) A predicate is reflexive-marked iff either the predicate is lexically reflexive or one of the predicate’s arguments is a SELF-anaphor.
On the other hand, the predicates in (104b) are not inherently reflexive, therefore these predicates are not reflexive-marked. As the coarguments of the predicates are coindexed, the predicates are reflexive. Because the predicates in (104b) are reflexive but not reflexive-marked, (104b) is ruled out by Condition A.

Next we repeat (56b) in 2.2.2 as (105), which shows the long-distance (LD) binding of zibun.

(105) Billi -wa [Johnj -ga zibunij -o semeta] to omot-ta.

-Bill thought that John blamed himij.

Following Principle A, zibun must be bound in its BC; the embedded clause. The embedded subject John inside the BC could be the antecedent of zibun, as the index j shows, but the matrix subject Bill outside the BC also could be, as the index i illustrates. Principle A incorrectly rules out the zibun binding by the matrix subject Bill. On the other hand, R&R’s theory can account for the LD binding of zibun. Under their analysis, Bill can be the antecedent of zibun if seme(ra) ‘to hit’ in the embedded clause is taken as a non-reflexive predicate. If the embedded predicate is not inherently reflexive, then the predicate is not reflexive-marked because the predicate does not have a reflexivizer anaphor as its argument. Zibun cannot be bound locally, and it is bound by the non-local binder Bill. Condition A vacuously rules in the zibun binding by Bill.

Although it has been a widely accepted view that zibun-zisin does not allow LD binding (cf. Nakamura (1987)(1995), Tsujimura (1996) and Aikawa (2001)), non-local binding of zibun-zisin is possible, and this is what is expected in our analysis based on R&R.


-John said that Bob saw a snake near selfij.

In (106), zibun-zisin in an adjunct clause allows non-local binding as well as local binding. In other words, zibun-zisin can be bound by Bob inside the embedded IP or by John outside the embedded IP. Here again, Principle A of the Binding Theory cannot explain the LD binding of zibun-zisin. On the other hand, the Conditions of R&R can. Their Conditions vacuously rule in (106) because zibun-zisin in it is not in an argument position, that is, zibun-zisin is not in a reflexive domain. R&R’s Conditions vacuously apply when anaphors are outside of reflexive domains of predicates.

The Binding Theory regards anaphors as a single species. In contrast, the reflexive analysis proposed by R&R distinguishes anaphors into two types, and they insist that the two kinds of anaphors show contrastive behaviors. As we have seen in 3.1.1 and 3.1.2, zibun and zibun-zisin have different properties. Therefore, R&R’s analysis works better in accounting for the behavior of zibun and
4.2. REFLEXIVE-MARKING IN JAPANESE

zibun-zisin. In addition, Principles A and B of the Binding Theory are just to regulate the distribution of anaphors and pronouns, respectively, while the Conditions by R&R regulate the domain of reflexivity of predicates. R&R argue that reflexivity is dependent on the relation between predicates and their coarguments. When we consider the differences between the two analyses, R&R’s analysis seems better to explain reflexivity in Japanese than the analysis of the Binding Theory. Thus, we suggest that R&R’s analysis will provide a better account for Japanese reflexives.

In the remainder of this chapter, we will consider reflexivity in Japanese based on Reinhart and Reuland’s (1993) analysis, referring to Aikawa (1993). We aim to have answers for the following two questions: (i) whether the property of predicates affects the behaviors of zibun and zibun-zisin, and (ii) how zibun and zibun-zisin behave in non-argument position.

4.2 Reflexive-marking in Japanese

The notion of reflexive-marking, namely taking SELF ‘reflexivizer’ anaphors or inherent reflexivity of predicates, is essential for Reinhart and Reuland’s (1993) binding analysis. In the following subsections, we will investigate what the reflexivizer is and what the inherently reflexive predicates are in Japanese.

4.2.1 Reflexivizer in Japanese

Reinhart and Reuland (1993) claim that the reflexivity of a predicate can be licensed only through the relationship of variable binding between two arguments of a predicate. If an expression $x$ is a reflexivizer and it occurs in the reflexivity domain of a predicate, $x$ is expected to be construed as a bound variable. What is the reflexivizer in Japanese? Are zibun and zibun-zisin bound variables?

The availability of (i) anaphor-bindings by quantifier phrases (QPs) and (ii) sloppy identity readings of anaphors tells us if an anaphor can be a bound variable. Here we apply the sloppy identity test to zibun and zibun-zisin to see if they are bound variables. 3

3 Aikawa (1993) applies QP-binding test to zibun and zibun-zisin see if they are bound variables as in (i) and (ii). She claims that zibun is not bound by the QP antecedent daremo-ga ‘everyone’ in (i) and it cannot be construed as a bound variable, while zibun-zisin in (ii) is bound by the QP and it can be construed as a bound variable. Hence, she regards zibun-zisin as a reflexivizer in Japanese and zibun as a non-reflexivizer.

(i) Daremo-ga zibun-o tunetta.
‘Everyone, pinched?’

(ii) Daremo-ga zibun-zisin-o tunetta.
‘Everyone, pinched self,?’

However, the comparison in (i) and (ii) does not say anything about the bound variable binding of zibun and zibun-zisin, because the sentence with zibun is unacceptable even if it has a referential NP as its antecedent as in (iii).

(iii) *John-ga zibun-o tunetta.
‘John, pinched?’
\[\text{\text{-top \ -acc blamed \ also so did} }\]
John blamed self. Bob did so, too.'

\[\text{\text{-top \ -acc blamed \ also so did} }\]
John blamed self-self. Bob did so, too.'

As in (107) and (108), both zibun and zibun-zisin are bound variables because both induce sloppy readings. However, zibun and zibun-zisin show a difference: zibun-zisin induces only the sloppy reading, while zibun induces both the sloppy and strict reading. In other words, zibun-zisin is a bound variable, whereas zibun functions both as a bound variable that induces the variable reading and as a constant that induces the coreference reading. As the English pronominal his in (109)
\[\text{indicates, pronouns also show the property that induce both the sloppy and strict reading. (109) can be interpreted in two ways as shown in (110). If his is treated as a constant, then it induces a strict reading, and if his is a bound variable, it induces a sloppy reading.}\]

(109) [Bill liked his cat] and [Charles did too]. \hspace{1cm} (Reuland & Everaert 2001: (34))

(110) a. Bill \(\lambda x \ (x \text{ liked } a's \text{ cat}) \) & Charles \(\lambda x \ (x \text{ liked } a's \text{ cat}) \) (strict reading)

b. Bill \(\lambda x \ (x \text{ liked } x's \text{ cat}) \) & Charles \(\lambda x \ (x \text{ liked } x's \text{ cat}) \) (sloppy reading)
\hspace{1cm} (Reuland & Everaert 2001: (35))

When is a pronominal interpreted as a variable and when as a constant? Reinhart (1983) and Grodzinsky and Reinhart (1993) propose a condition shown in (111) to regulate the interpretation of a pronominal as a constant.

(111) Rule I: Intrasentential Coreference

NP A cannot corefer with NP B if replacing A with C, C a variable A-bound by B, yields an indistinguishable interpretation. \hspace{1cm} (Grodzinsky & Reinhart 1993: 88 (20))

(112) indicates how Rule I (111) functions. In (112), Bill and him are intended to corefer, though the sentence seems to be ruled out by Principle B of the Binding Theory. We repeat the second sentence of (112) as (113a). Following Rule I, we replace him in (113a) with a variable in (113b),
and (113b) can be transcribed as (113c). Then, $B$ A-binds $C$ in the second conjunct in (113c) and the two sentences in (113c) are distinguishable. Hence we can say $B$ and $A$ in (113a) can corefer. The property Mary and Bill have in common is Bill-adoration. If Bill has the SELF-adoration property, not him but himself should be used in the second conjunct.

(112) I know what Bill and Mary have in common. Mary adores Bill and Bill adores him too.

(Reuland & Everaert 2001: (38))


c. $\lambda y$ (y adores Bill)(Mary) & $\lambda x$ (x adores x)(Bill)

Though we do not regard zibun as a pronominal, if we apply Rule I to zibun, the condition clearly accounts for the coreference reading of zibun as in (114). The Japanese sentence (114) is the translation of the English (113a). (114b) is equal to (113b), and (114c) has the same structure with (113c). What Mary and Bill have in common is Bill-adoration in (114) as well. Bill does not have the SELF-adoration property.

(114) a. Watasi-wa [Mary to Bill]-ga kyootuu-ni motu kangae-o sitte-iru. Mary-wa Bill-o suuhai-si, Bill-mo zibun-o suuhai-suru.

   'I know what Mary and Bill have in common. Mary adores Bill, and Bill adores self too.'

b. Mary-wa Bill -o suuhai-si, Bill-mo zibun -o suuhai-suru.

   -TOP -ACC also self -ACC adores

   'Mary adores Bill, and Bill adores self too.'

c. $\lambda y$ (y adores Bill)(Mary) & $\lambda x$ (x adores x)(Bill).

We have seen that zibun-zisin is a bound variable that induces only the sloppy reading. Regarding zibun, we have observed that zibun induce both the strict 'coreference' reading and the sloppy 'binding' readings in (107), (109) and (111) - (114). Though we have observed that both zibun and zibun-zisin are bound variables, we want to define zibun as not a pure bound variable anaphor because zibun has a property that is shared by pronominals. Therefore, we can conclude that zibun-zisin, not zibun, is the reflexivizer in Japanese.
4.2.2 Inherent Reflexivity

First of all, we will restudy Ueda’s (1986) observation that we have seen in 3.2.1. In his analysis, *zibun* is a pronoun, so he admits that local binding of *zibun* in (89a), here repeated as (115b), is problematic. Ueda argues what gives the contrast of grammaticality in the local binding of *zibun* is a semantic difference between verbs. He accounts for this phenomenon as follows: if the verb of the clause in which *zibun* occurs represents a physical activity such as *nagur(u) ‘to hit’ or ker(u) ‘to kick’ in (115a), then Principle B applies. If the verb represents an activity of more abstract sort, like *nikunde-iru ‘to hate’ or seme(ru) ‘to blame’ in (115b), then *zibun* is exempt from Principle B.

(115) a. *John* -wa *zibun* -o * [nagutta / ketta].
    -TOP -ACC [hit / kicked]
    *‘John [hit/kicked] himself.’

b. *John* -wa *zibun* -o * [nikunde-iru / seme].
    -TOP -ACC [hate / blamed]
    ‘John [hates/ blamed] himself.’

We regard *zibun* as an anaphor, so we do not fully accept Ueda’s analysis for the local binding of *zibun*. However, his classification between two types of predicates is worthy of attention. We will account for the different grammaticality in terms of the reflexivity of predicates. Let us see the Dutch examples (116) and (117), which we have seen as (30) and (31) in 2.2.1. R&R account for the difference of grammaticality between the two sentences as follows: in (116), *zieh*, a non-reflexivizer anaphor, is taken as an argument of an inherently reflexive predicate *gedraagt ‘behaves,’ while in (117), the predicate *haat ‘hates’ is not inherently reflexive, so it cannot take a non-reflexivizer *zieh*.

(116) *zieh* gedraagt [+ref] [zieh/*ziehzelf].
    behaves [SE/*SEL]
    ‘Max behaves.’

(117) *zieh* haat [-ref] [ziehzelf/*zieh].
    hates [SELF/*SE]
    ‘Max hates himself.’

We will analyze (115a) and (115b) along the line of this analysis proposed by R&R. We regard predicates in (115a) as non-reflexive inherently. They need to be reflexive-marked by a reflexivizer anaphor argument to be interpreted reflexively. The predicate is not reflexive-marked, so Condition A rules out (115a). On the other hand, predicates in (115b) have the reflexive property in the lexicon. That is, they are reflexive-marked. Besides, coarguments are coinverted, so they are reflexive. Therefore, Condition A of R&R allows these predicates to take *zibun* as their arguments.
4.2. REFLEXIVE-MARKING IN JAPANESE

The definition of ‘intrinsic reflexivity’ mentioned by R&R is that coarguments of an inherently reflexive predicate, which are present in its thematic grid, are lexically predisposed to be identical in reference. According to this definition, inherently reflexive predicates are very few in Japanese. If we do not pay attention to this definition, we can find much more predicates that induce the reflexive readings. The predicates in (118a) and (118b) are called as zi-verbs and ziko-verbs, respectively. These predicates morphologically display their reflexivity with the morphemes zi- and ziko-. Both zi- and ziko- mean ‘self.’ These morphemes are prefixed to Chinese base predicates, and make verbal nouns zisatu in (118a) and ziko-syookai in (118b). They are further suffixed by the verb suru ‘do.’ (Aikawa & Tsujimura 1996)

   -NOM killed-self
   ‘John killed himself.’

   -NOM self-introduced
   ‘John introduced himself.’
   (Aikawa 1993: 76)

We accept that these predicates are inherently reflexive as they induce the reflexive readings in (118a) and (118b). However, we leave aside these predicates for a while as these predicates can induce the reflexive reading without taking object arguments. Here we consider some non-Chinese origin predicates such as hazi(ri) ‘to be ashamed’ or hoko(ri) ‘to pride oneself,’ and some Chinese origin predicates such as kensu-suru ‘to be humble’ as inherently reflexive (hereafter [+ ref]) predicates. Let us consider examples in (119).

(119) a. John -ga zibun -o hazita [+ ref].
   -NOM -ACC was-ashamed
   ‘John was ashamed of himself.’

b. John -ga musuko -o hazita.
   -NOM son -ACC was-ashamed
   ‘John was ashamed of his son.’

c. John -ga ei - hazita.
   -NOM was-ashamed
   ‘John was ashamed of himself.’

Hazi(ri) ‘to be ashamed of’ is one of the inherently reflexive predicates in Japanese. In (119a), the coarguments of the predicate: John and zibun, are identical in reference. However, this predicate is used as non-reflexive in some situations as in (119b). The two coarguments are not identical:
John and musuko 'son,' and they are not coindexed. We will regard this predicate as an inherently reflexive predicate because it predominantly induces the reflexive reading unless it overtly takes object nouns that are different in reference from the subject nouns. For instance in (119c), if the object occurs covertly as the e shows, the predicate induces the reflexive interpretation.

4.2.3 Inherently Reflexive Predicates

Let us investigate two examples of inherently reflexive predicates: hazi(ru) 'to be ashamed of' and kensen-suru 'to humble oneself.' The reflexivity of each predicate is licensed by the predicate itself, so the predicate is reflexive-marked. If its coarguments are coindexed as in (120a), then the predicate is reflexive and Condition A of R&R rules in (120a). The reflexivity of a [+ ref] predicate is satisfied if it takes zibun, not zibun-zisin that functions as a reflexivizer, as its argument as in (120a). Now we will consider (120b), which (120a) is embedded into a larger sentence. Although many scholars believe that zibun allows long distance (LD) bindings, the acceptability of the LD binding is low in (120b). (120b) is a counterexample to the view that zibun allows LD binding. Although the matrix subject Mary might be the antecedent in some situations, the embedded subject John is dominantly interpreted as the antecedent of zibun. We suggest that the dominant interpretation of the local zibun binding is due to the inherently reflexive property of the embedded predicates. In the embedded IP, each the inherently reflexive predicate hazi(ru) 'to be ashamed of' and kensen-suru 'to humble oneself' and their coarguments John and zibun constitute the reflexive domain of the embedded predicates. The predicates are reflexive-marked because they are inherently reflexive, and the predicates are reflexive as their coarguments are coindexed. Hence, R&R's Condition A rules in the zibun binding by John.

(120) a. John$_{ij}$ -ga zibun$_{ij}$ -o [hazita / kensen-sita] [+ ref],

-NOM -ACC [was-ashamed / humbled]

'John$_{ij}$ [was ashamed of / humbled] self$_{ij}$.'

b. Mary$_{ij}$ -ga [IP John$_{ij}$ -ga zibun$_{ij}$ -s] -o [hazita / kensen-sita]] to omotta.

-NOM -NOM -ACC [was-ashamed / humbled] -COMP thought

'Mary$_{ij}$ thought that John$_{ij}$ [was ashamed of / humbled] self$_{ij}$ ?s$_{ij}$.'

Here we will study the zibun-binding that is referred to as 'backward anaphor' binding. First of all, we will study what backward anaphor is. Backward anaphor binding is seen in the case where matrix predicate is psychological verbs such as odorokasera 'to surprise' in (121). An object of a matrix psychological predicate has the thematic role Experiencer.
4.2. REFLEXIVE-MARKING IN JAPANESE

(121) [IP John\textsubscript{i} -ga zibun\textsubscript{ij} -o kensonsita [+ref] koto] -ga Mary\textsubscript{j} -o odorokaset\textsubscript{a}.

\hspace{1cm} -NOM \hspace{1cm} -ACC humbled fact -NOM \hspace{1cm} -ACC surprised

‘The fact that John\textsubscript{i} humbled self\textsubscript{ij} surprised Mary\textsubscript{j}.’

In (121), John, one of the argument of the inherently reflexive predicate kensonsuru ‘to humble oneself,’ is the antecedent of zibun. This is the same binding relation as the one seen in (120b); the embedded IP constitutes the reflexive domain of the predicate kensonsita, and John is interpreted as the antecedent of zibun. Zibun as a backward anaphor, however, is generally analyzed to be bound Experiencer nominals as in (122) and (123).

(122) [IP John\textsubscript{i} -ga zibun\textsubscript{ij} -o semeta [+/-ref] koto] -ga Mary\textsubscript{j} -o odorokaset\textsubscript{a}.

\hspace{1cm} -NOM \hspace{1cm} -ACC blamed fact -NOM \hspace{1cm} -ACC surprised

‘The fact that John\textsubscript{i} blamed self\textsubscript{ij} surprised Mary\textsubscript{j}.’

(123) [IP John\textsubscript{i} -ga zibun\textsubscript{ij} -o taihosita [-ref] koto] -ga Mary\textsubscript{j} -o odorokaset\textsubscript{a}.

\hspace{1cm} -NOM \hspace{1cm} -ACC arrested fact -NOM \hspace{1cm} -ACC surprised

‘The fact that John\textsubscript{i} arrested self\textsubscript{ij} surprised Mary\textsubscript{j}.’

In (122), the matrix object Mary as well as the embedded subject John can be the antecedent of zibun, and in (123), Mary is dominantly interpreted as the antecedent of zibun. Although Mary does not c-command zibun, it can be the antecedent of zibun in (122) and (123). (121) indicates the local binding of zibun contrary to the general analysis on backward anaphor bindings. We argue that the different binding relations in (121) – (123) are due to the different properties of embedded predicates among the three sentences. We claim that the property of predicates affects the interpretation of zibun in backward anaphor binding. The predicate in the embedded predicate is [+ref], so (121) shows the local binding of zibun. We will see the detailed analyses of (122) and (123) when we study other kinds of predicates in the following section.

Next, we will consider the case that the [+ ref] predicates take zibun\textsubscript{sisin} as their arguments as in (124). As we define zibun\textsubscript{sisin} as the Japanese reflexivizer, zibun\textsubscript{sisin} functions as a reflexivizer to compensate for the reflexivity of [-ref] predicates. Then what is the function of zibun\textsubscript{sisin} when it occurs as the argument of a [+ ref] predicate? 4

(124) John\textsubscript{i} -ga zibun\textsubscript{sisin}i -o [hazita / kenson-sita [+ref]].

\hspace{1cm} -NOM \hspace{1cm} -ACC [was-ashamed / humbled]

‘John\textsubscript{i} [was ashamed of / humbled] self\textsubscript{i}.’

\textsuperscript{4}R&R explain this issue as follows: ‘A different question is why intrinsically reflexive verbs favor a SE anaphor over a SELF one. This is does not follow directly from anything we say, but we believe that it follows from principles of economy: the same property should not be marked twice. (Reinhart & Reuland 1993: footnote15)’
(125) Max₁ gedraagt [zich₁ /*zichzelf₁]. (Dutch)
    behaves [SE /*SELF]
    ‘Max behaves (himself).’
    (Reuland & Everaert 2001: (54))

(126) Max₁ benimmt [sich₁ /*sich selbst]. (German)
    behaves [SE /*SELF]
    ‘Max behaves (himself).’

In Japanese, a [+ ref] predicate can cooccur with zibun-zisin as (124) shows. In contrast, neither
in Dutch nor in German do reflexivizer anaphors cooccur with [+ ref] predicates. The [+ ref]
predicate gedraagt ‘behaves’ in Dutch cannot take the reflexivizer anaphor zichzelf in (125), and
the [+ ref] predicate benimmt ‘behaves’ in German cannot have sich selbst as its argument in (126).
We claim that reflexivizer anaphors that occur as the arguments of [+ ref] predicates are used as
focus anaphors. We have studied focus anaphors in 2.2.2. We repeat (49) in (127) and (50) in (128).
The focus anaphor ‘himself’ in (127) undergoes the LF movement, and moves to the focus position
as in (128).

(127) Bismarck’s impulsiveness has, as so often, rebounded against himself.

(128) himself₁ [Bismarck’s impulsiveness has, as so often, rebounded against e₁]

On this analysis, we propose that zibun-zisin that cooccurs with a [+ ref] predicate undergoes the
LF movement. (130) is the LF representation of (129). This zibun-zisin is used as a focus anaphor,
not as a reflexivizer.

(129) John₁ -ga zibun-zisin₁ -o hazita
        -NOM -ACC was-ashamed
    ‘John₁ was ashamed of self-self₁.’

(130) zibun-zisin-ο₁ [John-ga  e₁ hazita]

Whether a reflexivizer anaphor can be used as focus or not depends on the property of reflexivizer
anaphors. We suggest that reflexivizer anaphors that can cooccur with [+ ref] predicates like zibun-
zisin in Japanese have the property that can be focus anaphors. Reflexivizer anaphors that do not
have the property to be focus anaphors cannot cooccur with [+ ref] predicates like zichzelf in Dutch
or sich selbst in German.

Zibun-zisin used as a focus anaphor undergoes LF movement even when it is embedded in a
larger sentence. (131) has the LF structure shown in (132).

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5We consulted Philip Spaeth about the judgement.
4.3 Properties of Predicates

As we have seen in 4.2.2, Japanese has inherently reflexive predicates as well as Dutch or German. R&R propose that there are two other types of predicates in addition to inherently reflexive predicates: doubly listed predicates (both as reflexive and as non-reflexive) and non-reflexive predicates (hereafter [+/- ref] and [- ref], respectively). In this section, we will see if Japanese has these other types of predicates.

4.3.1 Doubly Listed Predicates

While the number of what can be considered inherently reflexive predicates in Japanese are small, there are many predicates in the language which should be dually listed as both reflexive and non-reflexive in the lexicon. Some doubly listed predicates are of non-Chinese origin such as *seme*(*ru*) ‘to blame’ or *home*(*ru*) ‘to praise,’ and some are of Chinese origin such as *syookai*-*saru* ‘to introduce’ or *hihan*-*saru* ‘to criticize.’ These predicates are both reflexive and non-reflexive, so *zibun* as direct object may refer either to the subject or to some other individual in context. In the case of reflexive usage, the subject and object of the predicate are the same in reference as in (133a). In the case of non-reflexive usage, the subject and object have different reference as (133b) shows.

(131) Mary3-ga [John1-ga zibun-zisin4j -o hazita] to omotta.
\[\begin{array}{ll}
\text{-NOM} & \text{-NOM} \\
\text{-ACC} & \text{-COMP thought} \\
\end{array}\]
‘Mary3 thought that John1 was ashamed of self-self4j.’

(132) zibun-zisin-o1 [Mary-ga [John-ga e1 hazita] to omotta.]
When *zibun-zisin* is used as a focus anaphor, *Mary* can be the antecedent of it in (131). We claim that *zibun-zisin* as a focus anaphor can be bound by a non-local binder, although *zibun-zisin* is thought not to allow long distance binding. Both the embedded subject *John* and the matrix subject *Mary* can be the antecedent of *zibun-zisin* in (131).6

We regard these non-Chinese origin and Chinese origin predicates like *haz(i)ru* ‘to be ashamed of,’ *hoko*(*ru*) ‘to be proud of’ and *kensosu*-*saru* ‘to humble oneself’ as inherently reflexive predicates in Japanese, though the number is very small.

6 Although *kensosu*-*saru* ‘to humble oneself’ in (i) is an inherently reflexive predicate as well as *haz(i)ru* ‘to be ashamed of’ in (131), the acceptability of the LD binding of *zibun-zisin* in (i) is lower than that of (131).

(i) Mary3-ga [John1-ga zibun-zisin4j -o kensosu3ita] to omotta.
\[\begin{array}{ll}
\text{-NOM} & \text{-NOM} \\
\text{-ACC} & \text{-COMP thought} \\
\end{array}\]
‘Mary thought that John, humbled self-self4j?’

It seems that the acceptability of LD bindings of *zibun-zisin* differ depending on predicates that take *zibun-zisin*, but we insist that the restriction of local bindings of *zibun-zisin* gets loose when *zibun-zisin* is used as a focus anaphor.
(133) a. John$_i$ -ga zibun$_i$ -o semeta.
   - NOM    - ACC blamed
   ‘John$_i$ blamed self$_i$.’

b. John$_i$ -ga Mary$_j$ -o semeta.
   - NOM    - ACC blamed
   ‘John$_i$ blamed Mary$_j$.‘

Here, we will study se(me)ru ‘to blame’ and syookai-suru ‘to introduce’ in (134). The predicates in (134a) have to be used as [+ ref]; otherwise the predicates are not reflexive-marked, and then the reflexive interpretation is impossible. In a complex sentence (134b), if the predicates are used as [+ ref], the antecedent of zibun is the embedded subject, and the antecedent is the matrix subject if the predicates are taken as [- ref]. In (134b), when semeta or syookai-sita is used as [+ ref], the embedded clause is the reflexive domain of the predicate. zibun and the antecedent John have to be coindexed with the index $i$. Then, Condition A rules in the sentence, that is, the predicates are reflexive-marked by its inherent reflexivity and their coarguments are reflexive. When zibun and the matrix subject Mary are coindexed with the index $j$, semeta and syookai-sita should be used as non-reflexive; otherwise Condition A incorrectly rules out the sentence because the reflexive-marked predicates are not reflexive.

(134) a. John$_i$ -ga zibun$_i$ -o [semeta / syookai-sita [+/- ref]].
   - NOM    - ACC [blamed / introduced]
   ‘John$_i$ [blamed / introduced] self$_i$.’

b. Mary$_j$ -ga [John$_i$ -ga zibun$_i$ -o [semeta / syookai-sita]] to omotta.
   - NOM    - NOM    - ACC [blamed / introduced]    - COMP thought
   ‘Mary$_j$ thought that John$_i$ [blamed / introduced] self$_i$$_j$.’

c. John$_i$ -ga Mary$_j$ -o [semeta / syookai-sita].
   - NOM    - ACC [blamed / introduced]
   ‘John$_i$ [blamed / introduced] Mary$_j$.’

If the predicates are used as non-reflexive, the subjects and the objects can have different references as in (134c).

Next we will consider the backward binding of zibun that appears with a doubly listed predicate. We repeat (122) in (135).

(135) [NP [IP John$_i$ -ga zibun$_i$ -o semeta koto] -ga Mary$_j$ -o odorokasetan.
   - NOM    - ACC blamed fact    - NOM    - ACC surprised
   ‘The fact that John$_i$ blamed self$_i$ surprised Mary$_j$.’
4.3. PROPERTIES OF PREDICATES

The embedded predicate *semeta* is a doubly listed predicate, so it can be used both reflexively and non-reflexively. If it is used as a reflexive predicate, *John* is interpreted as the antecedent of *zibun*. If the predicate is used non-reflexively, *Mary*, which is outside the reflexive domain of the predicate, can be the antecedent of *zibun*. (135) shows that the inherent property of the predicates affects the interpretation in the backward *zibun* binding.

In (136a), *zibun-zisin* can function as a reflexivizer. Thus, the predicate *seme(ru)* or *syookai-suru* does not need necessarily to be [+ ref]. *Zibun-zisin* functions as a reflexivizer to compensate for the reflexivity of the predicates if the predicates are used as [- ref]. If the predicate is [+ ref], *zibun-zisin* is used as a focus anaphor. Let us examine (136b) in which (136a) is embedded. When *zibun-zisin* reflexivizes the [- ref] predicates, only the local-binding reading is accepted, as (136b) indicates. As the embedded clause is regarded as the reflexive domain of the predicate, the antecedent of *zibun-zisin* is unambiguously the embedded subject *John*. When *zibun-zisin* is used as a focus anaphor, the same sentence has the LF structure shown in (137a). It functions as focus, and the matrix subject *Mary* can be the antecedent of *zibun-zisin* as well as the embedded subject *John*, as (137b) shows.

(136) a. *John* -ga *zibun-zisin* -o [semeta / syookai-sita].
   -NOM -ACC [blamed / introduced]
   'John [blamed / introduced] self-*f*.'

   -NOM -NOM -ACC [blamed / introduced] -COMP said
   'Mary said that John [blamed / introduced] self-*f*.'

(137) a. *zibun-zisin* -o [Mary -ga [John -ga *e* -o [semeta / syookaisita]] to *omotta.*]

   -NOM -NOM -ACC [blamed / introduced] -COMP said
   'Mary said that John [blamed / introduced] self-*f*.'

There is another type of doubly listed predicates: verbs that select body part NPs as their objects such as *hige-o so(ru)* ‘to shave oneself,’ *kami-o some(ru)* ‘to dye one’s hair’ and *karada-o ara(au)* ‘to wash oneself.’ As these predicates are doubly listed as reflexive and non-reflexive, direct objects of them may belong either to subjects (reflexive usage of predicates) as in (139b) or to some other individuals in context (non-reflexive usage) as in (140).

(138) *John* shaved *himself*.

(139) a. *John* -ga *zibun* -o *sotta.*
   -NOM self -ACC shaved
   'John shaved self.'
b. John₁-ga zibun₁-no hige -o sotta.
   -NOM self-GEN beard -ACC shaved
   ‘John shaved himself.’ (‘John shaved his beard.’ literally translated)

c. John₁-ga e hige -o sotta.
   -NOM beard -ACC shaved
   ‘John shaved himself.’

(140) John₁-ga Bob₂-no hige -o sotta.
   -NOM -GEN beard -ACC shaved
   ‘John shaved Bob’s beard.’

In English, the direct object reflexive anaphor *himself* has the same index with the subject noun *John* as (138) shows. In Japanese, by contrast, the subject and the object are not identical: *John* and *hige* ‘beard’, as in (139b). If the direct object is identical with the subject as in (139a), the literal translation of (138), the sentence is ungrammatical. The predicate needs to take a body part as its argument such as *hige* ‘beard’ in (139b). (139b), in which the object *hige* is not strictly identical with the subject *John*, is taken as grammatical. In the case of verbs that select body-part objects, reflexive anaphors appear in genitive positions of object body parts. If the possessor of the body-part object is overtly represented, *zibun* appears with a genitive marker *no* as *zibun-no* in (139b). If the possessor is covertly shown, an empty specifier occurs as the *e* in (139c) indicates. In Japanese, what is denoted by a direct object must belong to a subject. In (139), the direct object *hige* ‘beard’ should be understood as the subject *John’s*. We notice that there is a tight referential link between subjects and objects in Japanese. The tight referential linkage between subjects and objects has a strong resemblance to the whole-part or possessor-possessee relation of the ‘inalienable possession’ construction.

With regard to the inalienable possession, let us see Nishigauchi’s (2004) analysis. He proposes the structure that involves inalienable possession as in (141) connected to the transitive construction such as (142).

(141)
4.3. PROPERTIES OF PREDICATES

(142) Gakusei -ga Yamada -o (kurikaesi hagesiku) atama -o tatai-ta.
    student -NOM repeatedly hard head -ACC hit
    ‘The student hit Yamada on the head hard, over and over again.’

    (Nishigauchi 2004: (15))

Nishigauchi argues that (142) is low in acceptability because it violates the double-o constraint (Harada 1973). However, he claims that the intervening adverbial, namely kurikaesi hagesiku ‘repeatedly hard’, between the two accusatively marked elements Yamada -o and atama -o improves the status of sentences involving double-o. He analyzes (142) as having the structure shown in (143). One of the two accusatively marked elements atama ‘head’ is in the head of the lower NP. V, the sister of atama, assigns the accusative case to it. The other element Yamada is in the specifier position of the lower VP. It is assigned the accusative case by V0 that is raised from the lower V position and c-commands Yamada.

(143)

Based on Nishigauchi’s analysis, we will suggest that zibun in genitive positions of objects in verbs that take body parts as their arguments have such structure shown in (144). zibun overtly appears with the genitive marker -no, while it is assigned the accusative case at some syntactic levels.
Let us return to the study of the non-reflexive usage in (140). Even when it is used as non-reflexive, the predicate takes a body part as its direct object. In the case of a non-reflexive predicate, the nominal that appears in the genitive position of the direct object is different from the subject. In (140), the object Bob’s beard was shaven by the subject John. In this usage, the predicate is non-reflexive, that is transitive. In (145), zibun-zisin appears in genitive position. Compared with zibun in genitive position that means just ‘his / her,’ zibun-zisin in genitive position expresses ‘his / her own.’ In other words, zibun-zisin in genitive position is an intensifier that expresses the inalienable possession relation more clearly than zibun in genitive position.  

(145) Johni-ga zibun-zisin-no hige-o sotta.
   -NOM self-self-GEN beard-ACC shaved
   ‘John shaved his own beard.’

As in (139c), the predicate that takes a body part induces the reflexive interpretation. In addition, the predicate is used as transitively as well, as (140) shows. Therefore, we take these predicates as doubly listed predicates together with the predicates that we have seen in the first half of this subsection, such as seme(ru) ‘to blame’ or syookai-suru ‘to introduce.’

### 4.3.2 Non-reflexive Predicates

Under R&H’s theory, predicates that lack reflexivity can compensate for this by taking reflexivizers as their arguments in some languages like Dutch. As in (146), the [- ref] predicate haat ‘hates’

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induces the reflexive interpretation when it takes a reflexivizer anaphor *zich*\textsubscript{self}. If this predicate takes a non-reflexivizer anaphor *zich*, the reflexive interpretation is not induced.

(146) Max\textsubscript{1} haat \textsubscript{-ref} \{*zich*\textsubscript{self} / *zich*\textsubscript{i} \}

hates SELF / *SE

'Max hates himself.'

Does this idea apply to Japanese? As (147) indicates, the predicates *odo*(su) 'to threaten' and *taiho*-suru 'to arrest' induce different interpretations depending on whether they take *zibun* or *zibun-zisin* as their arguments. In (147a), these predicates take the non-reflexivizer anaphor *zibun*. The reflexive reading cannot be suggested. On the other hand, in (147b), the reflexive reading is predominantly induced by the predicates taking the reflexivizer anaphor *zibun-zisin*, though we do not fully accept the reflexive interpretation of (147b).

(147) a.?*John*\textsubscript{i} -ga *zibun*\textsubscript{i} -o \{ *odosita / taiho-sita \textsubscript{-ref}\}.

\textsubscript{-NOM} \textsubscript{-ACC} [threatened / arrested]

*?*John\textsubscript{i} [threatened / arrested] self\textsubscript{i}.

b.?*John*\textsubscript{i} -ga *zibun-zisin*\textsubscript{i} -o \{ *odosita / taiho-sita \}.

\textsubscript{-NOM} \textsubscript{-ACC} [threatened / arrested]

*?*John\textsubscript{i} [threatened / arrested] self-self\textsubscript{i}.

When (147) is embedded in larger sentences, the LD binding of *zibun* and the local binding of *zibun-zisin* are the dominant interpretations for the anaphor bindings.

(148) a. Mary\textsubscript{j} -ga \{ *John*\textsubscript{i} -ga *zibun-zisin*\textsubscript{i/\textsubscript{j}} -o \{ *odosita / taiho-sita \}\} to omotta.

\textsubscript{-NOM} \textsubscript{-NOM} \textsubscript{-ACC} [threatened / arrested] \textsubscript{-COMP} thought

'Mary\textsubscript{j} thought that John\textsubscript{i} [threatened / arrested] self-self\textsubscript{i/\textsubscript{j}].'

b. Mary\textsubscript{j} -ga \{ *John*\textsubscript{i} -ga *zibun-zisin*\textsubscript{i/\textsubscript{j}} -o \{ *odosita / taiho-sita \}\} to omotta.

\textsubscript{-NOM} \textsubscript{-NOM} \textsubscript{-ACC} [threatened / arrested] \textsubscript{-COMP} thought

'Mary\textsubscript{j} thought that John\textsubscript{i} [threatened / arrested] self-self\textsubscript{i/\textsubscript{j}].'

In this way, a reflexive interpretation is not determined by the property of predicates but it depends on the reflexive property of arguments. That is, a reflexive interpretation is determined by taking *zibun-zisin*. Japanese does not show the clear contrast on grammaticality between non-reflexive predicates with *zibun-zisin* and non-reflexive predicates with *zibun* that we can observe in the Dutch example (146), but reflexivizer anaphors compensate for the lack of reflexivity of predicates in Japanese as well as in Dutch. Therefore we classify these predicates into non-reflexive predicates.
Next we will consider backward anaphor bindings here again. We will see backward zibun interpretation that occurs with non-reflexive predicates in (149), which we have already seen in (123), and other cases of backward anaphor bindings in (150) and (151).

(149) [NP [IP John\textsubscript{i} -ga zibun\textsubscript{ij} -o taihosita koto] -ga Mary\textsubscript{j} -o odorokaset\textsubscript{a}.

\begin{align*}
\text{-NOM} \quad \text{-ACC arrested fact} \quad \text{-NOM} \quad \text{-ACC surprised}
\end{align*}

‘The fact that John\textsubscript{i} arrested self\textsubscript{ij}\textsuperscript{a}, surprised Mary\textsubscript{j}.’

The non-reflexive predicate taiho-suru ‘to arrest’ in the embedded IP does not constitute its reflexive domain of it, and John cannot be interpreted as the antecedent of zibun. Mary is the antecedent though it does not c-command zibun. Mary is the object of the matrix predicate odorokaset\textsubscript{a} ‘surprised,’ and it has the thematic role Experiencer. In (149), the Experiencer nominal is the antecedent of zibun, but Experiencer nominals are not always the antecedents of zibun in backward anaphor binding as we have seen in (121) and (135). It is generally said that backward anaphors are bound by Experiencer nominals, but we predict that theta roles do not affect the backward zibun binding. Two sentences in (150) seem to support this prediction.

(150) a. [NP Zibun\textsubscript{i} -no ronbun -ga LI -ni notta koto] -ga John\textsubscript{i} -o utyooten-ni sita.

\begin{align*}
\text{-GEN paper} \quad \text{-NOM get into fact} \quad \text{-NOM} \quad \text{-ACC enraptured}
\end{align*}

‘The fact that self\textsubscript{i}\textsuperscript{a}’s paper has got into LI enraptured John\textsubscript{i}.’

b. [NP Zibun\textsubscript{i} -no ronbun -ga LI -ni notta koto] -ga John\textsubscript{i} -o yuumei -ni sita.

\begin{align*}
\text{-GEN paper} \quad \text{-NOM get into fact} \quad \text{-NOM} \quad \text{-ACC famous made}
\end{align*}

‘The fact that self\textsubscript{i}\textsuperscript{a}’s paper has got into LI made John\textsubscript{i} famous.’

(150a) have a parallel structure with (150b), but a property of the matrix predicate differs from that of (150b). The matrix predicate in (150a) is a psychological verb, and the Experiencer nominal John can be the antecedent of zibun. In contrast, in (150b), the predicate is not a psychological one, and John is not Experiencer. Nevertheless, John is the antecedent of zibun.\footnote{In Japanese, both psychological verbs and causative predicates have the same verb ending -sase(ni).} As predicted, do not theta roles affect the backward zibun binding? The answer is ‘yes,’ in spite of (150). (151) shows that theta roles of nominals affect backward zibun bindings.

(151) a. [NP Chomsky\textsubscript{j} -ga zibun\textsubscript{ij} -no ronbun -o inyoo-sita koto] -ga John\textsubscript{i} -o utyooten-ni sita.

\begin{align*}
\text{-NOM} \quad \text{-GEN paper} \quad \text{-ACC quote fact} \quad \text{-NOM} \quad \text{-ACC enraptured}
\end{align*}

‘The fact that Chomsky\textsubscript{j} quoted from self\textsubscript{ij}\textsuperscript{a}’s paper enraptured John\textsubscript{i}.’
4.4 Zibun and Zibun-zisin in Non-argument Position

Here, we will consider cases of zibun and zibun-zisin in non-argument positions that behave differently from those in argument position. 9 One of the non-argument positions is in an adjunct as seen in (152). The other position is a genitive position in NP as in (153). Neither zibun nor zibun-zisin are the arguments of the predicates: mi(ra) ‘to see’ and hihan-suru ‘to criticize,’ respectively.

(152) John$_i$ -ga [PP zibun$_i$ / zibun-zisin$_i$] -no tikaku-de hebi -o mita.
    -NOM
    -GEN near snake
    ‘John$_i$ saw a snake near [self$_i$ / self-$self_i$].’

    -NOM
    -GEN paper
    ‘John$_i$ criticized self$_i$’s paper.’

9Reinhart and Reuland (1993: 673) propose anaphors that are not in argument positions can be used logophorically. They call such anaphors as ‘logophors.’
In this section, we will analyze how the behaviors of zibun and zibun-zisin in non-argument position can be accounted for.

4.4.1 Analysis by Aikawa (1993)

Before we see our analysis for zibun and zibun-zisin in non-argument positions, let us study Aikawa’s (1993) analysis. Aikawa (1993: 145-156) calls zibun as in (154a) ‘bare zibun’ and zibun as in (154b) ‘specifier zibun.’ When zibun-zisin is substituted for zibun in (154a) and (154b), the former is called ‘bare zibun-zisin’ and the latter is ‘specifier zibun-zisin.’

(154) a. Keni -ga zibun -o hihansita.
        -NOM -ACC criticized
        ‘Keni criticized zibun.’

        -NOM -GEN paper -ACC criticized
        ‘Keni criticized zibun’s paper.’ (Aikawa 1993: 146 (51))

Aikawa (1993) proposes an LF analysis of ‘specifier zibun’ and ‘specifier zibun-zisin’ as in (155) and (156). Under her analysis, ‘specifier zibun’ can be associated with Agr at LF by coindexation like ‘bare zibun,’ as we have seen in 3.2.3, and no LF-movement is involved. ‘Specifier zibun-zisin’ does not invoke LF-movement either, but the -zisin part cannot be extracted from ‘specifier zibun-zisin,’ unlike the case of ‘bare zibun-zisin,’ as we have seen in 3.3.2.

(155)
(156)

\[
\begin{array}{c}
\text{AgrP} \\
\text{NP}_i \quad \text{AgrP} \\
\text{t}_i \quad \text{Agr}_i \\
\text{VP} \quad \text{Agr} \\
\text{zibun-zisin}_i \text{-GEN N'}
\end{array}
\]

(Aikawa 1993: 151 (62))

Aikawa’s (1993) LF-analysis of *zibun* and *zibun-zisin* in ‘specifier’ position in her terms raises some questions. Why does she limit non-argument positions to specifier positions? Can her analysis account for *zibun* and *zibun-zisin* that appear inside adjunct clauses as well? Aikawa’s analysis of *zibun* and *zibun-zisin* in non-argument positions is not enough to account for ‘specifier *zibun*’ and ‘specifier *zibun-zisin*’. Besides, Aikawa claims that the Conditions of Reinhart and Reuland (1993) are irrelevant to her analysis in (155) and (156), because *zibun* and *zibun-zisin* in (155) and (156) are not in argument positions of the predicates. Although Aikawa says that R&R’s Conditions are irrelevant to *zibun* and *zibun-zisin* in ‘specifier’ positions, we believe that the Conditions of R&R apply to *zibun* and *zibun-zisin* in non-argument positions. We disagree with Aikawa (1993) in this point also.

### 4.4.2 Analysis based on Reinhart and Reuland (1993)

We insist that the Conditions proposed by Reinhart and Reuland (1993) are relevant to the analysis on *zibun* and *zibun-zisin* in non-argument positions. Their Conditions focus on the relation between a predicate and its arguments, and R&R argue that a predicate and its arguments constitutes a reflexive domain of the predicate. If an anaphoric element is in a non-argument position of a predicate, it is outside of a reflexive domain of the predicate. Then, the Conditions vacuously rule in the element. In this subsection, we cannot focus on *zibun-zisin* in non-argument positions for the lack of space, but we will analyze *zibun* in non-argument positions based on the theory by Reinhart and Reuland (1993).

Let us compare *zibun* in an argument position in (157) and *zibun* in non-argument positions in (158) and (159). \(^{10}\)

\(^{10}\) In these examples, we purposely have *sinranai-hito* as the embedded subjects. If we use *Mary* as the embedded subject...
(157) John{\textsubscript{1}}-wa [siranai-hito{\textsubscript{ij}} -ga zibun{\textsubscript{ij}} -o hokot{\textsubscript{te}}-te-iru] -no -o kiita.
   \(-\)TOP stranger \(-\)NOM \(-\)ACC be-proud \(-\)ASP \(-\)ACC heard
   ‘John{\textsubscript{1}} heard a stranger{\textsubscript{ij}} being proud of self{\textsubscript{ij}}.’

(158) John{\textsubscript{1}}-wa [siranai-hito{\textsubscript{ij}} -ga [NP zibun{\textsubscript{ij}} -no ronbun] -o hokot -te-iru] -no -o
   \(-\)TOP stranger \(-\)NOM \(-\)GEN paper \(-\)ACC be-proud \(-\)ASP \(-\)ACC
   heard
   ‘John{\textsubscript{1}} heard a stranger{\textsubscript{ij}} being proud of self{\textsubscript{ij}}’s paper.’

(159) John{\textsubscript{1}}-wa [siranai-hito{\textsubscript{ij}} -ga [NP zibun{\textsubscript{ij}} -no daigaku -no tosyokan -no kensaku-sisutemu
   \(-\)TOP stranger \(-\)NOM \(-\)GEN university -GEN library -GEN search system
   \(-\)GEN precision \(-\)ACC be-proud \(-\)ASP \(-\)ACC heard
   ‘John{\textsubscript{1}} heard a stranger{\textsubscript{ij}} being proud of self{\textsubscript{ij}}’s university library search system precision.’

All the three sentences have the same embedded predicate hoko{\textsubscript{ru}} ‘to be proud,’ \(^{11}\) and it is an inherently reflexive predicate. To (157), Condition A applies. The embedded predicate is an inherently reflexive predicate, so it is reflexive-marked. In addition, it is reflexive because its coarguments are coindexed. The embedded clause siranai-hito-ga zibun-o hokotte-iru is the reflexive domain of the predicate. In (157), the long-distance (LD) binding of zibun is not allowed, and the antecedent of zibun must be siranai-hito ‘a stranger’ that locally binds zibun. To (158) and (159), the Conditions vacuously apply. Zibun is not in an argument position in either sentence. In other words, zibun is not in the reflexive domain of the embedded predicate hoko{\textsubscript{ru}}. The LD binding of zibun becomes acceptable once zibun gets out of the reflexive domain.

Here we notice an interesting contrast between (158) and (159). In (158), zibun is embedded in a NP that contains only ronbun ‘paper.’ Though it is not impossible for the matrix subject John to bind zibun, the acceptability of the LD binding is low. Siranai-hito ‘a stranger’ is dominantly interpreted as the antecedent of zibun. By contrast in (159), zibun is embedded into a more complex as in (i) and if Mary is John’s teacher, it is not impossible for Mary to be proud of her student John. Then we cannot strictly say who is the reference of zibun.

(i) John,-wa [Mary-ga zibun{\textsubscript{ij}} -o hokot -te-iru] -no -o kiita.
   \(-\)TOP \(-\)NOM \(-\)ACC be-proud \(-\)ASP \(-\)ACC heard
   ‘John heard Mary being proud of self{\textsubscript{ij}}.’

On the other hand, if we use siranai-hito ‘a stranger’, zibun clearly refers to siranai-hito ‘a stranger’ because a stranger is not likely to be proud of John. To make clear that there is no relation between the matrix subject John and the embedded subject such as teacher-student relation, we use siranai-hito ‘a stranger’ as the embedded subject.

\(^{11}\)The -te-iru part is not a main verb. The element -te-iru shows the aspect (glossed as ASP) of the predicate with the meaning ‘progressive.’
NP that has *daigaku-no* ‘of university,’ *tosyokan-no* ‘of library’ *kensaku-sisutemunono* ‘of search system,’ and *seimitsusa* ‘precision.’ The possibility that the matrix subject *John* is interpreted as the antecedent of *zibun* increases. From this comparison, we assume that the LD binding of *zibun* becomes more prominent as the NP that contains *zibun* becomes more complex. We suggest this is because the pragmatical restriction gets loose when the object NP is complex, and the possibility of the LD binding of *zibun* increases. The complexity of NPs seems to affect the interpretation of the binding relation of *zibun*.

In addition, we will see an interesting observation in (160) - (162). As we have studied, *zibun* in an argument position of an inherently reflexive predicate must be locally bound. So, *siranai-hito* ‘a stranger’ is the antecedent of *zibun* in (160). Once *zibun* gets outside of the reflexive domain, it can be bound by a non-local binder as in (161) and (162). We have seen that the complexity of NPs affects the acceptability of LD binding of *zibun* in (158) and (159), and we predict that the complexity of NPs relates to the binding relation of *zibun*. Contrary to this prediction, although the complexity of NPs of the two sentences in (161) and (162) are equal, the acceptability of *zibun*-binding by the matrix subject *John* differs.


‘*John* heard a stranger humbling himself.’

(161) *John* -wa [siranai-hito] -ga *zibun* -no [musuko / okonai] -o *kensonsi* -te-iru -no

‘*John* heard a stranger humbling self’s [son / behavior].’

(162) *John* -wa [siranai-hito] -ga *zibun* -no [daigaku / mati] -o *kensonsi* -te-iru]

‘*John* heard a stranger humbling self’s [university / home-town].’

*Zibun* in both (161) and (162) shows an inalienable possession relation to the object nominal of the predicate *kensonsuru* ‘to humble’. The inalienability between *zibun* and *musuko* ‘son’ or *okonai* ‘behavior’ in (161) is stronger than the one between *zibun* and *daigaku* ‘university’ or *mati* ‘hometown’ in (162). We notice that if the object nominal has a strong inalienability with *zibun*, then *zibun* is bound locally. If the object nominal has a weak inalienability with *zibun*, the possibility of the LD binding of *zibun* increases. As (161) and (162) show, the weaker the inalienability gets,
the more prominent the LD binding of *zibun* is. From this observation, we suppose that there is a hierarchy involving inalienable possession relations. For instance, *musuko* ‘son’ or *ronbun* ‘paper’ have a tight inalienable possession relation with *zibun*, and they are highly ranked in the hierarchy. On the other hand, *daigaku* ‘university’ or *mati* ‘home-town’ have a less tight relation, so they are low ranked.

We still have many issues that we are not able to deal with in this thesis for the lack of space. Especially, we have to investigate if *zibun-zisin* in non-argument positions behaves similarly or differently compared with *zibun* in non-argument positions. We will leave it for our future studies.

In this chapter, we have studied reflexives in Japanese based on the reflexive analysis by Reinhart and Reuland (1993). *Zibun* and *zibun-zisin* have different functions in terms of reflexive-marking; the inherent property of predicates affects to the binding of *zibun* and *zibun-zisin*; and *zibun* and *zibun-zisin* in non-argument positions behave differently from those in argument positions. Through this chapter, we have observed that Reinhart and Reuland’s (1993) analysis is a good basis for an account of reflexivity in Japanese.
Chapter 5 Concluding Remarks

We have seen two theories on reflexives in Chapter 2. One is the Binding Theory proposed by Chomsky (1981), which has been the major leading theory on the study of reflexives for a long time. The other is the theory offered by Reinhart and Reuland (1993). It has introduced a new approach to reflexives by insisting that reflexivity is affected by the properties of predicates, as well as those of anaphors. Principle A in the Binding Theory is to regulate the distribution of anaphors, and Condition B is to regulate the distribution of pronouns. On the other hand, R&R’s Conditions are to regulate the domain of reflexivity, which predicates and their arguments induce.

In Chapter 3, we defined *zibun* as an anaphor and therefore *zibun* conforms to Principle A, which states that anaphors should be bound in their binding categories (BCs). Hence *zibun* must be bound locally according to Principle A. Thus Principle A can explain the binding relation of *zibun* in (163a), where *zibun* is bound locally. The other two *zibun* in (163), however, show different binding relations, and Principle A cannot explain them. Although the sentence structures and the BCs of the three sentences in (163) are the same, *zibun* in (163b) can be bound either locally or non-locally, and *zibun* must be bound non-locally in (163c).

(163)  
   -NOM stranger -NOM -ACC be ashamed -COMP thought  
   ‘Johnᵢ thought that a strangerᵢ was ashamed of selfᵢ₊₊.’

   -NOM stranger -NOM -ACC blame -COMP thought  
   ‘Johnᵢ thought that a strangerᵢ blamed selfᵢ₋₋.’

   -NOM stranger -NOM -ACC threaten -COMP thought  
   ‘Johnᵢ thought that a strangerᵢ threatened selfᵢ₊₊.’

In contrast, Reinhart and Reuland (1993) can account for these different binding relations. R&R claim that there are three kinds of predicates based on inherent reflexivity: inherently reflexive ([+ ref]), doubly listed as reflexive and non-reflexive ([+/− ref]), and non-reflexive ([− ref]), as (164) - (166) illustrate.
(164) Max₁ gedraagt [+ref] [zichᵢ /*zichzelfᵢ] (Dutch)
    behaves [SE/*SELF]
  'Max behaves.'

(165) Max₁ wast [+/-ref] [zichᵢ / zichzelfᵢ]
    washes [SE / SELF]
  'Max washes himself.'

(166) Max₁ haat [-ref] [zichzelfᵢ /*zichᵢ]
    hates [SELF/*SE]
  'Max hates himself.'

Their classification of these three types of predicates is true for predicates in Japanese as in (167), which presents (163) again for clarity. The predicate *hazī(ru) ‘to be ashamed’ in (167a) is [+ ref]. Because the predicate induces the reflexive reading, *zibun in the object position of the predicate must be locally bound. The predicate *seme(ru) ‘to blame’ in (167b) is [+/- ref], so if it is used as [+ ref] it induces the reflexive interpretation and the local binder *siranai-hito ‘a stranger’ binds *zibun. If the predicate is used as [- ref], then the reflexive interpretation is not induced and *zibun is bound by the non-local binder *John. In (167c), the predicate is [- ref] and the reflexive reading is not available. The non-local binder *John binds *zibun.

\[
\begin{align*}
(167) \text{John}_i \text{-ga} & \left\{ \\
& a. [\text{siranai-hito}_j \text{-ga} \text{*zibun}_i \text{-o} \text{ hazita} [+ \text{ref}]] \\
& b. [\text{siranai-hito}_j \text{-ga} \text{*zibun}_i \text{-o} \text{ semeta} [+/- \text{ref}]] \\
& c. [\text{siranai-hito}_j \text{-ga} \text{*zibun}_i \text{-o} \text{ odosita} [- \text{ref}]] \\
\right\} \text{-to omotta.}
\end{align*}
\]

It is widely accepted that *zibun allows both local and long-distance (LD) bindings as we saw in 3.1.1. However, *zibun in (167a) allows only local binding and *zibun in (167c) allows only LD binding. We have seen that the binding of *zibun depends on the properties of predicates that take *zibun as their argument.

*Zibun and *zibun-zisin behave differently from English reflexive anaphors such as *himself and *herself. We have seen their different behaviors in Chapter 3. Reflexive anaphors in English are classified into only one category. Principles in the Binding Theory can account for the behavior of English-type anaphors that are categorized into one group to some extent, but the single account might not apply to *zibun and *zibun-zisin, because the properties of these two are different from each other. Reinhart and Reuland (1993) classify anaphors into two types based on the reflexivizing function: SELF-anaphors and SE-anaphors. The reflexivizing function means the ability to reflexivize a predicate that lacks reflexivity and to impose identity between coarguments of the predicate. The
element that has the reflexivizing function is called a ‘reflexivizer.’ SELF-anaphors, for example
ziehzwelf in Dutch, are morphologically complex, and can function as reflexivizers. SE-anaphors,
such as zich, are morphologically simple, and cannot function as reflexivizers. R&R define a predi-
cate as reflexive-marked if and only if the predicate is lexically reflexive or one of its arguments
is a SELF reflexivizer anaphor, and a predicate as reflexive if and only if two of its arguments are
coindexed. In (164), the predicate gedraagt ‘to behave’ is [+ ref], so it is reflexive-marked. The
predicate does not require a reflexivizing anaphor, and the predicate takes a non-reflexivizer SE
anaphor zich. In (166), SELF-anaphor zichzwelf functions as a reflexivizer and reflexivizes the [-
ref] predicate haat ‘hates,’ and hence the predicate is reflexive-marked. (166) has to take the SELF-
anaphor zichzwelf; otherwise it is not reflexive-marked and is ruled out by R&R’s Condition A, which
states that a reflexive-marked predicate is reflexive.

The same distinction between anaphors, based on the reflexivizing function, is seen between
zibun and zibun-zisin. An element that can be a reflexivizer must be construed as a bound variable.
We have observed in 4.2.1 that zibun-zisin can be a bound variable, while zibun cannot. Hence, we
have concluded that zibun-zisin can function as a reflexivizer and zibun cannot. Though zibun-zisin
have not been defined as a SELF-anaphor and zibun as a SE-anaphor, the classification between
zibun-zisin and zibun based on the reflexivizing function could be accepted.

(168) *John1 -ga zibun1 -o odosita [-ref].
   -NOM  -ACC threatened
   *'John1 threatened self1.'

(169) ?*John1 -ga zibun-zisin -o odosita.
   -NOM  -ACC threatened
   'John1 threatened self-self1.'

(170) Max1 haat [-ref] [ziehzwelf1 */ziehzwelf1]
   hates [SELF/SE]
   ‘Max hates himself.’

In Dutch, [- ref] predicates are not allowed to take non-reflexivizer anaphors as their arguments;
they can take only reflexivizer anaphors, as in (170). However, this clear contrast seen in Dutch
does not hold for Japanese. Both reflexivizer and non-reflexivizer anaphors can be the arguments of
[- ref] predicates in Japanese. Although the acceptability is low, non-reflexivizer zibun can be the
argument of the [- ref] predicate odosita ‘threatened,’ as in (168). In (169), the lack of reflexivity of
the [- ref] predicate is not completely compensated for, though this predicate takes the reflexivizer
zibun-zisin. Japanese [- ref] predicates can cooccur with both non-reflexivizer zibun and reflexivizer
zibun-zisin. The weak reflexivizing function of zibun-zisin is regarded as resulting from a property or behavior different from SELF-anaphors in Dutch.

Another difference in behaviors between zibun-zisin and SELF-anaphors in Dutch is that zibun-zisin can be the argument of a [+ ref] predicate. In Dutch, reflexivizer anaphors cannot be the argument of [+ ref] predicates. In (174), the predicate gedraagt ‘to behave’ takes zich, but it does not allow zichzelf as its argument. On the contrary, zibun-zisin can be an argument of a [+ ref] predicate in Japanese. In (172), the [+ ref] predicate kensun-suru ‘to humble’ takes zibun-zisin. Of course, the predicate can be reflexive-marked with a non-reflexivizer zibun, as in (171). Zibun-zisin, as an argument of a [+ ref] predicate, can be analyzed as a focus anaphor, not a reflexivizer anaphor. Focus zibun-zisin undergoes LF movement, as in (173). (173) is the LF representation of (172).

(171) Johni - ga zibun i o kensun i [+] ref.
      - NOM        - ACC humbled
      ‘Johni humbled selfi.’

(172) Johni - ga zibun-zisin i o kensun i.
      - NOM        - ACC humbled
      ‘Johni humbled self-selfi.’

(173) zibun-zisin i o [Johni - ga ei kensun i.]

(174) Maxi gedraagt [+ ref] [zich i /+zichzelfi]
      behaves       [SE /+SELF]
      ‘Max behaves.’

It is widely accepted that zibun-zisin does not allow LD bindings in 3.1.2, but the LD binding of zibun-zisin is possible when zibun-zisin is used as a focus anaphor, as in (175), and this is what is expected in our analysis based on R&R. (176) is the LF structure of (175).

(175) Maryj - ga [Johni - ga zibun-zisin ij o kensun i] to omotta.
      - NOM        - NOM        - ACC humbled - COMP thought
      ‘Maryj thought that Johni humbled self-selfij.’

(176) zibun-zisin i o [Maryj - ga [Johni - ga ei kensun i] to omotta.]

Finally, we saw cases where zibun appears in a non-argument position, as in (177) and (178). Under the analysis of the Binding Theory, as the anaphor zibun must be bound within its binding category, the possible antecedent of zibun in (177) and (178) is Mary. Contrary to Principle A of the Binding Theory, John can be the antecedent of zibun. Principle A cannot explain John-binding
to *zibun*. On the other hand, R&R’s analysis can account for the grammaticality of the two possible bindings of *zibun*: binding by *Mary* and binding by *John*. R&R’s Conditions vacuously rule in *zibun* in a non-argument position. Their Conditions focus on elements in the reflexive domain of predicates, hence the Conditions vacuously apply when anaphoric elements are outside the reflexive domain.

(177) *John_i*-wa [Mary_j -ga [NP zibun_{ij} -no tomodati] -o seme-te-iru]-no -o kiita.

   -TOP    -NOM         -GEN friend    -ACC was blaming    -ACC heard  

   ‘*John_i* heard that *Mary_j* was blaming self_{ij}’s friend.’

(178) *John_i*-ga [Mary_j -ga [NP zibun_{ij} -no heya -ni] iru] to omotta.

   -NOM    -NOM         -GEN room in    -COMP thought

   ‘*John_i* thought that *Mary_j* was in self_{ij}’s room.’

As we have seen, Reinhart and Reuland’s (1993) analysis gives a better account for reflexives in Japanese. R&R have mainly studied reflexives in Germanic languages. In these languages, SELF reflexivizer anaphors compensate for the lack of reflexivity of [- ref] predicates, and [+ ref] predicates are not allowed to take reflexivizer anaphors as their arguments. Japanese reflexives show difference in these two points compared to reflexives in these languages. Although R&R’s analysis does not straightforwardly apply to reflexivity in Japanese, we prefer their analysis to the analysis of the Binding Theory to account for reflexives in Japanese. R&R’s analysis insists that reflexivity is affected by the inherent properties of predicates, as well as by the properties of the reflexive anaphors. Their Conditions regulate predicates and anaphors in the reflexive domains they constitute. On the other hand, the analysis of the Binding Theory just regulates the distribution of anaphors and pronouns. We have actually seen that R&R’s analysis can explain the three different binding behaviors of *zibun* in (163), (177) and (178), which the Binding Theory analysis cannot. In this thesis, we have observed that R&R’s analysis on reflexivity is a good basis for an account of reflexivity in Japanese. Therefore, we conclude that Reinhart and Reuland’s (1993) analysis can give a better account of reflexives and anaphors in Japanese than the Binding Theory analysis.
Bibliography


