

# Reflexive Binding and Attitudes *de se*\*

Taisuke Nishigauchi and Maki Kishida

---

## Abstract

In this paper we develop an analysis of reflexive binding involving the reflexive *zibun* in Japanese. We argue that the reflexive *zibun* is bound by a POV (point of view) holder that minimally c-commands *zibun*. The POV holder is defined as an argument (typically subject and Experiencer) that can be a locus of *de se* belief. Some predicates are incapable of hosting POV holders thus defined in combination with *zibun* and we call such predicates ‘anti-reflexive’ predicates, which are marked as such in the lexicon. *De se* interpretation plays a key role in both local and long distance binding of *zibun*.

## 1. Introduction

It has been observed since the early days of generative grammar that the grammaticality of local binding of the reflexive element *zibun* differs depending on the type of predicates that *zibun* cooccurs with. For example, the predicates in (1a) allow local binding of *zibun*, while the predicates in (1b) do not.

- (1) a. John<sub>i</sub> -wa zibun<sub>i</sub> -o {nikunda / semeta}.  
          -TOP      -ACC {hated / blamed}  
          ‘John<sub>i</sub> {hates/ blamed} himself<sub>i</sub>.’
- b. \*John<sub>i</sub> -wa zibun<sub>i</sub> -o {nagutta / ketta}.  
          -TOP      -ACC {hit / kicked}  
          \*‘John<sub>i</sub> {hit / kicked} himself<sub>i</sub>.’ (Ueda, 1986)

When the sentences in (1) are embedded as complements of verbs designating thought (we call them ‘thought verbs’), long-distance (LD) binding is acceptable in both cases.

- (2) a. Mary -wa [ John<sub>i</sub> -ga zibun<sub>i</sub> -o {nikunda / semeta} to] omotta.  
          -TOP      -NOM      -ACC {hated / blamed} that thought  
          ‘Mary<sub>j</sub> thought that John<sub>i</sub> {hated / blamed} self<sub>i/j</sub>.’
- b. Mary -wa [ John -ga zibun -o {nagutta / ketta} to] omotta.  
          -TOP      -NOM self -ACC {hit / kicked} that thought  
          ‘Mary<sub>j</sub> thought that John<sub>i</sub> {hit / kicked} self<sub>\*i/j</sub>.’

---

\*We would like to thank Norbert Hornstein, Jeff Lidz, and Howard Lasnik for comments and discussion.

It is clear that the Binding Theory in Chomsky (1981, 1986) is incapable of capturing the seemingly contradictory nature of *zibun*, which sometimes behaves like an anaphor subject to Condition A as in (1a), while other times behaves like pronominals subject to Condition B, as in (1b) and the LD interpretations of (2). We believe that reference to the nature of predicates with which the reflexive *zibun* occurs is essential in any adequate analysis of reflexive binding involving this item.

## 2. Predicate-centered Approaches

### 2.1 Reinhart and Reuland 1993

Reinhart and Reuland (1993) (hereafter, R&R) consider reflexivity as a property of predicates. R&R divide predicates into three types depending on their properties on intrinsic reflexivity: inherently reflexive, non-reflexive and lexically doubly-listed predicates. In addition, they classify anaphors into two types based on their function: SELF anaphors that can reflexivize non-reflexive predicates (function as ‘reflexivizers’) and SE anaphors that require an inherently reflexive predicate to yield a reflexive meaning. (3) and (4) show their alternative binding conditions and the definitions of the terms.

- (3) Condition A: A reflexive-marked *syntactic* predicate is reflexive.  
 Condition B: A reflexive *semantic* predicate is reflexive-marked.
- (4) A predicate is *reflexive* iff two of its arguments are coindexed.  
 A predicate is *reflexive-marked* iff
- i. it is lexically reflexive, or
  - ii. one of its arguments is a SELF-anaphor (Reinhart & Reuland, 1993, 678)

Under their analysis, the (un)grammaticality of (5) is explained as follows. In (5a), an inherently reflexive predicate takes an SE-anaphor *zich* ‘self,’ and this predicate is reflexive-marked lexically. The predicate in (5b) is inherently non-reflexive, but it is reflexivized by taking a SELF anaphor *zichzelf* ‘selfself.’ This predicate is syntactically reflexive-marked. In both cases, Condition B is satisfied. By contrast, (5c) is excluded because Condition B is violated: the predicate is not reflexive-marked as it is neither lexically reflexive nor does it take a SELF reflexivizing anaphor.

- (5) a. Max<sub>i</sub> gedraagt zich<sub>i</sub>  
       behave himself  
       ‘Max behaves himself.’
- b. Max<sub>i</sub> haat zichzelf<sub>i</sub>  
       hates himself  
       ‘Max hates himself.’
- c. \*Max<sub>i</sub> haat zich<sub>i</sub>  
       hates himself  
       ‘Max hates himself.’

### 2.2 Lidz (2001)

Lidz (2001b) gives an alternative version of a predicate-centered approach, with the consideration of more intricate aspects of identity relations holding with anaphoric expressions. He points out two major defects of Reinhart and Reuland’s (1993) analysis.

Lidz claims that R&R's analysis makes us predict that two types of reflexive-marked predicates (lexically and syntactically reflexive-marked predicates) should form a natural class, and he demonstrates the semantic differences of the two kinds of predicates using two diagnostics. The first diagnostic uses the Madame Tussaud context first discussed in Jackendoff (1992).<sup>1</sup>

- (6) a. Ringo scheert zich  
shaves self  
'Ringo shaves himself (=Ringo / \*statue).'
- b. Ringo scheert zichzelf  
shaves selfself  
'Ringo shaves himself (=Ringo / statue).' (Lidz, 2001b, (9))

On one interpretation, Ringo Starr can be understood as shaving one of the statues in the wax museum that portrays him. In this situation it is felicitous in Dutch to say (6b) but not (6a). If Ringo shaves his own face, then it is possible to say either (6a) or (6b). Lidz's point is that R&R's analysis fails to capture the fact that the statue reading is available only with a syntactically reflexive-marked predicate (6b).

Comparative deletion construction is used as the second diagnostic. Lexically reflexive-marked predicates allow only the sloppy readings as in (7a), while syntactically reflexive-marked predicates allow both the sloppy and the strict (non-sloppy) readings, as (7b) indicates. These two diagnostics demonstrate that the two types of reflexive-marked predicates are semantically different.

- (7) a. Zij verdedigde zich beter dan Peter  
she defended self better than  
'She defended herself better than Peter defended himself'  
\* 'She defended herself better than Peter defended her'
- b. Zij verdedigde zichzelf beter dan Peter  
she defended selfself better than  
'She defended herself better than Peter defended himself'  
'She defended herself better than Peter defended her' (Lidz, 2001b, (11))

Secondly, Lidz (2001b) proposes a different way of distinguishing anaphors than R&R's way. Lidz characterizes SELF anaphors in R&R's terms as 'near reflexives', for they are referentially dependent on their antecedents but not necessarily identical with them, as we have seen in (6b). In addition, Lidz characterizes SE anaphors that induce semantic (or pure) reflexivity, such as *zich* in (6a), as 'pure reflexives.' (8) shows the semantic representations of near-reflexive predicates (predicates that take near-reflexives as their arguments) and pure-reflexive predicates. Condition R in (9) regulates pure-reflexivity, and it states that if a predicate is semantically reflexive, it must be lexically reflexive, and vice versa.

- (8) a.  $\lambda x [P(x,x)]$  (semantic / pure reflexive)  
b.  $\lambda x [P(x,f(x))]$  (near reflexive) (Lidz, 2001b, (13))
- (9) Condition R  
 $\lambda x [P(x,x)]$   $\leftrightarrow$  ( $\theta_1 = \theta_2$ )  
semantics  $\theta$ -grid (Lidz, 2001b, (16))

<sup>1</sup>The predicate in (6) is a doubly-listed predicate (as reflexive and non-reflexive) in R&R's term. It can take either an SE anaphor or a SELF anaphors depending on the usage.

### 3. How Japanese differs from Dutch

In the remainder of the present article, we are going to argue that reflexive binding in Japanese differs from the Dutch counterpart in the following two respects:

1. There are no predicates which are lexically specified as being inherently reflexive in combination with *zibun*.  
 ⇒ *Zibun* is not an SE-anaphor.
2. Some predicates are lexically specified as being anti-reflexive.

We will discuss each of these points in the following subsections.

#### 3.1 Reflexively-marked predicates

We know of no verb in Japanese which shows the inherently lexical property of being reflexively-marked in combination with the reflexive *zibun*, analogous to *gedraagt* 'behave' in Dutch, which shows the property in combination with *zich*.

The predicates in the following might represent the closest analogue to reflexively-marked predicates.

- (10) a. *Yose-te wa kae-su.*  
 draw near and return  
 '(Waves) drawing ashore, returning back (to the ocean).'
- b. *Rekisi-wa kurikae-su.*  
 history-Top repeat  
 'History repeats (itself).'

If the predicates in these sentences are transitive verbs, we might label these as inherently reflexively-marked on semantic grounds. If these do represent reflexively-marked predicates in the language, however, we do not know how prevalent these are, nor do we intend to investigate these predicates in the present context.<sup>2</sup> What is clear to us at the moment is that the reflexive *zibun* is unable to participate in constructions exemplified by (10), which in turn shows that *zibun* is not an SE-anaphor in the sense of Reinhart and Reuland (1993).

Another set of possible candidates are some compounds of Sino-Japanese origins, with the first member of compound being *zi* or *ziko* 'self'. Categorically these items are usually labeled verbal nouns, which obtain their verbal status by being concatenated with the light verb *su(ru)*: *zisatu (su)* 'kill oneself, commit suicide', *ziko-hihan (su)* 'criticize oneself, do self-criticism', etc. Occurrence of these items in combination with *zibun* as object varies in acceptability, and we are not in a position to present any generalization about this variability.

- (11) a. *\*zibun-o zisatu-suru.*  
 self-Acc commit-suicide do
- b. *??zibun-o ziko-hihan-suru.*  
 self-Acc self-criticism do

We will not discuss these constructions here. For some properties of these constructions, see Tsujimura and Aikawa (1999).

<sup>2</sup>Imazumi (MA thesis from Osaka University) discusses some of these predicates.

### 3.2 Near-Reflexivity

We consider ‘near-reflexivity’ in the sense of Lidz (2001b) as the core concept in the identity relation holding with the reflexive *zibun*. This point can be established by the two diagnostics used by Lidz (2001b): Statue interpretations and non-sloppy interpretations.

#### STATUE-INTERPRETATIONS

One diagnostic of near-reflexivity as pointed out in Lidz (2001b) is the availability of statue interpretations. The statue interpretation is possible in all reflexive environments involving the reflexive *zibun*. We know of no environment in which the near-reflexive interpretation is systematically excluded while a pure-reflexive interpretation is available, although the opposite case is well-attested.<sup>3</sup>

- (12) a. John -ga *zibun* -o home-ta  
 John -NOM self -ACC praise-PAST  
 ‘John praised self.’ (*zibun* = John / Statue-John)
- b. John -ga *zibun* -o kowasi-ta  
 John -NOM self -ACC break-PAST  
 ‘John broke self.’ (*zibun* = \*John / Statue-John)

In (12a) the reflexive *zibun* allows the interpretation on which John praised the statue supposed to look like John, as well as the interpretation on which John praised himself (real-John). Our supposition is that, in all the cases in which the real-identity interpretation is available, the statue reading is also available, although the opposite is not true. Thus in (12b) *zibun* can only be interpreted as a statue or a portrait of John, and the real-John interpretation is impossible.

Sentences like (12b) have been hitherto out of consideration in the study of reflexive binding, due to the obvious reason of semantic selection. However, now that we have the statue interpretation associated with the reflexive in view, we consider sentences like (12b) relevant to our research. We will have more to say about them in subsection 4.4.

#### NON-SLOPPY IDENTITY INTERPRETATION

The availability of the non-sloppy identity interpretation in various constructions, notably comparative deletion constructions, is the second diagnostic utilized by Lidz (2001b) to tease out near-reflexivity.

We know of no environment in which the non-sloppy interpretation is excluded in comparative deletion construction in which the reflexive *zibun* is involved.

- (13) Ringo -wa John yorimo hagesiku *zibun* -o hihansi-ta  
 Ringo -TOP John than severely self -ACC criticize-PAST  
 ‘Ringo<sub>i</sub> criticized himself<sub>i</sub> more severely than John<sub>j</sub> criticized himself<sub>j</sub>.’ (sloppy)  
 ‘Ringo<sub>i</sub> criticized himself<sub>i</sub> more severely than John<sub>j</sub> criticized him<sub>i</sub>.’ (non-sloppy)

In (13) it is possible to interpret John as criticizing himself (the sloppy identity interpretation) as well as criticizing Ringo (the non-sloppy interpretation). That this pattern is prevalent with the reflexive *zibun* has been observed in the previous literature, such as Aikawa (1993).<sup>4</sup>

<sup>3</sup> Among the lexical items classified as reflexive anaphors in Japanese, *zibun-zisin* also allows statue interpretation, while *kare-zisin* does not allow this interpretation. Nakamura (1989), Aikawa (2001) discuss various lexical items with the semantic import of reflexivity.

<sup>4</sup> Aikawa (1993) notes that *zibun-zisin*, unlike *zibun*, does not allow the non-sloppy interpretation. Our judgment on this point is not so clear. If we replace *zibun* with *zibun-zisin* in (13), for example, the non-sloppy reading is possible, although the sloppy interpretation is dominant.

## ANTI-REFLEXIVE PREDICATES

In the previous subsection, we have established that ‘near-reflexivity’ in the sense of Lidz (2001b) constitutes the core concept in the identity relations involving the reflexive *zibun*, and in this sense reflexive binding involving *zibun* differs from reflexive binding in Dutch in that Condition R (9) in the sense of Lidz (2001b) either does not hold or is trivially satisfied.

We are going to argue in the present article that another, and related, important point with respect to which Japanese is different from Dutch in reflexive binding is that while in Dutch some verbs are positively marked in the lexicon so that they are reflexively-marked, Japanese does not have such verbs, as far as cooccurrence with *zibun* is concerned.

In this respect, reflexive-binding with *zibun* in Japanese is similar to Malayalam, as discussed in Lidz (2001a), in which no predicates are allowed to be lexically reflexive. Lidz (2001a, 241) analyzes the reflexive anaphor *tan* in Malayalam as an anaphor which blocks binding by a coargument across the board, since this anaphor does not permit a near-reflexive interpretation.

On this logic, *zibun* in Japanese permits local binding by a coargument precisely because its core meaning lies with near-reflexivity. However, if there are predicates in Japanese which force pure-reflexivity by virtue of their semantic or other lexical properties (other than being lexically-reflexive), we expect *zibun* to behave on a par with *tan* in Malayalam.

Now we will argue in Section 4.3 that this is exactly what happens with verbs in Japanese whose presence in the sentence precludes the local binding of the reflexive *zibun*. The predicates listed in the following exemplify the case in point.

- (14) *damas* ‘deceive’, *ke(ru)* ‘kick’, *nagur* ‘strike’, *oikake* ‘chase’, *sasow* ‘ask out’, *tukamae* ‘catch, capture’, etc.

We argue that these predicates are negatively marked with respect to reflexivity in the lexicon. This is what we mean by saying predicates are ‘anti-reflexive’. The basis for these predicates to be anti-reflexive lies with their property of imposing pure-reflexivity on *zibun*, which by its nature does not allow pure-reflexivity with its coargument.

We will discuss the properties of these predicates in Section 4.3. To show that some predicates are marked anti-reflexive, we need to discuss the notions underlying the idea.

## 4. Binding by POV

### 4.1 The Modal Projection

We claim that the following statement captures reflexive binding involving *zibun*, both in local and long-distance (LD) environments.

- (15) Reflexive *zibun* is bound by a POV (=Point of View) holder that minimally c-commands it.

Structurally, we hold that a POV holder occupies Spec of a projection of modally-sensitive auxiliaries, which we label as Mod(ality)P, which in turn consists of several sublayers of modal projections, as has been argued by Cinque (1995) among others.

- (16) [<sub>ModP</sub> X<sub>i</sub> [<sub>VP</sub> ... *zibun*<sub>i</sub> ... V ] Mod]

The POV holder in SpecModP is very often the subject of the sentence, which we believe is the main reason why the ‘subject’ has been traditionally taken as the antecedent of *zibun* since the earliest days of generative studies of Japanese syntax. That simply positing the subject of

a clause as the antecedent of *zibun* does not sufficiently describe the relevant data is shown by the subtle difference in acceptability between the sentences in (17).

- (17) a. Taro-ga zibun-o home-ta.  
 Taro-Nom self-Acc praise Past  
 ‘Taro praised himself.’  
 b. ??Taro-ga zibun-o home-te kure-ta.  
 Taro-Nom self-Acc praise do-favor Past  
 ‘Taro praised self (for me).’

While in (17a) the antecedent of *zibun* can be straightforwardly determined in such a way that it is bound by the subject *Taro*, the interpretation in (17b) is not so straightforward. The most likely candidate for the antecedent of *zibun* in (17b) is the speaker, so this sentence is interpreted by many speakers of the language in such a way as: Taro praised me, and I take it as a favor to me. But since the use of *zibun* in reference to the speaker (the first person prominal) is restricted to certain dialects, such as athlete’s speech, the majority of the speakers of the language are reluctant to accept sentence (17b).

The contrast as seen in (17) is accounted for in terms of the possible protagonist that can occupy SpecModP: In (17a) nothing prevents the subject *Taro* from appearing in this position:

- (18) [<sub>ModP</sub>Taro(-ga) [<sub>VP</sub> *e* zibun-o V] ]

We assume that the empty category is effected in SpecVP due to the movement of *Taro* to SpecModP. Thus, in our analysis *Taro* is taken as the antecedent of *zibun* not because it is the subject but it is the POV holder appearing in SpecModP.

Turning to (17b), the presence of the modal element *kure* makes the whole difference. The function of this element is to indicate that the action or event depicted by VP is evaluated positively from the viewpoint of a person *other than* the subject. We posit the presence of *pro* in SpecModP to indicate this evaluator.

- (19) [<sub>ModP</sub> *pro* [<sub>VP</sub> Taro(-ga) zibun-o V] *kure*<sub>Mod</sub>]

Thus if nobody is explicitly mentioned, the speaker is the most likely ‘controller’ of *pro* in (19), which in turn leads to the interpretation that *zibun* is bound by the speaker, for *pro* is what resides in SpecModP and its controller is the speaker.

If (17b) is embedded in a complex sentence, the interpretation of *zibun* is straightforward.

- (20) Mari-ga Taro-ga zibun-o home-te kure-ta to omow-ta.  
 Mari-Nom Taro-Nom self-Acc praise do favor-Past that thought  
 ‘Mari thought Taro praised self as a favor to her.’

In this sentence, the matrix subject is the only possible antecedent of *zibun* in the embedded clause. We argue, however, that this is not due to the LD binding of *zibun*. In fact, our claim is that there is no such thing as LD binding of *zibun*. Our claim is, drawing on the analysis in Nishigauchi (2005), that what appears to be LD binding of *zibun* is due to control of *pro* that resides in ModP. Recall, from (19), that *pro* is in SpecModP headed by the modal element *kure* in the embedded clause of (17b). In (20), the matrix subject can be the controller of *pro* in SpecModP.



## 4.2 Attitudes *de se*

We define ‘POV holder’ in terms of attitudes *de se* or self-ascriptiveness (Chierchia, 1989; Huang & Liu, 2001).

(24) A POV holder is a potential locus of *de se* belief.

The notion variously referred to as ‘attitude *de se*’ or ‘self-ascriptiveness’, as discussed in Chierchia (1989), Huang and Liu (2001), plays a central role in our account of reflexivity.

A sentence such as the following illustrates the relevance of the notion of *de se* belief.

(25) The soldier<sub>i</sub> believes he<sub>i</sub> is a war hero.

On one interpretation, the soldier hears a story about a courageous soldier, and worships that individual, not knowing that the person is himself, as being a war hero. On this interpretation the identity between the matrix subject and the pronoun in the complement clause is not part of the belief ascribed to the soldier: Rather, the identity is part of the information supplied by the speaker of the sentence. Such an interpretation is referred to as the *de re* belief. On the other hand, (25) can be understood as the soldier’s belief about himself, where the content of his thought might be rephrased as a first personal statement: I am a war hero. This interpretation is referred to as representing the *de se* belief. We refer to an individual as a POV-holder if such a *de se* belief can be ascribed to that individual, even though the actual interpretation may not turn out to be the *de se* interpretation.

As the interpretation of (25) indicates, a *de se* interpretation is usually associated with a complement clause governed by a verb designating thought. We believe that this is what underlies the LD reflexive binding as observed in sentences such as:

(26) Takasi-ga [Mari-ga zibun-o kiraw-te iru to] omow-ta.  
 Takasi-Nom Mari-Nom self-Acc hate is that thought  
 ‘Takashi thought Mary hates self (=him).’

This sentence allows a *de se* interpretation ascribed to the matrix subject, where his thought may be spelled out as: ‘Mary hates me,’ although that may not be the accurate interpretation intended by the speaker on this particular occasion. In so far as that interpretation is not excluded, we take the matrix subject of this sentence as the POV holder.

Chierchia (1989) defines the *de se* attitude as the following:

(27)  $x$  stands in a belief relation with the property  $Q$  (i.e.,  $x$  self-ascribed  $Q$ ) iff  $x$  believes (*de re*) that  $x$  has  $Q$ , and furthermore,  $K(x, x)$  where  $K$  is the cognitive access that we have to ourselves.

(28)  $K(x, x) =_{def}$   $x$  is disposed to describe the relevant belief by referring to  $x$  by the first-person pronoun.

We hold that there are two ways a given argument can be considered a POV holder. One way is for an argument to be an ‘Experiencer’ argument of thought- and psych-predicates. This is related to the fact that LD binding of *zibun* is prevalent in cases in which the reflexive occurs inside the complement clause depicting the content of thought.

The statement in (27) implies that the *de se* interpretation is available in a complement structure where the relation is mediated by  $Q$ , the statement in (28) does not preclude the relation  $K$  from holding in a single clause: We hold that when a reflexive is felicitously bound by

a local argument (most often subject), a specific form of thought, which may be characterized as being ‘first personal’ or ‘self-ascriptive’, can be ascribed to the referent of that argument.

In fact, in the current literature, the distinction between a simplex clause and a complement clause is not so clear. What appears to be a simplex clause has been treated, since the generative semantics tradition, as derived from a complex structure involving some layers of functional projections. In particular, clauses with agentive (or active) predicates have been derived from a complement structure involving the volitive (auxiliary) predicate DO which takes a complement clause (VP) whose subject is Pro: That is to say, agentive clauses have been considered as control structures:

(29) DP DO [<sub>VP</sub>Pro ...]

It has been pointed out by Hornstein (2003) that obligatory control exhibits the *de se* interpretation:

- (30) a. Only Churchill<sub>i</sub> remembers [that he<sub>i</sub> gave the BST speech.]  
 b. Only Churchill<sub>i</sub> remembers [Pro<sub>i</sub> giving the BST speech.]

Sentence (30a) can be ambiguous, having the interpretation on which Churchill was the only person who remembered that Churchill gave the famous BST speech, a false statement in light of our general knowledge, and the interpretation on which Churchill was the only person who had the personal recollection of himself giving the speech which turned out to be famous. This latter interpretation, which is a true statement so long as Churchill did not forget the event, is the *de se* interpretation, and this latter interpretation is the only reading available in (30b) a sentence involving obligatory control. Hornstein (2003) considers the *de se* interpretation as a defining characteristic of obligatory control.

Along these lines, we hold that a sentence like (31) derives from a control structure like (32).

(31) Taro-ga zibun-o home-ta.  
 Taro-Nom self-Acc praise Past  
 ‘Taro praised himself.’

(32) Taro<sub>i</sub> DO Past [Pro<sub>i</sub> praise self]

For this line of idea to go through, we need to hypothesize that DO, an element of volitive projection, entails the ‘cognitive access’ *K* defined in (27).<sup>6</sup>

This way, we hold that a thought whose content might be spelled out as ‘I am praising / saying good things about myself.’ can be ascribed to Taro, subject of the clause containing the control complement clause.

<sup>6</sup>We envisage DO as the head of an aspectual (or modal) projection that develops above VP. We discuss only active sentences here, but stative (non-active) sentences are also considered to have multi-layered projections.

Typical stative sentences that allow the occurrence of object involve multiple-nominative constructions, in which the object is nominative marked, as in:

- (i) Takasi-ga zibun-ga hokor-asi-i (koto)  
 Takasi-Nom self-Nom proud that  
 ‘that Takashi is proud of himself.’

where the (complex) adjective *hokor-asi* ‘proud’ consists of the root verb *hokor* ‘take pride’ and the adjective-forming suffix *-asi*, each of which might have its own argument structure. It’s quite likely that sentences like (i) involve complex structures at some level of representation, although we will not go into the matter in the present paper.

That might not be an accurate description of what was in his mind in the situation which is depicted by this sentence, but the point is that a possibility of such a thought, which might be legitimately assimilated with a *de se* belief occurring in Taro's mind, cannot be excluded if (31) is uttered felicitously.

Certainly, sentence (31) can be understood in a situation where Taro is saying good things about a certain individual, not knowing that that individual is himself, where the identity between Taro and the reflexive is part of the information supplied by the speaker. We take this 'ambiguity' as capitalizing on the parallelism between a complex sentence involving a verb of thought and a 'simplex' sentence, now considered a control structure, designating the speaker's belief.

### 4.3 Anti-Reflexive Predicates

#### WHEN THE AMBIGUITY FAILS

We claimed in the previous subsection that what appears to be simplex sentences like (31) exhibits the *de se/de re* ambiguity. In this subsection, we are going to show that this ambiguity is systematically absent in a class of sentences, and these are sentences whose predicates we listed in (14). We labeled these as *anti-reflexive predicates*.

- (14) damas 'deceive', ke(ru) 'kick', nagur 'strike', oikake 'chase', sasow 'ask out', tukamae 'catch, capture', etc.

The following is a result of using some of these predicates in reflexive sentences.

- (33)(\*) Takasi-ga zibun-o {tukamae-ta. / sasow-ta. }  
 Takasi-Nom self-Acc caught / asked out  
 'Takashi caught himself / asked himself out.'

These sentences, with the predicates in curly brackets, require special interpretation, if they are to be read felicitously. We need to imagine a situation in which Takashi tried catching someone, or asked out someone, who turned out to be himself in the mirror. That is to say, these sentences are permissible only on the interpretation in which the reflexive *zibun* is construed in a way analogous to 'statue' situations, as described in Lidz (2001b). Further, and more important, these sentences do not allow a *de se* interpretation ascribed to the subject. These sentences require a *de re* interpretation, in which the information as to the identity between the subject and the reflexive must be understood as being supplied by the speaker of the sentence. Therefore, the subject of this sentence is not a POV holder.

The status of (33) can be improved if we add an adjunct meaning 'not knowing / unknowingly' as in the following.<sup>7</sup>

- (34) Takasi-ga soo-to-wa sirazu zibun-o {tukamae-ta. / sasow-ta. }  
 Takasi-Nom not knowing self-Acc caught / asked out  
 'Takashi unknowingly caught himself / asked himself out.'

The improvement here is what we expect, since the addition of the adjunct forces the interpretation in which Takashi was not conscious of the activity depicted by the predicate, and the *de re* interpretation, in tandem with the statue interpretation of *zibun*, comes to be easily obtained.

Thus, if sentence (33) is embedded in a clause whose main verb is a thought verb, whose subject is a POV holder, the resulting sentence is expected to show LD binding of *zibun* by the matrix subject (although the possibility of local binding, with the statue-interpretation and the *de re* interpretation only marginally remains), and this expectation is borne out.

<sup>7</sup>Pointed out by Satoshi Tomioka.

- (35) Mari-ga [Takasi-ga zibun-o {tukamae-ta / sasow-ta } to omow-ta.  
 Mari-Nom Takasi-Nom self-Acc caught / asked out that thought  
 ‘Mari thought Takashi caught self / asked self out.’

#### ANTI-PURE IDENTITY

What can be the basis for predicates to be anti-reflexive? Aikawa (2001, 183–185) explores some semantic characterization of predicates whose presence in the sentence precludes the local binding of *zibun*. Drawing on the observations made by Ueda (1986), Aikawa (2001, 183–184) observes that “predicates that allow local binding of *zibun* involve abstract activities whereas those that preclude local binding of *zibun* involve physical activities.” While it is true that quite a few of the predicates disallowing local binding of *zibun* designate physical activities (*tukamae* ‘catch’, *oikake* ‘chase’, *nagur* ‘hit’, etc.), a considerable number of predicates denoting verbal activities (*damas* ‘deceive’, *sasow* ‘ask out’, etc.) and perception (*mi(ru)*, ‘see’, *kik(u)* ‘hear’, etc.) belong to this class. We hesitate to characterize the latter two classes of predicates as denoting physical activities on a par with the first class of predicates. So no general characterization on the basis of the nature of activities designated by the predicates appears to be available.

Nevertheless, we agree with Aikawa (2001, 184), referring to her examples (36), that “the activities expressed by the predicates in [(36)] concern Taro’s personality, thought(s), deed(s), etc., rather than Taro’s physical body part(s)” although our interpretation of this fact diverges from Aikawa’s, which is based on ‘concreteness’.

- (36) Taro<sub>i</sub>-ga zibun<sub>i</sub>-o hihan-sita / semeta.  
 Taro-Nom self-Acc criticized blamed  
 ‘Taro criticized/blamed himself.’

The generalization that we would like to suggest is that the identity condition involved in the local binding of *zibun* precludes pure identity in Lidz’s (2001b) sense. Our observation is that in all the cases in which the local binding of *zibun* is possible, the identity relation involved is near-identity in some sense. For example, if someone criticizes self, what s/he actually does is criticize self’s deed, behavior, speech, etc., as is suggested by Aikawa (2001). On the other hand, some predicates require that the relation should be direct: if someone deceives X, s/he does not deceive X’s property or attribute. If X is identical with the person denoted by the subject, the identity relation has to be pure-identity. What we are suggesting is that *zibun* cannot be used in the position of X in these cases, which, if grammatical, would have imposed pure-identity on the reflexive *zibun*, which by virtue of its lexical properties, resists pure-identity.

Construed this way, predicates we refer to as anti-reflexive are those predicates which impose pure-identity when *zibun* is used in their domain, while *zibun* resists pure-identity with its coargument. This is quite consistent with the observations we made in section 3.2. That is to say, the reflexive *zibun* that is locally bound exhibits the properties of near-reflexives: (i) the statue interpretation is always possible, and (ii) the non-sloppy identify interpretation is available in deletion contexts.

#### YOU CAN’T KILL YOURSELF

One piece of evidence that some predicates in Japanese are lexically specified as being anti-reflexive comes from idioms. There are some idioms in the language consisting of some verbs and the reflexive *zibun*. The most obvious of these idioms is the expression *zibun-o koros* ‘kill

oneself'. If this expression is used in a simplex sentence, it can never be understood as saying someone committed suicide. Rather, it means someone sacrificed him/herself, suppressed his/her desire, etc. as in:

- (37) Yamada-wa zibun-o koros-i te kaisya-no tame-ni hatarai-ta.  
 Yamada-Top self-Acc kill and company-Gen favor-Dat worked  
 'Yamada sacrificed himself and worked hard for his company.'

Other idioms of this type, which may be less obvious than the one just discussed, involve *damas(u)* 'deceive, cheat', *gomakas(u)* 'cheat', *osae(ru)* 'control, suppress', etc., and they yield similar meanings associated with self-sacrifice and self-control. Verbs like *migak(u)* 'polish', *kitae(ru)*, etc. yield more positive meanings of self-discipline and self-improvement. Another set of verbs which yield idiomatic meanings in combination with the reflexive are related with vision or sight: *sagas(u)* 'search', *mituke(ru)* 'find', *mi-usinaw(u)* 'lose sight of', etc.

Notice that these idiomatic meanings are retained when these expressions are embedded in a complement clause.

- (38) Syatyoo-wa [Yamada-ga zibun-o koros-oo to si-te iru to] omow-ta.  
 president-Top Yamada-Nom self-Acc kill do is that thought  
 'The boss thought Yamada is going to sacrifice himself.' or  
 'The boss thought Yamada is going to kill him.'

This sentence is ambiguous in such a way that when the reflexive is bound locally by the complement subject, the complement clause has only the idiomatic meaning on which Yamada is going to sacrifice himself, and when the reflexive is bound LD the resulting interpretation has to do with the boss's fear that Yamada will kill him.

The idiomatic interpretation in combination with the reflexive occurs typically (or rather exclusively) with predicates which are lexically specified as being anti-reflexive in our analysis, and we take this as a piece of supporting evidence for the present analysis. Firstly, from a communicative point of view, the absence of a literal interpretation of a given expression must be sufficiently obvious to the speakers of the language for that expression to be established as having an idiomatic interpretation. We hold that the absence of a felicitous *de se* interpretation of a construction with the reflexive *zibun* in combination with what we label as anti-reflexive predicates is sufficiently obvious. Secondly, it is worth pointing out that it is only with the class of anti-reflexive predicates in our terms that idiomatic interpretations are available in combination with the reflexive *zibun*. We take this second point as indicating that it is only this class of verbs, what we call anti-reflexive predicates, that have any lexical specification having to do with reflexivity in the language.

While the literal interpretation of the combination of these predicates with the reflexive *zibun* does not allow the *de se* interpretation, the idiomatic interpretations of these do have the *de se* interpretation. In this light, these idioms may be considered a device to get a *de se* interpretation of a construction with the reflexive which otherwise lacks it.

#### 4.4 Completing the system

So far, we have considered two types of predicates occurring with the reflexive *zibun*. First type, call it type A, allows its subject to be a POV holder, or a locus of a *de se* belief. The second type, call it type B, also labeled anti-reflexive predicates, does not allow its subject to be a POV holder.

To complete the system, we consider a third type of predicates, call it type C. These predicates have hitherto never been considered in the context in which the reflexive *zibun* is discussed.

- (39) Type C predicates: *kowas* (break, destroy), *hakob* (carry), etc.

These predicates have never been considered in the relevant discussion because of semantic selection: These predicates typically select non-human objects, while the reflexive *zibun* is normally considered human. However, if we take the statue-reading of the reflexive in our view, as in Lidz (2001b), these predicates merit some examination.

As the following examples indicate, predicates of type C only yield the statue-reading of the reflexive.

- (40) Takasi-ga zibun-o {*kowasi-ta* / *hakon-da*. }  
 Takasi-Nom self-Acc broke / carried  
 ‘Takashi broke / carried himself.’

These predicates are similar to what we called the anti-reflexive predicates in that they do not allow the real-self, as opposed to the statue-self, reading in the simplex clause. However, these predicates contrast with the anti-reflexive predicates when the clause is embedded as complement to thought verbs.

- (41) Mari-ga [Takasi-ga zibun-o {*kowasi-ta* / *hakon-da* } to] omow-ta.  
 Mari-Nom Takasi-Nom self-Acc broke / carried that thought  
 ‘Mari thought Takashi broke / carried self.’

These sentences are different from (35), in which anti-reflexive predicates are used in the complement clause, in that here both the local and LD binding of the reflexive are equally possible, though only on the statue reading.

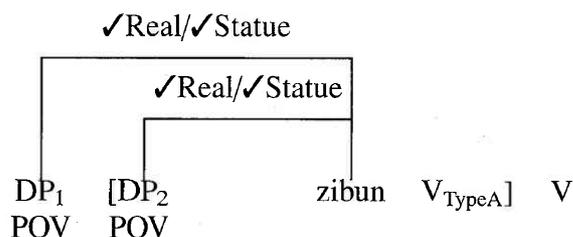
The reason for this contrast lies with the attitude *de se*. Sentence (40) allows a *de se* belief to be ascribed to the subject of the sentence, so Takashi could have had the thought: I broke myself (=a statue, picture of myself). Therefore, the subject of this sentence can be a POV holder.

This consideration leads us to a very simple view of reflexive binding in Japanese: As long as a predicate is not lexically marked as anti-reflexive, a *de se* interpretation is not excluded, and hence the subject can be a POV holder. This means that neither type A predicates nor type C predicates need to be lexically specified in connection with reflexivity. It is only the anti-reflexive predicates that need to be specified in the lexicon.

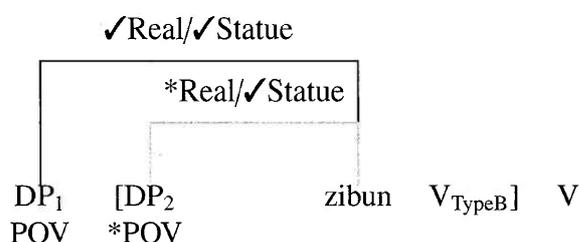
#### 4.5 To recapitulate

Our observations so far may be summarized by the diagrams below:

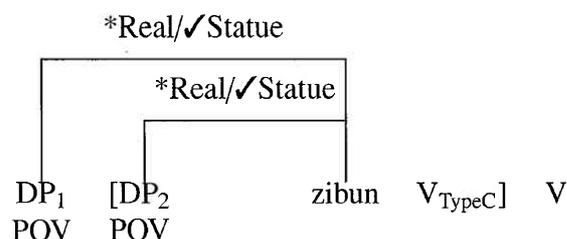
- (42) 1. Type A predicates: allow their subject to be a POV holder, or a locus of a *de se* belief: for example *homeru* ‘praise’ etc.



2. Type B predicates: (anti-reflexive predicates) do not allow their subject to be a POV holder: for example *tukamaeru* ‘catch,’ and *sasow* ‘ask out’ etc.



3. Type C predicates: typically select non-human objects, and allow only statue-self readings: for example *kowasu* ‘break, destroy’ etc.



## 5. LD Binding and the Attitude *de se*

### 5.1 Subject orientation

One consequence of the present analysis is that subject orientation of reflexive binding follows straightforwardly. As Giorgi (2006) observes, subject-orientedness of reflexive binding may be attributed to the supposition that only the subject is compatible with the *de se* requirement on the reflexives. This applies to LD binding of *propri* in Italian:

- (43) Gianni<sub>i</sub> ha informato Maria<sub>j</sub> che i propri<sub>i/\*j</sub> pantaloni sono in flamme.  
informed that self's pants are on fire  
'Gianni informed Maria that self's pants are on fire.'

However, Giorgi (2006) does not adopt this view in her analysis of reflexive binding in Italian, because local binding of *propri* is not subject-oriented.

- (44) Ho convinto Maria<sub>i</sub> del proprio<sub>i</sub> valore.  
I convinced of self's value  
'I convinced Maria of her own value.'

This consideration has led Giorgi (2006) to a disjunctive statement of her principle of anaphoric binding:

- (45) Long distance anaphoric binding:  
(a) A LDA is the spell-out of an unsaturated position.  
(b) It can be saturated either by a co-argument or  
(c) by the bearer of the attitude.

Clause (a) of this statement shows Giorgi's (2006) conception of reflexive-binding: a reflexive-anaphor is a spell-out of an argument position whose  $\theta$ -role is unsaturated, i.e. not filled by a lexical element. Clauses (b) and (c) are the conditions proposed for this process, where we

assume that the ‘bearer of attitude’ is close in its intended meaning to the POV holder in our analysis.

The behavior of the reflexive *zibun* indicates that the clause (b) of Giorgi’s (2006) does not work, and reference to a POV holder (or bearer of the attitude in her terms) is always required. In this sense it might be observed that the account of reflexive binding in Japanese is simpler than the account of what appears to be its counterpart in Italian in that the former does not employ a disjunctive statement that seems to be called for in the latter.

We are not in a position to give a definitive conclusion here, but it is quite likely that languages exhibiting LD reflexive binding can be divided into those that make reference to co-arguments and those that don’t.

Our position about subject-orientation of reflexive binding is that it is at best an epiphenomenon. Although subject-orientation holds in a great number of cases of reflexive binding, it is simply because subject is the most likely candidate for a POV holder in a variety of constructions. In the next subsections, we are going to discuss a number of cases in which non-subjects are considered to be the antecedents of the reflexive. Our purpose in doing so is to show that what is at the core of reflexive binding is the attitude *de se*.

## 5.2 Causative, psych constructions and POV

One systematic class of counterexamples to subject orientation of reflexive binding comes from causative and psych constructions, such as the following.

- (46) [C Kyoozyu-ga zibun<sub>i</sub>-o in’yoo-sita koto] ga Takasi<sub>i</sub>-o utyooten-ni si-ta.  
 Prof. C.-Nom self-Acc quote-Past that Nom Takasi-Acc crazy make-Past  
 ‘That Prof. C. quoted him made Takashi crazy.’

The acceptability of this sentence on the interpretation on which the reflexive is coindexed with *Takashi* is a counterexample to the assumptions held about reflexive binding in the literature. The antecedent does not even c-command the reflexive, nor is it a subject, at least in the linguistic form that is pronounced.

Several proposals have been made in the literature, in which ‘backward reflexivization’ has been analyzed as arising from syntactic movement applying to a structure in which the antecedent c-commands the reflexive. The best-known among those analyses are Belletti and Rizzi (1988), Pesetsky (1995), and there have been attempts to derive the causative construction such as (46) in terms of syntactic movement.

However, it is clear that backward reflexivization is not necessarily observed in causative constructions. Observe the following.

- (47) \*[C Kyoozyu-ga zibun<sub>i</sub>-o in’yoo-sita koto] ga Takasi<sub>i</sub>-o yuumei-ni si-ta.  
 Prof. C.-Nom self-Acc quote-Past that Nom Takasi-Acc famous make-Past  
 ‘That Prof. C. quoted him made Takashi famous.’

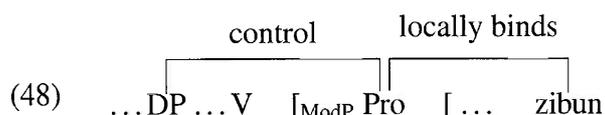
The only difference between (46) and (47) is that while the meaning of the former involves making Takashi crazy, the latter’s meaning involves making Takashi famous. That is to say, while the former involves the semantic import of a psych construction, the latter doesn’t.

This difference is reflected on the  $\theta$ -role associated with the argument *Takashi*: It is only in (46) that *Takashi* is associated with the  $\theta$ -role of Experiencer. By virtue of having the Experiencer role, on a par with the subject of thought-verbs, *Takashi* can be construed as the POV holder, to whom the *de se* belief represented by the sentential subject can be ascribed.

While it is conceivable that (46) can be derived from a structure in which *Takashi* c-commands the reflexive and can somehow be identified as the subject, we will not pursue the possibility here.

Nishigauchi (2005) explores the possibility that reflexive binding as seen in (46) can be accounted for as a case of non-obligatory control (NOC). Recall that NOC does not require the controller to c-command Pro (Williams, 1980). Nishigauchi (2005) hypothesizes that clauses have modal projections (ModP) in their CP systems, and an NOC Pro can be housed in Spec of this ModP.

With this much theoretical setup, it is possible to view many cases of LD reflexive binding as cases of NOC, mediated by Pro in ModP, which may be a local binder of *zibun*.



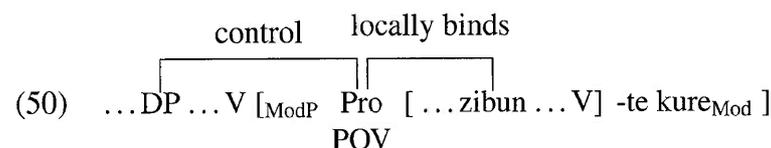
The difference between (46) and (47), assuming that they are structurally identical, would then be attributed to the  $\theta$ -role of DP: While in (47) DP is not associated with anything, in (46) DP has the Experiencer role, which makes it amenable as a POV holder. Thus, the sentential subject can be read as representing a *de se* belief ascribed to this DP *Takashi*, mediated by Pro that is controlled by DP.

That the analysis just sketched may be on the right track is suggested by examples like the following:

- (49) [C Kyoozyu-ga zibun<sub>i</sub>-o in'yoo-site kure-ta koto] ga Takasi<sub>i</sub>-o  
 Prof. C.-Nom self-Acc quote do favor-Past that Nom Takasi-Acc  
 yuumei-ni si-ta.  
 famous make-Past  
 'That Prof. C. quoted him made Takashi famous.'

The use of the reflexive in sentence (49) is perfectly acceptable and is in marked contrast to that in (47). Sentence (49) is minimally different from (47) in that it has a modal (or deictic) auxiliary (*te*) *kure* attached to V, which means the subject of V did V as a favor to whoever is affected by this action depicted in the complement clause. The speaker may be the one who is affected by this, but if there is an argument in the sentence that can be considered an affectee, that argument may be chosen.

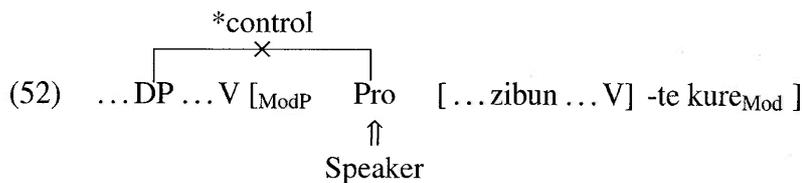
In the particular case of (49), Pro can appear in Spec of ModP whose head is the deictic auxiliary (*te*) *kure*, and can be considered a POV holder. This Pro, further, may be controlled by any argument in the sentence, and if such an argument is available, it can be considered a POV holder by virtue of the control relation.



The possibility of reflexive binding is affected further, if we throw into sentence (49) some factor which interferes with the control relation depicted in (50). To see this, consider the following.

- (51) \*[C Kyoozyu-ga zibun<sub>i</sub>-o in'yoo-site kure-ta koto] ga watasi-no musuko<sub>i</sub>-o  
 Prof. C.-Nom self-Acc quote do favor-Past that Nom my son-Acc  
 yuumei-ni si-ta.  
 famous make-Past  
 'That Prof. C. quoted self made my son famous.'

Sentence (51) minimally differs from (49) in that the causee argument is now 'my son', replacing *Takashi*. This makes the interpretation of the complement clause different in such a way that the most plausible person that is favorably affected by Prof. C.'s quoting someone is the speaker. This is reflected in our analysis in such a way that Pro in the ModP of the complement clause is 'controlled' by the speaker



'Control' of Pro by the speaker blocks its control by a sentence-internal argument. This closes the door to DP in (52) to be identified as a POV holder via control, and hence to become the antecedent for the reflexive.

### 5.3 The antecedent in PP

The following example, adapted from Sells (1987), is one of the most convincing counterexamples to subject-orientation of the reflexive *zibun* that we are aware of.<sup>8</sup>

- (53) Taroo<sub>i</sub> wa Takasi<sub>j</sub> kara [Yosiko ga zibun<sub>i/j</sub> o sasow-ta koto] o kiita  
 Taroo TOP Takasi from Yosiko Subj self Obj asked out Comp Obj heard  
 'Taroo<sub>i</sub> heard from Takasi<sub>j</sub> that Yosiko<sub>k</sub> asked self<sub>i/j</sub> out.'

The key fact here is that *Takashi*, part of the PP headed by *kara* 'from', can be taken as the antecedent of *zibun*, although the matrix subject can also be a legitimate antecedent. Hence, sentence (53) allows ambiguity with respect to the reflexive.

Sells's (1987) explanation for the acceptability of the reading in question is that in this sentence *Takashi* has the discourse role of Source (of the information), which is the highest entity in the hierarchy of logophoric antecedents.

The availability of the reading on which the reflexive is bound by *Takashi* can be enhanced by making it clear that the speaker is empathizing with Takashi by using a pronoun.

- (54) Kare<sub>j</sub>-no ootoo<sub>i</sub> ga Takasi<sub>j</sub> kara [Yosiko ga zibun<sub>i/j</sub> o sasow-ta koto] o kiita  
 his brother NOM Takasi from Yosiko Subj self Obj asked out Comp Obj heard  
 'His<sub>j</sub> brother<sub>i</sub> heard from Takasi<sub>j</sub> that Yosiko<sub>k</sub> asked self<sub>i/j</sub> out.'

Since, in this sentence, the speaker is 'taking sides' with Takashi by referring to his brother by means of a pronoun referring back to Takashi, it becomes easier to interpret the complement clause as reporting Takashi's viewpoint, hence the complement clause can be more easily read as representing his *de se* belief.

<sup>8</sup>In (53), we use *sasow* 'ask out' as the predicate in the complement clause, since this predicate being an 'anti-reflexive' predicate in our sense, the third possible reading on which *Yoshiko* is the antecedent, which is irrelevant in our discussion, can be eliminated.



- (57) Zhangsan<sub>i</sub> renwei wo<sub>j</sub> zhidao Wangwu<sub>k</sub> xihuan ziji<sub>\*i/\*j/k</sub>.  
 think I know like self  
 ‘Zhangsan thinks that I know that Wangwu likes himself.’ (Cole & Sung, 1994, (20a))

Here the presence of the first person pronoun in the second complement clause is delimiting the interpretation of the reflexive in the lowest complement clause to its co-argument subject, while the reflexive *ziji* can otherwise be bound LD by the subjects in the higher clauses.

What we observe in (56) is different from the blocking effect as seen in (57) in that the presence of the first person pronoun does not preclude the LD binding by the matrix subject in (56). What we saw there was that the presence of some expression which makes the complement clause a *de re* statement from the viewpoint of the speaker excludes the possibility of a *de se* interpretation from the viewpoint of some other individual mentioned in the sentence which would be otherwise available.

The contrast as seen in the following sentences points to the same direction.

- (58) a. Takasi<sub>i</sub>-ga [watasi<sub>j</sub>-ga zibun<sub>i/j</sub>-o simei-si ta gar-te iru koto] ni  
 Takasi-Nom I-Nom self-Acc appoint want Evid. is that Dat  
 yooyaku kizui-ta.  
 finally realized  
 ‘Takashi finally realized that I (was showing sign that I) want to appoint self.’
- b. Takasi<sub>i</sub>-ga [watasi<sub>j</sub>-ga zibun<sub>\*i/j</sub>-o simei-si tai koto] ni  
 Takasi-Nom I-Nom self-Acc appoint want that Dat  
 yooyaku kizui-ta.  
 finally realized  
 ‘Takashi finally realized that I want to appoint self.’

Sentence (58b) involves a desiderative construction in the embedded clause. The desiderative construction in Japanese, with the adjectival affix *ta(i)* attached to V, is most felicitously used with the first person subject, and can be considered as indicative of a *de se* statement ascribed to the speaker. Indeed, this is the only way the complement clause in (58b) can be interpreted, so the POV status of the complement subject cannot be lifted. This accounts for the fact that (58b) allows only one interpretation for the reflexive, viz. the complement subject as its antecedent.

On the other hand, (58a) involves an evidential construction, with the verbal lexical item *-gar* attached to the desiderative construction in the embedded clause. The attachment of the evidential *-gar* makes it possible to interpret the embedded clause as representing the belief of an individual other than the complement subject. Thus, the POV status of the complement subject can be lifted, and the matrix subject can be the POV holder. This accounts for the ambiguity of the reflexive in (58a).<sup>10</sup>

Notice that it is the desiderative construction induced by the verbal system with the desiderative affix *ta(i)* that makes the complement clause unambiguously *de se*, and it’s not due to the presence of the first person pronoun in the complement clause. This is already demonstrated by the contrast in (58a–b), for in both of these sentences we do have the first person pronoun, and yet they differ in interpretation. In this sense, the phenomenon that we are looking at is different from the blocking effect, as described and studied at length in Huang and Liu (2001), Pan (2001).

<sup>10</sup>For a recent discussion on desiderative / evidential constructions in Japanese, cf. Tenny (2006).

Although the desiderative construction with *ta(i)* is most congenial with the first person subject, other names are not completely excluded from appearing in the subject of this construction, although that requires that the clause with this construction should be read in such a way that the speaker is empathizing with the complement subject. As a result, the complement clause must be read *de se* from the viewpoint of the subject. Therefore, the following sentence, which differs from (58b) only in the choice of the complement subject, only allows the complement subject to be the antecedent of the reflexive.

- (59) Takasi<sub>i</sub>-ga [Mari<sub>j</sub>-ga zibun<sub>\*i/j</sub>-o simei-si tai koto] ni  
 Takasi-Nom Mari-Nom self-Acc appoint want that Dat  
 yooyaku kizui-ta.  
 finally realized  
 ‘Takashi finally realized that Mari wants to appoint self.’

In section 4.2, we pointed out that the POV-status of the complement subject can be lifted, and this accounts for LD binding of the reflexive *zibun*. The fact that sentences like (58b) and (59) do not allow LD binding indicates that the desiderative construction, being inherently a *de se* statement, does not allow the POV-status of its subject to be lifted. This fact counts as further evidence that confirms our claims about the relevance of attitudes *de se* to reflexive binding.

## 6. Conclusion

In this paper we have developed an analysis of reflexive binding involving the reflexive *zibun* in Japanese. Our claim has been that the reflexive *zibun* is bound by a POV (point of view) holder that minimally *c*-commands *zibun*. The POV holder is defined as an argument (typically subject and Experiencer) that can be a locus of *de se* belief.

In this light, we claim that reflexive binding in Japanese differs from the Dutch counterpart in the following two respects:

1. There are no predicates which are lexically specified as being inherently reflexive in combination with *zibun*.  $\Rightarrow$  *Zibun* is not an SE-anaphor.
2. Some predicates are lexically specified as being anti-reflexive: Some predicates are incapable of hosting POV holders thus defined in combination with *zibun* and we call such predicates ‘anti-reflexive’ predicates, which are marked as such in the lexicon.

*De se* interpretation has been shown to play a key role in both local and long distance binding of *zibun*. We have shown this by analysing along this line the following phenomena: (i) backward reflexivization in causative constructions, (ii) reflexive binding by non-*c*-commanding antecedents, (iii) desiderative and evidential constructions.

## References

- Aikawa, Takako (1993). *Reflexivity in Japanese and LF-analysis of Zibun-Binding*. Ph.D. dissertation, Ohio State University, Columbus OH.
- Aikawa, Takako (2001). Reflexives. In *The Handbook of Japanese Linguistics*, pp. 154–190. Blackwell.
- Belletti, Adriana & Rizzi, Luigi (1988). Psych-verbs and  $\theta$ -Theory. *Natural Language and Linguistic Theory*, 6, 291–352.

- Chierchia, Gennaro (1989). Anaphora and attitudes *de se*. In Bartsch, R. van Benthem, J. & van Emde Boas, P. BEDS, *Semantics and contextual expression*, pp. 1–30. Foris, Dordrecht.
- Chomsky, Noam (1981). *Lectures on Government and Binding*. Dordrecht.
- Chomsky, Noam (1986). *Knowledge of Language: Its Nature, Origin and Use*. Praeger.
- Cinque, Guglielmo (1995). *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. Oxford University Press.
- Cole, Peter & Sung, Li-May (1994). Head Movement and Long-Distance Reflexives. *Linguistic Inquiry*, 25, 355–406.
- Giorgi, Alessandra (2006). From temporal anchoring to long distance anaphors. *Natural Language and Linguistic Theory*, 24, 1009–1047.
- Hornstein, Norbert (2003). On Control. In Hendrick, Randall (Ed.), *Minimalist Syntax*, pp. 6–81. Blackwell.
- Howard, I. & Niekawa-Howard, A. (1976). Passivization. In Shibatani, Masayoshi (Ed.), *Syntax and Semantics 5: Japanese Generative Grammar*, pp. 201–238. Academic Press, New York.
- Huang, James C.-T. & Liu, Luther (2001). Logophoricity, Attitudes and *ziji* at the Interface. In Peter Cole, G. Hermon & Huang, James C.-T. (Eds.), *Long Distance Reflexives: Syntax and Semantics 33*, pp. 141–195. Academic Press.
- Jackendoff, Ray (1985). *Semantics and cognition*. MIT Press, Cambridge, Mass.
- Jackendoff, Ray (1992). Mme Tussaud meets the binding theory. *Natural Language and Linguistic Theory*, 10, 1–31.
- Kuno, Susumu & Kaburaki, Etsuko (1977). Empathy and Syntax. *Linguistic Inquiry*, 8, 627–672.
- Lidz, Jeffrey (2001a). Anti-Antilocality. In Cole, Peter, Hermon, G., & Huang, James C.-T. (Eds.), *Long Distance Reflexives: Syntax and Semantics 33*, pp. 227–254. Academic Press.
- Lidz, Jeffrey (2001b). Condition R. *Linguistic Inquiry*, 32, 123–140.
- Nakamura, Masaru (1989). Reflexives in Japanese. *Gengo Kenkyu*, 95, 206–230.
- Nishigauchi, Taisuke (2005). ‘Point of View’ and the Logophoric Anchor. *Theoretical and Applied Linguistics at Kobe Shoin*, 8, 107–132.
- Pan, Haihua (2001). Why the blocking effect?. In Cole, P., Hermon, G., & Huang, James C.-T. (Eds.), *Long Distance Reflexives: Syntax and Semantics 33*, pp. 279–316. Academic Press.
- Pesetsky, David (1995). *Zero Syntax*. MIT Press.
- Reinhart, Tanya & Reuland, Eric (1993). Reflexivity. *Linguistic Inquiry*, 24, 657–720.

- Sells, Peter (1987). Aspects of Logophoricity. *Linguistic Inquiry*, 18, 445–479.
- Tenny, Carol L. (2006). Evidentiality, Experiencers, and the Syntax of Sentience in Japanese. *Journal of East Asian Linguistics*, 15, 245–288.
- Tsujimura, Natsuko & Aikawa, Takako (1999). Two Types of *Zi*-Verbs in Japanese. In *The Journal of Association of Teachers of Japanese*, Vol. 33, pp. 26–43.
- Ueda, Masanobu (1986). Notes on a Japanese (reflexive) pronoun *zibun*. ms, University of Massachusetts, Amherst.
- Williams, Edwin (1980). Predication. *Linguistic Inquiry*, 11, 203–238.

**Author's E-mail Address:** [gauchi@sils.shoin.ac.jp](mailto:gauchi@sils.shoin.ac.jp)

**Author's web site:** <http://banjo.shoin.ac.jp/~gauchi/>