Binding and Reflexive in Japanese

KISHIDA Maki
Kobe Shoin Graduate School
maki-k@sils.shoin.ac.jp

January 28, 2006
Generative Lyceum
How do the three reflexive elements differ?

(1) John\textsubscript{1}-ga \{ a. zibun\textsubscript{1}-o \\
 b. zibun-zisin\textsubscript{1}-o \\
 c. kare-zisin\textsubscript{1}-o \} semeta.

‘John blamed himself.’
(2) John\textsubscript{j}-ga [siranai hito\textsubscript{i}-ga zibun\textsubscript{i}/j-o semeta] to omotta.
\[ \Rightarrow zibun = \text{‘John’, ‘siranai hito’} \]

(3) John\textsubscript{j}-ga [siranai hito\textsubscript{i}-ga zibun\textsubscript{i}/?*j-o kenson-sita] to omotta.
\[ \Rightarrow zibun = \text{‘siranai hito’} \]

(4) John\textsubscript{j}-ga [siranai hito\textsubscript{i}-ga zibun?*i/j-o odosita] to omotta.
\[ \Rightarrow zibun = \text{‘John’} \]

Why their references differ?
To answer these questions.

To show that the analysis on reflexives proposed by Reinhart and Reuland (1993) can account for reflexives in Japanese.

To support the long-distance binding analyses: apparent long-distance reflexives may be locally bound by nature.
2. Empirical Problems in BT
4. Explanation for the Problems
5. R&R’s application to Japanese
6. Nature of Long-distance Binding
Government and Binding theory ...

- Binding Principles

  A: An anaphor is bound in its binding category.
  B: A pronominal is free in its binding category.
  C: An R-expression is free anywhere.

  - Bound: coindexed by c-commanding NP
  - Free: not be bound
(5a) \([\text{John}_i \text{ hates himself}_i]\).

(5b) \([\text{John}_i \text{ hates him } *_{i/j}]\).

(6a) \(\text{Bob}_j \text{ thinks that } [\text{John}_i \text{ hates himself} _{*_{i/j}}]\).

(6b) \(\text{Bob}_j \text{ thinks that } [\text{John}_i \text{ hates him } *_{i/j}].\)

(The binding category is shown with \[...,\])

- Complementary distribution between anaphors and pronouns
Absence of complimentary distribution

(7) John$_i$ saw a snake near {him$_i$ / himself$_i$}.

Violations of Principles

(8) Physicists like yourself are a godsend.

(9) John$_i$ thought that [a picture of himself$_i$ would be nice on that wall].

(10a) We elected me.
(10b)*We voted for me.
BT cannot account for the binding of the Japanese reflexive element *zibun*.

(2) John\textsubscript{j}-ga [siranai hito\textsubscript{i}-ga zibun\textsubscript{i/j}-o semeta] to omotta.
\[ \rightarrow zibun = \text{‘John’, ‘siranai hito’} \]

The status of the element is controversial: *zibun* is an anaphor? or a pronoun?

- if *zibun* is an anaphor,  
  \[ zibun = \text{John} \ldots \text{Principle A violation} \]

- if *zibun* is a pronoun,  
  \[ zibun = \text{siranai hito} \ldots \text{Principle B violation} \]
R&R suggest a new approach:

- Differences between R&R and BT

  (i) Properties of predicates

  Classification of predicates depending on lexical reflexivity
  ⇔ BT: not care

  (ii) Functional distinction of anaphors

  Two types of anaphors (SELF / SE -anaphors)
  ⇔ BT: one type of anaphors (e.g. *himself*)

  (iii) Reflexive domains

  A predicate and its coarguments
  ⇔ BT: Reflexive anaphors and binding category
Predicates are classified into three types depending on lexical properties of them.

- reflexive ( [+ ref] ) predicates
  
  (11) Max\textsubscript{i} gedraagt [+ ref] zich\textsubscript{i} \textit{(Dutch)}
  
  behaves himself

- non-reflexive ( [– ref] ) predicates
  
  (12) Max\textsubscript{i} haat [– ref] zichzelf\textsubscript{i}
  
  hates himself

- doubly-listed ( [+– ref] ) predicates
  
  (13) Max\textsubscript{i} wast [+– ref] \{zich\textsubscript{i} / zichzelf\textsubscript{i}\}
  
  washes himself
(ii) **Function of anaphors**

**SELF-anaphor:**
- morphologically complex
  - e.g. *zichzelf* (Dutch), *sich selbst* (German)...
- function as a reflexivizer
  (compensates for the lack of reflexivity of predicates)

(12) Max\text{ɪ} haat [– ref] zichzelf\text{ɪ}
    hates \hspace{1cm} SELF

**SE (Simple Expression)-anaphor:**
- morphologically simplex
  - e.g. *zich* (Dutch), *sich* (German) ...
- cannot function as a reflexivizer

(11) Max\text{ɪ} gedraagt [+] ref] zich\text{ɪ}
    behaves \hspace{1cm} SE
(iii) Reflexive domain

A predicate and its coarguments constitute a reflexive domain.

\[ \text{Arg.1 + Predicate + Arg.2(\{SELF / SE\})} \]

R&R’s Conditions regulate predicates / anaphor in this domain.

Elements outside reflexive domains are vacuously ruled in.

(7) John saw a snake near {him / himself}.
(8) Physicists like yourself are a godsend.
Definitions for R&R’s Conditions

- R&R distinguish levels of predicates into two: **syntactic** and **semantic** levels. Different Conditions apply.

- A predicate is **reflexive-marked** iff either it is lexically reflexive or one of its arguments is a SELF-anaphor.

  (11) Max\textsubscript{i} gedraagt [+ ref] \{zich\textsubscript{i} /*zichzelf\textsubscript{i}\}

  behaves \quad SE \quad /*SELF

  (12) Max\textsubscript{i} haat [– ref] \{zichzelf\textsubscript{i} /*zich\textsubscript{i}\}

  hates \quad SELF \quad /*SE

- A predicate is **reflexive** iff two of its arguments are coindexed.
Condition A: A reflexive-marked syntactic predicate is reflexive.

→ At syntactic level, if a predicate is reflexive-marked (it is [+ ref] or takes a SELF as its argument), then it must be reflexive (the coarguments of it must be coindexed).
Condition A:
A reflexive-marked *syntactic* predicate is reflexive.

(11) Max$_i$ gedraagt [+ ref] {zich$_i$ / *zichzelf$_i$} (Dutch)
    behaves       SE   / *SELF

(12) Max$_i$ haat [− ref] {zichzelf$_i$ / *zich$_i$}
    hates         SELF   / *SE

(13) Max$_i$ wast [+/− ref] {zich$_i$ / zichzelf$_i$}
    washes        SE   / SELF
Condition B:
A reflexive semantic predicate is reflexive-marked.

→ At semantic level, if a predicate is reflexive (its coarguments are coindexed), the predicate must be reflexive-marked (it is [+ ref ] or takes a SELF as its argument).
Condition B:
A reflexive *semantic* predicate is reflexive-marked.

(10a) We elected me. ⋅ ⋅ collective reading
→ We (λx (x elect me))

(10b)*We voted for me. ⋅ ⋅ distributive reading
→ Max (λx (x vote for me)) & Lucie (λx (x vote for me))
& ⋅ ⋅ & I (λx (x vote for me))

The predicate $I_i vote for me_i$ is reflexive but not reflexive-marked, and Condition B rules out (10b).
(14) Bismarck’s impulsiveness has, as so often, rebounded against himself.  

\[ \cdots \text{himself} = \text{a focus anaphor} \]

At LF, a focus expression undergoes movement.

(15) LF of (14):

\[ \text{himself}_i [\text{Bismarck’s impulsiveness has, as so often, rebounded against } e_i ] \]

→ Then, it is no longer in the reflexive domain.

\[ \Rightarrow \text{Focus anaphors are exempt from Conditions.} \]
R&R’s analysis gives a better account for reflexives in English (the cases for which BT cannot account) as well as Dutch (Germanic languages).

⇒ How about for reflexives in Japanese?
(16) Mary\textsubscript{i} -ga Bob\textsubscript{j}-ni [ John\textsubscript{k}-ga zibun\textsubscript{i}/\textsubscript{j}/\textsubscript{k}-o semeta ] to itta.

(17) Mary\textsubscript{i} -ga Bob\textsubscript{j}-ni [ John\textsubscript{k}-ga zibun-zisin\textsubscript{i}/\textsubscript{j}/\textsubscript{k}-o semeta ] to itta.

(18) John\textsubscript{i}-ga [ Bob\textsubscript{j}-ga kare-zisin\textsubscript{i}/\textsubscript{j}-o semeta ] to itta.

(19) John\textsubscript{i}-ga Bob\textsubscript{j}-ni kare-zisin\textsubscript{i}/\textsubscript{j}-nituite hanasita.

<table>
<thead>
<tr>
<th></th>
<th>LD-binding</th>
<th>Subj.-Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zibun</strong></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Zibun-zisin</strong></td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td><strong>Kare-zisin</strong></td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>$\phi$ agreement</td>
<td>morph. complexity</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>$\text{zich (SE)}$</td>
<td>$-$</td>
<td>$-$</td>
</tr>
<tr>
<td>$\text{zichzelf (SELF)}$</td>
<td>$-$</td>
<td>$+$</td>
</tr>
<tr>
<td>$'m$ $\text{zelf ('himself')}$</td>
<td>$+$</td>
<td>$+$</td>
</tr>
</tbody>
</table>
Reflexivizers are expected to be construed as bound variables.

↓

Strict / sloppy reading test shows *zibun-zisin* is a bound variable, while *zibun* is not a pure bound variable.

↓

*Zibun-zisin* is reflexivizer in Japanese.
## Comparison of Anaphors

<table>
<thead>
<tr>
<th></th>
<th>$\phi$ agreement</th>
<th>morph. complexity</th>
<th>reflexivizer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dutch</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>zich</em> (SE)</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>zichzelf</em> (SELF)</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>’m zelf (‘himself’)</td>
<td>+</td>
<td>+</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Japanese</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>zibun</em></td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>zibun-zisin</em></td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><em>kare-zisin</em></td>
<td>+</td>
<td>+</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Comparison of Predicates

Dutch

- Reflexive predicates [+ ref]: gedraagt ‘behaves’
- Non-reflexive predicates [− ref]: haat ‘hates’
- Doubly listed predicates [+− ref]: wast ‘washes’

Japanese

-[+ ref]: haziru / kenson-suru · · ·
- [− ref]: odosu / taiho-suru · · ·
-[+− ref]: semeru / syookai-suru · · ·
Let us apply R&R’s (1993) analysis to reflexive in Japanese!

<table>
<thead>
<tr>
<th></th>
<th>Dutch</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF / SE anaphors</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>[+ ref], [– ref] and [+/- ref]</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>[+ ref] pred. doesn’t take SELF</td>
<td>+</td>
<td>♠</td>
</tr>
<tr>
<td>[– ref] pred. needs SELF</td>
<td>+</td>
<td>♠</td>
</tr>
</tbody>
</table>
Dutch: [+ ref ] + SELF → *

(11) Max_i gedraagt [+ ref] \{zich_i /*zichzelf_i\}
    behaves SE /*SELF

Japanese: [+ ref ] + SELF → allowed

· · · Difference between Dutch and Japanese #1

(20) John_i-ga zibun_i-o \{hazita / kenson-sita\} [+ ref].

(21) John_i-ga zibun-zisin_i-o \{hazita / kenson-sita\} [+ ref]

  [+ ref ] predicates in Japanese can take zibun-zisin as
  their arguments.
Focus anaphor in English

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

(15) LF of (14)

\[
\text{himself}_i \ [\text{Bismarck’s impulsiveness has, as so often, rebounded against } e_i \ ]
\]

\[\text{Zibun-zisin}\] with [+ ref ] functions as a \textbf{focus anaphor}.

(21) \text{John}_i\text{-ga zibun-zisin}_i\text{-o \{hazita / kenson-sita\} [+ ref]}

(22) LF of (21)

\[
\text{zibun-zisin}_i\text{-o } [\text{John}_i\text{-ga } e_i \ \{\text{hazita / kenson-sita}\}].
\]

\[\text{Focus anaphor zibun-zisin}\] is exempt from Conditions.
When a focus anaphor *zibun-zisin* is embedded...

(23) $\text{John}_i$-ga [hahaoya-ga $\text{zibun-zisin}_{i/j}$-o kensonsita [+ ref] ] to omotta.

(24) LF of (23)

$\text{zibun-zisin}_{i/j}$-o [John$_i$-ga [hahaoya$_j$-ga $e_{i/j}$ kensonsita [+ ref] ] to omotta.]

$\Rightarrow$ *zibun* = John, hahaoya

$\Rightarrow$ Long-distance binding of *zibun-zisin* is possible.
Dutch: $[\text{– ref}] + \text{SELF} \rightarrow \text{reflexive-marked}$

(12) $\text{Max}_i \text{haat} \ [\text{– ref}] \ {\text{zichzelf}}_i / {\text{*zich}}_i$

$hates \quad \text{SELF} \quad / \text{*SE}$

Japanese: $[\text{– ref}] + \text{SELF} \rightarrow \text{??}$

$\cdots \text{Difference between Dutch and Japanese #2}$

(25) $\text{*John}_i\text{-ga zibun}_i\text{-o} \ {\text{odosita}} / {\text{taiho-sita}} \ [\text{– ref}]$.

(26) $\text{??John}_i\text{-ga zibun-zisin}_i\text{-o} \ {\text{odosita}} / {\text{taiho-sita}} \ [\text{– ref}]$.

$\text{The reflexivizing function of zibun-zisin is weak.}$
R&R’s analysis does not straightforwardly apply to Japanese:

1. [+ ref ] pred. + zibun-zisin \rightarrow \text{allowed}
2. [− ref ] pred. + zibun-zisin \rightarrow \text{not fully reflexive-marked}

R&R’s analysis is right:

- Functional distinction of reflexive elements
  - Focus anaphor zibun-zisin
- Properties of predicates that affect reflexive binding

(3) John_j-ga [ siranai hito_i-ga zibun_{i/?}*j-o kenson-sita ([+ ref]) ] to omotta.

(4) John_j-ga [ siranai hito_i-ga zibun_{i/?*i/j-o} odosita ([− ref]) ] to omotta.
(4) John\(_j\)-ga [ siranai hito\(_i\)-ga zibun\(_i\)/j-o odosita ([– ref]) ] to omotta.

If *siranai hito* and *zibun* are coindexed, the predicate *odos(u)* is reflexive, but not reflexive-marked. So, Condition B rules out the case: *siranai hito = zibun*.

→ Then, why is *John* chosen as the reference of *zibun*?

⇒ How is long-distance binding accounted for?
Apparent long-distance reflexives may be locally bound by nature.

- Cole and Sung (1994) · · · Head-movement analysis
- Nishigauchi (2005) · · · Control analysis
Cole and Sung (1994)

- **Morphological distinction of anaphors**
  - Long-distance reflexives are monomorphemic.
    - *zibun* in Japanese
    - *ziji* in Chinese
  
  (27) \[ \text{Zhangsan}_i \text{ renwei} \left[ \text{Lisi}_j \text{ zhidao} \left[ \text{Wangwu}_k \text{ xihuan} \text{ ziji}_{i/j/k} \right] \text{ think} \text{ know} \text{ like} \text{ self} \right] \text{ ‘Zhangsan thinks Lisi knows Wangwu likes } \text{him/himself’} \]

- Local reflexives are polymorphemic.
  - *zibun-zisin* in Japanese
  - *taziji ‘him/her-self’* in Chinese
  - *himself* in English
Only monomorphemic reflexives are allowed long-distance binding due to the availability of LF head movement from Infl. to Infl.

(28) [Wangwu_i shuo [Zhangsan_j zengsong gei Lisi_k yipian guanyu say give to one about ziji_i/j/∗_k de wenzhang.]]

self DE article

‘Wangwu says that Zhangsan gave an article about him/himself to Lisi.’
Morphological distinction is not a single factor that decides local / long-distance bindings.

Japanese
(3) John_{j}-ga [siranai hito_{i}-ga zibun_{i}/?_{j}-o kenson-sita] to omotta. (local zibun)
(4) John_{j}-ga [siranai hito_{i}-ga zibun?_{i/j}-o odosita] to omotta. (long-distance zibun)
(22) John_{i}-ga [hahaoya-ga_{j} zibun-zisin_{i/j}-o kensonsita ] to omotta. (long-distance zibun-zisin)

English
(9) John_{i} thought that [a picture of himself_{i} would be nice on that wall]. (long-distance himself)
Nishigauchi (2005)

- The reflexive *zibun* itself is always bound locally.

\[
\text{Zibun} = \begin{cases} 
\text{local anaphor} \cdots \ (a) \\
\text{local logophor} \cdots \ (b) \\
\text{long-distance logophor} \cdots \ (c) 
\end{cases}
\]

(29) *Zibun* is locally bound by DP in SpecVP, SpecSubjP, or SpecModP.

\[
\begin{array}{c}
\text{[ModP DP [SubjP/VP DP \ldots zibun \ldots]} \\
\text{(a)} \\
\text{(b)}
\end{array}
\]
(c) PRO in SpecModP is controlled by the secondary ego in the sense of Sells (1987). Zibun in may be locally bound by PRO.

\[ \ldots \text{DP} \begin{cases} [\text{SOURCE}] \\ [\text{SELF}] \\ [\text{PIVOT}] \end{cases} \ldots \begin{cases} [\text{ModP}] \\ \text{PRO} \end{cases} \begin{cases} \ldots \text{zibun} \ldots \end{cases} \]

- The secondary ego is identified as one of
  - SOURCE: The one who makes the report.
  - SELF: The one whose ‘mind’ is being reported.
  - PIVOT: The one from whose point of view the report is made.
(30) Mary\textsubscript{i}-ga [SubjP/VP John\textsubscript{j}-ga zibun\textsubscript{*i}/j-o hazita [+ ref] ] to omotta.

\textit{Zibun} is locally bound by one of SpecVP and SpecSubjP with [+ ref ] predicates. \rightarrow local anaphor

(31) [ModP Hanako\textsubscript{i}-wa [ musume-ga zibun\textsubscript{i}-o seme-te ] simatta ].

‘Hanako\textsubscript{i} is upset by the fact that her daughter blamed her\textsubscript{i}.’

\textit{Zibun} is locally bound by DP with POV in Spec ModP. \rightarrow local logophor
(4) John\textsubscript{j}-ga [ siranai hito\textsubscript{i}-ga zibun\textsubscript{?i/j}-o odosita [– ref] ] to omotta.

(32) J\textsubscript{j}-ga [\textsubscript{ModP} PRO [\textsubscript{SubjP/VP} s-ga zibun\textsubscript{j}-o odosita ] to omotta. ]

- control \rightarrow locally binds

The matrix subject John controls PRO, and the PRO locally binds zibun. \rightarrow long-distance logophor

- John is chosen as the reference of zibun because it is the secondary ego.
The analysis on reflexives proposed by Reinhart and Reuland (1993) can give a better account of reflexives in Japanese.

The property of predicates that cooccur with reflexive elements determines the binding relations of these elements.

Anaphors are classified depending on their function.

Apparent long-distance reflexives may be locally bound by nature.


