Parametric Variation in Classification of Reflexives∗

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1 Introduction

• Several languages have more than one type of reflexive anaphor:

  Dutch zich ‘self,’ zichzelf ‘selfself’ and ’m zelf ‘himself’
  Kannada tann ‘self,’ tann-taane ‘self-self’ etc.

• How do these anaphors differ? How are they classified in a language?

  (2) Lidz (1996, 2001a,b)
  Anaphors are semantically different: Pure reflexive anaphors and Near reflexive anaphors

  (3) Liu (2003)
  Another type of anaphor with a special function.

• Proposals:

  (4) Only the two types of anaphor: Pure reflexive anaphors and Near reflexive anaphors.

  (5) What looks like the third type of anaphor is a subcase of Near reflexive anaphor.

  (6) Parametric variation in the two-way classification of reflexive anaphor among languages

      a. Morphologically simplex anaphors and complex anaphors

          (e.g. Dutch, Kannada, Malayalam etc.)

      b. Bound-morpheme anaphors and free-morpheme anaphors

          (Japanese, Russian, Chinese, Korean etc.)

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2 Lidz (1996, 2001a,b)

- When locally bound, anaphors in a language show semantic difference.

(7) Diagnostic #1: Availability of “statue reading” in the Madame Tussaud context\(^1\)

a. Ringo scheert zich
   Ringo shaves self
   ‘Ringo shaves himself.’ (\(\text{zich} = \text{Ringo, *statue of Ringo}\))\(^2\)

b. Ringo scheert zichzelf
   Ringo shaves selfself
   ‘Ringo shaves himself’ (\(\text{zichzelf} = \text{Ringo, statue}\))
   (Lidz, 2001a, (29))

c. Only in the \(\text{zichzelf}\) case in (b), an additional statue reading is available.

(8) Diagnostic #2: Availability of non-sloppy identity reading in comparative deletion constructions

a. Zij verdedigde zich beter dan Peter
   she defended self better than
   ‘She defended herself better than Peter defended himself’ (sloppy identity reading)
   *‘She defended herself better than Peter defended her’ (*non-sloppy identity)

b. Zij verdedigde zichzelf beter dan Peter
   she defended selfself better than
   ‘She defended herself better than Peter defended himself’(sloppy identity)
   ‘She defended herself better than Peter defended her’ (non-sloppy identity)
   (Lidz, 2001a, (30))

c. Only in the \(\text{zichzelf}\) case in (b), an additional non-sloppy identity reading is available.

- Two Types of Reflexivity

(9) Two Types of Anaphors

a. Pure reflexive anaphors (e.g. \(\text{zich}\) in (7a)): require complete identity with their antecedents.

b. Near reflexive anaphors (\(\text{zichzelf}\) in (7b)): referentially dependent on their antecedents, but not necessarily identical with them.

(10) Semantics of Pure reflexivity / Near reflexivity

a. \(\lambda x [P(x,x)]\) (Pure reflexive predicates)

b. \(\lambda x [P(x,f(x))]\) (Near reflexive predicates)
   (Lidz, 2001a, (15))

\(^1\)The Madame Tussaud context is first discussed in Jackendoff (1992).
\(^2\)Reinhart and Reuland (1993) propose that the predicates \(\text{scheert}\) ‘shaves’ in (7) and \(\text{verdedigde}\) ‘defended’ in (8) are doubly marked as reflexive and non-reflexive in the lexicon. In other words, these predicates have two usages: the predicates in the (a) examples are used as reflexive, while the ones in the (b) examples are non-reflexive.
• Pure reflexivity

(11) **Condition R**

\[ \lambda x [P(x, x)] \leftrightarrow (\theta 1 = \theta 2) \]

*semantics*  
*\theta*-grid  

(Lidz, 2001a, (17))

(12) a. Semantic reflexivity (left side of Condition R)

– marked by a Pure reflexive anaphor  
  (e.g. Dutch *zich* in (7a), Kannada *tann* in (15a), Russian *-sja* in (16a))

b. Lexical reflexivity (right side of Condition R)

– lexically marked on verbs (e.g. the Dutch verb *sheert* ‘shaves’ in (7a))
– a verbal reflexive marker on verbs (Kannada *-koND* in (15a): Cf. Lidz, 1995)
– a Pure reflexive anaphor (Russian in (16a)) etc.

• Near reflexivity

(13) Individual anaphors are lexically specified as introducing the Near reflexive function (*f(x)* in (10b)) or not. (e.g. Dutch *zichzelf* in (7b), Kannada *tann-tanne* in (15c), Russian *sebja* etc.)

(14) Condition R makes an interesting prediction: “If an anaphor can be bound by a coargument (in the absence of lexical reflexivity), then that anaphor is a Near-reflexive”. (Lidz, 2001a, 237)

(15) a. Hari *tann-annu hoDe-du-koND-a*  
  Hari self-Acc hit-PP-Refl.Past-3sm
  ‘Hari hit himself.’ (= Hari, *statue)

b. Hari *tann-annu hoDe-d-a.*  
  Hari self-Acc hit-Past-3sm
  ‘Hari hit himself.’ (= Hari)

c. Hari *tann-annu-taane hoDe-d-a*  
  Hari self-Acc-self hit-Past-3sm
  ‘Hari hit himself.’ (= Hari, statue)  
  (Lidz, 2001a, (12))

(16) a. Yeltsin *zastrelil-sja.*  
  Yeltsin shot-self
  ‘Yeltsin shot himself.’ (*-sja* = Yeltsin, *statue)

b. Yeltsin *zastrelil sebja.*  
  Yeltsin shot self
  ‘Yeltsin shot himself.’ (*sebja* = Yeltsin, statue)  
  (Lidz, 2001a, (26))
3 Liu (2003)

- Pure reflexivity and Near reflexivity are not the only interpretations that are induced in the Madame Tussaud context.

Jiang Jie-Shi furiously hit-Asp self one-Cl  
‘Jiang Jie-Shi, hit himself; furiously.’ (ziji = Jiang Jie-Shi, statue)  

b. Jiang Jie-Shi henhen-de da-le ta-ziji yi-xia.  
Jiang Jie-Shi furiously hit-Asp him self one-Cl  
‘Jiang Jie-Shi, hit himself; furiously.’ (ta-ziji = Jiang Jie-Shi, statue)  

c. Jiang Jie-Shi henhen-de da-le ziji-benshen yi-xia.  
Jiang Jie-Shi furiously hit-Asp self self one-Cl  
‘Jiang Jie-Shi, hit himself; furiously.’ (ziji-benshen = Jiang Jie-Shi, *statue)  
(Liu, 2003, (11))

(18) a. What looks like Pure reflexivity in (17c) is Pure identity between ziji-benshen ‘self-self’ and its antecedent.  

b. Ziji-benshen is not a Pure reflexive anaphor but a focus operator anaphor.

(19) a. The suffix -benshen ‘-self’ functions as a focus marker that involves a notion of scalability with respect to the expectations of the speaker (cf. Edmondson and Planck (1978) and Rooryck and Vanden Wyngaerd (1998)).  

b. Wei-le jiaqiang liang-guo jian de bangyi, zongtong benshen yao dao jichang lai  
For-Asp reinforce two-state between DE friendship president self want arrive airport come  
yingjie meigu guowuqing,  
welcome United States Secretary of State  
‘In order to reinforce the diplomatic relationship between the United States and us, the president himself will come to the airport to welcome the U.S. Secretary of State.’  
(Liu, 2003, (27))

(20) Pure identity is induced as a consequence of the semantic composition of ziji-benshen:  

a. There is a set of what the Near reflexive function of ziji ‘self’ denotes:  
\[ \{ \text{Jiang Jie-Shi, a statue of Jiang Jie-Shi, a portrait of Jiang Jie-Shi etc...} \} \]  

b. The focus marker -benshen ‘-self’ picks out the one element highest on the scale of what could be construed as Jiang Jie-Shi.  

c. The antecedent itself is selected as the reference of ziji-benshen.

(21) Pure reflexivity is a subcase of Pure identity.
• Ziji-benshen does not induce a non-sloppy identity reading in comparative deletion constructions.

(22) a. Zhangsan xianzai bi Lisi guoqu geng quanxin ziji-de liyi
Zhangsan now compare Lisi past more care-about self-DE benefit
‘Zhangsan_i cares about his_i benefit more than Lisi_j cared about his_j benefit.’ (sloppy identity)
‘Zhangsan_i cares about his_i benefit more than Lisi_j cared about his_j benefit.’ (non-sloppy identity)
b. Zhangsan xianzai bi Lisi guoqu geng quanxin ziji-benshen-de liyi
Zhangsan now compare Lisi past more care-about self-self-DE benefit
‘Zhangsan_i cares about his_i benefit more than Lisi_j cared about his_j benefit.’ (sloppy identity)
*‘Zhangsan_i cares about his_i benefit more than Lisi_j cared about his_j benefit.’ (*non-sloppy identity)

(23) Ziji-benshen is an operator anaphor. (cf. Katada, 1991)
   a. The anaphor has the semantic range like other operators such as quantifiers and wh-words.
   b. It undergoes VP-adjunction at LF (cf. Huang and Tang, 1989)
   c. The elided structure in (22b) involves an Operator-variable relation (cf. Heim and Kratzer 1998)
   d. Subject to predication or strong binding by an appropriate local subject (cf. Chomsky, 1986)

• There are two ways to induce Pure identity reading in languages:

(24) a. Pure reflexivity as a consequence of Condition R (like the Dutch case)
   b. Pure identity as a consequence of a special function of anaphor (like the Chinese case)

(25) A language disjunctively selects one of the two ways.

4 Proposals

(26) Pure reflexivity and Pure identity are not disjunctive in a language.

(27) a. Only the two types of anaphor: Pure reflexive anaphors and Near reflexive anaphors
   b. What looks like the third type is a subcase of Near reflexive: if a Near reflexive anaphor has a special function, that function counteracts its Near reflexive anaphor status.

(28) Parametric variation among languages with respect to the two-way classification of anaphor:
   a. morphologically simplex anaphor = Pure reflexive anaphor (e.g. Dutch zich ‘self’ in (7))
      morphologically complex anaphor = Near reflexive anaphor (zichzelf ‘selfself’)
      (Languages that select the way in (28a) are Dutch, Kannada, Malayalam etc.)
   b. bound-morpheme anaphor = Pure reflexive anaphor (e.g. Russian -sja ‘self’ in (16))
      free-morpheme anaphor = Near reflexive anaphor (sebja ‘self’)
      (Languages that select the way in (28b) are Russian, Japanese, Chinese, Korean etc.)
(29) \(a\). If lexical reflexivity marking occurs independently from semantic reflexivity marking in a language, a morphologically simplex anaphor is Pure-reflexive. (e.g. Dutch, Kannada etc.)

\(b\). If lexical reflexivity marking occurs simultaneously with semantic reflexivity marking, a bound-morpheme anaphor is Pure-reflexive. (Russian, Japanese, Chinese etc.)

4.1 Japanese

- Classification of Japanese anaphors

(30) \(a\). John-ga hihan-si-ta.
   John-Nom criticism-do-Past
   ‘John criticized { someone / something / *himself }.’

\(b\). The predicate hihan-suru ‘criticize’ lacks any reflexivity.

(31) \(a\). John-ga zibun-o hihan-si-ta.
   John-Nom self-Acc criticism-do-Past
   ‘John criticized self.’

\(b\). John-ga zibun-zisin-o hihan-si-ta.
   John-Nom self-self-Acc criticism-do-Past
   ‘John criticized self-self.’

\(c\). Recall the prediction in (14): ‘if an anaphor can be bound by a coargument (in the absence of lexical reflexivity), then that anaphor is a Near-reflexive’

\(d\). Zibun and zibun-zisin are classified as Near reflexive anaphors.

(32) \(a\). John-ga ziko-hihan-si-ta.
   John-Nom self-criticism-do-Past
   ‘John criticized { self / *someone / *something }.’

\(b\). Ziko- marks semantic reflexivity and lexical reflexivity simultaneously.\(^4\)

\(^3\)Here, we examine three types of anaphor that lack phi-feature specification. This language has one type of anaphor that is phi-feature specified: pronoun+zisin `-self’ type such as kare-zisin ‘him-self’ and kanojo-zisin ‘her-self,’ but this type of anaphor is rarely used. So, we exclude this type from our examination.

\(^4\)Zi / ziko- morphemes are used in Sino-Japanese origin complex verbs known as zi-verbs and ziko-verbs. Zi/ziko-verbs consist of three parts: zi/ziko- ‘self,’ Sino-Japanese verbal noun (e.g. satu ‘killing’ in (i) and hihan ‘criticism’ in (32a)), and the light verb suru ‘do.’ Zi-/ziko-morphemes do not productively attach to verb roots. Following Sato and Kishida (2007) and Kishida and Sato (2009), we assume that zi/ziko- is syntactically incorporated into verb root as its object argument: as (ii) indicates, another object argument zibun ‘self’ is not allowed. (cf. Aikawa, 1993, Tsujimura and Aikawa, 1996, 1999, Shimada, 2006 for different accounts)

(i) John-ga zi-satu-si-ta.
   John-Nom self-killing-do-Past
   ‘John killed self.’

(ii) *John-ga zibun-o zi-satu-si-ta.
   John-Nom self-o self-killing-do-Past
   ‘John killed self.’
Three kinds of anaphor under the proposed classification:

a. bound-morpheme $zi$-/$ziko$- ‘self-’ = Pure reflexive anaphor
b. $zibun$ ‘self’ = Near reflexive anaphor
c. $zibun$-$zisin$ ‘self-self’ = Near reflexive anaphor

- The Pure / Near reflexivity distinguishing diagnostics$^5$

Diagnostic #1: Availability of statue reading in the Madame Tussaud context

   John-Top self-criticism-do-Past
   ‘John criticized self.’ ($ziko$ = John, *statue)

   John-Top self-Acc criticism-do-Past
   ‘John criticized self.’ ($zibun$ = John, statue)

   John-Top self-self-Acc criticism-do-Past
   ‘John criticized self-self.’ ($zibun$-$zisin$ = John, *statue)

Diagnostic #2: Availability of non-sloppy identity reading in comparative deletion constructions

a. Mary-wa John yorimo hagesiku ziko-hihan-si-ta.
   Mary-Top John than severely self-criticism-do-Past
   ‘Mary criticized herself more severely than John criticized himself.’ (sloppy identity)
   *‘Mary criticized herself more severely than John criticized her.’ (non-sloppy identity)

b. Mary-wa John yorimo hagesiku zibun-o hihan-si-ta.
   Mary-Top John than severely self-Acc criticism-do-Past
   ‘Mary criticized herself more severely than John criticized himself.’ (sloppy identity)
   ‘Mary criticized herself more severely than John criticized her.’ (non-sloppy identity)

c. Mary-wa John yorimo hagesiku zibun-zisin-o hihan-si-ta.
   Mary-Top John than severely self-self-Acc criticism-do-Past
   ‘Mary criticized herself more severely than John criticized himself.’ (sloppy identity)
   *‘Mary criticized herself more severely than John criticized her.’ (non-sloppy identity)

Results

a. $ziko$- ‘self-’ = Pure reflexive anaphor
b. $zibun$ ‘self’ = Near reflexive anaphor

c. apparent contradiction: $zibun$-$zisin$ ‘self-self’ is Near reflexive anaphor in (33c), but it does not behave like a Near reflexive anaphor in (34c) and (35c).

$^5$We share the judgements in (34) and (35) with Shimada (2006) and Miura (2008) who also apply these diagnostics to Japanese and propose different analyses.
• Zibun-zisin is a **focus operator anaphor**

(37) a. The suffix -zisin ‘self’ functions as a focus marker that involves a notion of scalarity with respect to the expectations of the speaker.

b. Amerika to wagakuni-no gaikoo kankei-o kyooka-suru tame, America and our country -Gen diplomatic relation -Acc reinforce to syusyoo-zisin -ga Amerika -no kokumutyooken -o kuukoo e mukaeni it-tta president-self -Nom America-Gen secretary of state -Acc airport to welcome go-Past ‘In order to reinforce the diplomatic relationship between the United States and us, the president *himself* will come to the airport to welcome the U.S. Secretary of State.’

(38) What is induced in (34c) is Pure identity as a consequence of the properties of zibun-zisin.

a. the Near reflexive function of zibun ‘self’

b. the focus function of -zisin ‘-self’

(39) Only the sloppy identity reading is allowed in (35c).

a. Zibun-zisin is an operator anaphor that has the semantic range.

b. It adjoins to VP and is subject to strong binding.

c. \[ [ \text{John} ] [\text{VP} \text{zibun-zisin}_i [\text{VP} \ldots t_i \ldots ] ] \] (the elided part of (35c))

**Claims:**

(40) Japanese has both Pure reflexivity and Pure identity. The two readings are not disjunctive in a language.

(41) As zibun-zisin has a special function as a focus marker, that function counteracts its Near reflexive anaphor status. It is a Near reflexive anaphor, not a third type of anaphor.

(42) Classification of anaphor in Japanese

a. bound-morpheme zi-/ziko- ‘self-’ = Pure reflexive anaphor

b. zibun ‘self’ = Near reflexive anaphor

c. zibun-zisin ‘self-self’ = Near reflexive anaphor → Focus operator anaphor

### 4.2 Chinese

• Our proposal: in some languages,

(43) a. Bound-morpheme anaphors (or clitics) are Pure reflexive anaphors.

b. Free-morpheme anaphors are Near reflexive anaphors.

c. A Near reflexive anaphor with a special function does not behave like a Near reflexive anaphor.
• Chinese also has three types of reflexivity.

(44) Xiang-Yu zuihou zi-jin-le.
   Xiang-Yu finally self-killing-Asp
   ‘Xiang-Yu finally killed himself’ (zi- = Xiang-Yu, *statue)

(45) a. Jiang Jie-Shi henhen-de da-le { ziji / ta-ziji } yi-xia. (= (17a,b))
   Jiang Jie-Shi furiously hit-Asp { self / him-self } one-Cl

b. Jiang Jie-Shi henhen-de da-le ziji-benshen yi-xia. (= (17c))
   Jiang Jie-Shi furiously hit-Asp self-self one-Cl
   ‘Jiang Jie-Shi hit himself furiously.’ (ziji-benshen = Jiang Jie-Shi, *statue)

(46) a. zi- ‘self-’ = Pure reflexive anaphor

   b. ziji ‘self’, ta-ziji ‘him-self’ = Near reflexive anaphors

   c. ziji-benshen ‘self-self’ = Near reflexive anaphor → Focus operator anaphor

4.3 Other languages

• Russian

(47) a. Yeltsin zastrelil-sja.
   Yeltsin shot-self
   ‘Yeltsin shot himself.’ (-sja = Yeltsin, *statue)

b. Yeltsin zastrelil sebja.
   Yeltsin shot self
   ‘Yeltsin shot himself.’ (sebja = Yeltsin, statue) (Lidz, 2001a, (26))

• Korean

   Chelswu-Nom self-criticism-do-Past-Dec
   ‘Chelswu criticized himself.’ (caki- = Chelswu, *statue)

b. Chelswu-ka caki-lul piphan-ha-yss-ta.
   Chelswu-Nom self-Acc criticism-do-Past-Dec

• Spanish

(49) El zorro se- lavó.
   The zorro self washed
   ‘Zorro washed himself.’ (se- = Zorro, *statue) (Shimada, 2006, 60)
5 Concluding remarks

(52) Anaphors are classified based on their semantics: Pure reflexive anaphors and Near reflexive anaphors.

(53) What looks like the third type is a subcase of Near reflexive: if a Near reflexive anaphor has a special function, that function counteracts its Near reflexive anaphor status.

(54) Parametric variation with respect to the two-way classification of anaphor:

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<th>Reflexivity</th>
<th>Pure reflexivity</th>
<th>Near reflexivity</th>
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<td>Type I</td>
<td>morphologically simplex anaphors</td>
<td>morphologically complex anaphors</td>
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<tr>
<td>(=28a)</td>
<td>Dutch</td>
<td>zich</td>
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<td></td>
<td>Kannada</td>
<td>tann</td>
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<td></td>
<td>Malayalam etc.</td>
<td>tan</td>
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<tr>
<td>Type II</td>
<td>bound-morpheme anaphors</td>
<td>free-morpheme anaphors</td>
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based on how reflexivity marking occurs in a language.
References


