Affixal Reflexive Anaphor in Japanese

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1 Introduction

- This work examines the nature of Japanese affixes zi- and ziko- ‘self’ that appear in Sino-Japanese morphologically complex verbs known as zi-verbs and ziko-verbs.

   John-Nom self-killing-do-Past
   ‘John killed self.’

   John-Nom self-criticism-do-Past
   ‘John criticized self.’

(2) Though there are many researches on the anaphor zibun ‘self’ in Japanese, a detailed study of zi- and ziko- is yet to be conducted (Aikawa, 1993, Tsujimura and Aikawa, 1996, 1999).

- Proposal:

(3) a. There are several types of zi-verbs and ziko-verbs

   b. The zi-/ziko-affixes in each type of verb have different functions/meaning.

   c. The zi-/ziko-affixes used in the reflexive type of zi-/ziko-verbs are ‘Pure reflexive anaphors’ in Lidz’s (2001a,b) sense.

2 Zi-verbs and ziko-verbs

- The zi-/ziko- affixes combine with a wide variety of Sino-Japanese verbal nouns (e.g. satu ‘killing’) to create a complex predicate with the support of the light verb suru ‘do’ (Grimshaw and Mester, 1988).

- There are two types of zi-verbs and ziko-verbs

(4) The object-taking type: verbs that can occur with an object argument [(4a) and (4b)]

(5) The objectless type: verbs that cannot occur with an object argument [(5a)-(5c)]
| Object-taking type |  
| --- | --- |
| **zi-verbs** |  
| (4a) *zi-man-suru* ‘boast about oneself’  
*zi-kyoo-suru* ‘confess oneself guilty’  
*zi-syu-suru* ‘turn oneself in’ etc. | (4a’) John-ga musuko-o zi-man-si-ta.  
John-Nom son-Acc ZI-boast-do-Past  
‘John boasted about his son.’ |
| **zikо-verbs** |  
| (4b) *zikо-kanri-suru* ‘self-administer’  
*zikо-syu-suru* ‘report by oneself’ etc. | (4b’) John-ga taizyuu-o ziko-kanri-suru.  
John-Nom weight-Acc ZIKO-control-do  
‘John controls his weight.’ |

| Objectless type |  
| --- | --- |
| **zi-verbs** |  
| (5a) *zi-satu-suru* ‘kill oneself’  
*zi-ai-suru* ‘take care of oneself’  
*zi-ritu-suru* ‘establish oneself’ etc. | (5a’) John-ga (*musuko-o) zi-satu-si-ta.  
John-Nom son-Acc ZI-killing-do-Past  
‘John killed self.’ (*John killed his son.*) |
| **zikо-verbs** |  
| (5b) *zi-ten-suru* ‘revolve’  
*zi-kai-suru* ‘collapse’  
*zi-baku-suru* ‘explode’ etc. | (5b’) Tikyuu-ga (*syooowakusei-o) zi-ten-suru.  
earth-Nom asteroid-Acc ZI-rotation-do  
‘The earth rotates.’ (*The earth rotates an asteroid.*) |
| **zikо-verbs** |  
| (5c) *zikо-syookai-suru* ‘introduce oneself’  
*zikо-hihan-suru* ‘criticize oneself’ etc. | (5c’) John-ga (*tomodati-o) ziko-syookai-suru.  
John-Nom friend-Acc ZIKO-introduction-do  
‘John introduces self.’ (*John introduced his friend.*) |

- The *zi*-verbs in (5a) and (5b)

  (6) a. Tsujimura and Aikawa (1999) regard verbs in both (5a) and (5b) as reflexive verbs: the *zi*-affix serves as a reflexive element.
  b. Not tenable: *zi-* in (5a) shares properties with the anaphor *zibun* ‘self,’ but *zi-* in (5b) does not.

(7) a. *Zibun* is subject-oriented: only subjects not objects can be antecedents of it.
  b. Taroo-ga Ziroo-ni zibun-nituite hanasi-ta  
  Taro-Nom Ziro-Dat self-about told  
  ‘Taro told Ziro about self,’ (Tsujimura, 1996, (11))

(8) a. *Zibun* has the animacy restriction on its antecedent.
John-Nom self-Acc blame-Past  
‘John blamed himself.’
history-Nom self-Acc repeat  
‘History repeats itself.’ (Tsujimura, 1996, (9))

(9) a. *Zi*- in (5a’) is like *zibun* in (8b): The possible antecedent *John* is animate.
   → The *zi*-affix used in verbs in (5a) is a reflexive anaphor.
   → *Zi*-verbs in (5a) are reflexive verbs.
  b. *Zi*- in (5b’) is not like *zibun*: The possible antecedent *tikyuu* ‘the earth’ is not animate.
   → The *zi*-affix in (5b) is not a reflexive anaphor. (see Footnote 4)
   → *Zi*-verbs in (5b) are not reflexive verbs.
• Reflexive *zi*-verbs / *ziko*-verbs – (5a) and (5c)

(10) a. The *zi/-ziko*-affixes are reflexive elements, like *zibun*, that are direct object arguments of verbal nouns.

b. The affixes have to be incorporated into verbal nouns and the light verb *suru* ‘do,’ due to their morphological nature (Kishida and Sato, 2010).

(11) a. These verbs cannot take a direct object but can take an indirect object.

   John-Nom { friend-Acc / friend-Dat } self-introduction-do-Past
   ‘John { *introduced his friend to self / introduced self to his friend* }’

• The object-taking *zi*-verbs / *ziko*-verbs – (4a) and (4b)

(12) a. The *zi/-ziko*-affixes cannot be generated as direct objects of verbal nouns.

b. They do not function as reflexive anaphors.

• This work focuses on objectless *zi*-verbs in (5a) and objectless *ziko*-verbs in (5c).

3 Affixal vs. Non-affixal anaphors

• *Zi/-ziko-* and *zibun* behave identically in some aspect.¹

(13) Both *ziko-* and *zibun* allow local (coargument) binding.

   John-Nom self-criticism-do-Past
   ‘Johni criticized selfi.’

   John-Nom self-Acc criticism-do-Past
   ‘Johni criticized selfi.’

• They show different behaviors in other aspects.

(15) *Ziko-* allows only local binding, while *zibun* allows non-local binding as well.

   Mary-Top John-Nom self-criticism-do-Past that think-Past
   ‘Maryi thought that Johni criticized selfi/j.’

   Mary-Top John-Nom self-Acc criticism-do-Past that think-Past
   ‘Maryi thought that Johni criticized selfi/j.’

¹This work does not focus on other types of non-affixal anaphors in Japanese, namely *zibun-zisin* ‘self-self’ and the pronoun+-*self* type such as *kare-zisin* ‘him-self.’ Kishida (to appear) compares these anaphors with *zi/-ziko-* and *zibun.*
(17) In the Madame Tussaud context (Jackendoff, 1992, Lidz, 2001a,b), ziko- refers to only the antecedent itself. Zibun can refer to an extension of the antecedent, such as ‘a statue of antecedent.’

(18) . . . Ringo started undressing himself. (himself = Ringo, statue of Ringo) (Jackendoff, 1992, (9))

   John-Nom self-criticism-do-Past
b. John-ga zibun-o hihan-si-ta. (zibun = John, statue of John)
   John-Nom self-Acc criticism-do-Past

(20) In comparative deletion constructions, the ziko- sentence has only a sloppy identity reading, but the zibun sentence has both a sloppy identity reading and a non-sloppy identity reading.

(21) a. Mary-ga John yorimo hagesiku ziko-hihan-si-ta.
   Mary-Nom John than severely self-criticism-do-Past
   ‘Mary criticized herself more severely than John criticized himself.’ (sloppy identity reading)
   *‘Mary criticized herself more severely than John criticized her.’ (non-sloppy)
b. Mary-ga John yorimo hagesiku zibun-o hihan-si-ta.
   Mary-Nom John than severely self-Acc criticism-do-Past
   ‘Mary criticized herself more severely than John criticized himself.’ (sloppy)
   ‘Mary criticized herself more severely than John criticized her.’ (non-sloppy)

4 Types of Reflexives

- Lidz (2001a,b): anaphors in languages are classified into two types based on their semantics.

(22) a. **Pure reflexive anaphors**: require complete identity with their antecedents. Variables. Must be referentially identical with their antecedents.

b. **Near reflexive anaphors**: referentially dependent on their antecedents but are not necessarily identical with them. A function \( f(x) \) in (23b) that takes its antecedent as input and returns an element that is representationally related to the antecedent.

(23) a. \( \lambda x \left[ P(x,x) \right] \) (Pure reflexive predicates \( \rightarrow \) Pure reflexivity)
b. \( \lambda x \left[ P(x,f(x)) \right] \) (Near reflexive predicates \( \rightarrow \) Near reflexivity) (Lidz, 2001a, (15))

- Diagnostic 1: the Madame Tussaud context

(24) Ringo scheert \{ zich / zichzelf\}. [Dutch]
   Ringo shaves \{ self / selfzelf\}
   ‘Ringo shaves himself’ (zich = Ringo,*statue : zichzelf = Ringo, statue) (Lidz, 2001a, (29))

(25) a. **Zich** is a Pure reflexive anaphor and its reference must be identical with its antecedent.

b. **Zichzelf** has the Near reflexive function that can return an extension of the antecedent.
Diagnostic 2: Comparative deletion constructions

(26) Zij verdedigde {zich / zichzelf} beter dan Peter
she defended {self / selfself} better than
zich: ‘She defended herself better than Peter defended {himself / *her}.’
zichzelf: ‘She defended herself better than Peter defended {himself / her}.’ (Lidz, 2001a, (30))

(27) a. Zich is a variable. The semantic structure of the entire sentence is
b. [defend (she, she)] better than [defend (Peter, Peter)] (→ sloppy identity)

c. Zichzelf is not a variable and can have its own index. The semantic structure can be
d. \( \lambda x[\text{defend}(x,f(x))] (\text{she}_i) \) better than \( \lambda x[\text{defend}(x,f_i(x))] (\text{Peter}) \) (sloppy)
\( \lambda x[\text{defend}(x,f_i(x))] (\text{she}_i) \) better than \( \lambda x[\text{defend}(x,f_i(x))] (\text{Peter}) \) (non-sloppy)

5 Proposal

5.1 Reflexive anaphors in Japanese

- The affixal anaphors (zi-/ziko-) are Pure reflexive and the non-affix anaphor (zibun) is Near reflexive.
- The properties of zi-/ziko- observed in Section 3: local antecedent requirement, unavailability of statue readings /non-sloppy identity readings, are all attributed to their nature as Pure reflexive anaphors.

(28) a. Only the local antecedent is allowed in (28b): ziko- is a variable. It constitutes an Operator-Variable relation and is subject to predication or strong binding by an appropriate local subject (Liu, 2003).

b. Mary-wa [ John-ga ziko-hihan-si-ta ] to omot-ta. (= (16a))
Mary-Top John-Nom self-criticism-do-Past that think-Past
‘Mary thought that John criticized self. ’

c. [ [ John ] [ VP ziko- \(_i\) [ VP ... \(_i\)-hihan-suru ... ] ] ] (Based on Liu (2003, 33))

(29) a. The statue reading is not available in (29b): the reference of the Pure reflexive anaphor ziko-
has to be exactly identical with its antecedent.

John-Nom self-criticism-do-Past

(30) a. Only the sloppy identity reading is induced in (30b): ziko- is a variable.

b. Mary-ga John yorimo hagesiku ziko-hihan-si-ta. (= (21a))
Mary-Nom John than severely self-criticism-do-Past
‘Mary criticized herself more severely than John criticized { himself / *her} .’

c. [criticize (Mary, Mary)] better than [criticize (John, John)]
• Non-affixal anaphor *zibun* is a Near reflexive anaphor

(31) a. *Zibun* allows the non-local antecedent as well in (31b): *zibun* is not a variable.\(^2\)
   
   b. Mary-wa [John-ga zibun-o hihan-si-ta] to omot-ta. (= (16b))
   Mary-Top John-Nom self-Acc criticism-do-Past that think-Past
   ‘Mary thought that John criticized self.’

(32) a. The statue reading is available in (32b): the Near reflexive function of *zibun* takes the antecedent
   *John* as input and returns an extension of its antecedent, namely ‘the statue of John.’
   
   b. John-ga zibun-o hihan-si-ta. (= (19b))
   John-Nom self-Acc criticism-do-Past
   ‘John criticized self.’

(33) a. The non-sloppy identity reading is also allowed in (33b):
   
   b. Mary-ga John yorimo hagesiku zibun-o hihan-si-ta. (= (21b))
   Mary-Nom John than severely self-Acc criticism-do-Past
   ‘Mary criticized herself more severely than John criticized {himself/her}.’

   c. \(\lambda x[\text{criticize}(x,f(x))] (\text{Mary}_i) \text{ better than } \lambda x[\text{criticize}(x,f(x))] (\text{John})\)
   \(\lambda x[\text{criticize}(x,f_i(x))] (\text{Mary}_i) \text{ better than } \lambda x[\text{criticize}(x,f_i(x))] (\text{John})\)

5.2 *In other languages*

• The classification that affixal reflexives are Pure reflexive and non-affixal ones are Near reflexive is true
  in some other languages.\(^3\)

(34) Yeltsin {zastrelil-*sja* / zastrelil *sebja*}. [Russian]
   Yeltsin {shot-self / shot self}
   ‘Yeltsin shot himself.’ (*-sja = Yeltsin, *statue) (*sebja = Yeltsin, statue) (Lidz, 2001a, (26))

(35) a. Xiang-Yu zuihou *zi*-jin-le. [Chinese]
   Xiang-Yu finally self-killing-Asp
   ‘Xiang-Yu finally killed himself’ (*zi- = Xiang-Yu, *statue) (Liu, 2003, Footnote 30 (ii))

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

(36) Gianni {si-*lava* / lava *se stesso*}. [Italian]
   Gianni {self-washes / washes self-same}
   ‘Gianni washes himself.’ (*si- = Gianni,*statue) (*se stesso = Gianni, statue) (Giorgi, 2007, (15)(18))

\(^2\)As is well known, there are quite a few studies on non-locally bound zibun but we do not see them in this study.

\(^3\)The Dutch examples in (24) and (26) show that, in this languages, the non-affixal anaphor *zieh* is Pure reflexive (and another non-affixal anaphor *ziezelf* is Near reflexive). We assume that there are language variation with respect to the Pure/Near reflexive distinction: in some languages like Japanese and Russian, the affixal and non-affixal distinction corresponds to the Pure/Near reflexive distinction, while in other languages like Dutch and Kannada, morphologically simplex anaphors are Pure reflexive and complex ones are Near reflexive. See Kishida (to appear) for the detail.
• Not all affixes are Pure reflexive anaphors

(37) Chinese has two types of ‘zi-verb’: some zi-verbs can occur with objects, while some cannot. Zi-ren ‘think of oneself as’ in (38a) takes a clausal object, while zi-sha ‘kill oneself’ in (38b) cannot. Only the zi-affix in the latter type of verb is a reflexive element.

(38) a. XiaoLing zi-ren shi yi-ge hen cong-ming-de ren.  
   XiaoLing ZI-identify be one-CL very smart person.  
   ‘XiaoLing identifies self as a very smart person.’  
   (Chow, p.c.)

   b. Zhangsan zi-sha le.  
   Zhangsan ZI-kill Asp  
   ‘Zhangsan committed suicide.’  
   (Chief, 1998, (1b))

(39) Italian clitic si- occurs in non-reflexive constructions as well: decausative construction in (40a) and middle construction in (40b) (Cf. reflexive construction in (36)).

(40) a. Il vetro si-rompe.  
   the glass SI-breaks  
   ‘The glass breaks.’

   b. La pellice si-vendono bene d’autunno  
   The furs SI-sell well in-autumn  
   ‘The furs sell well in the autumn.’

6 Conclusion

(41) There are several types of zi-verbs and ziko-verbs

   a. the Object-taking types (4a,b) and the Objectless types (5a-c)

   b. Zi-verbs arise in reflexive constructions ((5a),(5c)) and in non-reflexive constructions ((5b)).

(42) a. The affixal anaphors zi-/ziko- (in the reflexive usage) function as Pure reflexive anaphors ((5a),(5c)).

   b. The non-affixal anaphor zibun is a Near reflexive anaphor.

(43) Other issues: the zi-/ziko-affixes in other usages. Just homonyms?

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4The si-affix in this usage is like the Japanese zi-affix in (5b). Both are ‘decausative markers.’ See Kishida and Sato (2010) for a detailed discussion.
References


