The Internal Structure of Sino-Japanese Reflexive Verbs:
A Hidden Transitive Analysis

KISHIDA Maki
University of Maryland, College Park

1 Introduction

• We discuss the internal syntax of Sino-Japanese intrinsic reflexive verbs (known as ‘zi-verbs’):

      -nom self-killing-did
      ‘John killed himself.’
      -nom self-establishing-did
      ‘John established himself.’

• Aim and Proposal:

  (2) We provide several syntactic and morphological arguments that this class of verbs has a hidden
      transitive syntactic structure, contra Tsujimura & Aikawa’s (1999) unaccusative analysis.

  (3) These verbs are derived by obligatory incorporation of the reflexive morpheme -zi- ‘self’ into
      Sino-Japanese verbal nouns supported by the light verb suru ‘do.’

2 What are Zi-verbs?

• The reflexive morpheme -zi- ‘self’ combines with a wide variety of Sino-Japanese verbal nouns (VNPs)
  to create a complex predicate with the support of the light verb suru ‘do’ (Grimshaw & Mester 1988).

  (4) a. zi-satu-suru  ‘kill oneself,’
       zi-ren-suru  ‘revolve around oneself,’
       zi-kai-suru  ‘demolish oneself’ …
  b. zi-man-suru  ‘boast oneself,’
       zi-kyoo-suru  ‘confess oneself’
       zi-san-suru  ‘praise oneself,’
       zi-nin-suru  ‘admit oneself’ …

• The reflexive morpheme -zi- ‘self’ is morphologically bound.

  (5)* John -ga  zi -o  satu-sita.
      -nom self -acc killing-did
      ‘John killed himself.’

*This is a joint work with Yosuke Sato at University of Arizona
*mkishida@umd.edu
• The Sino-Japanese VNs cannot be used without the reflexive morpheme -zi- ‘self.’

(6)* John -ga zibun -o satu-sita.
\hspace{1cm} ^{\text{-NOM self -ACC killing-did}}
‘John killed himself.’

• The -zi-VN complex is morphologically bound.

(7)* John -ga zi-satu ta.
\hspace{1cm} ^{\text{-NOM self-killing -PAST}}
‘John killed himself.’

3 Tsujimura & Aikawa’s 1999 Unaccusative Analysis of Zi-Verbs

• Tsujimura & Aikawa (1999) claim that there are two types of zi-verbs in Japanese.\(^1\)

  - Object-free: cannot take object arguments as in (8a). [represented in (4a)]
  - can take object arguments as in (8b). [in (4b)]

(8) a.* John -ga musuko -o zi-satu-sita.
\hspace{1cm} ^{\text{-NOM son -ACC self-killing-did}}
‘John killed his son.’

\hspace{1cm} ^{\text{-NOM son -ACC self-boasting-did}}
‘John boasted his son.’

  - We only discuss the object-free type of zi-verbs in this presentation.

• Tsujimura & Aikawa (1999) propose the unaccusative analysis of the object-free type of zi-verbs.

  - This type of verbs lacks an external argument in [Spec, vP], and the surface subject John, base-generated as the complement of the VN zi-satu ‘self-killing,’ undergoes movement into [Spec, TP] for Case reasons.

\hspace{1cm} ^{\text{-NOM self-killing-did}}
‘John killed himself.’

  b. [TP John -ga [vP ... [vP ... [vNP t1 zi-satu] si ] ... ] ta]

  - As is expected of unaccusative verbs in general, zi-verbs cannot take direct objects: (8a)

\(^1\)Tsujimura & Aikawa (1996, 1999) analyse the first type as unaccusative zi-verbs (as we will see shortly) and the second type as inalienable possession zi-verbs. See these works for detailed discussion on the second type.
• 1st diagnostic of unaccusativity: based on the distribution of Resultative phrases


Resultative phrases must be predicated of underlying direct objects.

(11) Unaccusative Hypothesis (Perlmutter 1978):

An unaccusative verb takes its Theme argument as its underlying direct object.


Jiro -Nom bread -Acc black toasted

‘Jiro toasted the bread black.’

b. Pan -ga makkuro-ni yaketa.

bread -Nom black burned

‘The bread burned black.’

c. Furui tatemono -ga konagona-ni zi-kai-sita.

old building -Nom pieces-into self-demolished

‘The old building demolished (itself) into pieces.’ (Tsujimura & Aikawa 1999: 31f)

• 2nd diagnostic of unaccusativity: based on NP quantifying

(13) Miyagawa (1989)

‘An NP and the quantifier that it is associated with must be in a mutual c-command relation.’

(14) a. Gakusei -ga san-nin [VP ie -o katta].

students -Nom three-CL house -Acc bought

b. Gakusei -ga [VP ie -o san-nin katta].

students -Nom house -Acc three-CL bought

‘Three students bought a house.’

(15) a. Gakusei -ga san-nin [VP ie -e hasitta].

students -Nom three-CL house -toward ran

b. Gakusei -ga [VP ie -e san-nin hasitta].

students -Nom house -toward three-CL ran

‘Three students ran toward the house.’

(16) a. Gakusei -ga san-nin [VP ie -ni ti kita].

students -Nom three-CL house -Goal came

b. Gakusei -ga [VP ie -ni ti san-nin kita].

students -Nom house -Goal three-CL came

‘Three students came into the house.’

(17) a. Gakusei -ga san-nin [VP ie -de ti zi-satu-sita].

students -Nom three-CL house -Loc self-killing-did

b. Gakusei -ga [VP ie -de ti san-nin zi-satu-sita].

students -Nom house -Loc three-CL self-killing-did

‘Three students killed themselves in the house.’
4 The Syntax of Intrinsic Reflexivity

4.1 Against the Unaccusative Analysis

- We provide five arguments that the object-free type of zi-verbs has an external argument and cannot be unaccusative, contrary to Tsujimura & Aikawa (1999).
  (The 1st-4th arguments are based on Kageyama (1993), and the fifth one is on Kishimoto (2005).)²

- 1st Argument: Only verbs with external arguments can be the first member of V+V compounds headed by naosu ‘redo.’

(18) a. hiraki-naosu ‘open again,’ tukuri-naosu ‘make again’ [Transitive V + naosu ‘redo’]

b. asobi-naosu ‘play again,’ ne-naosu ‘sleep again’ [Unergative V + naosu ‘redo’]

c.*oti-naosu ‘fall again,’ *joohatusi-naosu ‘evaporate again’ [Unaccusative V + naosu ‘redo’]

d. zi-satu-si-naosu ‘kill oneself again,’ zi-ritu-si-naosu ‘establish oneself again’ [Zi-V + naosu ‘redo’]

- 2nd Argument: The accusative case marker -o cannot be attached only with VNs that have external arguments.

(19) Burzio’s generalization:
  Case is assigned to the object iff a θ-role is assigned to the subject. (Burzio 1986: 178)

(20) a. kenkyu (-o) suru
    research (-ACC) do
    ‘do research’ [Transitive VN]

b. rikon (-o) suru
    divorce (-ACC) do
    ‘get divorced’ [Unergative VN]

c. sikyo (*-o) suru
    death (-ACC) do
    ‘die’ [Unaccusative VN]

d. zi-satu (-o) suru
    self-killing (-ACC) do
    ‘kill oneself’ [Zi- VN]

(21) Tikyuu -ga zi-ten (-o) suru.
    earth -NOM self-revolving (-ACC) do
    ‘The earth rotates.’

²All the examples from Kageyama (1993) and Kishimoto (2005) in this section are originally provided in Japanese. The morpheme glosses and the translations in all these examples are due to the present authors.
• 3rd Argument: Only external arguments of the base non-passive constructions can be marked with the dative case marker -ni in the derived indirect passive constructions.

(22) a. *Tuma -ga hooseki -o kaw -ta.*  
wife  -NOM jewelry  -ACC buy  -PAST  
‘His wife bought jewelry.’

b. John -wa *tuma -ni* hooseki -o kaw -are -ta.  
-DAT wife  -ACC buy  -PASS -PAST  
‘John was adversely affected by having his wife buy jewelry.’

wife  -NOM get divorce  -PAST  
‘His wife got divorced.’

b. John -wa *tuma -ni* rikon-s -are -ta.  
-DAT wife  -PASS -PAST  
‘John was adversely affected by having his wife getting divorced.’

(24) a. *Yasai -ga kusar -ta.*  
vegetable  -NOM rot  -PAST  
‘Vegetables rot.’

b. *John -wa yasai -ni kusar -are -ta.*  
-DAT vegetable  -PASS -PAST  
‘John was adversely affected by having vegetables rot.’

wife  -NOM self-killing-do  -PAST  
‘His wife killed herself.’

b. John -wa *tuma -ni* zi-satu-s -are -ta.  
-DAT wife  -PASS -PAST  
‘John was adversely affected by having his wife killing herself.’

• 4th Argument: Only external arguments of the base constructions can be the subjects of the passivized causative constructions.

teacher  -TOP student  -DAT expensive book  -ACC (forcibly) buy  -CAUS -PAST  
‘The teacher forcibly made the student buy an expensive book.’

b. *Seito -wa sensei -ni kookana hon -o kaw -ase -are -ta.*  
student  -TOP teacher  -DAT expensive book  -PASS -PAST  
‘The student was made to buy an expensive book by the teacher.’
(27) a. Karera -no ryoosin -ga [hutari -o rikon-s] -ase -ta. [Unergative V]  
   they -GEN parents -NOM two people -ACC divorce -CAUS -PAST  
   ‘Their parents made the two get divorced.’

   b. Hutari -wa karera -no ryoosin -ni rikon-s -ase -rare -ta.  
   two people -TOP they -GEN parents by divorce -CAUS -PASS -PAST  
   ‘The couple was made to get divorced by their parents.’

   -NOM water -ACC evaporate -CAUS -PAST  
   ‘John made the water evaporate.’

   water -NOM by evaporate -CAUS -PASS -PAST  
   ‘The water was made to evaporate by John.’

(29) a. Media -no hoodoo -ga [sono aidoru -o zi-satu-s] -ase -ta. [Zi-V]  
   media -GEN report -NOM that idol -ACC self-kill -CAUS -PAST  
   ‘The report of the media made that idol kill herself.’

   b. Sono aidoru -wa media -no hoodoo -no -tame zi-satu-s -ase -rare -ta.  
   that idol -TOP media -GEN report -GEN reason self-kill -CAUS -PASS -PAST  
   ‘That idol was caused to kill herself due to the report of the media.’

• 5th Argument: Volitional external arguments can be marked with the instrumental case marker -de.

(30) a. Watasi -tati -ga/-de kore -o yari -masu. [Transitive V]  
   I -PL -NOM/-with this -ACC do -Polite  
   ‘We will do this work.’

   b. John to Mary -ga/-de isshoni asonda. [Unergative V]  
   and -NOM/-with together played  
   ‘John and Mary played together.’

   c. Atusa-notame, John to Mary -ga/-de taoreta. [Unaccusative V]  
   heat-for and -NOM/-with fell  
   ‘John and Mary collapsed for heat.’

   d. Hukushu-notame, John to Mary -ga/-de zi-satu-si -ta. [Zi-V]  
   revenge-for and -NOM/-with self-killing-do -PAST  
   ‘John and Mary killed themselves to revenge themselves.’

⇒ These arguments show that the object-free type of zi-verbs cannot be unaccusative and it has an external argument.
4.2 Proposal: Hidden Transitive Analysis of Zi-Verbs

- The object-free type of zi-verbs is associated with a hidden transitive syntactic structure.
- The reflexive morpheme -zi- ‘self’ undergoes successive obligatory incorporation in the syntax from the D head position to the Sino-Japanese verbal noun through V into the v head (with the support by the light verb *non *‘do’). The surface subject is base-generated in [Spec, vP].
- Zi-verbs are transitive verbs with external and internal arguments both in their normal syntactic positions: The reflexive morpheme -zi- ‘self’ is the internal argument of the verbal noun. The sole DP argument is the external argument of the whole complex predicate.

   -nom self-killing does
   ‘John kills himself.’

\[\begin{center}
\begin{align*}
\text{DP} & \quad \text{VP} \\
\text{John-ga} & \quad \text{V} \\
\text{VNP} & \quad \text{VNsuru} \\
\text{-zi-} & \quad \text{-satu}
\end{align*}
\end{center}\]

\[\text{vP}\]

4.3 Under Our Hidden Transitive Analysis

- As zi-verbs have external arguments, the phenomena seen in 4.1 can be explained.
- As zi-verbs have internal arguments, the fact that they cannot take object arguments can be explained.
- Tsujimura & Aikawa’s two arguments can be explained equally well.

- Direct Object Restriction is satisfied: It is the reflexive morpheme -zi- ‘self’ that the resultative phrase is predicated of within the VP.

\[(32)\] [\text{L_p} \text{Furui tatemono -ga} \quad [\text{VP konagona-ni zi-kai-sita}]].
   old building -nom pieces-into self-demolishing-did
   ‘The old building self-demolished into pieces.’

- Mutual c-command requirement is satisfied: The floating numeral quantifier is in a mutual c-command relation with the reflexive morpheme -zi- ‘self’ within the VP.

\[(33)\] [\text{L_p} \text{Gakusei -ga} \quad [\text{VP ie -de san-nin zi-satu-sita}]].
   students -nom house -loc three-CL self-killing-did
   ‘Three students killed themselves in the house.’
5 Conclusion

- We propose a hidden transitive analysis for the object-free type of zi-verbs (Sino-Japanese intrinsic reflexive verbs): they are transitive verbs with external and internal arguments both in their normal syntactic positions, contrary to Tsujimura & Aikawa (1999)'s unaccusative analysis.

- The five arguments discussed in section 4.1 show that this class of verbs has an external argument and they are not unaccusative.

- The two arguments originally made by Tsujimura & Aikawa (1999) for the unaccusativity of zi-verbs in fact constitute evidence that it is the reflexive morpheme -zi- ‘self’ that serves as an internal argument of a Sino-Japanese verbal noun.

References


