

Zi-verbs in Japanese*
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1 Introduction

- We discuss the syntax of Sino-Japanese origin morphologically complex verbs (known as ‘*zi*-verbs’):

- (1) a. John-ga *zi*-ritu-suru.
John-Nom self-support-do
‘John_i supports himself_i.’
b. Tatemono-ga *zi*-kai-suru.
building-Nom self-collapse-do
‘The building collapses (by itself).’

- Two types of *zi*-verb¹

- cannot occur with an object argument as in (2a) → **Objectless *zi*-verbs** [represented in (5a)]
- can occur with an object argument as in (2b). → Object-taking *zi*-verbs [in (5b)]

- (2) a.* John-ga musuko-o *zi*-ritu-si-ta.
John-Nom son-Acc self-support-do-Past
‘John supported his son.’
b. John-ga musuko-o *zi*-man-si-ta.
John-Nom son-Acc self-boasting-do-Past
‘John boasted about his son.’

- (3) Seminal work by Tsujimura and Aikawa (1999):
All objectless *zi*-verbs are uniformly reflexive verbs with an unaccusative syntactic structure.

- Aim and Proposal:

- (4) a. We provide several syntactic and morphological arguments that a certain type of objectless *zi*-verb has an external argument, contrary to Tsujimura and Aikawa (1999).
b. There are three types of objectless *zi*-verbs: transitive, unaccusative, and unergative.
c. *Zi*-verbs with a transitive structure are reflexive verbs, while other types of *zi*-verb are not.
d. The *zi*-morpheme is ambiguous:
 - argument *zi*-morpheme ‘self’ (transitive objectless *zi*-verbs)
 - adjunct *zi*-morpheme ‘by itself’ (unaccusative objectless *zi*-verbs)
 - adjunct *zi*-morpheme ‘by oneself’ (unergative objectless *zi*-verbs)

*This is a joint work with Yosuke Sato @UBC.

¹Tsujimura and Aikawa (1996, 1999) analyze the first type as ‘unaccusative *zi*-verbs’ and the second type as ‘inalienable possession *zi*-verbs.’

2 What are *Zi*-verbs?

- The *zi*-morpheme combines with a Sino-Japanese verbal noun and the light verb *suru* ‘do,’ and creates a complex predicate (Grimshaw and Mester, 1988).²

- (5) a. *zi-ritu-suru* ‘self-support-do = support oneself,’ *zi-satu-suru* ‘kill oneself’
 zi-ten-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 *zi*-morpheme is morphologically bound.

- (6)*John-ga *zi-o* *ritu-suru*. (6’) John-ga { **zi-o* / *zibun-o* } *yasinat-ta*
 John-Nom self-Acc support-do John-Nom { self-Acc / self-Acc } support-Past
 ‘John_i supported himself_i.’

- The Sino-Japanese verbal nouns cannot be used without the *zi*-morpheme.

- (7)*John-ga *zibun-o* *ritu-si-ta*.
 John-Nom self-Acc support-do-Past
 ‘John_i supported himself_i.’

- The *zi*+verbal noun complex cannot be inflected for tense by itself.

- (8)*John-ga *zi-ritu-ta*.
 John-Nom self-support-Past
 ‘John_i supported himself_i.’

3 Tsujimura and Aikawa’s 1999 Uniform Unaccusative Analysis

- Tsujimura and Aikawa (1999) propose a uniform unaccusative analysis of objectless *zi*-verb.

- Objectless *zi*-verbs lack an external argument in [Spec, vP]. The surface subject base-generated as the complement of the verbal noun *zi-ritu* ‘self-support’ undergoes movement into [Spec, TP] for Nominative case.

- (9) a. John-ga *zi-ritu-si-ta*.
 John-Nom self-support-do-Past
 ‘John_i supported himself_i.’

- b. [TP John_i-ga [vP \dots [vP \dots [vNP t_i *zi-ritu*] *si*] \dots] ta]

- As is expected of unaccusative verbs in general, objectless *zi*-verbs cannot occur with direct objects.

²In sections 1-3, we gloss all the *zi*-morpheme as ‘self’ following Tsujimura and Aikawa (1999). The list in (5) is cited from their work.

- 1st diagnostic for unaccusativity: based on the distribution of Resultative phrases
 - (10) Direct Object Restriction (Simpson, 1983, Levin and Rappaport Hovav, 1995):
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.
 - (12) a. Ziroo-ga *pan-o makkuro-ni yai-ta.* [Transitive verb]
Jiro-Nom bread-Acc black toast-Past
'Jiro toasted the bread black.'
 - b. *Pan-ga makkuro-ni yake-ta.* [Unaccusative verb]
bread-Nom black burn-Past
'The bread burned black.'
 - c. *Furui tatemono-ga konagona-ni zi-kai-sita.* [Zi-verb]
old building-Nom pieces-into self-demolish-Past
'The old building demolished (itself) into pieces.' (Tsujimura and Aikawa, 1999, 31f)
- 2nd diagnostic for unaccusativity: based on Numeral Quantifier Floating
 - (13) Miyagawa (1989b):
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 kat-ta]. [Transitive verb]
students-Nom three-CL house-Acc buy-Past
 - b. *Gakusei-ga [_{VP} ie-o san-nin kat-ta].
students-Nom house-Acc three-CL buy-Past
'Three students bought a house.'
 - (15) a. Gakusei-ga san-nin [_{VP} ie-e hasit-ta]. [Unergative verb]
students-Nom three-CL house-toward run-Past
 - b. *Gakusei-ga [_{VP} ie-e san-nin hasit-ta].
students-Nom house-toward three-CL run-Past
'Three students ran toward the house.'
 - (16) a. Gakusei_i-ga san-nin [_{VP} ie-ni t_i ki-ta]. [Unaccusative verb]
students-Nom three-CL house-Goal come-Past
 - b. Gakusei_i-ga [_{VP} ie-ni t_i san-nin ki-ta].
students-Nom house-Goal three-CL come-Past
'Three students came into the house.'
 - (17) a. Gakusei_i -ga san-nin [_{VP} ie -de t_i zi-satu-sita]. [Zi-verb]
students -Nom three-CL house -Loc self-killing-did
 - b. Gakusei_i -ga [_{VP} ie -de t_i san-nin zi-satu-sita].
students -Nom house -Loc three-CL self-killing-did
'Three students killed themselves in the house.'

4 Against the Uniform Unaccusative Analysis

- We provide five diagnostics for external argumenthood.
 - Some objectless *zi*-verbs, such as *zi-ritu-suru* ‘self-support-do, support oneself’ and *zi-satu-suru* ‘self-killing-do, kill oneself,’ have an external argument and cannot be unaccusative, contrary to Tsujimura & Aikawa (1999).
 - The 1st-4th diagnostics are based on Kageyama (1993), and the fifth one is on Kishimoto (2005).
- 1st diagnostic for external argumenthood: Only verbs with external arguments can be the first member of V+V compounds headed by *naosu* ‘redo.’

- (18) a. *kiki-naosu* ‘hear again,’ *tukuri-naosu* ‘make again’ [Transitive V + *naosu* ‘redo’]
- b. *suwari-naosu* ‘sit again,’ *ne-naosu* ‘sleep again’ [Unergative V + *naosu* ‘redo’]
- c. **korobi-naosu* ‘tumble again,’ **oti-naosu* ‘fall again’ [Unaccusative V + *naosu* ‘redo’]
- d. *zi-ritu-si-naosu* ‘support oneself again’ [Zi-V + *naosu* ‘redo’]

- 2nd diagnostic: The accusative case marker *-o* can be attached only with verbal nouns (VNs) that have external arguments when VNs occur with the light verb *suru* ‘do.’

(19) Argument Transfer theory:

The argument-taking property of VN is transferred into the empty θ -grid of the light verb *suru* ‘do.’ (Grimshaw and Mester, 1988)

(20) Burzio’s generalization:

Case is assigned to the object iff a θ -role is assigned to the subject. (Burzio, 1986, 178)

- (21) a. *kenkyu (-o) suru* [Transitive VN]
 research (-Acc) do
 ‘do research’
- b. *rikon (-o) suru* [Unergative VN]
 divorce (-Acc) do
 ‘get divorced’
- c. *sikyo (*-o) suru* [Unaccusative VN]
 death (-Acc) do
 ‘die’
- d. *zi-ritu (-o) suru* [Zi-VN]
 self-support (-Acc) do
 ‘support oneself’

- 3rd diagnostic: 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. John-no **tuma-ga** hooseki-o kaw-ta. [Transitive V]
 John-Gen wife-Nom jewelry-Acc buy-Past
 ‘John’s wife bought jewelry.’

b. John-wa **tuma-ni** hooseki-o kaw-are-ta.
 John-Top wife-Dat jewelry-Acc buy-Pass-Past
 ‘John was adversely affected by having his wife buy jewelry.’

(23) a. John-no **tuma-ga** rikon-si-ta. [Unergative V]
 John-Gen wife-Nom divorce-do-Past
 ‘His wife got divorced.’

b. John-wa **tuma-ni** rikon-s-are-ta
 John-Top wife-Dat divorce-do-Pass-Past
 ‘John was adversely affected by having his wife getting divorced.’

(24) a. John-no **tuma-ga** sikyo-si-ta [Unaccusative V]
 John-Gen wife-Nom death-do-Past
 ‘John’s wife died.’

b.*John-ga **tuma-ni** sikyo-s-are-ta
 John-Nom wife-Dat death-do-Pass-Past
 ‘John was adversely affected by his wife die.’

(25) a. John-no **tuma-ga** zi-ritu-si-ta. [Zi-V]
 John-Gen wife-Nom self-support-do-Past
 ‘John’s wife supported herself.’

b. John-ga **tuma-ni** zi-ritu-s-are-ta.
 John-Nom wife-Dat self-support-do-Past-Past
 ‘John was adversely affected by having his wife support herself.’

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

(26) a. Kantoku-ga **kooti-ni** sensyu-o kitae-sase-ta. [Transitive V]
 manager-Nom coach-Dat players-Acc train-Caus-Past
 ‘The manager made the coach train the players.’

b. **Kooti-ga** kantoku-niyotte sensyu-o kitae-sase-rare-ta.
 coach-Nom manager-by players-Acc train-Caus-Pass-Past
 ‘The coach was made to train the players by the manager.’

c.***Sensyu-ga** kantoku-niyotte kooti-ni kitae-sase-rare-ta.
 players-Nom manager-by coach-Dat train-Caus-Pass-Past
 ‘The players were made to be trained by the coach by the manager.’

(27) a. Karera-no ryoosin-ga **hutari-o** rikon-s-ase-ta. [Unergative V]
 they-Gen parents-Nom two people-Acc divorce-do-Caus-Past
 ‘Their parents made the two get divorced.’

b. **Hutari-ga** karera-no ryoosin-niyotte rikon-s-ase-rare-ta.
 two people-Nom they-Gen parents-by divorce-do-Caus-Pass-Past
 ‘The couple was made to get divorced by their parents.’

(28) a. Isya-ga **kanzya-o** sikyo-s-ase-ta. [Unaccusative V]
 doctor-Nom patient-Acc death-do-Caus-Past
 ‘The doctor made the patient die.’

b. ***Kanzya-ga** isya-niyotte sikyo-s-ase-rare-ta.
 patient-Nom doctor-by death-do-Caus-Pass-Past
 ‘The patient was made to die by the doctor.’

(29) a. Ryoosin-ga **John-o** zi-ritu-s-ase-ta. [Zi-V]
 parent-Nom John-Acc self-support-do-Caus-Past
 ‘His parents made John support herself.’

b. **John-ga** ryoosin-niyotte zi-ritu-s-ase-rare-ta.
 John-Nom parent-by self-support-do-Caus-Pass-Past
 ‘John was made to support himself by his parents.’

- 5th diagnostic: Underlying external arguments can be marked with the instrumental case marker *-de* as well as the nominative case marker *-ga*.

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

b. Watasi-tati -ga/ -de isshoni asonda. [Unergative V]
 I-PL -Nom/-with together played
 ‘We played together.’

c. Atusa-notame, watasi-tati -ga/*-de taoreta. [Unaccusative V]
 heat-from I-PL -Nom/-with fell
 ‘We collapsed from heat.’

d. Oya-ni sinpai-o kake-mai-to watasi-tati -ga/ -de zi-ritu-si-ta. [Zi-V]
 parent-Dat worry-Acc incur-won’t-for I-PL -Nom/-with self-support-do-Past
 ‘We supported ourselves in order not to incur worries on our parents.’

⇒ The results of the five diagnostics demonstrate that a certain type of objectless *zi*-verb such as *zi-ritu-suru* ‘self-support-do’ have an external argument.

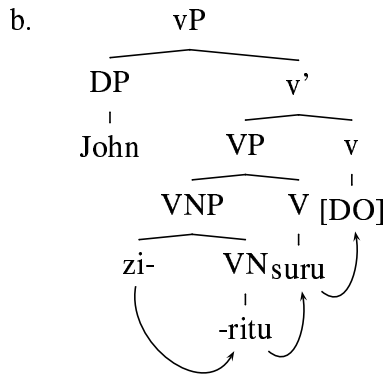
⇒ Tsujimura and Aikawa’s (1999) Uniform Unaccusative analysis of objectless *zi*-verb is not tenable.

5 Proposal

5.1 Objectless *Zi*-Verbs with a Hidden Transitive structure

- Objectless *zi*-verbs such as *zi-ritu-suru* ‘support oneself’ and *zi-satu-suru* ‘kill oneself’ have external and internal arguments and they are associated with a hidden transitive syntactic structure.

(31) a. John-ga zi-ritu-suru.
 John-Nom self-support-do.
 ‘John supports himself.’



- (32) a. The *zi*-morpheme meaning ‘self’ is base-generated as the internal argument of the Sino-Japanese verbal noun. It is an anaphoric object bound by the external argument of the complex verb.
- b. Due to the bound-morpheme nature, the *zi*-morpheme undergoes successive obligatory incorporation through the verbal noun and the light verb *suru* ‘do’ into the *v* head to create the surface complex predicate.
- c. The value of the *v* head is selected from the fixed class (e.g. CAUSE, DO, BECOME, BE) (the decompositional theory of argument structure; Harley, 1995, Harley and Noyer, 2001). The light verb of transitive objectless *zi*-verbs has the value DO.
- d. The sole DP argument is the external argument of the whole complex predicate. It is base-generated in [Spec, vP] and undergoes movement to [Spec, TP] to receive Nominative case.

- The results of the diagnostics in section 4 indicate that these *zi*-verbs have external arguments.
- Two diagnostics for internal argumenthood show that these *zi*-verbs have internal arguments.
 - Numeral Quantifier Floating (→ (33)) and
 - The *takusan* construction (→ (37))
- 1st diagnostic for internal argumenthood: Numeral Quantifier Floating
 - The floating numeral quantifier is in a mutual c-command relation with the *zi*-morpheme ‘self’ VP-internally.

(33) a. *Gakusei-ga san-nin* [_{VP} zyoozuni zi-ritu-si-ta].
 student-Nom three-CL skillfully self-support-do-Past
 ‘Three students supported themselves skillfully.’

- b. Gakusei-ga [_{VP} zyoozuni *san-nin* *zi-ritu-si-ta*].
 student-Nom skillfully three-CL self-support-do-Past
 ‘Three students supported themselves skillfully.’

• 2nd diagnostics for internal argumenthood: the *Takusan* construction (Kageyama, 1993, 1996)

- *Takusan* is a numeral quantifier / an adverb that means ‘a lot, many, much.’
- *Takusan* functions as a numeral quantifier if verbs have an (underlying) internal argument that the phrase modifies. *Takusan* functions as an adverb that indicates the amount of action which is denoted, if verbs lack an internal argument,

(34) a. (Hito-ga) takusan (hon-o) yon-da [Transitive V]
 (people-Nom) a lot (book-Acc) read-Past
 ‘(Someone) read a lot (of books) /*A lot (of people) read (books)’

b. [_{TP} (Hito_i-ga) [_{VP} t_i [_{VP} **takusan** (hon-o) yon] da]

(35) a. (Hito-ga) takusan hasit-ta [Unergative V]
 (people-Nom) a lot run-Past
 ‘(Someone) ran a lot (= great distance) /*A lot (of people) ran’

b. [_{TP} (Hito_i-ga) [_{VP} t_i [_{VP} takusan hasit] ta]

(36) a. (Happa-ga) takusan oti-ta [Unaccusative V]
 (leaves-Nom) a lot fall-Past
 ‘A lot (of leaves) fell /*(A leaf) fell frequently’

b. [_{TP} (Happa_i-ga) [_{VP} t_i [_{VP} **takusan** t_i oti] ta]

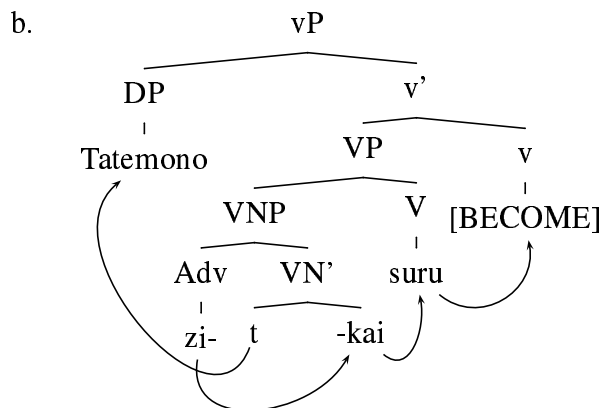
(37) a. (Hito-ga) takusan zi-ritu-si-ta [Zi-V]
 (people-Nom) a lot self-support-do-Past
 ‘A lot (of people) supported themselves /*(Someone) supported himself frequently’

b. [_{TP} (Hito_i-ga) [_{VP} t_i [_{VP} **takusan** zi_i-ritu-si] ta]

5.2 Objectless *Zi*-verbs with an Unaccusative structure

- Objectless *zi*-verbs such as *zi-kai-suru* ‘collapse by itself’ and *zi-baku-suru* ‘explode by itself’ are unaccusative verbs.

(38) a. Tatemono-ga zi-kai-si-ta.
 building-Nom self-collapse-do-Past
 ‘The building collapsed (by itself).’



- (39) a. The sole DP is base-generated as an internal argument of the verbal noun and moves to [Spec,vP].
 b. The *v* head has the value BECOME.
 c. The *zi*-morpheme functions as an adjunct that means 'by itself.'³ (38a) can be paraphrased easily as (40).

(40) Tatemono-ga {sizento / hitorideni} taore-ta.
 building-Nom by itself collapse-Past
 'The building collapsed by itself.'

- The five diagnostics for external argumenthood introduced in section 4, applied to this type of object-less *zi*-verbs, show that these verbs lack external arguments.

- (41) a. *(Hankai-zyootai dat-ta node) tatemono-ga zi-kai-si-naosi-ta.
 Half-collapse-state Cop-Past since building-Nom Zi-collapse-do-again-Past
 'The building got collapsed by itself again (since it has been half-destroyed).'
- b. (Tuyoi zisin-notame) tatemono-ga zi-kai (*-o) si-ta
 strong earthquake-for building-Nom Zi-collapse-Acc do-Past
 'The building got collapsed by itself due to a strong earthquake.'
- c. ?*John-ga ie-ni zi-kai-s-are-ta.
 John-Nom house-Dat Zi-collapse-do-Pass-Past
 'John was adversely affected by having his house get collapsed by itself.'
- d. *Ie-ga John-niyotte zi-kai-s-ase-rare-ta
 house-Nom John-by Zi-collapse-do-Cause-Pass-Past
 'The house was made to get collapsed by itself by John.'
- e. Ano hoteru-de-wa honkan-to-bekkan-ga/*-de zi-kai-si-ta.
 That hotel-Loc-Top main building-and-annex-Nom/Instr Zi-collapse-do-Past
 'As for that hotel, the main building and annex got collapsed by themselves.'

- The two diagnostics for internal argumenthood show that these verbs underlyingly have an internal argument.

(42) Tatemono_i-ga [_{VP} kireini *san-ken* t_i zi-kai-si-ta].
 building-Nom finely three-CL Zi-collapse-do-Past
 'Three buildings finely collapsed by themselves.'

- (43) a. (Biru-ga) takusan zi-kai-si-ta.
 (building-Nom) a lot Zi-collapse-do-Past
 'A lot of buildings collapsed by themselves.'
- b. [_{TP} (Biru-ga_i) [_{VP} t_i [_{VP} **takusan** t_i zi-kai-si]] ta]

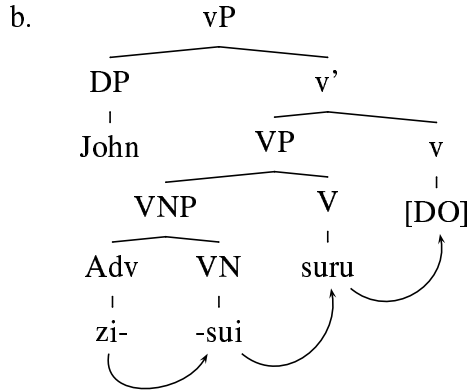
³We gloss adjunct *zi*-morphemes as *Zi* in the examples.

5.3 Objectless *Zi*-verbs with an Unergative structure

- Third type of objectless *zi*-verb:

Tsujimura and Aikawa (1999) mention as a future task to be undertaken for a complete classification of *zi*-verbs that “there is at least one other type in which *zi*- plays a role as an adjunct. Included in this list are *zi-sui-suru* ‘do one’s own cooking,’ *zi-syuu-suru* ‘study for oneself,’ *zi-doku-suru* ‘read for oneself,’ and *zi-kyuu-suru* ‘supply for oneself” (p.40).

- (44) a. John-ga *zi-sui-suru*.
 John-Nom Zi-cooking-do
 ‘John cooks by himself.’



- (45) a. The light verb has the value DO, like the transitive type.
 b. The *zi*-morpheme functions as an adjunct, like the unaccusative type. However, this means ‘by oneself’: (44a) can be closely paraphrased as (46).

- (46) John-ga *zibun-de ryoori-suru*.
 John-Nom by himself cooking-do
 ‘John cooks by himself.’

- The five diagnostics for external argumenthood show that these verbs have an external argument.

- (47) a. *Itido sippai-si-ta ga John-ga zi-sui-si-naosi-ta*.
 Once mistake-do-Past but John-Nom Zi-cooking-do-again-Past
 ‘John was again in the habit of cooking by himself (though he has once failed).’

- b. *John-ga zi-sui(-o) suru*.
 John-Nom Zi-cooking-Acc do
 ‘John cooks by himself.’

- c. *John-ga musuko-ni zi-sui-s-are-ta*.
 John-Nom son-Dat Zi-cooking-do-Pass-Past
 ‘John was adversely affected by having his son cook himself.’

- d. *Musuko-ga John-niyotte zi-sui-s-ase-rare-ta*.
 son-Nom John-by Zi-cooking-do-Caus-Pass-Past
 ‘His son was made to cook by himself by John.’

e. Setuyaku-notame watasi-tati-ga/de zi-sui-suru.
 saving-for I-Pl-Nom/Instr Zi-cooking-do
 ‘We cook by ourselves to save money.’

- The two diagnostics for internal argumenthood show that these verbs lack internal arguments.

(48) *Gakusei-ga [_{VP} zyoozuni san-nin zi-sui-suru]
 student-Nom skillfully three-Cl Zi-cooking-do
 ‘Three students do their own cooking skillfully.’

(49) a. (Dareka-ga) takusan zi-sui-suru.
 (someone-Nom) a lot Zi-cooking-do
 ‘Someone does their own cooking frequently.’

b. [_{TP} (Dareka-ga_i) [_{VP} t_i [_{VP} takusan zi-sui-suru]]]

5.4 Three-way classification

- The Syntax of Objectless *Zi*-verbs

types of objectless <i>zi</i> -verbs	Ext.-arg?	Int.-arg?	<i>zi</i> =Arg?Adj?	Value of <i>v</i>
Transitive (<i>zi-ritu-suru</i> ‘support oneself’)	Yes	Yes	Arg	DO
Unaccusative (<i>zi-kai-suru</i> ‘destruct by itself’)	No	Yes	Adj	BECOME
Unergative (<i>zi-sui-suru</i> ‘cook by oneself’)	Yes	No	Adj	DO

- An independent argument in favor of the three-way classification of objectless *zi*-verb:
 Sino-Japanese verbal nouns are classified into three ways (Dubinsky, 1985, 1989, Miyagawa, 1989a, Tsujimura, 1990)
 - transitive (e.g. *hakai-suru* ‘destruction-do, destruct’)
 - unaccusative (*sikyo-suru* ‘death-do, die’)
 - unergative (*benkyoo-suru* ‘study-do, study’)

⇒ Objectless *zi*-verbal nouns form a proper subset of Sino-Japanese verbal nouns.

6 Object-taking *Zi*-verb

- The second type of *zi*-verb: these verbs can occur with an object argument.

(50) John-ga musuko-o zi-man-si-ta. (= (2b))
 John-Nom son-Acc self-boasting-do-Past
 ‘John_i boasted about his_i son.’

- 1st property of object-taking *zi*-verb: Nominalized *zi*-verbs induce reflexive interpretations without any overt object argument.

(51) *Zi-man-suru-no-wa yoku-nai*
 self-boast-do-ing-Top good-not
 ‘Boasting about {oneself /*someone else} is not good.’

- 2nd property: Object arguments must be in an inalienable possession relation with subjects.

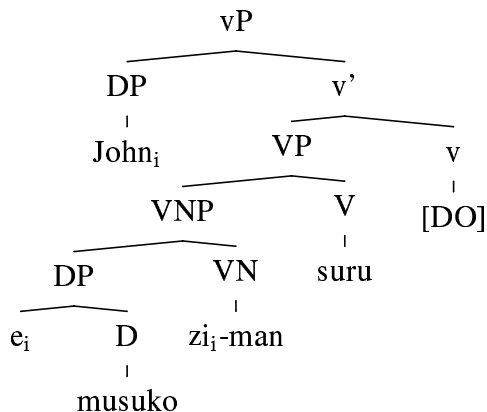
(52) *John-ga { ∅ / zibun-no /*Mary-no } musuko-o zi-man-si-ta.*
 John-Nom { / self-Gen / Mary-Gen } son-Acc self-boast-do-Past
 ‘John_i boasted about { (his_i) / his_i /*Mary’s} son.’

- The five diagnostics for external argumenthood show that these verbs have an external argument.

- (53) a. *Mary-ga hankoo-o zi-kyoo-si-naosi-ta.*
 Mary-Nom crime-Acc self-confessing-do-again-Past
 ‘Mary confessed about her own crime again.’
- b. *Mary-ga zi-kyoo-o-si-ta-no-wa hankoo-o da.*
 Mary-Nom self-confessing-Acc-do-Past-thing-Top crime-Acc Cop
 ‘It was her crime that Mary confessed.’⁴
- c. *Mary-ga musuko-ni hankoo-o zi-kyoo-s-are-ta.*
 Mary-Nom son-Dat crime-Acc self-confessing-do-Pass-Past
 ‘Mary was adversely affected by having her son confess about his own crime.’
- d. *Musuko-ga Mary-niyotte hankoo-o zi-kyoo-s-ase-rare-ta.*
 son-Nom Mary-by crime-Acc self-confessing-do-Caus-Pass-Past
 ‘Her son was made to confess about his own crime by Mary.’
- e. *Higaisya-no kazoku-no tame watasi-tati-ga/-de hankoo-o zi-kyoo-si-ta.*
 victim-Gen family-Gen for I-Pl-Nom/Inst crime-Acc self-confessing-do-Past
 ‘We confessed about our crime for the family of the victims.’

- The syntax of Object-taking *Zi*-verb under the decompositional approach

(54) (Structure for (50))



⁴To avoid the Double-O constraint, we use cleft construction. I thank Jun for pointing out this.

- (55) a. The subject *John* is base-generated in [Spec,vP] with the value DO and moves into [Spec,TP] for Nominative case.
- b. There is an empty category (e_i) that is bound by the *zi*-morpheme within the verbal complex. This morpheme, in turn, is bound by the subject in [Spec,vP].

→ Any position where the *zi*-morpheme is base-generated?

→ What is this *zi*-morpheme?

7 Summary

- We have provided several syntactic and morphological arguments for the three way contrast among objectless *zi*-verbs: transitive, unaccusative, and unergative, contrary to Tsujimura and Aikawa's (1999) Uniform Unaccusative analysis.
- Only *zi*-verbs with a transitive structure are reflexive verbs.
(Transitive objectless *zi*-verbs. Object-taking *zi*-verbs also?)
- The *zi*-morpheme is ambiguous:
 - argument *zi*-morpheme 'self' (transitive objectless *zi*-verbs)
 - adjunct *zi*-morpheme 'by itself' (unaccusative objectless *zi*-verbs)
 - adjunct *zi*-morpheme 'by oneself' (unergative objectless *zi*-verbs)
 - ?? (Object-taking *zi*-verbs)

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