

Syntax-semantics discrepancy in deadjectival verbs and inherently- directed motion verbs in Japanese

Yoko Sugioka
(Keio University)
sugioka@keio.jp

CoS Workshop at DGfS, Feb. 24, 2022.

Outline:

1. Two types of inchoativization in Japanese CoS verbs
2. Two types of transitivity alternation in deadjectival verbs
3. Self-controlled CoS constructions with non-deadjectival verbs
4. Peculiarities of inchoative transitive constructions
5. Two conditions for pseudo-reflexive structure
6. Summary

Feb. 24, 2022

CoS Workshop at DGfS

2

. Two types of inchoativization in Japanese verbs (cf. Kageyama 1996)

a. anticausativization : Causer = Theme

b. decausativization : Causer \rightarrow 0

(2) a. *e* *o* *kake-ru* 'hang a painting' b. *e* *ga* *kak-ar-u* 'a painting is hung'
 painting ACC hang-PRES painting NOM hang -INTR -PRES

[x CAUSE [BECOME [y BE AT-z]]] → [(0-CAUSE) { BECOME [y BE AT-z] }]

(b) Given (i) deleted but implied (de-pen-relation without effort)

→ Deadjectival verbs exhibit both types

Feb. 24, 2022

CoS Workshop at DGfS

3

2. Two types of transitivity alternation in deadjectival verbs

2.1. Formation of verb from adjective (A)

- Verbal affix for A (tr./intr.): *-me* / *-mar*, *-ge* / *-g(ar)*
ex. *yowa-i* 'weak-PRES' → *yowa-me* 'weaken (Vt)'
yowa-mar 'weaken (Vi)'
- Default verbal affix: *-r* ex. *kumo_N* 'cloud' *-r* 'to get cloudy' CoS
gutin 'complaint' *-r* 'to complain' Activity
semi-productive in new coinages: *kopi-r* 'to copy (Vt)' *gugu-r* 'to search on Google (Vt)'
a handful of A: *yowa-r* 'weaken (Vi)', *huto-r* 'get fat (Vi)'
- Periphrastic form (adverbial A-ku + V): causative: *yowa-ku su* 'to make weak'
inchoative: *yowa-ku nar* 'to become weak'

Feb. 24, 2022

CoS Workshop at DGfS

4

2.2. Inchoativization of externally-caused deadjectival verbs (A-me/-mar)

- (3) a. *Ken ga suupu o atata-me -ru.* 'Ken warms up the soup.'
Ken NOM soup ACC warm -me -PRES
b. *Suupu ga atata-mar -u.* (ok: *nan-naku*) 'The soup warms up' (ok: without effort)
soup NOM warm-mar-PRES effort-not
- (4) a. *Ken ga konro no hi o yowa-me -ru.* 'Ken lowers the flame of the gas stove.'
Ken NOM stove GEN flame ACC weak-me-PRES
b. *Konro no hi ga yowa-mar -u.* (ok: *nan-naku*) 'The flame of the gas stove gets lowered.'
stove GEN flame NOM weak-mar-PRES (ok: without effort)
- (5) a. *Sensei ga siken o haya-me -ru.* 'The teacher makes the exam hour earlier.'
teacher NOM exam ACC early-me-PRES
b. *Siken ga haya-mar -u.* (ok: *nan-naku*) 'The exam hour gets earlier.'
exam NOM early-mar-PRES
Cf. **Siken ga hitoride.ni haya-mar -u.* 'The exam hour gets earlier by itself.'
exam NOM by-itself early-mar-PRES

Feb. 24, 2022

CoS Workshop at DGfS

5

➤ (3b)-(5b) *A-mar*: **telicity** (entailed result state)

→ **decausativization** properties : [(~~0-CAUSE~~) (BECOME [y BE AT-z])]

(6) time adverbials: *for* (duration of change) vs. *in* (the end point)

*5 *hun-kan* / 5 *hun de suupu ga atata-mar-ta* 'the soup got warm *for 5 minutes / in 5 minutes'
5 min.-long 5 min. in *soup NOM warm-mar-PAST*

(7) *-te.i* 'be' : (telic V) result state vs. (atelic V) progressive interpretation (Kindaichi 1950)

suupu ga atata-mar-te.i -ru 'the soup is warm /has been heated' (result state)
soup NOM warm-mar-be-PRES

(8) **saituu ni* 'in the middle of V (atelic)

**suupu ga atata-mar-u saityuu ni* 'in the middle of the soup warming up'
soup NOM warm-mar-PRES middle in

Feb. 24, 2022

CoS Workshop at DGfS

6

2.3. Internally-caused deadjectival verbs : *A-mar*

- (9) a. *Kaze no ikioi ga yowa-mar -u.* 'The force of the wind weakens/drops.'
wind GEN force NOM weak-mar-PRES
b. *Sharin no kaiten ga haya-mar -u.* 'The spin of the wheel quickens.'
wheel GEN spin NOM quick-mar-PRES

- **Internal control**, no external cause implied:

(9ab) ok: *hitoride ni* 'by itself' / **nan-naku* 'without effort' (agentive reading only)

- **Mixed telicity**:

- (10) a. *Kaze ga 1 zikan / 1 zikan de yowa-mar -ta.* 'The wind dropped for 1 hour / in 1 hour.'
wind NOM 1 hour-long 1 hour in weak-mar-PAST
b. *Kaiten ga 1 zikan / 1 zikan de haya-mar -ta.* 'The (wheel's) spin quickened for 1 hour / in 1 hour.'
spin NOM 1 hour-long 1 hour in quick-mar-PAST
c. *-te.i* 'be' form: both result state and progressive interpretation

→ degree achievement verbs (e.g. cool, Dowty 1979): [y GO TO [Property]] (Jackendoff 1990)

Feb. 24, 2022

CoS Workshop at DGfS

7

➤ **Proposal:**• **GO TO function for internally-caused deadjectival V (A-mar):**

(11) [y GO TO [y BE AT-z*]]

z* : a higher point on the degree scale inherent in A (cf. Kennedy and Levin 2008)

ex. (9a) *yowa-mar* 'weaken (Vi)' : movement toward a higher point on the scale of 'weakness'→ Mixed telicity (10ab) *kaze ga yowa-mar* 'the wind weakens'

atelic interpretation: moving toward a higher degree

telic interpretation: moving to an endpoint / result state fixed by the context

• **Internal control : self-controlled CoS**

(12) [y CAUSE [y GO TO [y BE AT-z*]]]

Causer = Theme Cf. (1b) anticausativization [x = y CAUSE [BECOME [y BE AT-z]]]

Two events: causation and CoS

Feb. 24, 2022

CoS Workshop at DGfS

8

➤ **Pseudo-reflexive semantic structure for self-controlled CoS deadjectival verbs**

(15) [x - y CAUSE [y GO TO [y BE AT-z*]]] (Cf. (12))

y: inherent property of x (Section 5)

(13) *kaze no ikioi* 'force of the wind'• **Two possible projections to argument structure**V < x-y > → **intransitive** morphology (-mar) and syntax (no accusative case) – (13a) (14a)V x < y > → **transitive** morphology (-me) and syntax (accusative case) – (13b) (14b)

• Decausativized inchoative verbs cannot yield the same type of transitive construction:

(16) a. *Konro no hi ga yowa-mar-u.* (=4b) 'The flame of the gas stove gets lowered.'
stove GEN flame NOM weak-mar-PRESb. **Konro ga hi o yowa-me-ru.* 'The gas stove lowers its flame.'
stove NOM flame ACC weak-me-PRES→ [x-y CAUSE ... : x-y composite has **internal control for change** (Section 5)

Feb. 24, 2022

CoS Workshop at DGfS

10

2.4. **Two syntactic structures (intransitive / transitive) for self-controlled CoS**(13) a. *Kaze no ikioi ga yowa-mar-u.* (=9a) 'The wind force weakens (drops).'
wind GEN force NOM weak-mar-PRESb. *Kaze ga ikioi o yowa-me-ru.* 'The wind weakens its force.'
wind NOM force ACC weak-me-PRES(14) a. *Sharin no kaiten ga haya-mar-u.* (=9b) 'The spin of the wheel quickens.'
wheel GEN spin NOM quick-mar-PRESb. *Sharin ga kaiten o haya-me-ru.* 'The wheel quickens its spin.'
wheel NOM spin ACC quick-me-PRES➤ (13ab) (14ab): **Same semantic properties** (cf. Sugioka 2001)- Internal control : *hitoride ni* 'by itself' / **nan-naku* 'without effort'- Mixed telicity : 1 *zikan* 'for one hour' (duration of change) / 1 *zikan de* 'in one hour'- *te, iru* 'be' form has both progressive and result interpretation (cf. (7))

Feb. 24, 2022

CoS Workshop at DGfS

9

3. **Self-controlled CoS constructions with non-deadjectival verbs**Cf. Verbs of inherently-directed motion *fall*, *rise* as atelic unaccusative verbs (L&RH 1995: 172)-• The same type of transitivity alternation and semantic properties of pseudo-reflexive structure (15):
No external cause (ok: *hitoride ni* 'by itself'), mixed telicity(17) a. *Kabu no ne ga sagar-u.* 'The stock price drops.'
stock GEN price NOM drop-PRESb. *Kabu ga ne o sage-ru.* 'The stock drops its price.'
stock NOM price ACC drop-PRES(18) a. *Seitoo no hyoo ga her-u.* 'The votes for the party decreases.'
party GEN vote NOM decrease-PRESb. *Seitoo ga hyoo o heras-u.* 'The party decreases (=gets less) votes.'
party NOM vote ACC decrease-PRES(19) a. *Kawa no mizu-kasa ga mas-u.(Vi)* 'The volume of water in the river increases.'
river GEN water-volume NOM increase-PRESb. *Kawa ga mizu-kasa o mas-u.(Vt)* 'The river increases its volume of water.'
river NOM water-volume ACC increase-PRES

Feb. 24, 2022

CoS Workshop at DGfS

11

4. Peculiarities of inchoative transitive constructions

Pseudo-reflexive structure for self-controlled CoS

(15) [x - y CAUSE [y GO TO [y BE AT-z*]]] (Cf. (12))

y: property of x (13) *kaze no ikioi* 'force of the wind', (17) *kabu no ne* 'price of the stock'

Theme (y) is also Cause as part of the composite x - y

→ **No passivization** of the direct object in inchoative transitive : (13b) (14b) (17b-19b)

(20) a. * *Ikioi ga kaze ni.yotte yowa-me-rare-ta.* <(13b) 'The force was weakened by the wind.'
force NOM wind by weak-me-PASS-PAST

Cf. External Cause :

o^{ok} *Hi ga Ken ni.yotte yowa-me-rare-ta.* <(4a) 'The flame was lowered by Ken.'
flame NOM Ken by weak-me-PASS-PAST

b. * *Ne ga kabu ni.yotte sage-rare-ta.* <(17b) 'The price was dropped by the stock.'
price NOM stock by drop-PASS-PAST

Feb. 24, 2022

CoS Workshop at DGfS

12

- Synthetic compounding (internal argument + V) (Sugioka 2001)

internal argument + Vt : *raise the price* > *price raising*, *price raise*

ne o age 'raise the price' > *ne-age* 'price raising'

internal argument + Vi : the price rises > *price rising* cf. *price increase*

ne ga agar 'the price rises' > *ne-agari* 'price increase'

→ **No synthetic compound formation** (Theme (y) + Vt) for (17b) (18b)

(21) a. * *kabu no ne-sage* (Vt) 'price-dropping of the stock' – ok: Agentive reading only
stock GEN price-drop
Cf. *kabu no ne-sagari* (Vi) 'price drop of the stock'
stock GEN price-drop

b. * *seitoo no hyoo-herasi* (Vt) 'vote-reducing of the party' – ok: Agentive reading only
party GEN vote reduce

Cf. *seitoo no hyoo-heri* (Vi) 'vote drop of the party'
party GEN vote reduce

Feb. 24, 2022

CoS Workshop at DGfS

13

5. Two conditions for pseudo-reflexive structure and inchoative transitive constructions

5.1. Semantics of the verb : no entailed result state (Issue (1))

internally-controlled deadjectival verb (A-mar) → no entailed result state

inherently-directed motion / calibratable change 'rise' 'fall' → no endpoint

Cf. default verbal affix (-r) / root verbs : result state entailed [BECOME [y BE AT-z]]

(22) a. *Taihoo no seiryoku ga yowa-r-u.* 'The power of the typhoon gets weak.'
typhoon GEN power NOM weak-r-PRES

b. *Suupu no ondo ga same-r-u.* 'The temperature of the soup gets cold.'
soup GEN temperature NOM cool-PRES

Telicity: 1 zikan de 'in 1 hr' / *1 zikan 'for 1 hr' (duration of change); *saityuu ni 'in the middle of'

→ No inchoative transitive construction:

(23) a. **Taihoo ga seiryoku o yowa-r-as-u.* (cf. o^{ok}*yowa-me-ru*) 'The typhoon weakens its force.'
typhoon NOM power ACC weak-r-TR-PRES weak-me-PRES

b. **Suupu ga ondo o samas-u.* 'The soup cools its temperature.'
soup NOM temperature ACC cool-PRES

Feb. 24, 2022

CoS Workshop at DGfS

14

Cf. Periphrastic causative / inchoative: Result state entailed

adverbial A-ku + su 'cause' / nar 'become'

(24) a. *Sharin no kaiten ga hayaku nar-u.* 'The spin of the wheel gets quick.'
wheel GEN spin NOM quick become-PRES

b. *Taihoo no seiryoku ga yowaku nar-u.* 'The power of the typhoon gets weak.'
typhoon GEN power NOM weak become-PRES

Telicity: 1 zikan de 'in 1 hr' / *1 zikan 'for 1 hr' (duration of change); *saityuu ni 'in the middle of'

→ No inchoative transitive construction:

(25) a. **Sharin ga kaiten o hayaku su-ru.* 'The wheel quickens its spin.'
wheel NOM spin ACC quick cause-PRES

b. **Taihoo ga seiryoku o yowaku su-ru.* 'The typhoon weakens its power.'
typhoon NOM power ACC weak cause-PRES

Cf. External Cause:

c. *Sui-on ga taihoo no seiryoku o yowaku su-ru.* 'Low sea temperature weakens
sea-temp. NOM typhoon GEN power ACC weak cause-PRES the power of the typhoon.'

Feb. 24, 2022

CoS Workshop at DGfS

15

Cf. Two deadjectival verbs from the same A: *hiro-gar* vs. *hiro-mar* 'broaden'

- *hiro-gar* 'broaden' Vi [- result state]

(26) a. *Seitoo no sizi ga hiro-gar-u.* 'The party's support broadens / expands.'
 party GEN support NOM broad-gar-PRES

b. *Seitoo ga sizi o hiro-ge-ru.* 'The party broadened its support.' (inchoative)
 party NOM support ACC broad-ge-PRES

- *hiro-mar* 'spread, get well-known' [+ result state]

-- lexicalized (no periphrasis by *hiroku su* 'make broad', Saito 1990)

(27) a. *Burando no namae ga hiro-mar-u.* 'The brand name gets spread.'
 brand GEN name NOM broad-mar-PRES

b. **Burando ga namae o hiro-me-ru.* 'The brand spreads its name.'
 brand NOM name ACC broad-me-PRES

Feb. 24, 2022

CoS Workshop at DGfS

16

5.2. The nature of the argument NPs (Issue (2))

(15) [x - y CAUSE [y GO TO [y BE AT-z*]]]

- **Subject NP (x): [+ internal control] for change** (or so perceived)

- natural force (e.g. wind (13), river (19))
- self-moving object (e.g. spinning wheel (14))
- fluctuating entity (e.g. stock (17), political party base (18) (26))

Cf. Hasegawa (2004: 311) proposes a possessor-raising analysis for psychological and 'self-change' unaccusative transitive verbs (Appendix) and cases like (17):

'it [the possessor] does not have any particular control over the occurrence of the event itself, but it merely is the main entity undergoes the change'

But: (29) a. **Konro ga hi o yowa-me-ru.* (=16b) 'The gas stove lowers its flame.'
 stove NOM flame ACC weak-me-PRES

b. **Heya ga ondo o age-ru.* 'The room raises its temperature.'
 room NOM temp. ACC raise-PRES

Feb. 24, 2022

CoS Workshop at DGfS

18

- Sino-Japanese verb for *hiro-gar* / *hiro-ge* 'broaden, expand' [- result state]:
kakudai-su (Vi / Vt) (-su: light verb attached for inflection)

(28) a. *Seitoo no sizi ga kakudai-su -ru.* 'The party's support base broadens / expands.'
 party GEN support NOM broaden -PRES

b. *Seitoo ga sizi o kakudai-s-ase -ru.* 'The party broadened its support base.'(inchoative)
 party NOM support ACC broaden -cause -PRES

Cf. *Seitoo ga sizi o kakudai-su -ru.* 'The party broadened its support base.' (agentive)
 party NOM support ACC broaden -PRES

➤ (28b): *kakudai-su* (Vi) + causative affix -(s)ase
 [x - y CAUSE [y GO TO

Feb. 24, 2022

CoS Workshop at DGfS

17

• **Direct object NP: [+measurable property]**

denotes or implies concrete values on a monotonic scale

- strength (force of nature, e.g. wind (13))
- speed (e.g. spinning of the wheel (14))
- number (e.g. stock price (17), vote count (18))
- volume (e.g. water in river (19))

(30) a. *Kawa no sui-i / sui-men ga agar-u.* 'The level / surface of water in the river rises.'

river GEN water-level / w.-surface NOM rise-PRES

b. *Kawa ga sui-i / *sui-men o age-u.* 'The river raises its water level / water surface.'
 river NOM water-level / w.-surface ACC raise-PRES
 (cf. (19))

➤ **Subject NP [+internal control] – Direct object NP [+ measurable property]**

Q: What is special about the subject-object relation that can form the pseudo-reflexive structure?

Feb. 24, 2022

CoS Workshop at DGfS

19

Cf. Rappaport-Hovav & Levin (2012) on unexpected causative variants of Vs of calibratable change

(31) *Solving this issue / *My mother skyrocketed my personal growth* (p.168 (28))

- 'Verbs of calibratable CoS *skyrocket*, *drop* form causative constructions with interdependent subject-object relation of inherently possessed properties' (p.163)
- 'their tendency to select themes that are abstract measurable entities, representing properties of entities with scalar values [...] not physical objects' (p.168)
- 'Changes in the values of properties inherently possessed by animates are like internally caused changes of state: they are generally only under the control of the possessor' (p.168)

➤ 'x-y composite' in [x - y CAUSE [[y GO TO [y BE AT-z*]]]]
 x-y : interdependent subject-object relation
 inanimate x [+ internal control] has control over y [+measurable property]
 → pseudo-reflexive CoS structure
 → transitive morphosyntax

Feb. 24, 2022

CoS Workshop at DGfS

20

6. Summary

Data: Transitivity alternation in internally-caused deadjectival and inherently-directed verbs in Japanese

Proposal: Pseudo-reflexive semantic structure [x - y CAUSE [y GO TO [y BE AT-z*]]]

→ intransitive and transitive morphosyntactic structure

- **Issue (1)** : Not having entailed result state yields atelic interpretation of degree achievement / inherently-directed motion (GO TO)
- **Issue (2)** : Subject-object interdependence in self-controlled CoS
 Causer [+internal control] has control over Theme [+measurable property]
 → Pseudo-reflexive structure → Inchoative intransitive / transitive construction
 Cf. anticausativization and reflexive constructions in French, Spanish, German, etc.

Feb. 24, 2022

CoS Workshop at DGfS

21

Appendix

'unaccusative transitive' constructions with animate subjects in Japanese
 (cf. Hasegawa 2004, a.o.)

[+ result state] → telic / punctual events

- Experiencer : *kokoro o ita-me* 'hurt (one's own) heart (feeling)'
 kodomo o nakus 'lose a child'
- Possessor (inalienable) : *hone o or* 'break (one's own) bone'
- Animate Source : *tane ga me o das* 'a seed puts out a bud'
- Animate Location : *ki ga mi o tuke* 'a tree bears a fruit'

Feb. 24, 2022

CoS Workshop at DGfS

22

Acknowledgement :

This research was supported by JSPS KAKENHI Grant #17H02334.

References :

Beavers, J. and A. Koontz-Garboden, 2020. *The roots of verbal meaning*. Oxford UP.
 Dowty, D. 1979. *Word meaning and Montague grammar*. Reidel.
 Grimshaw, G. 1982. *Argument structure*. MIT Press.
 Hasegawa, N. 2004. Unaccusative transitives and Burzio's generalization: Reflexive constructions in Japanese. *Proceedings of the Workshop on Altaic Formal Linguistics 1 (MITWPL46)*: 300-314.
 Jackendoff, R. 1990. *Semantic structures*. MIT Press.
 Kageyama, T. 1996. *Doosi-imiron* [Verb semantics] Kuroso Publishers.
 Kennedy, C. and B. Levin. 2008. Measure of change: The adjectival core of degree achievements. In L. McNally and C. Kennedy eds. *Adjectives and adverbs*, 156-182. Oxford UP.
 Kindaichi, H. 1950. Kokugo doosi no itibunrui [A classification of Japanese verbs]. *Gengokenkyu* 15: 48-63, The Linguistic Society of Japan.

Feb. 24, 2022

CoS Workshop at DGfS

23

Koontz-Garboden, A. 2009. Anticausativization. *NLLT* 27. 77-138

Levin, B., and M. Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. MIT Press

Rappaport-Hovav, M. and B. Levin. 1998. Building verb meanings. In *The projection of arguments: Lexical and compositional factors*, eds. M. Butt and W. Geuder, 97–134. CSLI

Rappaport-Hovav, M. and B. Levin. 2012. Lexicon uniformity and the causative alternation. In *The theta system*, eds. Everaert, M. et al., 150-176. Oxford UP.

Saito, M. 1992. *Gendai nihongo no gokoosironteki kenkyuu* [studies on word formation in Modern Japanese] Hituzi-shobo.

Sugioka, Y. 2001. Transitivity alternations in deadjectival verbs. In *Proceedings of the COE international symposium*, eds. Inoue, K. and N. Hasegawa, 169-187. Kanda University of International Studies.

Sugioka, Y. 2002. Incorporation vs. modification in Japanese deverbal compounds. *Japanese/Korean Linguistics* 10: 496-509. CSLI Publications.

Feb. 24, 2022

CoS Workshop at DGfS

24