Argument structure of compound verbs in Japanese: Against “bottom-up” models

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1. Introduction

- Japanese lexical V1-V2 compound verbs: at least 1,800 (Morita 1990).

(1) V1-V2
  a. osi-akeru push-open ‘open by pushing’
  b. oi-mawasu chase-turn ‘chase around’
  c. oti-tuku drop-attach ‘calm down’
  d. uri-isogu sell-hurry ‘hurry to sell’

- Previous studies: e.g.,
  - Fukushima 2005: protoroles, obliqueness hierarchy
  - Kageyama 1993: unaccusativity and transitivity
  - Matsumoto 1996: Subject

  → ‘bottom-up’ (cf. Spencer 2006)

(2) Argument structure of nomi-aruku drink-walk ‘bar-hop’

\[ \begin{array}{c}
\text{V1-V2} \\
\text{(Ag 2 <Path, Th>)} \\
\text{V1 (nomi- ‘drink’) V2 (-aruku ‘walk’) (Ag 1 <Th>) (Ag 2 <Path>)}
\end{array} \]

\( \theta \) Identification 
(adapted from Kageyama 1993:107)

- Bottom-up models \( \rightarrow \) 2-staged rules:
  (i) Identification; (ii) Permission & Prohibition

- Goal:
  - To offer an alternative account working within the framework of RRG (Van Valin and LaPolla 1997, Van Valin 2005), hypothesizing that only one verb serves as an argument contributor, whereas the other element is non-argument contributing.

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1 This handout is the updated version of the hard copy distributed on the day of the presentation.
2. On ‘affixes’

2.1. Libben (2005)

A psycholinguistic study of English nominal compounds by Libben (2005:277):

Consider the morpheme *bat*. As associated with a particular comic book and movie hero, this morpheme has acquired considerable frequency as an initial compound constituent. *Batman* drives a *batmobile* and a *batboat*, and rides a *batcycle*. He flies a *batplane*, climbs a *batrope*, wears a *batcape*, and works in a *batcave*. All of these compounds are transparent if one posits that the bound compound modifier *bat-*, rather than the free morpheme *bat*, is the one that is employed in compound processing.

→ New way of looking at V-V: one member of a compound verb: decategorized element.

Proposal:

(3)
- Analyzable = Base Verb + Affix
  - Semantic Head
    - Superordinate (Lyons 1977)
  - Event specifier
  - Argument contributing
  - Argument non-contributing

a. kodomo-ga hurue-agat-ta
   child-NOM shiver(V1)-rise(V2)-PAST
   ‘The child shivered considerably.’

b. taoru-ga te-kara suberi-oti-ta
   towel-NOM hand-from slip-fall-PAST
   ‘The towel fell slipping from my hand.’

c. kunao-o nori-kit-ta
   difficult.situation ride-cut-PAST
   ‘(We) overcame the difficult situation.’
3. Logical structures of analyzable compound verbs

3.1. Prefix(V1)-base verb(V2)

3.1.1. Intransitive[activity (atelic)]-intransitive[change-of-state (telic)]

(4) a. suberi-otiru  slip-fall ‘fall slipping’  [I-I]₁
b. mai-agaru  dance-rise ‘rise as if dancing’  [I-I]₁
c. huki-deru  blow-exit ‘spout’   [I-I]₁
d. hasiri-modoru   run-return ‘return running’  [I-I]₁

Possible LS=Bottom up?

(5) suberi-otiru  slip-fall :
   ?? do' (x, [slip' (x)]) & INGR fallen' (x)
   cf. Active accomplishment, eat y:  do' (x, [eat' (x, y)]) & INGR consumed' (y)

Table 1: Diagnostic tests for Japanese

<table>
<thead>
<tr>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Test 5</th>
<th>Test 6</th>
<th>Test 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-te-i)</td>
<td>(citation form)</td>
<td>(for phrase)</td>
<td>(durative in phrase)</td>
<td>(-owar)</td>
<td>(yukkuri)</td>
<td>(zyozyo-ni)</td>
</tr>
<tr>
<td>Active accomplishment</td>
<td><strong>Progressive</strong></td>
<td>Future</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Achievement</td>
<td><strong>Resultative state</strong></td>
<td>Future</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>suberi-oti-slip-fall</td>
<td><strong>Resultative state</strong></td>
<td>Future</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No?</td>
</tr>
<tr>
<td>Base verb: oti- ‘fall’</td>
<td><strong>Resultative state</strong></td>
<td>Future</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

   ‘The parcel is on the floor (fallen) slipping
   /*The parcels are falling slipping onto the floor.’

b. nimotu-ga yuka-ni oti-te-i-ru
   Parcel-NOM floor-DAT fall-L-exist-NPAST
   ‘The parcel is on the floor (fallen).’

→ Compound’s Aktionsart class = V2’s Aktionsart class (Achievement)
English activity verbs → [decategorization] → -ingly-adverbs

(7)     a. flow → flowingly (e.g. “She danced flowingly across the stage…”)
b. slip → slippingly (e.g. “the process of slippingly pushing up the opponent's shinai ...”)  
c. whine → whiningly (e.g. “he whiningly inquires whether this is like …”)
d. joke → jokingly (e.g. “What did Harry Truman jokingly call his wife and daughter?”)
e. bump → bumpingly (e.g. “The train came bumpingly to a halt.”)  

            (Attested, Google search)

(8)  a. She danced passionately.: passionate' (do' (she, [dance' (she)])
b. She danced flowingly.: flowing' (do' (she, [dance' (she)])

(9)  a. suber- ‘slip’ : do' (z, [slip' (z)])
    → [prefixation: modification] → suberi-: slipping' (w), w=LS

            b. oti- ‘fall’: INGR fallen' (x)

            c. suberi-oti- ‘slip-fall’: slipping' (INGR fallen' (x))

3.1.2. Transitive-transitive[change-of-state]

(10) Activity V1
     a. osi-akeru push-open ‘open by pushing’ [T-T]T
     b. haki-atumeru sweep-gather ‘gather by sweeping’ [T-T]T
     c. humi-katameru stamp-harden ‘harden by stamping’ [T-T]T

Causative change-of-state V1
     d. kiri-saku cut-split ‘split by cutting’ [T-T]T
     e. tokasi-ireru melt-put ‘melt into’ [T-T]T
     f. tigiri-toru tear-remove ‘remove by tearing’ [T-T]T

Activity V1

(11) Keekan-ga doa-o osi-ake-ta.
     police-NOM door-ACC push-open-PAST
     ‘The policeman opened the door by pushing it.’

(12) a. V1: os- ‘push’ : do’ (x, [push' (x, y)])
b. V2: ake- ‘open’ :[do' (x, Ø)] CAUSE [BECOME open' (y))]
c. V1-V2: osi-akeru:[do' (x, [push' (x, y)])] CAUSE [BECOME open' (y))]

Causative change-of-state V1

(13) Kazue-ga nuno-o kiri-sai-ta.
     Kazue-NOM cloth-ACC cut-tear-PAST
     ‘Kazue tore the cloth by cutting.’
a. *kir*-‘cut’: \[\text{do} \ (x, \emptyset) \ \text{CAUSE} \ [\text{INGR cut} \ (y)]\]  
\[\rightarrow \ [\text{prefixation: atelicization}] \rightarrow kiri-: \text{do} \ (x, [\text{cut} \ (x, y)])\]

b. V2: *sak*-‘to split’: \[\text{do} \ (x, [\text{cut} \ (x, y)]) \ \text{CAUSE} \ [\text{BECOME torn} \ (y)]\]

c. V1-V2: *kiri-saku*: \[\text{do} \ (x, [\text{cut} \ (x, y)]) \ \text{CAUSE} \ [\text{BECOME torn} \ (y)]\]

- Base V2 with an unspecified activity \(\rightarrow\) V1: specifies the activity (cf. (14))
- Base V2 with no unspecified activity \(\rightarrow\) V1: one-place predicate (cf. (9))

3.2. Base verb(V1)-suffix(V2)

- V2: grammaticalized (e.g. *agar* = ‘rise’ [lexical verb]; ‘hard’ [V2])

(15) a. hurue-agar-u shiver-rise ‘shiver hard’

b. oi-mawas-u chase-turn ‘chase around’

c. nige-kir-u escape-cut ‘get away successfully’

(16) -agar (<Ev>) (adapted from Kageyama 1993:109)

(17) a. hurue- ‘shiver’ : \[\text{do} \ (x, [\text{shiver} \ (x)])\]

b. hurue-agar- ‘shiver hard’ : \[\text{considerable} \ \text{do} \ (x, [\text{shiver} \ (x)])\]

c. Samusa-ni hurue-agat-ta  
cold-DAT shiver-AGAR-PAST  
‘(We) shivered from cold considerably.’

(18) a. hage- ‘become bare’ : \[\text{BECOME bare} \ (x)\]

b. hage-agar- ‘become bare considerably’ : \[\text{BECOME considerable} \ \text{bare} \ (x)\]

c. Yama-ga hage-agat-te-i-ru  
mountain-NOM become.bare-AGAR-L-exist-NPAST  
‘The mountain has become considerably bare.’

Summary

- Two types of LS for V1-V2
  a. One-place predicate type: … \[\text{pred}_p, \ldots \text{pred}_q \ (x, (y))\]
  b. Activity specifier type: \[\text{do} \ (x, [\text{pred}_p \ (x, (y))]) \ \text{CAUSE} \ [\ldots \text{pred}_q \ (y)]\]
4. Case marking

(20) kodomo-ga hurue-agat-ta
    child-NOM shiver-rise-PAST
    ‘The child shivered considerably.’

(21) Taroo-ga huku-o kiri-sai-ta
    Taro-NOM clothes-ACC cut-split-PAST
    ‘Taro tore the clothes by cutting.’

Figure 1: Linking for Sentence (20) (cf. Van Valin 2009)

Figure 2: Linking for Sentence (21) (cf. Van Valin 2009)
5. Concluding Remarks

- Argument structure of compound verbs in Japanese can be accounted for drawing on a theory that does not posit the level of syntactic argument structure (i.e., RRG).

- Simpler account can be provided by abandoning the premise that the component verb always brings full-fledged information as a full verb into a compound verb structure.

- No merging of two argument structures → no rules to govern merging operations
- Straightforward case-marking (cf. Fukushima 2005)

- Remaining Issues: Predictiveness

- Fukushima (2005:572): ‘[t]here seems to be no principled (phonological, morphological, syntactic, or semantic) reason’ that explains why a particular V1 combined with a V2 is acceptable in one case but its synonym combined with the same V2 is unacceptable”

- Need of detailed studies on semantics of verbs that can be combined together.

References