The expression of 'putting' and 'taking' events in Japanese: The asymmetry of Source and Goal revisited[1]

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Abstract

This study explores the expression of Source and Goal in describing placement and removal events in adult Japanese. Although placement and removal events *a priori* represent symmetry regarding the orientation of motion, their (c)overt expressions actually exhibit multiple asymmetries at various structural levels. The results show that the expression of the Source is less frequent than the expression of the Goal, but, if expressed, morphosyntactically more complex, suggesting that 'taking' events are more complex than 'putting' events in their construal. It is stressed that finer linguistic analysis is necessary before explaining linguistic asymmetries in terms of non-linguistic foundations of spatial language.

Key words: asymmetry, *Source, Goal, Japanese, placement/removal events*

1. Introduction

This chapter explores the linguistic encoding of Path in the expression of caused-motion events in Japanese. A caused-motion event typically represents an animate Agent moving an (in)animate entity, and is usually expressed by a transitive verb, as in *Mary put a vase on the table.*

The investigation uses the *'Put and Take'* video stimulus designed by Bowerman et al. (2004) at the Max Planck Institute for Psycholinguistics. Elicited spoken data of Japanese are examined, contrasting the expression of placement or 'putting' events (e.g., 'putting cup on table') to the expression of removal or 'taking' events (e.g., 'taking cup off table'). The pairs of events are opposed in terms of the orientation of the motion described: while 'putting' events involve motion toward the Goal (i.e. endpoint), 'taking' events involve motion away from the Source (i.e. starting point). The main aim of the present study is to demonstrate a variety of situations and types of **asymmetry** in the expression of the Source and the Goal of such motion events in Japanese.

The chapter is organized as follows: Section 2 introduces the theoretical background for the study. Section 3 presents the methodology and the procedure of the data elicitation. Section 4 briefly describes the typical expression of 'putting' and 'taking' events in Japanese. Section 5 describes various asymmetries found in the data, and Section 6 refines the analysis of the expression of the Source. Section 7 argues for a more detailed linguistic analysis of the phenomenon of asymmetry in conclusion.

2. Different treatments of the Path

Motion events typically represent one entity moving (or moved) with respect to another entity. In such events, the Path is considered as a route traversed by the moving entity from a starting point (*Source*) and passing intermediate points (*Mediums*) before arriving at an endpoint (*Goal*) (Lakoff 1987). Following Talmy (2000: 25), the moving entity is called the *Figure* and the location is called the *Ground*. This section surveys the ways in which the Path has been treated in the literature (§ 2.1.), and more specifically the expression of the Source and the Goal (§ 2.2.).

2.1. *(C)overt expression of the Path*

Linguistically, even when a language licenses the expression of the three portions of the Path within a clause, as in 'He went from the station [Source], along the avenue [Medium] and through the crowds [Medium], past the monument [Medium], to his office [Goal]' (adapted from Slobin 1997: 439), previous studies of motion events have preferentially dealt with motion events focusing only on the Goal, as in 'He went to his office', without regard to the rest of Path components (i.e. Source and Medium). Similarly, previous studies have only considered the surface structure, i.e. the overt (explicit) expression of the elements, to use the terms of Sinha and Kuteva (1995), while certain information is 'covertly' (i.e. implicitly) expressed[3], as is often the case in the expression of the Source or Medium in actual event description.

Focusing on surface structure (thus, what is overtly expressed), the literature has treated the notion of Path in different ways. The work of Talmy (1991, 2000), possibly the most influential in the spatial domain, proposes a 'local' encoding of the Path: that is, in some languages, the Path is encoded by the verb (e.g., *salió* 'moved out'), as in Spanish (1a),

while in other languages it is encoded by a satellite (e.g., a verbal particle in English, as in 'floated *out*'), as in English (1b).

(1) a. *La botella* **salió** *de la cueva (flotando)*
           the bottle   moved-**out**   from   the cave   *(floating)*
           'The bottle floated out of the cave (floating).' (Talmy 2000: 49)
      b. *The* bottle *floated* **out** of the cave.

Talmy's model is, however, quite simplistic, since the actual description of events depends on more than a binary 'typology' factor. For instance, Slobin (2004) has pointed out that there are languages in which both Manner and Path are expressed by a complex verb (e.g., fēi *chū* (fly exit) 'fly out'), as in Chinese (2). Further, Sinha and Kuteva (1995) have proposed the notion of a 'distributed' encoding of the Path: that is, the Path (with its different dimensions) is expressed throughout a clause. For instance, in Japanese, the information of Goal is 'redundantly' expressed between the locative *ni* and the verb *ireru* 'to insert' (3).

(2) *Fēi* **chū** *yī zhī māotóuyīng.*
       fly   exit   one   owl
       'An owl popped out.' (Slobin 2004: 224)
(3) *Sensei-wa   hon-o   hako-no   naka-**ni**   **ireru**.*
       professor-TOP   book-OBJ   box-GEN   inside-LOC   insert.PRES
       'The professor put the book in the box.' (Sinha and Kuteva 1995: 186)

The actual expression is therefore richer and more complex. The present study adopts Sinha and Kuteva's (1995) model to explore the expression of Source and Goal in Japanese.

2.2. *(A)symmetrical Expression of Source and Goal*

Previous studies have mainly focused on the expression of the Goal. By contrast, little is known about the expression of the Source. The few studies that have been done, however, have provided strong evidence of asymmetry in the expression of Source and Goal, independent of the methodology used to collect the data.

Introspective studies have observed that the use of Goal is more extensive than the use of Source. An early study that makes this observation is Fillmore (1972), which examines the expression of

'going' and 'coming' in English. Fillmore points out that the Goal can occur with either the verb 'come' (4a) or the verb 'go' (4b), whereas the Source can only occur with 'come' (5a-5b). Recent studies have also observed similar phenomena in the language (Ungerer and Schmid 1996, Verspoor et al. 1998).

(4) a. *The man*   *came*   ***into***   *her bedroom.*
     b   *He*   *went*   ***to***   *London.*
(5) a. *He*   *came*   ***from***   *somewhere.*
     b. **He*   *went*   ***from***   *somewhere.* (Fillmore 1972)

Similarly, Ikegami (1982, 1987) claims that in the expressions related to 'giving' and 'receiving' in Japanese, the Goal NP occurs with the verb *morat-* 'to receive' (6a) or *age-* 'to give' (6b), while the Source NP only occurs with the verb *morat-* 'to receive' (7a-7b). Notice that the term **dissymmetry** (= 'asymmetry') was introduced by this author on the basis of this study.

(6) a. ***Ken-ni***   *hon-o*   *morat-ta.*
         Ken-DAT   book-ACC   receive-PST
         '(He) received the book from Ken.'[4]
     b. ***Taroo-ni***   *hon-o*   *age-ta.*
         Taro-DAT   book-ACC   give-PST
         '(He) gave a book to Taro.'
(7) a. ***Ken-kara***   *hon-o*   *morat-ta.*
         Ken-ABL   book-ACC   receive-PST
         '(He) received the book from Ken.'
     b. *****Taroo-kara*** *hon-o*   *age-ta.*
         Taro-ABL   book-ACC   give-PST
         '(He) gave a book from Taro.'

Such linguistic preference for the Goal over the Source is also found in other domains of research such as written corpus studies and developmental studies. For instance, Miyajima (1986: 45) uses a corpus of 90 Japanese magazines (published in 1955), from which about 1500 clauses involving physical motion have been extracted, and finds that clauses including the Goal represent 74.4% (1106 Tokens) of the tokens, while clauses including the Source represent only 14.8% (220 Tokens). A similar tendency has been reported in corpus studies of English (Goldin-Meadow and Zheng 1998, Koenig *et al.* 2003, Stefanowitsch and Rohde 2004). As for developmental studies, it has been observed that

child speakers of Japanese (Miyahara 1974) tend to produce the Goal earlier than the Source.

More recently, analyses of spoken data have also pointed to a linguistic preference for the Goal to the detriment of the Source. Lakusta and Landau (2005) examined elicited data using video stimulus representing various scenes of motion from one place to another, and found that child and adult speakers of English tend to consistently encode the Goal without specifying the Source, as in *John ran to the station*. Similar results have been obtained by Lakusta *et al.* (2006), contrasting child language production in English and Japanese: for instance, English-speaking children encoded the Goal in 80% of their responses (*vs.* 20% for the Source), and Japanese-speaking children expressed the Goal in 55% of their responses (*vs.* 40% for the Source).

All of these observations, whether based on intuition, experimental child and adult language, or corpus analyses, seem to provide strong evidence for the asymmetrical expression of Source and Goal.

The explanation proposed by researchers for this asymmetry is based on a non-linguistic motivation: the Goal is cognitively more salient than the Source, and therefore the Goal is also linguistically preferred over the Source (Ikegami 1982, 1987, Ungerer and Schmid 1996, Verspoor *et al.* 1998, Lakusta and Landau 2005, Lakusta *et al.* 2006).

However, **symmetry** has also been demonstrated, in the distribution of the Source or the Goal when both the verb and the Ground are considered. Borillo (1998) discusses the phenomenon with French data in terms of *semantic congruence* (Borillo 1998: 140-141). That is, the Goal (e.g., *à la gare* 'to the station') will occur with the verb denoting the motion toward the Goal (e.g., *arriver* 'to arrive'), as in (8a), and the Source (e.g., *de la côte* 'from the coast') with the verb denoting the motion from the Source (e.g., *s'éloigner* 'to move away'), as in (8b)[5]. That is, the verb in question may require the overt expression of a Source or a Goal, and when we take into account the specifications of the verb, we may find that Sources appear as frequently with source-oriented verbs as Goals appear with goal-oriented verbs. In other words, the asymmetry found in the expression of Goals and Sources in other studies may be attributed to an overall asymmetry in the verbs that require Goal *vs.* Source expressions. A similar phenomenon has also been reported in English (Stefanowitsch and Rohde 2004).

(8) a. *Il*   ***est arrivé***   ***à***   *la gare.*
     he   arrived   to/at   the station
     'He arrived at the station.' (Borillo 1998: 141)

   b. *Le bateau*   ***s'est éloigné***   ***de***   *la côte.*
     the ship   moved away   from   the coast
     'The ship moved away from the coast.' (Borillo 1998: 140)

The present study investigates the expression of Source and Goal in Japanese from Borillo's and Stefanowitsch and Rohde's perspective. It examines whether placement and removal events in Japanese can also be symmetrically depicted under certain circumstances.

3. Method

The present study is based on spoken data, using the *'Put and Take'* elicitation stimulus (Bowerman et al. 2004). The stimulus consists of 63 video-clips, including various types of caused-motion events; for instance, placement/removal (e.g., 'put cup on table', 'take cup off table'), dressing/undressing (e.g., 'put on coat', 'take off coat'), giving/receiving (e.g., 'give cup to someone', 'take coke can from someone'), dropping (e.g., 'drop book on floor'), etc. (cf. Majid (ed.) 2004). The data elicitation was carried out in June 2005, individually, with twenty students of Kobe University (Kobe, Japan). They were all native speakers of Japanese, and included 10 males and 10 females aged between 18 and 37 (mean age=23.5).

Here the study will focus on sixteen pairs of placement and removal events[6], represented in Table 1.

@@ Insert Table 1 here

These sixteen placement (i.e. 'putting') events typically represent an Agent moving a Figure to a Ground (e.g., 'woman puts cup on table'), and the sixteen corresponding removal (i.e. 'taking') events represent an Agent moving a Figure from a Ground (e.g., 'woman takes cup off table'). In other words, the 'putting' events characteristically involve motion oriented toward the Goal and the 'taking' events involve motion oriented away from the Source. Note that the categorization of 'putting' *vs.* 'taking' follows the stimulus coding in which the scene code for

'putting' begins with the number '0' (e.g., '001: put cup on table'), and the scene code for 'taking' events begins with the number '1' (e.g. '101: take cup off table'). The selected events consist of two sets of eight pairs of *'support-relation'* events (i.e. 'putting ON' and 'taking OFF') and eight pairs of *'containment-relation'* events (i.e. 'putting IN' and 'taking OUT'), this because, as will be seen below, the notion of support and containment is an important source of asymmetry in the expression of Source and Goal.

After having transcribed all twenty subjects' responses to the *Put and Take* stimulus, 640 responses depicting the sixteen pairs of events (i.e. 320 responses for 'putting' events and 320 for 'taking' events) were extracted. As it happened, a number of these responses were realized with verbs which express no motion, for instance, *grasping* (e.g., 'A man grasped beans') or *possession* (e.g., 'A person held a cup'). Here the study will focus on the responses involving expression of motion, although I will also discuss asymmetry in the 'non-motion' responses. The set of actual motion responses, which will be referred to as the *Japanese data*, include 586 responses (312 responses for 'putting' events and 274 for 'taking' events).

4. The expression of 'putting' and 'taking' events in Japanese

The section briefly introduces the basic expression of 'putting' and 'taking' events in Japanese.

4.1. *Word order and case marking*

Japanese is a canonically SOV language. In the language, each noun (or pronoun) is habitually marked by a morpheme indicating its syntactic relation within a clause, for instance, the nominative *ga* for the subject, the accusative *o* for the direct object, the ablative *kara* for the indirect object, as in (9a). In Japanese grammar, these morphemes are pervasively designated 'particle' (Miyahara 1974, Shibatani 1990) or 'postposition' (Tsujimura 1996, Kita 2006). In this study these morphemes are called 'cases' to avoid confusion with the 'particle' in English (i.e. verbal particle). In the language any nominal constituents (NPs) are actually optional if the discourse or situational context allows for the retrieval of the missing element: for instance, example (9b) shows the absence of both subject and direct object.

(9) a. *Kanozyo-wa   syasin-o   kabe-kara   hagasi-masi-ta.*
       she-TOP   picture-ACC   wall-ABL   peel-POLI-PST
       'She peeled a picture off the wall.' (p&t128_jp.03)[7]

   b. *Potto-ni   sizume-ta.*
      pot-DAT   sink-PST
      '(She) sank (it) into the pot.' (p&t019_jp.16)

Each participant (Agent, Figure, and Ground) is marked with an appropriate case marker: the Agent is marked with the topic marker *wa* (9a) or the nominative case *ga*, the Figure by the accusative case *o* (9a). The Ground is marked with the ablative case *kara*, to indicate that the motion proceeds from the Source (9a), or the dative case *ni*, to indicate that the motion proceeds to the Goal (9b).

4.2. Semantic congruence between the verb and the Path NP

It is important to mention here that in Japanese, 'putting' verbs (e.g., *oku* 'to put on') as well as 'taking' verbs (e.g., *hazusu* 'to detach') have a strong constraint on the choice of the type of Ground argument, which depends on the semantics of the verb, as noted by Borillo (1998) and Stefanowitsch and Rohde (2004). For instance, the verb *oi-* (< *oku*) 'to put on', denoting motion toward the Goal, naturally takes the Goal NP (10a), but not the Source NP (10b) or a combination of Source and Goal NPs (10c). Similarly, the verb *hazusi-* (< *hazusu*) 'to detach', focusing on motion from the Source, takes the Source NP (e.g., *kabe-kara* 'from the wall') (11a), but not the Goal NP (11b) or a combination of Source and Goal NPs (11c).

(10) a. ***Tukue-no   ue-ni   *koppu-o   oi-ta.**
        table-GEN   top-DAT   cup-ACC   put.on-PST
        '(S/he) put the cup on the table top.' (Imoto 2001: 182)

    b. ***Syokkidana-no   naka-kara* koppu-o   oi-ta.**
        cupboard-GEN   inside-ABL   cup-ACC   put.on-PST
        '(S/he) put the cup from inside of the cupboard.' (*ibid.*)

    c. ***Syokkidana-no   naka-kara   tukue-no   ue-ni***
        cupboard-GEN   inside-ABL   table-GEN   top-DAT
        koppu-o   oi-ta.
        cup-ACC   put.on-PST
        '(S/he) put the cup from inside of the cupboard on the table top.' (*ibid.*)

(11) a. ***Kabe-kara***   *aburae-o*   *hazusi-ta.*
          wall-ABL   canvas-ACC   detach-PST
          '(S/he) detached the canvas from the wall.' (*ibid.*)

      b. ****Teeburu-no   ue-ni***   *aburae-o*   *hazusi-ta.*
          table-GEN   top-DAT   canvas-ACC   detach-PST
          '(S/he) detached the canvas onto the table top.' (*ibid.*)

      c. ****Kabe-kara   teeburu-no   ue-ni***   *aburae-o*
          wall-ABL   table-GEN   top-DAT   canvas-ACC
          hazusi-ta.
          detach-PST
          '(S/he) detached the canvas from the wall onto the table
          top.' (*ibid.*)

Following prior claims, the expression of the Source and Goal NPs in the
data is expected to be symmetrical once the semantics of the verb are
taken into account. I expect that the proportion of uses of Source NPs
with source-oriented verbs will parallel the proportion of uses of goal
NPs with goal-oriented verbs.

4.3. *Three types of predicate*

In Japanese, studies of the expression of motion have been often based
on examples that include a simplex verb consisting of a single verbal
stem (e.g., *tori-* 'to remove), as in (12a) (cf. Imoto 2001, Ueno 2003).
This bias toward simplex verbs may have been an artifact of the
introspective approach to data collecting. As will be shown below with
this stimulus-based data, 'putting' and 'taking' events can in fact
alternatively be expressed by complex verbs (see the chapter on
Mandarin Chinese by Chen and Lowland Chontal by O'Connor, this
volume). These complex verbs are either *compound verbs* typically
formed by direct juxtaposition of two components, such as *moti-age-*
(hold-raise) 'to lift' (12b), or '*TE-linked verb constructions*' in which two
(or more) components are linked by the connective suffix *-te*[8], such as
mot-te iki- (hold-CONN go) 'to carry (something)' (12c).

(12) a. *Koppu-o*   *teeburu-kara*   ***tori****-masi-ta.*
          cup-ACC   table-ABL   remove-POLI-PST
          '(She) removed the cup from the table.'
          (P&T101_Jp.07)

b. *Sono   hito-ga   koppu-o*
   that   person-NOM   cup-ACC
   ***moti-age**-masi-ta.*
   hold-raise-POLI-PST
   'That person lifted the cup.' (p&t101_jp.15)
c. *Koppu-o   **mot-te**   **iki**-masi-ta.*
   cup-ACC   hold-CONN   go-POLI-PST
   '(She) carried the cup (from the table)'
   (p&t101_jp.05)

The main semantic template of these complex verbs is the sequence of Manner (e.g., *korogasi-* 'to roll') or Means (e.g., *nage-* 'to throw') in the first component (henceforth V1), and change-of-location (e.g., *komu* 'to move in') in the second component (henceforth V2) (Tagashira and Hoff 1986, Ishii 1987, Himeno 1999, *inter alia*), as in (13). The V1 is morphosyntactically and semantically considered to be an optional component (Matsumoto 1997).

(13) a. MANNER + CHANGE-OF-LOCATION
          korogasi-komu (roll-move.in) 'to move in rolling'
          korogasi-te iku (roll-CONN go) 'to go rolling'
      b. MEANS + CHANGE-OF-LOCATION
          nage-komu (throw-move.in) 'to move in throwing'
          osi-te kuru (push-CONN come) 'to come pushing'

Although no exhaustive list has been established, the studies assume the high productivity of such complex verbs in the language, in terms of the ability to create new complex verbs. For instance, the present *Japanese data* include several compound verbs which are not found in the dictionary, such as *kuwae-toru* (hold between one's teeth-remove) 'to remove holding between one's teeth', *nigiri-toru* (grip-remove) 'to remove gripping', *korogasi-komu* (roll-move.in) 'to move in rolling'. On the other hand, the use of complex verbs in discourse has scarcely been investigated in the literature. The present study will attempt to provide the first description of different predicate types (i.e. simple, compound and TE-linked verbs) in the expression of the 'putting' and 'taking' events.

5. Multiple asymmetries

The main result of the analysis of the Japanese data collected with the *'Put and Take'* elicitation stimulus is that it reveals multiple instances of asymmetry in the expression of the Source versus the Goal. The argument presented here is that these cases of asymmetry are found at the different levels of event construal, syntactic construction, and morphosyntactic encoding.

5.1. Asymmetry 1: non motion and Source

The first instance of asymmetry is related to the level of event construal. As mentioned in section 3, several responses for the 'putting' and 'taking' events involve 'non motion'. These events are expressed by a verb, such as *tukami-* 'to grasp', or *mot-* 'to hold', which typically denotes an Agent's manual control of an object, as in (14).

(14) a. *Kare-wa   tongu-de   banana-o   **tukami**-masi-ta*
               he-TOP   tongs-INSTR banana-ACC   grasp-POLI-PST
               'He grasped a banana with tongs (from the table).'
               (p&t103_jp.03)
      b. *Koppu-o   **mot**-ta.*
               cup-ACC   hold-PST
               '(She) held the cup (from the table).' (p&t101_jp.16)

It is important to mention here that such 'non motion' descriptions are abundantly found in the responses for the 'taking' events, especially the 'taking OFF' events (see Table 2).

@@ Insert Table 2 here

Further analysis is required to ascertain the reason why such 'non motion' descriptions are so common in the responses for the 'taking OFF' events. A first hypothesis will be suggested in Section 5.4.

5.2*. Asymmetry 2: More overt expression of Goal than of Source*

The analysis of the overt expression of the Source and Goal NPs shows that, as expected, the Goal NP (e.g., *tukue-no ue-ni* 'to the table top') is consistently expressed (95.2 %) in the description of the 'putting' events, while the Source NP (e.g., *tukue-kara* 'from the table') is only

expressed in half of the responses (51.5%) in descriptions of the 'taking' events (seeTable 3).

@@ Insert Table 3 here

The results seem to suggest that the expression of Source and Goal is *asymmetrical* in the Japanese data even if the semantic congruence between the verb and the Path NP is taken into account. The expression of the Source NP will be further examined in section 6.

5.3. Asymmetry 3: Source expressed with case vs. with a relative clause

The Japanese data show that the Source can be expressed in different ways, either with a simple ablative case *kara*, which explicitly indicates motion away from the Source, or with a relative clause that can be used to indicate the initial (static) location of the Figure, as in (15a-15b) where the relative clause is indicated by boldface and square brackets). Notice that the language has no relative pronoun to signal the relative construction. It is only the clause placed before a noun which enables us to identify this construction.

(15)   a.   *Aru*   *hito-ga*   ***[teeburu-no   ue-ni***
            certain   person-NOM   table-GEN   top-DAT
            at-ta]   *koppu-o*   *mot-te*   *it-ta.*
            be-PST   cup-ACC   hold-CONN   go-PST
            'A person carried the cup which had been on the table top' (p&t101_jp.19)

       b.   ***[Mizu-ni   hait-te-iru]***   *renga-o*
            water-DAT   go.in-CONN-RES   brick-ACC
            tori-dasi-masi-ta.
            remove-move.out-POLI-PST
            '(She) took a brick which had been inside of water.' (p&t119_jp.01)

Table 4 represents the distribution of different means of expressing (or not expressing) the Source. In the Japanese data, relative clauses account for 28.1% (77 Tokens) of the responses[9].

@@ Insert Table 4 here

The phrasal modifier, for instance *teeburu-no ue-ni at-ta* 'there was on the table top' in (15a), indicates the place where the cup had been

placed before it was moved. These results seem to suggest that the expression of the Source may be more complex in general than the expression of the Goal, in that there are more options for its expression (i.e. omission, case or relative clause). If this relative clause option is considered a type of 'Source', then the responses for the 'taking' events with overt expression of a Source go up to 79.6% (51.5% with the ablative case *kara* and 28.1% with a relative clause). Nevertheless, it is interesting that an asymmetry still persists in the expression of Source *vs.* Goal.

5.4. Asymmetry 4: complex verbs and source

The Japanese data include three predicate types: simplex verb, compound verb, and TE-linked verb, with certain predictable patterns in the distribution of the simplex and complex verbs (all listed in the Appendix). The first pattern is concerned with the way in which the event is performed. When the event is performed in the default way (i.e. more usual means, such as 'grasping with a hand'), it tends to be expressed by a simplex verb. For instance, all twenty subjects used the simplex verb in describing the event 'put a cup on table', as in (16). On the other hand, when the event is performed in an unusual way (e.g., using a tool), the event may be expressed using either a simplex or a complex verb. For example, sixteen subjects used the simplex verb, while four subjects used the complex verb in which the V1 expresses the means (e.g., *hasan-de* 'to pinch') in describing the event 'putting banana on table with long tongs' (17a-17b). Such unusual means can be also expressed by the instrumental case *de*.

(16)   *Onnanohito-ga*   *koppu-o*   *teeburu-ni*
        woman-NOM   cup-ACC   table-DAT
        ***oki**-masi-ta.*
        put.on-POLI-PST
        'A woman put a cup on the table.' (p&t001_jp.18)

(17) a. *Kanozyo-wa*   *tongu-de*   *banana-o*
          she-TOP   tongs-INSTR   banana-ACC
          teeburu-no   *ue-ni*   *oki-masi-ta.*
          table-GEN   top-DAT   put.on-POLI-PST
          'She put the banana on the table top with tongs.'
          (p&t003_jp.03)

b. *Hasami-de*　　**hasan-de**　　*banana-o*
　　scissors-INSTR　pinch-CONN　banana-ACC
　　tukue-no　　*ue-ni*　　*oi-ta.*
　　table-GEN　　top-DAT　　put.on-PST
　　'(She) pinched a banana with scissors and then
　　(she) put (it) on the table top.' (p&t003_jp.08)

More significantly, another distribution pattern for the simplex and complex verb was found, regarding the two types of events: the 'putting' events tend to be expressed by a simplex verb (14 types and 83.0% of the tokens), whereas the 'taking' events tend to be expressed by a *complex verb* (29 types and 62.0% of the tokens), in particular by a compound verb (see Tables 5-6).

@@ Insert Table 5 here
@@ Insert Table 6 here

The increased use of compound verbs in the responses for the 'taking' events essentially results from the use of compound verbs in which the V1 denotes an Agent's 'grasping' or 'holding' and the V2 denotes 'upward motion' or 'removal', as in (18). It seems that this type of compound verb reflects the way in which the events are construed: the events are perceived in a two-step process including the Agent's control of the Figure as the first phase, and the motion of the Figure as the second.

(18)　*V1(grasping/holding)-V2 (move.upward/remove)*
　　　moti-ageru　　(hold-raise)　　'to lift up'
　　　tori-ageru　　(remove-raise)　'to take up'
　　　hiroi-ageru　　(pick.up-raise)　'to pick up'
　　　tukami-ageru　(grasp-raise)　　'to raise grasping'
　　　tumami-ageru　(pinch with fingertips-raise) 'to raise pinching'
　　　hasami-toru　　(pinch with a tool-remove)　'to remove pinching'
　　　tukami-toru　　(grasp-remove) 'to remove grasping'
　　　nigiri-toru　　(grip-remove)　'to remove gripping'
　　　kuwae-toru　　(hold between one's teeth-remove)　'to remove holding between one's teeth'

This may shed some light on why some responses for the 'taking' events involved the 'non motion' option (cf. §5.1.): such responses might result from the subject's intentions to overtly express the means of motion, and to leave the actual motion to be inferred from the context.

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The results for the distribution of simplex or complex verbs seem to suggest further that in describing the 'taking' events the use of complex verbs that encode different parts of an event require that the speaker pay attention to these more fine-grained aspects of the event.

5.5. Summary: Source is more complex than Goal

Multiple instances of asymmetry have been presented throughout this section. These findings suggest that the expression of 'putting' and 'taking' is asymmetrical with regard to morphosyntactic complexity: the expression of the 'putting' events is morphosyntactically simpler than that of the 'taking' events. The 'putting' events tend to be expressed by a simplex verb and the Goal NP is quite consistently specified. However, the 'taking' events tend to be expressed by a complex verb with (or without) the Source NP or with a relative clause indicating the initial location of the Figure.

6. Further asymmetry in the expression of Source

This section will further explore the expression of the Source NP. In section 5.2. above, it has been shown that the Source NP is expressed in half of the responses for the 'taking' events. This relatively high ratio seems to call for further examination, in order to understand in which contexts the Source NP is actually expressed.

6.1. *Impact of support/containment on the expression of Source*

Closer inspection of the responses for the 'taking' events reveals that the occurrence of the Source NP is dependent on the nature of the 'taking' events, namely whether they instantiate a case of 'support-relation' (i.e. motion from a support) or of 'containment-relation' (i.e. motion from a container). The study shows that the Source NP is quite rare (17.0 %) in the responses involving the support-relation (e.g., 'take cup off table'), whereas it is, surprisingly, highly frequent (77.6 %) in the responses involving the containment-relation (e.g., 'take orange out of box'), as shown in Table 7. On the other hand, in the description of 'support-relation' the Source tends to be expressed in the relative clause or not to be expressed at all.

@@ Insert Table 7 here

It is clearly important to differentiate support-relation Sources from containment-relation Sources. This suggests that in Japanese, the notion of support or containment has an impact on the overt expression of the Source NP. Interestingly, similar results are found in Lowland Chontal (O'Connor, this volume), in which a lexical Goal is found to be more frequent than a lexical Source, and a containment-relation Source is expressed lexically more often than a support-relation Source.

6.2. *Source in the description of the containment-relation*

One might, then, wonder why the Source NP tends to be encoded when the responses involve the containment-relation, counter to what has been claimed in previous studies (see § 2.2.). Further analysis will allow us to advance a hypothesis. It has been stated that the ablative case *kara*, marking the Source, also marks the initial state in the expression of 'change of state' events, as in (19a-19b) (Kuwae 1980: 471; Masuoka and Takubo 1987: 60, Morita 1989: 343-347). The 'change of state' events characteristically involve the resultant state (e.g., 'signal changes to green', 'rice is transformed into sake'). It may suggest that the occurrence of the ablative case *kara* concerns a resultative state. Similarly, the 'taking OUT' events, involving the boundary-crossing, seem also to imply the result, namely the resultant location (e.g., outside of Ground object).

(19) a. *Singoo-ga*   **aka-kara**   *ao-ni*   *kawaru.*
          signal-NOM   red-ABL   bleu-DAT   change
          'The signal changes from red to green (lit. bleu).'
      b. *Nihonsyu-wa*   **kome-kara**   *tukuri-masu.*
          sake-TOP   rice-ABL   produce-POLI
          '(One) produces sake [Japanese alcoholic drink] from rice.' (Kuwae 1980: 471)

Further analysis of the responses for the 'taking OUT' events supports this hypothesis. As shown in Table 7 above, the Source NP is omitted in 13 of 156 responses for this type of event. Of the 13 responses without a Source NP, 9 responses are construed as removal events without boundary-crossing (e.g., *hiroi-age-* 'to pick up', *hazusi-* 'to detach'), as in (20a-20b).

(20) a. *Mikan-o*   **hiroi-age**-*masi-ta.*
      mandarin-ACC   pick.up-raise-POLI-PST
      '(He) picked up a mandarin (from the box).'
      (p&t111_jp.01)

      b. *Tumari-o*   **hazusi**-*ta.*
      stuffing-ACC   detach-PST
      '(She) detached the stuffing (from the car exhaust).'
      (p&t117_jp.16)

This could mean that the occurrence of a Source NP marked by the ablative case *kara* depends in the end more on the nature of the verb (i.e. verb which denotes the boundary-crossing, such as *dasu* 'to move out' *vs.* verb which denotes a 'no boundary-crossing', such as *hiroi-ageru* 'to pick up') than on the nature of the event itself (i.e. 'taking OUT' *vs.* 'taking OFF'). In other words, even if it is the case of a 'taking OUT' event, the Source NP can be omitted when the verb itself does not denote boundary-crossing. This study therefore shows the necessity of taking into account the verb semantics in any discussion of the Source-Goal asymmetry.

6.3. *Summary: Nesting of asymmetry*

This section has refined our analysis of the overt expression of the Source NP in descriptions of 'taking' events. The first analysis has revealed that the expression of the Source NP depends not only on semantic congruence (between the verb and the Path NP), but also on the notion of boundary-crossing. The second analysis has demonstrated that the Source NP tends to be omitted when 'taking OUT' events are expressed by means of a verb that does not denote boundary-crossing. Both remarks seem to point to the fact that the semantics of the verb (i.e. 'support-relation Source' or 'containment-relation Source') might have an impact on the expression of the Source NP.

7. Conclusion

This chapter has described multiple types of asymmetry in the expression of Source and Goal in descriptions of 'putting' and 'taking' events in Japanese. These asymmetries are found at different levels. First, *at the level of event interpretation*, 'taking' events seem to be perceived differently from 'putting' events in terms of **event segmentation**, in that 'taking' events seem to be perceived as a chain of

two events (i.e. 'grasping' and then 'removing'). More over, the subjects seem to be more sensitive to **boundary crossing** in describing 'taking' events than in describing 'putting' events. Second, *at the level of overt expression*, the Source or Goal may be explicit, implicit or non-specified, but if the Source is expressed (which is less frequent) it has a more complex linguistic structure, consisting of relative clauses rather than case markers (in particular in the expression of 'taking OFF' events), and complex rather than simple verbs.

This study demonstrates therefore the importance of a finer examination of the linguistic structure, taking into account in the analysis of the expression of spatial language the semantic distribution between the Path NP and the verb, as well as the actual different forms of expression. It points to a more complex relation between language and cognition than the one proposed in previous studies that attributed all of the asymmetry to the existence of a general cognitive bias toward the Goal over the Source.

Abbreviations:

ABL: ablative; ACC: accusative; CONN: predicate connective; DAT: dative; GEN: genitive; IDEO: ideophone; INSTR: instrumental; LOC: locative; NOM: nominative; OBJ: direct object; POLI: politeness; PRES: present; PST: past; RES: resultative; TOP: topic

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Tables

Table 1. List of 16 pairs of 'putting' and 'taking' events considered

	'Putting' events	'Taking events'
Support-relation	001: put cup on table 002: put plastic cup on table with mouth 003: put banana on table with long tongs 005: put fistful of rice on table 007: put book on floor 027: hang rope over tree branch 028: put poster on wall 031: put saucer on top of cup	101: take cup off table 102: take plastic cup off table with mouth 103: take banana off table with long tongs 105: take handful of beans from flat surface 107: take magazine from floor 127: unhang rope from tree branch 128: take poster off wall 131: take saucer off cup
Containment-relation	011: put apple in bowl 014: put candle into candle stand 015: put celery branch into recorder case 016: put stone into pocket 017: stuff rag into car exhaust 019: put stone into pot of water 024: put head into bucket 035: put pen in hole	111: take orange from box 114: take candle out of candle stand 115: take cucumber out recorder case 116: take stone out of pocket 117: take rag out of car exhaust 119: take stone out of pot of water 124: take head out of bucket 135: take pen out hole

Table 2. Number of responses including a no motion verb

Ground	'Putting' events	'Taking events'
Support-relation	3	**42**
Containment-relation	5	4
Total	8	46

Table 3. Occurrence of Goal and Source NPs

Goal NP in 'putting' events		Source NP in 'taking' events	
Ratio	Tokens	Ratio	Tokens
95.2 %	297 (/312)	51.5 %	141 (/274)

Table 4. Expression of Source

Ablative Case		Relative clause		No Source	
Ratio	Tokens	Ratio	Tokens	Ratio	Tokens
51.5 %	141	28.1. %	77	20.4 %	56

Table 5. Distribution of the use of types of predicate

	'Putting' events	'Taking events'
Simplex verb	14	11
Compound verb	10	19
TE-linked verb	8	10

Table 6. Token of three types of predicate

	'Putting' events (N = 312)		'Taking events' (N = 274)	
	Ratio	Tokens	Ratio	Tokens
Simplex verb	**83.0 %**	259	38.0 %	104
Compound verb	13.8 %	43	**53.6 %**	147
TE-linked verb	3.2 %	10	8.4 %	23

Table 7. Expression of Source in the 'taking' events

	Ablative Case		Relative clause		No Source	
	Ratio	Tokens	Ratio	Tokens	Ratio	Tokens
Support	17.0 %	20	**46.6 %**	55	**36.4 %**	43
Containment	**77.6 %**	121	14.1 %	22	8.3 %	13

Appendix : List of verbs used in the Japanese data

'Putting' events
(a) Simplex verb (14 types)
   haru 'paste', *ireru* 'move in', *kabuseru* 'cover (with)', *kakeru* 'hang', *kakusu* 'hide', *noseru* 'put on (an object)', *oku* 'put on', *sasu* 'insert', *simau* 'put back', *sizumeru* 'sink', *tarasu* 'hang', *tateru* 'stand', *tukeru* 'soak', *tumeru* 'stuff'
(b) Compound verb (10 types)
   bura-sageru (IDEO 'swinging'-suspend) 'dangle', *hame-komu* (fit-move-in) 'fit into', *hari-tukeru* (paste-adhere) 'paste tightly', *hik-kakeru* (draw-hang) 'hang carelessly', *osi-komu* (push-move.in) 'push into', *otosi-ireru* (drop-move.in) 'drop into', *sasi-komu* (insert-move.in) 'insert', *tuki-sasu* (thrust-insert) 'thrust into', *tuk-komu* (thrust-move.in) 'thrust into', *tume-komu* (stuff-move.in) 'stuff into'
(c) TE-linked verb (8 types)

hasan-de oku (pinch (with a tool)-CONN put.on) 'pinch and put on', *ire-te iku* (move.in-CONN go) 'move in and go (away)', *kagan-de oku* (bend-conn put.on) 'bend and put on', *kuwae-te oku* (hold between one's teeth-CONN put.on) 'hold between one's teeth and put on', *moti-age-te oku* (hold-raise-CONN put.on) 'lift up and put on', *sasi-te ireru* (insert-CONN move.in) 'insert and then move in', *tori-age-te modosu* (remove-raise-CONN replace) 'take up and replace', *tukan-de oku* (grasp-CONN put.on) 'grasp and put on'

'Taking' events

(d) Simplex verb (11 types)
ageru 'raise', *dasu* 'move out', *dokeru* 'remove (aside)', *hagasu* 'peel', *hagu* 'strip', *hazusu* 'detach', *hirou* 'pick up', *nuku* 'extract', *orosu* 'take down', *toru* 'remove, take off', *utusu* 'remove'

(e) Compound verb (19 types)
hasami-toru (pinch (with a tool)-remove) 'remove pinching', *hiki-nuku* (pull-extract) 'pull out', *hikko-nuku* (pull-extract) 'pull out strongly', *hippari-dasu* (tug-move.out) 'tug out', *hiroi-ageru* (pick.up-raise) 'pick up', *hiroi-atumeru* (pick.up-gather) 'gather (up)', *kuwae-toru* (hold between one's teeth-remove) 'remove holding between one's teeth', *moti-ageru* (hold-raise) 'lift', *nigiri-toru* (grip-remove) 'remove gripping', *nuki-dasu* (extract-move.out) 'extract', *nuki-toru* (extract-remove) 'extract', *sukui-ageru* (scoop-raise) 'scoop up', *tori-ageru* (remove-raise) 'take up', *tori-dasu* (remove-move.out) 'take out' *tori-hazusu* (remove-detach) 'detach entirely', *tori-nozoku* (remove-eliminate) 'eliminate entirely', *tukami-ageru* (grasp-raise) 'raise grasping', *tukami-toru* (grasp-remove) 'remove grasping', *tumami-ageru* (pinch (with fingertips)-raise) 'raise pinching'

(f) TE-linked verb (10 types)
hasan-de moti-ageru (pinch (with a tool)-CONN hold-raise) 'pinch and lift up', *hirot-te iku* (pick.up-CONN go) 'pick up and go (away)', *hirot-te mot-te iku* (pick up-conn hold-conn go) 'pick up and carry', *kan-de moti-ageru* (bite-CONN hold-raise) 'bite and lift up' *kuwae-te moti-ageru* (hold between one's teeth-CONN hold-raise) 'hold between one's teeth and lift up', *mot-te iku* (hold-CONN go) 'carry', *tot-te iku* (remove-CONN go) 'remove and go (away)', *tukan-de ageru* (grasp-CONN raise) 'grasp and raise', *tukan-de mot-te iku* (grasp-CONN hold-CONN go) 'grasp and carry, *tuman-de moti-ageru* (pinch (with fingertips)-CONN hold-raise) 'pinch and then lift up'

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[3] According to the authors (Sinha and Kuteva 1995: 181), 'overt expression' refers to any information encoded in the surface structure and 'covert expression' to optionally omitted information in the surface structure but it may be retrieval from linguistic context.

[4] Any examples for which no source is given are invented examples.

[5] In French, certain verb, such as *arriver* 'to arrive' which expresses the Goal-oriented motion, may also take a Source PP (e.g., *arriver de la gare* 'arrive from the station). Such instance is considered as semantic *no congruence* (Borillo 1998: 47).

[6] In Japanese, (un)dressing events are habitually expressed without specifying the Goal NP, such as *Kare-wa boosi-o kabut-ta* (he-TOP hat-ACC put.on.head-PST) 'He put the hat (on the head)'. The study does not consider the expressions of such events in which the Ground NP is consistently absent. In addition, the study also excluded events with no counterpart 'taking' events (i.e. dropping events), and events in which the inherent directionality (i.e. Goal-oriented or Source-oriented) depends on speaker perspective (i.e. giving/receiving events).

[7] The examples with references beginning *'(p&t…)'* are from the data elicited using the *'Put and Take'* stimulus. For instance, in *'p&t128_jp.03'*, the first three numbers (i.e. '128') indicate the scene code, and the last two numbers (i.e. '03') identify the subject.

[8] Notice that the TE-linked verb has three interpretations in terms of the semantic relation held by the V1 and V2: the *temporal sequence* of two (or more) events (i.e. *'V1 and then V2'*), as in (i); the *simultaneous process*, as in (ii); or the *auxiliarization* of the V2 (functioning as an aspectual marker, such as progressive or resultative), as in (iii).

> (i)   TEMPORAL SEQUENCE
>   *kuwae-te oku* (hold between one's teeth-CONN put.on) 'to hold between one's teeth and then put on'
> (ii) SIMULTANEOUS PROCESS
>   *mot-te kuru* (hold-CONN come) 'to bring (to come holding)'
> (iii) AUXILIARIZATION
>   *osi-te iru* (push-CONN be) 'to be pushing (progressive)'
>   *hait-te iru* (go.in-CONN be) 'to be inside' (resultative)

[9] The relative clause is also used in describing in 'putting' events, however this construction appears only 12 times in the expression of the scene 002 ('put plastic cup on table with mouth') and the scene 003 (put banana on table with long tongs), as in (i-ii) below:

> (i)   *Kuwae-te-iru*   *koppu-o*   *tukue-no*   *ue-ni*
>   hold between one's teeth-CONN-RES   cup-ACC   table-GEN   top-DAT
>   *oki-masi-ta*
>   put.on-POLI-PST

'(She) put the cup that (she) has held between her teeth on the table top.'
(p&t002_jp.06)

(ii) *Hasan-de-i-ta*   *banana-o*   *tukue-no*   *ue-ni*   *oki-masi-ta.*
pinch-CONN-RES-PST   banana-ACC   table-GEN   top-DAT   put.on-POLI-PST
'(She) put the banana that (she) has pinched on the table top.'
(p&t003_jp.07)