A PROSODIC APPROACH TO DITRANSITIVE IDIOMS[*]

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1 Introduction

One of the observational facts about ditransitive idioms is that in Japanese parts of an idiom must be adjacent to each other whereas in English they do not have to be. To be more specific, ditransitive verbs in Japanese can have either dative-accusative-V or accusative-dative-V order on the surface, but accusative-V idioms only appear in the former and dative-V idioms only appear in the latter. In English, however, verbs like *give* exhibit dative alternation and V-accusative idioms may show V-dative-accusative order. In this paper, I argue that the distributional properties of ditransitive idioms in Japanese and English are best analyzed in prosodic terms. I go further and claim that distributional differences between Japanese and English idiom originate in the differences in their general prosodic properties.

2 Ditransitive Idioms in Japanese and English

2.1 Japanese Adjacent Idioms

Japanese abounds with ditransitive idioms. Those in (1a) constitute accusative-V idioms and those in (2a), dative-V idioms, in the sense that reversing the two DPs is impossible or results in the loss of idiomatic meanings as shown in (b) examples (Kishimoto 2008). Elements of an idiom are contained in a square in the examples below.[1]

[1] Abbreviations used in the glosses are: Acc (= Accusative), Dat (= Dative), PL (= Plural), and Top (= Topic).

(1) dative-accusative-V
  a. *kodomo-ni te-o yaku*   b. **te-o kodomo-ni yaku*
     kid-Dat hand-Acc burn   'can't handle the kid'
     shiai-ni mizu-o sasu   **mizu-o shiai-ni sasu*
     game-Dat water-Acc pour   'interrupt the game'
     hanashi-ni ochi-o tsukeru   **ochi-o hanashi-ni tsukeru*
     story-Dat fall-Acc attach   'give a punch line to the story'
     arasoi-ni keri-o tsukeru   **keri-o arasoi-ni tsukeru*
     quarrel-Dat end-Acc attach   'finish the quarrel'
     yokozuna-ni mune-o kariru   **mune-o yokozuna-ni kariru*
     grand champion (in sumo)-Dat chest-Acc borrow
                         'challenge the *yokozuna*'

(2) accusative-dative-V
  a. *kuruma-o te-ni suru*   b. **te-ni kuruma-o suru*
     car-Acc hand-Dat do   'obtain a car'
     doryoku-o boo-ni furu   **boo-ni doryoku-o furu*
     effort-Acc bar-Dat swing   'waste the effort'
     tomodachi-o ki-ni kakeru   **ki-ni tomodachi-o kakeru*
     friend-Acc mind-Dat hang   'care about a friend'
     uwasa-o komimi-ni hasamu   **komimi-ni uwasa-o hasamu*
     rumor-Acc ear-Dat enclose   'overhear the rumor'
     kako-o mizu-ni nagasu   **mizu-ni kako-o nagasu*
     past-Acc water-Dat flush   'forget the past'

Although the degree of idiomaticity seems to differ from one idiom to another (Kishimoto 2008:149), the idioms in (1a) and (2a) are thought to be fixed expressions and consist of fixed combinations of lexical items. A generalization is that idiom elements are linear adjacent, accusative-V or dative-V, in Japanese.

    As for the alternating orders in dative-accusative-V and accusative-dative-V, I do not commit myself to any argument regarding whether one order is derived from the other via scrambling, or each order is independently base-generated. This is truly a controversial issue in Japanese linguistics, but can be set aside for the purpose of the present paper. (But see related discussion in 3.1.)

2.2 English Disjoint Idioms

English also has ditransitive idioms as seen in (3) and (4) (Richards 2001, Levin 2008). A difference between Japanese and English is that the elements that constitute an idiom must be linear adjacent in Japanese, whereas they are disjoint in English.[2]

(3) V-accusative-dative
  a. *throw John to the dogs*   b. **throw (to) the dogs John*

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[2] I set aside V-accusative-*to* idioms such as *give birth to DP* and *give rise to DP* in this paper. They involve not only a verb and a DP, but also the fixed preposition *to*, and should be treated separately.
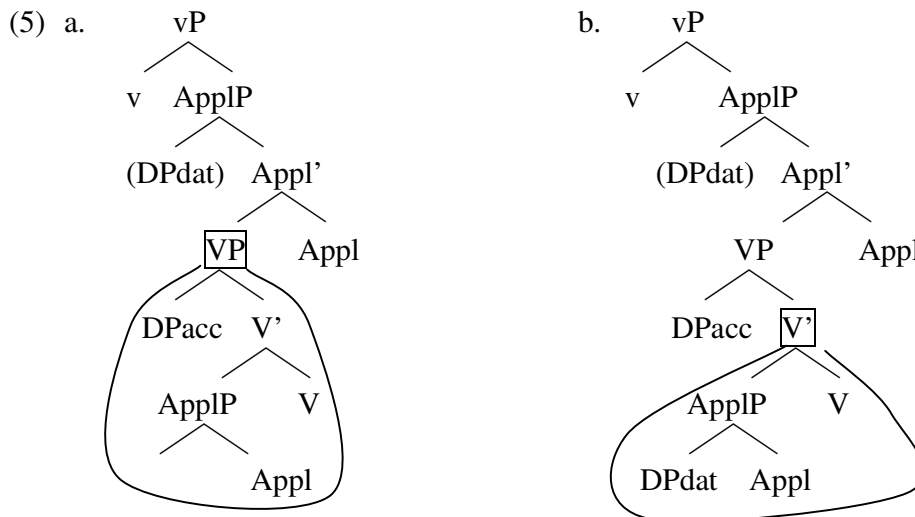
throw John *to the lions*   **throw (to) the lions John*
send John *to the devil*   **send (to) the devil John*
send John *to the showers*   **send (to) the showers John*
take John *to the cleaners*   **take (to) the cleaners John*

(4) V-dative-accusative

a. *give* Susan *the boot*   b. **give the boot to Susan*
   give Susan *the creeps*   **give the creeps to Susan*
   drive Susan *bananas*   **drive bananas to Susan*
   show Susan *the ropes*   **show the ropes to Susan*
   promise Susan *the moon*   **promise the moon to Susan*

This distributional property of English idioms raises a question of how to make them conform to some kind of locality requirement constraining the relations between their parts. We will look at some previous analyses of Japanese and English idioms in the next section.

3 Previous Analyses

3.1 Lexical-Syntactic Analysis of Japanese Ditransitive Idioms

On the basis of the data on nominalized clauses, and adopting the introduction of Appl(icative)P(phrase) to ditransitive constructions (Plykkänen 2002, Miyagawa and Tsujioka 2004), Kishimoto (2008) argues that accusative-V and dative-V idioms in Japanese are base-generated as in (5a) and (5b), respectively. (An idiom sequence is circled below.)

(5) a.
```
        vP
       /  \
      v   ApplP
          /   \
    (DPdat)  Appl'
            /    \
          VP     Appl
         /  \
     DPacc   V'
            /  \
        ApplP    V
            \
            Appl
```

b.
```
        vP
       /  \
      v   ApplP
          /   \
    (DPdat)  Appl'
            /    \
          VP     Appl
         /  \
     DPacc   V'
            /  \
        ApplP    V
        /   \
   DPdat    Appl
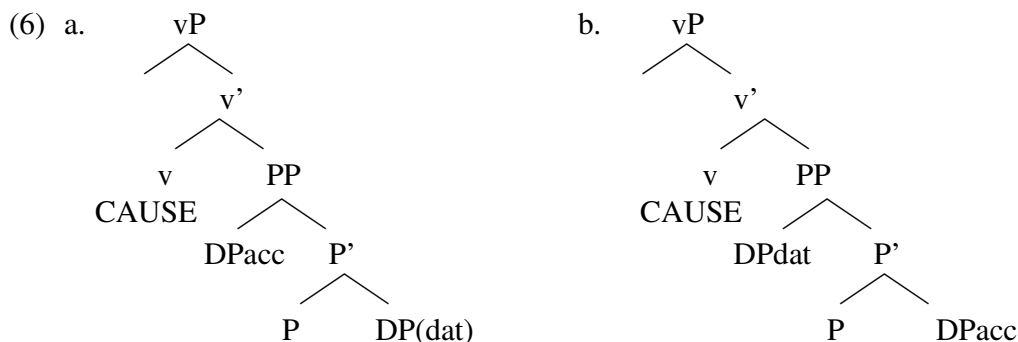```

(Irrelevant details are omitted.)

A crucial feature here is the postulation of an "internal" ApplP, which offers a structural position for idiomatic dative arguments. This is based on the premise that (rigid) idioms are assigned their meaning in the basic order (Kishimoto 2008:149). Kishimoto argues that the internal ApplP does not constitute a θ-marking domain, and is necessarily idiomatic. In this case, the dative DP is licensed without recourse to θ-role assignment.

The accusative DP in accusative-V idioms, on the other hand, is in a potential θ-position, and does *not* receive a θ-role when it forms an idiom with the verb with an appropriate choice of lexical items. In this case, the dative DP is in the specifier of the higher ApplP. In any case, an idiom sequence corresponds to a syntactic domain, i.e. VP in (5a) and V' in (5b).

Notice that Kishimoto's analysis of ditransitive idioms is much dependent on lexical-semantic properties of verbs. In accusative-V idioms, whether idiomatic meaning is obtained or not is contingent on the choice of accusative DP and the verb. If they are likely idioms, such as those in (1a) above, the verb does not assign a θ-role to the DP, whereas if they do not give rise to idiomatic meaning, the verb does assign a θ-role to the DP, and their meaning is calculated accordingly. In dative-V idioms, on the other hand, the dative DP is based-generated within internal ApplP, which is a non-θ domain. When a dative DP is not part of an idiom, it is generated above the VP, e.g. in the specifier of higher ApplP, and a non-idiomatic meaning is obtained. Although the syntactic structure proposed by Kishimoto successfully accounts for syntactic behaviors of ditransitive idioms, it does not provide an insight into the simple observation that idiom parts are always string adjacent in Japanese, irrespective of word order. More specifically, nonuniformity exists in that the syntactic configuration in (5b) is solely for dative-V idioms, whereas the configuration in (5a) is not only for accusative-V idioms, but also for ordinary accusative DP – V sequences.

## 3.2 Lexical-Syntactic Analysis of English Ditransitive Idioms

Let us turn to English. Richards (2001) proposes a lexical decomposition analysis of ditransitive idioms in English. On the basis of the data on ditransitive-transitive alternations (e.g. *The Count gives Mary the creeps ~ Mary got the creeps* vs. *Laura gave birth to Nolan ~ *Laura got birth*), Richards proposes that V(*give*)-accusative-dative and V(*give*)-dative-accusative idioms in (3a) and (4a) have the structures in (6a) and (6b), respectively. Note that Richards does not discuss V-accusative-dative idioms, but it is predicted that they should have the same structure as V(*give*)-accusative-dative (fixed) expressions he discusses (e.g. *give birth to DP, give way to DP*, cf. fn. 2).

(6) a.
```
              vP
              /\
             / \
            v'
           /\
          / \
         v   PP
       CAUSE /\
             / \
          DPacc P'
                /\
               / \
              P   DP(dat)
```

b.
```
              vP
              /\
             / \
            v'
           /\
          / \
         v   PP
       CAUSE /\
             / \
          DPdat P'
                /\
               / \
              P   DPacc
```

LOC                                                    HAVE

(Irrelevant details are omitted, and minor notational modifications have been made.)

In the V-dative-accusative order depicted in (6b), the dative DP occupies the specifier of PP, and the accusative DP occupies the complement of the P, which contains HAVE. The verb *give* consists of CAUSE under the little v and HAVE. In other words, the verb *give* is lexically decomposed into CAUSE and HAVE. In this case, P', a syntactic constituent, corresponds to the idiom in question, and hence only part of the verb participates in the idiom.

In the V-accusative-dative order depicted in (6a), the accusative DP occupies the specifier of PP, and the dative DP occupies the complement of the P, which contains LOC(ation). Although Richards (2001) does not discuss V-accusative-dative idioms, a natural extension of his analysis of V(*give*)-dative-accusative idioms would be that the P(LOC) and a dative DP should form an idiom. However, for V-accusative-*to* (fixed) expressions such as *give birth to DP*, Richards argues that the idiom is listed in the lexicon as *CAUSE birth LOC*. Notice here that CAUSE constitutes part of an idiom. Therefore, V-accusative-dative idioms must consist of CAUSE and P', which is not a syntactic constituent.

Compared to Kishimoto's (2008) analysis of Japanese ditransitive idioms, Richards' (2001) analysis of English ditransitive idioms is more heavily lexically dependent in the following respects. First, Richards adopts lexical decomposition analysis of verbs. For example, the verb *give* goes into syntactic configuration as CAUSE in (6a), whereas the same verb goes into syntactic configuration as CAUSE and HAVE in (6b). This captures the difference in meaning between the two orders (see Harley 2003, Bresnan et al. 2007 and Levin 2008 for recent relevant work). Richards' main argument is that there exist idioms that consist of a DP along with part of a verb (e.g. HAVE in (6b)). In other words, he uses idioms as supporting evidence for lexical decomposition. Richards' assumption regarding the syntax of idioms is in (7), adopted from Koopman and Sportiche (1991), and this allows the structures in (6) to provide idiom interpretations.

(7)  If X is the minimal constituent containing all the idiomatic material, the head of X is part of the idiom.

In (6b), X is P', but in (6a), X is v' because it must contain v (CAUSE) as I noted above.

Unlike Kishimoto's (2008) analysis of Japanese ditransitive idioms, an idiom is not necessarily a syntactic constituent in Richards's analysis of English ditransitive idioms. This is compatible with the observation that English ditransitive idioms are disjoint (at least on the surface) as we saw in (3) and (4) above. In order to approach the simple yet unanswered problem of *why* Japanese ditransitive idioms are adjacent and English ones are not, I will now change the direction of the discussion and look at the prosody of Japanese and English idioms.

# 4 A Prosodic Analysis

## 4.1 Ditransitive Idioms as Prosodic Constituents

In Japanese, the left edge of a syntactic phrase gets aligned with the left edge of a prosodic domain of downstep (Φ), or with the appearance of initial lowering if the word at the left edge is unaccented. The phrase immediately preceding the verb contains the default sentence stress (Selkirk and Tateishi 1991). Therefore, an accusative DP carries sentence stress in the dative-accusative-V order, and a dative DP carries sentence stress in the accusative-dative-V order. This is schematized in (9a) below. (Sentence stress is in bold.) In contrast, in English, the two internal arguments may be easily contained in the same phonological phrase (Φ), although phonological phrasing varies depending on various factors such as weight, the position of focus, the rate of speech and so on (Nespor and Vogel 1986). (We will see some examples in 4.2.) In English, the right edge of the prosodic domain corresponds to the position for sentence stress. For example, a dative DP carries sentence stress in the V-accusative-dative order, and an accusative DP carries sentence stress in the V-dative-accusative order. This is schematized in (9b).

(9)  a.  Japanese               b.  English
         DPdat [$_\Phi$ **DPacc** V ]        [$_\Phi$ … V DPacc **DPdat** ]
         DPacc [$_\Phi$ **DPdat** V ]        [$_\Phi$ … V DPdat **DPacc** ]

A generalization we notice here is that both in Japanese and English, ditransitive idioms include the verb plus a DP with sentence stress. In Japanese, they are always adjacent because the position of sentence stress is left-adjacent to the verb. In English, they are disjoint because sentence stress is placed sentence-finally. Based on this observation, I propose a prosodic condition on idioms in (10).

(10)  The lexical elements which constitute an idiom must be contained in a well-defined, minimum prosodic domain (Φ) which contains prosodic prominence.

I argue that the distributional difference of idiomatic elements between Japanese and English is attributable to the difference in general prosodic properties of the two languages. Japanese is a pitch-accent language and its sentential prosody is relatively fixed. This contrasts with English, which is an intonation language with relatively mobile prosodic prominence (Ladd 1996). The mobile prosody in English allows the two DPs in ditransitive construction to be contained in the same phonological phrase, extending the size of the phonological phrase compared with Japanese.

## 4.2 Variability in Word Order

A prosodically based analysis of idioms provides a natural account of the sensitivity to prosodic weight in English ditransitive idioms. For example, V-dative-accusative idioms may exhibit the other V-accusative-dative order when the dative DP is heavy, as in (11)-(13) (Richards 2001:187, n.4, Harley 2003, Levin 2008).

(11)  The Count [$_\Phi$ gives the creeps ] [$_\Phi$ to anyone who talks with him for five minutes].
      (cf.  (4)  *give Susan the creeps ~ \*give the creeps to Susan*)
(12)  Oscar will give the boot to any employee that shows up late.

(13)  Police lend an ear to the victims… (COBUILD as cited in Levin 2008:153)

To take (11) for example, the heavy PP forms its own phonological phrase and the accusative DP *the creeps* may have its own prosodic prominence at the right edge of the phonological phrase, satisfying the condition in (10). Furthermore, a V-accusative idiom is subject to heavy NP shift when the accusative DP is heavy (Levin 2008:153).

(14)  You want to lend – to the victims of the disaster [$_{DP}$ the most sympathetic ear possible].

Notice here that the preposition *to* is retained, which differentiates (14) from the idiom *lend DP an ear.* It has been pointed out that when heavy DP shift applies, the shifted DP constitutes its own intonational domain (Rochemont and Culicover 1990, Zubizarretta 1998). I assume that in such cases, the idiomatic meaning gets bleached because the accusative DP carries along too heavy a modifier to retain idiomatic meaning, and hence such cases do not have to obey the prosodic condition in (10). In fact, the V-accusative-dative idioms we saw in (3) truly do *not* show the heavy DP shifted (V-dative-accusative) order (Levin 2008:154).

This kind of word order variation is absent in Japanese, irrespective of the prosodic weight of the DPs.

(15)  a.  Naomi-wa    sannin-no   shougakusei-no         kodomo-tachi-ni  te-o
           Naomi-Top   three-of    elementary.school-of   child-PL-Dat      hand-Acc
           yaita.
           burn
           'Naomi could not handle three elementary school kids'
      b.  *Naomi-wa te-o sannnin-no shougakusei-no kodomotachi-ni yaita.

(16)  a.  Ken-wa    naganen    hoshigatteita  kuruma-o   te-ni     shita.
           Ken-Top   long.time  wanted         car-Acc    hand-Dat  did
           'Ken obtained a car which he had wanted for a long time'
      b.  *Ken-wa te-ni naganen hoshigatteita kuruma-o shita.

For the accusative-V idiom in (15a), the accusative DP cannot precede a long dative DP as in (15b). Likewise, for the dative-V idiom in (16a), the dative DP cannot precede a long accusative DP as in (16b). Thus, as far as prosodic factors such as linear order and heaviness are concerned, the two orders behave the same way. This parallelism naturally follows from the present prosodic analysis, but not the lexical-syntactic analysis we saw in 3.1.

In sum, more variation in word order is found in English ditransitve idioms than in Japanese. I argue that this difference in order variability originates in the general prosodic properties of the two languages. In particular, Japanese is a pitch accent language with relatively fixed prosody, whereas English is an intonation language with relatively mobile prosody.

# 5 Implications and Further Issues

In the previous section, I proposed a prosodic condition on idioms (10) (repeated below).

(10)  The lexical elements which constitute an idiom must be contained in a well-defined,

minimum prosodic domain (Φ) which contains prosodic prominence.

This condition captures the generalization that Japanese ditransitive idioms are adjacent whereas English ditransitive idioms are not always so. Another welcome consequence of the prosodic approach to idioms is that it lends to the account of their acquisition as a case of prosodic bootstrapping (Weissenborn and Höhle 2000, Anttila 2008). That is to say, children can use prosodic cues when they learn idioms, which must be learned on the basis of linguistic experience as part of their native language lexicon.

The prosodically based approach to ditransitive idioms taken in this paper focused on non-syntactic properties of the idioms, such as linear adjacency, phonological phrasing, the position of prosodic prominence, and heaviness. The flip side of this is that I have not looked at their syntactic or semantic-pragmatic properties, and have not taken into considerations many non-prosodic factors such as existence of movement (trace), animacy of DPs, information structure, strategy of ambiguity resolution, and so on, which various studies have shown interact with each other (Levin 2008:153). This paper should be regarded as a starting point for pursuing a prosodically based approach to ditransitive idioms, and to what extent other factors are still needed to account for them is to be explored in future research.

Another promising path to take is to examine how well the present analysis of ditransitive idioms goes with the phonologically based approach to constituent ordering in general (e.g. Anttila 2008, Donati and Nespor 2003). Investigations into this area should provide us with more insights into syntax-phonology interface.

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