SIGNIFICANCE OF LINEAR INFORMATION
IN PROSODICALLY CONSTRAINED SYNTAX

KAYONO SHIOBARA
Bunkyo Gakuin University

This paper argues for the significance of linear information in the computational component. In the grammatical model adopted here, syntactic and prosodic derivations proceed in parallel from left to right in the manner of Phillips’ (1996, 2003) incremental structure-building, and a syntactic object is spelled out as a prosodic object in multiple steps. The approach to linearization based on this model provides a prosodically-based account of the robust contrast between Japanese and English VP-internal, ditransitive idioms: obligatory adjacency in Japanese and optional and extensive disjointness in English. This approach reinforces the significance of linear information in the syntax, which is constrained by prosody (Zec and Inkelas (1990)).

Keywords: prosody, linearization, ditransitive idioms, left-to-right structure-building

1. Introduction

One of the observational facts about VP-internal, 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 the dative alternation and V-accusative idioms may show

* I have greatly benefited from thought-provoking discussion with Kuniya Nasukawa and Hisao Tokizaki. I am also indebted to the audience of the 28th Conference of the English Linguistic Society of Japan, where part of this paper was presented, Christopher Tancredi, and anonymous reviewers of English Linguistics, for insightful comments and discussion. I also thank Leah Gilner for stylistic suggestions. Needless to say, none of them is responsible for any remaining inadequacies in this paper. This study is supported in part by a Grant-in-Aid for Young Scientists (B) from the Ministry of Education, Culture, Sports, Science and Technology, Grant No. 22720165.

English Linguistics 28: 2 (2011) 258–277 — 258 —
© 2011 by the English Linguistic Society of Japan
V-dative-accusative order. In this paper, adopting the derivational linearization model proposed in Shiobara (2004, 2008, 2010), 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 idioms originate in the differences in their general prosodic properties: Japanese is a pitch-accent language with relatively immobile prosody whereas English is an intonation language with relatively mobile prosody.

2. Ditransitive Idioms in Japanese and English

2.1. A Definition of Ditransitive Idioms

A ditransitive idiom is defined here as an idiom consisting of a ditransitive verb and a VP-internal argument. In English, the most typical ditransitive verbs include verbs of physical transfer such as give, lend, hand, sell, return, which describe a scene where an agent participant causes an object/theme to pass into the (near-)possession of an animate receiver/recipient (Malchukov et al. (2010: 2)). Examples with the verb give are shown in (1).

(1) a. Mary gave John a pen.
   b. Mary gave a pen to John.

As is seen in (1), English has both a double object construction in (1a) and a prepositional dative construction in (1b). It does not matter for the purpose of this paper whether the ditransitive idiom at issue takes the double object construction or the prepositional dative construction (see Bresnan et al. (2007) and Rappaport Hovav and Levin (2008) for recent work on differences between the two constructions).

For Japanese, I limit the scope of ditransitive idioms dealt with in this paper to those consisting of a ditransitive verb and a VP-internal argument which is marked by the accusative case marker -o or the dative case marker -ni for ease of comparison with English. The accusative -o typically marks a theme argument, whereas the dative -ni marks different types of arguments. For example, in (2) the dative -ni marks the recipient of flowers whereas in (3) it marks the giver of flowers.¹

¹ The following abbreviations are used in the glosses: Acc: accusative; Dat: dative; Nom: nominative.
Japanese ditransitive verbs also allow alternation of internal arguments, and the examples in (a) above exhibit dative-accusative order and those in (b), accusative-dative order. Again, in this paper we will look at ditransitive idioms in both orders.

2.2. Japanese Adjacent Idioms

Japanese abounds with ditransitive idioms. The examples in (4) are accusative-V idioms and those in (5), dative-V idioms, in the sense that reversing the two DPs is impossible or results in the loss of idiomatic meanings as shown in the starred counterparts (Miyagawa and Tsujioka (2004), Kishimoto (2008)). (Idiom parts are underlined in the examples below.)

(4) dative-accusative-V
a. **genkou-ni** **te-o** **ireru** *te-o genkou-ni ireru*
manuscript-Dat hand-Acc put
‘revise the manuscript’
b. **kodomo-ni** **te-o** **yaku** *te-o kodomo-ni yaku*
kid-Dat hand-Acc burn
‘can’t handle the kid’
c. **shiai-ni** **mizu-o** **sasu** *mizu-o shiai-ni sasu*
game-Dat water-Acc pour
‘interrupt the game’
d. **hanashi-ni** **ochi-o** **tsukeru** *ochi-o hanashi-ni tsukeru*
story-Dat fall-Acc attach
‘give a punch line to a story’

(5) accusative-dative-V
a. **genkou-o** **te-ni** **ireru** *te-ni genkou-o ireru*
manuscript-Acc hand-Dat put
‘obtain a manuscript’
b. **kuruma-o** **te-ni** **suru** *te-ni kuruma-o suru*
car-Acc hand-Dat do
‘obtain a car’
c. \textit{kako-o \underline{mizu-ni} nagasu} \textit{*mizu-ni kako-o nagasu}  \\
\textit{past-Acc \underline{water-Dat} flush}  \\
‘forget the past’  \\
d. \textit{doryoku-o \underline{boo-ni} huru} \textit{*boo-ni doryoku-o huru}  \\
\textit{effort-Acc \underline{bar-Dat} swing}  \\
‘waste the effort’

Although the degree of idiomaticity seems to differ from one idiom to another (Kishimoto (2008: 149)), the idioms in (4) and (5) are thought to be fixed expressions and consist of fixed combinations of lexical items. A generalization is that idiom elements are linearly adjacent, accusative-V or dative-V, in Japanese.\textsuperscript{2}

Let me note here that adjacency of ditransitive idioms in Japanese is independent from the issue of base order in Japanese. It is far from uncontroversial whether the base VP-internal order is dative-accusative in (4), accusative-dative order in (5), or both (see e.g. Hale (1980), Hoji (1985), Saito (1985), Miyagawa (1997), Yatsushiro (2003) among many others for related discussion), and Matsuoka (2003) argues that different verbs take different base orders. As is seen in (4a) and (5a), however, we find the accusative-V idiom \textit{te-o ireru} ‘revise’ and the dative-V idiom \textit{te-ni ireru} ‘obtain,’ which constitute a minimal pair. Therefore, we can reasonably claim that linear adjacency characterizes the distribution of ditransitive idioms in Japanese independently of the issue of base order.

\textsuperscript{2} Given the following (b) examples where an adverbial adjunct, as opposed to an argument, intervenes between idiom elements, the generalization that refers to linear adjacency is too strong.

\begin{description}
\item[(i)] a. \textit{*te-o \underline{genko-ni} \underline{ireta}}  \\
\textit{hand-Acc \underline{manuscript-Dat \underline{put}}}  \\
‘revise the manuscript’  \\
b. \textit{?genko-ni \underline{te-o} \underline{chotto \underline{ireta}}}  \\
\textit{manuscript-Dat \underline{hand-Acc \underline{a little \underline{put}}}}  \\
‘revise the manuscript a little bit’
\item[(ii)] a. \textit{*mizu-\underline{n}i \underline{kako-o} \underline{nagashita}}  \\
\textit{water-Dat \underline{past-Acc \underline{flushed}}}  \\
‘forgot the past’  \\
b. \textit{?kako-o \underline{mizu-ni \underline{su\textcolor{red}{k}}kari} \underline{nagashita}}  \\
\textit{past-Acc \underline{water-Dat \underline{completely \underline{flushed}}}}  \\
‘forgot the past completely’
\end{description}

This paper limits the empirical scope of investigation to examples like (a), and leaves investigation into examples like (b) and their prosodic properties for future research.
2.3. English Disjoint Idioms

English also has ditransitive idioms as seen in (6) and (7) below (Nunberg, Sag and Wasow (1994), Richards (2001), Rappaport Hovav and Levin (2008)). A difference between Japanese and English is that the elements that constitute an idiom must be linearly adjacent in Japanese, whereas they must be disjoint in English (but see 4.3). In fact, “there are evidently no idioms consisting of a verb plus the first of two objects” in English (Hudson (1992: 262), see also Nunberg, Sag and Wasow (1994: 527), O’Grady (1998)).

(6) \( V \)-accusative-dative
   a. throw John to the dogs *throw (to) the dogs John
   b. send John to the showers *send (to) the showers John
   c. take John to the cleaners *take (to) the cleaners John

(7) \( V \)-dative-accusative
   a. give Susan the creeps *give the creeps to Susan
   b. drive Susan bananas *drive bananas to Susan
   c. show Susan the ropes *show the ropes 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. In the next section, I will look at some previous analyses of Japanese and English idioms and their problems.

3. Problems with Lexical-Syntactic Analyses

3.1. Lexical-Syntactic Analysis of Japanese Ditransitive Idioms

On the basis of data from nominalized clauses, and adopting the introduction of an Appl(icative)P(phrase) to ditransitive constructions (Pylkkänen (2002), Miyagawa and Tsujiko (2004)), Kishimoto (2008) argues that accusative-\( V \) and dative-\( V \) idioms in Japanese are base-generated as in (8a) and (8b), respectively. (Idiom sequences are circled below.)

---

3 At this point, I set aside adjacent idioms such as give birth to, give rise to, give the cold shoulder to, give the bucket to, and so on. They involve not only the fixed verb give and an accusative DP, but also the fixed preposition to, and should be treated separately. As we will discuss in 4.2 and 4.3, however, my proposal would not exclude adjacent ditransitive idioms in English.

I also set aside bigger idioms such as Shit hit the fan which are rare in English in any case.
A crucial feature here is the postulation of an “internal” ApplP, which offers a structural position for idiomatically 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 (8a) and V′ in (8b).

Notice that Kishimoto’s analysis of ditransitive idioms is 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 on the verb. If they are likely idioms, such as those in (4) 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 the 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 the higher ApplP, and a non-idiomatic meaning is obtained. Although the syntactic structure proposed by Kishimoto successfully accounts for the syntactic behavior 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, a mysterious non-uniformity exists in that the syntactic configuration in (8b) is solely for dative-V idioms, whereas the configuration in (8a) is not only for accusative-V idioms, but also for ordinary accusative DP-V sequences.

In this respect, English ditransitive idioms pose a challenge to any syntactically-based approach, since idiom parts are disjoint from each other on the surface. Let me turn to some previous analyses of English ditransitive idioms.

3.2. Lexical-Syntactic Analysis of English Ditransitive Idioms

To accommodate the disjointness of ditransitive idioms in English, O’Grady (1998) proposes a soft locality constraint, the Continuity Constraint in (9), where ‘chain’ includes (indirect) head-dependent relations (O’Grady (1998: 284)), and derives the disjointness of English VP idioms from the Hierarchy Constraint in (10).

(9) The Continuity Constraint
A construction’s component parts must form a chain.

(10) The Hierarchy Constraint
Any arguments that are part of a verbal idiom must be lower on the hierarchy than arguments that are not part of the idiom. (agent > theme > goal/location)

The Hierarchy Constraint in (10) faces a problem with V-accusative idioms in (7), where a verb constitutes an idiom with a theme, which is higher on the hierarchy than goal/location. Pointing out the fact that double object constructions such as (7) are semantically different from prepositional dative constructions such as (6), O’Grady gets around the problem by arguing that the non-theme argument in (7) is a recipient, not a goal/location, and recipient is higher on the hierarchy than theme.

Richards (2001) proposes a lexical decomposition analysis of ditransitive idioms in English. On the basis of ditransitive-transitive alternations (e.g. The Count gives Mary the creeps (ditransitive) ~ Mary got the creeps (transitive) vs. Laura gave birth to Nolan (ditransitive) ~ *Laura got birth (transitive)), Richards proposes that V(give)-accusative-(to)dative (fixed) expressions and V(give)-dative-accusative idioms have the structures in (11a) and (11b) below, respectively.
In the V-dative-accusative order depicted in (11b), 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 (11a), on the other hand, 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 examples of disjoint 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, disjoint V-accusative-dative idioms must consist of CAUSE and P’, which is not a syntactic constituent.

Compared with 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 a lexical decomposition analysis of verbs. For example, the verb give goes into a syntactic configuration as CAUSE in (11a), whereas the same verb goes into a syntactic configuration as CAUSE and HAVE in (11b). This captures the difference in meaning between the two orders as O’Grady (1998) does (see also Harley (2003), Bresnan et al. (2007) and Rappaport Hovav 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 (11b)). In other words, he uses disjoint V-accusative idioms as supporting evidence for lexical decomposition. Richards’ assumption regarding the
syntax of idioms is (12), adopted from Koopman and Sportiche (1991), and this allows the structures in (11) to provide idiomatic interpretations.

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

In (11b), X is P', but in (11a), X is v', because it must contain v (CAUSE), as I noted above.

Thus, unlike Kishimoto’s (2008) analysis of Japanese ditransitive idioms, an idiom is not necessarily a syntactic constituent in Richards’ 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 (6) and (7) above.

3.3. Summary of the Problems

It is not obvious how the previous syntactically-based analyses of Japanese and English ditransitive idioms we saw in 3.1 and 3.2 could be extended to apply cross-linguistically. For example, does Kishimoto’s analysis predict that English ditransitive idioms also have ApplP layers or not? Does O’Grady’s Hierarchy Constraint in (10) also apply to Japanese ditransitive idioms even though there is no obvious thematic difference between dative-accusative-V order and accusative-dative-V order in Japanese? Likewise, what does Richards’ lexical decomposition analysis predict for Japanese ditransitive idioms? To my knowledge, there has not been any comparative analysis of ditransitive idioms in general. Yet, the contrast between adjacency of Japanese idioms and disjointness of English idioms is too robust to be left unexplained.

In order to approach the simple yet unanswered problem of why Japanese ditransitive idioms display adjacency while English ones do not, I will now change the direction of the discussion and look at the prosody of Japanese and English idioms.

4. A Prosodic Approach

I take a different path from previous analyses and shed light on prosodic aspects of ditransitive idioms in Japanese and English. Section 4.1 will look at prosodic properties of Japanese and English ditransitive idioms. Then in 4.2, I will illustrate the background assumptions about the grammatical model, and show how a prosodic approach to ditransitive idioms is situated in this model. Section 4.3 will discuss welcome consequences of the prosodic analysis proposed.
4.1. The Prosody of Ditransitive Idioms

In Japanese, the left edge of a syntactic phrase gets aligned with the left edge of a prosodic domain of downstep (Φ, indicated by a straight line in (13a) below), 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), indicated by boldface in (13a) below). This prosodic pattern stays the same regardless of word order differences (Ishihara (2003), Shiobara (2004, 2010)). 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 (13a) below.

In contrast, in English, the two internal arguments may be easily contained in the same phonological phrase (Φ), although phonological phrasing in English varies depending on factors such as weight, position of focus, rate of speech and so on (Nespor and Vogel (1986)). The right edge of the prosodic domain corresponds to the position for sentence stress. For example, the dative DP carries sentence stress in the V-accusative-dative order, and the accusative DP carries sentence stress in the V-dative-accusative order. This is schematized in (13b).

\[\text{(13) a. Japanese} \quad \begin{array}{l}
\text{DPdat} | \Phi \text{DPacc} \quad \text{V} \\
\text{DPacc} | \Phi \text{DPdat} \quad \text{V}
\end{array} \quad \text{b. English} \quad \begin{array}{l}
\text{\Phi V DPacc DPdat} \\
\text{\Phi V DPdat DPacc}
\end{array}\]

(\(\Phi = \text{prosodic domain, e.g. phonological phrase, intonational phrase, major phrase})

A generalization that can be made about the prosody of ditransitive idioms is that, both in Japanese and English, ditransitive idioms include the verb plus a DP with sentence stress. In Japanese, they are 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.\(^4\)

I argue that the distributional difference of idiom parts between Japanese

\(^4\) It is not trivial to determine whether ditransitive idioms follow the general prosodic pattern of ditransitive VPs. At least intuitively, however, the DP immediately left-adjacent to the verb in a ditransitive idiom retains its lexical pitch accent (e.g. te-o in te-o ireru ‘hand-Acc put’) or exhibits initial lowering when unaccented (e.g. mizu-o in mizu-o sasu ‘water-Acc pour’). I assume here that the prosodic pattern depicted in (13a) applies generally to Japanese ditransitive VPs including ditransitive idioms.
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 due to the presence of lexically specified pitch accent. This contrasts with English, which is an intonation language with relatively mobile prosodic prominence. Let me quote Pierrehumbert and Beckman (1988), where they compare the intonation systems of English and Japanese concisely:

In Japanese pitch accents are specified in the lexicon. Phrasal tones are assigned in a determinate way on the basis of prosodic structure. In English, by contrast, pitch accents are not part of the lexical specification of words. Instead, they are elements in an inventory of intonational morphemes, which also includes the H or L phrase accent and the H% or L% boundary tone.

(Pierrehumbert and Beckman (1988: 237))

The mobile prosody in English allows the two DPs in a ditransitive construction to be contained in the same phonological phrase, extending the size of the phonological phrase to the whole VP.

Assuming that ditransitive idioms in Japanese and English have the prosodic patterns depicted in (13a) and (13b), respectively, let me propose the following Prosodic Condition on ditransitive idioms:

(14) Prosodic Condition on Ditransitive Idioms (extension of Shiobara (to appear))

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

A “well-defined” prosodic domain refers to one with a relevant prosodic prominence such as default sentence stress. Notice here that this prosodic condition does not seem to exclude adjacent ditransitive idioms in English although it does exclude disjoint ditransitive idioms in Japanese. How are the unacceptable adjacent idioms in (6b) and (7b) excluded in English then? Unlike Japanese, English prosody is mobile and it varies easily when the word order changes. In 4.3, I will come back to these examples and argue that they are excluded for independent prosodic reasons. Before that, let me introduce the model of grammar I assume in explaining the distributional properties of Japanese and English ditransitive idioms.

4.2. Left-to-Right Structure-Building and Prosodic Phases

First of all, I assume that syntactic structure and prosodic structure are built in parallel from left to right in line with Phillips (1996, 2003). They are then mapped by alignment constraints (McCarthy and Prince (1993)),
SIGNIFICANCE OF LINEAR INFORMATION IN PROSODICALLY CONSTRAINED SYNTAX

and spell-out applies iteratively (Uriagereka (1999), Chomsky (2001)) to pairs of syntactic-prosodic objects, in accordance with the Prosodic Phase Hypothesis in (15) (Shiobara (2004, 2008, 2010)). Sample derivations of Japanese and English ditransitive constructions are illustrated in (16).


A syntactic object is spelled out as a prosodic object.

(16) a. Japanese: Align-L (XP, MaP)

step 1

```
VP
  \   \ mapping by Align
  /    / Φ(MaP1) spell-out
DP1    ⇒ ➔ DP1

⇒ {DP1, MaP1}
```

step 2

```
VP
  \   \ mapping by Align
  /    / Φ(MaP2) spell-out
DP1  /   \ DP2
     /     \ V
     /      ⇒ {DP2 V, MaP2}
```

b. English: Align-R (VP, PPh)

```
VP
  \   \ mapping by Align
  /    / Φ(PPh) spell-out
V    ⇒ ➔ V DP1 P
     \   \⇒ {V DP1 P DP2, PPh}
DP1  P
     /   \ DP2
```

In Japanese, the first internal argument, DP1, initially gets merged in the VP (step 1). Then, the second internal argument, DP2, and the verb are merged incrementally from left to right (step 2). The left edge (L) of a syntactic phrase (XP) is aligned with the left edge of a prosodic domain (Φ), namely a Major Phrase (MaP), and hence the ditransitive VP is spelled out in two steps, and divided into two MaPs. Thus, the Prosodic Phase Hypothesis in (15) is instantiated in this case as “a syntactic phrase is spelled out as a MaP.” When spelled out, the DP left-adjacent to the verb gets assigned sentence stress (cf. 4.1).

In English, the verb and the two internal arguments get merged from left to right. Unlike Japanese, the whole VP can be contained in one prosodic
domain. In other words, the right edge (R) of the VP is aligned with the right edge of a prosodic domain, namely a Phonological Phrase (PPh), and the ditransitive VP is spelled out at once as one PPh. Thus, the Prosodic Phase Hypothesis in (15) is instantiated in this case as “the whole VP is spelled out as a PPh.” When spelled out, the sentence-final DP gets assigned sentence stress.5

This kind of parallel, derivational model of the grammar is driven by the Prosodic Phase Hypothesis, which, in turn, is based on the fact that linearization is largely determined by prosodic considerations. Although the empirical coverage is limited in this paper to ditransitive idioms in Japanese and English, there is a growing body of research which demonstrates that linearization is driven by non-syntactic principles, e.g. prosodic-phonological principles (see Erteschik-Shir and Rochman (2010) for general discussion), and performance principles (Hawkins (1994, 2004)). The gist of the Prosodic Phase Hypothesis is compatible with these previous proposals in arguing that linear order is (at least in part) determined by non-syntactic principles, namely, the left-to-right nature of sound production and perception, in line with the linear nature of the flow of time. A point to note, however, is that in the model of grammar proposed here, the prosodic effect on linear order is incorporated into the computational component as a number of grammatical principles, such as parallel, left-to-right structure-building of syntactic and prosodic objects, iterative mapping of syntactic and prosodic objects by alignment constraints, and iterative spell-out of pairs of syntactic and prosodic objects. Ultimately, the head-complement order should also be determined by prosody as argued for by Shukla and Nespor (2010) and Tokizaki’s Article in this series.

Going back to the prosodic condition of ditransitive idioms in (14), I revise and generalize it in accordance with the derivational model of the grammar depicted in (16):

(17) Condition on Ditransitive Idioms (generalized)

Idiom parts must be spelled out together.

Given the multiple spell-out of pairs of syntactic and prosodic objects, the condition in (17) guarantees that idioms parts are adjacent in Japanese, whereas they do not have to be so in English. With regards to the illegitimate idioms in English we saw in (6) and (7), I will argue that they are

filtered out by independently prosodic conditions. Let us see how in the next section.6

4.3. More on the Prosodic Conditions on Linear Order

Let us go back to the prosodic properties of ditransitive idioms in Japanese and English. In 4.1, we noted that in Japanese the prosodic pattern does not change when the word order changes from dative-accusative-V order to accusative-dative-V order, or vice versa. What about in English? English is an intonation language, and the positions of lexical stress easily change in accordance with the Rhythm Rule depending on where a lexical item appears in the sentence (Nespor and Vogel (1986), Ladd (1996), Anttila (2008)). In other words, the sentence prosody in English is mobile and changes depending on word order.

In the disjoint ditransitive idioms we saw in (6) and (7) (repeated below as (6′) and (7′), with prosodic annotations), default sentence stress should be assigned to the DP in sentence-final position.

(6′) V-accusative-dative
a. |Φ throw John to the dogs| *|Φ throw (to) the dogs John|

b. |Φ send John to the showers| *|Φ send (to) the showers John|
c. |Φ take John to the cleaners| *|Φ take (to) the cleaners John|

(7′) V-dative-accusative
a. |Φ give Susan the creeps| *|Φ give the creeps to Susan|
b. |Φ drive Susan bananas| *|Φ drive bananas to Susan|
c. |Φ show Susan the ropes| *|Φ show the ropes to Susan|

Therefore, although idiom parts are contained in a Phonological Phrase (PPh), a spell-out domain in English, illegitimate idioms differ from legitimate counterparts in that they do not carry prosodic prominence. Given this, I propose a prosodic condition in (18).

(18) Prominence in Ditransitive Idioms

A ditransitive idiom must carry prosodic prominence.

This condition is trivially satisfied in Japanese ditransitive idioms, because an idiom part always occupies the default sentence stress position, i.e. the

6 On the semantic side, I take the traditional view that a syntactic object is transferred into the semantic component and mapped to an LF simultaneously. Since idioms are lexically fixed expressions, I assume that their meanings are written in the lexicon and the idiom parts are annotated with their idiomatic meanings when they enter the Numeration.
position left-adjacent to the verb.\textsuperscript{7}

What if the right edge of the first DP is aligned with the right edge of a
PPh, and the DP part of the idiom (e.g. dog, showers, cleaners in (6), and
creeps, bananas, ropes in (7)) carries a phrasal stress, which is possible in
English with its mobile prosody? In such cases, the sentence-final DP is
spelled out on its own and hence constructs a PPh on its own. I assume
that these are independently excluded by a prosodic condition, which rules
out a PPh with only one prosodic word (PWd):

\begin{equation}
\text{(19) } *\text{PPh}
\end{equation}

| PWd

This is a manifestation of a general weight constraint that one prosodic cat-
egory is not heavy enough to constitute a bigger prosodic category.

This prosodically-based analysis of idioms provides a natural account of
the sensitivity to prosodic weight in English idioms in general. For ex-
ample, V-dative-accusative idioms may exhibit the other V-accusative-dative
order when the dative DP is heavy, as shown in (20) and (21) (Richards
(2001: 187, fn. 4), Harley (2003), Rappaport Hovav and Levin (2008)).

\begin{equation}
\text{(20) } |_{\phi} \text{The Count gives the creeps} |_{\phi} \text{to anyone who talks with him for five minutes}.
\end{equation}

\begin{equation}
\text{(21) } \text{Oscar will give the boot to any employee that shows up late.}
\end{equation}

In (20) and (21), owing to its heaviness, the sentence-final PP forms its own
PPh and the accusative DP gains its own prosodic prominence, a phrasal
stress, at the right edge of the phonological phrase, satisfying the condition
in (18). The fact that a heavy phrase gets to form its own prosodic domain
has been pointed out for heavy XP shift in general (Rochemont and Cul-
icover (1990), Zubizarreta (1998), Shiobara (2004, 2010)).\textsuperscript{8}

This kind of word order variation is absent in Japanese, irrespective of
the prosodic weight of the DPs. Based on performance evidence, Hawkins
(1994) and Yamashita and Chang (2001) point out that there is a heavy-to-

\textsuperscript{7} This leaves a remaining problem of how to distinguish between the illegitimate idioms in (6') and (7') and the legitimate fixed expressions in English (e.g. give birth to, give the cold shoulder to) I mentioned in fn. 3.

\textsuperscript{8} Interestingly and mysteriously, the illegitimate adjacent idioms in (6) do not improve even when the dative DP becomes heavy. Rappaport Hovav and Levin (2008: 154) ascribe this observation to the thematic difference between the double object construction and the prepositional dative construction, but this does not explain why illegitimate adjacent idioms in (7) improve with weight manipulation. I would like to leave a fuller examination of the prosody of these cases for future research.
light preference in Japanese. Such a weight effect, however, is not found in Japanese ditransitive idioms. For example, in (22a) below, a heavy accusative DP does not impair the dative-accusative-V idiom. In (22b), a heavy accusative DP and a light dative DP does not significantly improve the disjoint accusative-dative-V idiom.

(22) a. Naomi-wa hanashi-ni [DPacc daremo omoitsuka-nai youna
    Naomi-Top story-Dat nobody imagine-Neg like
    migotona ochi]-o tsuketa.
    wonderful fall-Acc attach
    ‘Naomi gave a wonderful punch line that no one could imagine to the story.’

b. ??Naomi-wa [DPacc daremo omoitsuka-nai youna migotona ochi]-
    o hanashi-ni tsuketa.

Interestingly, when an idiom part like ochi-o ‘fall-Acc’ gets focal stress as in (23) (indicated by upper case letters), the domain of Major Phrase (MaP) is extended toward the end of the sentence and the sentence improves, despite the fact that idiom parts are disjoint from each other.

(23) Naomi-wa daremo omoitsuka-nai youna |Φ MIGOTONA OCHI-o
    hanashi-ni tsuketa].

The well-formedness of (23) is predicted by the prosodic condition in (17): idiom parts are contained in the same MaP and hence spelled out together, and the idiom contains prosodic prominence, namely a focal stress, on the accusative DP.9,10

Furthermore, the prosodic condition in (17) extends to Japanese adjacent idioms in general. For example, Japanese has adjacent dative-nominative-V idioms such as those in (24), where the dative DP acts as an adjunct and

9 We need an additional alignment constraint which ensures that the left edge of a focused element gets aligned with the left edge of a prosodic object. See Shiobara (2004, 2010) for cases where foci are involved.

10 I do not have any explanation for larger adjacent dative-accusative-V idioms as in (i) in Japanese.

(i) a. kusai mono-ni huta-o suru
    stinky thing-Dat lid-Acc do
    ‘cover up unfavorable things’

b. kao-ni doro-o nuru
    face-Dat mud-Acc paint
    ‘bring shame on (others)’

The prosodic condition in (17) would wrongly rule out these idioms, because the alignment constraint in Japanese inserts a MaP boundary between the dative DP and the accusative DP, and hence the idiom parts are not spelled out together.
the verb is intransitive. This is because they have the same, fixed prosodic pattern as ditransitive idioms.

(24) a. \(\Phi\) hanashi-ni \(\Phi\) hana-ga saku \(\Phi\) *hana-ga hanashi-ni saku
story-Dat flower-Nom bloom
‘(people) getting excited about the story’

b. \(\Phi\) mondai-ni \(\Phi\) keri-ga tsuku \(\Phi\) *keri-ga mondai-ni tsuku
matter-Dat end-Nom attach
‘the matter getting finished’

In dative-nominative-V idioms, the nominative DP carries sentence stress, and it gets spelled out with the following verb as a MaP.

In sum, the prosodic condition in (17) 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 itself to prosodic bootstrapping in acquisition (Weissenborn and Höhle (2000), Anttila (2008)). 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 (cf. fn. 6). Needless to say, a further cross-linguistic investigation into idioms in general is necessary to test the adequacy of the prosodically-based analysis proposed in this paper.

5. Conclusion and Remaining Issues

In this paper, I pointed out that there is a robust contrast between Japanese and English ditransitive idioms: idiom parts must be adjacent to each other in Japanese, whereas they can be disjoint from each other in English. I argued that this contrast is well captured in prosodic terms, given the contrast in general prosodic properties between Japanese and English: Japanese is a pitch accent language with relatively immobile prosody, whereas English is an intonation language with relatively mobile prosody.

Based on the grammatical assumptions that (i) syntactic and prosodic structures are built from left to right in parallel, and (ii) pairs of syntactic and prosodic objects are spelled out iteratively to the phonological component, I argued that the condition in (17) correctly rules in adjacent ditransitive idioms in Japanese and disjoint ditransitive idioms in English, and correctly predicts that disjoint ditransitive idioms in Japanese should not be generated. Furthermore, I showed that independent prosodic conditions in (18) and (19) rule out illegitimate adjacent ditransitive idioms in English. Thus, the prosodic approach pursued in this paper reinforces the
significance of linear information incorporated as a left-to-right structure-building mechanism in syntax, which is constrained by prosody (Zec and Inkelas (1990)).

This is not the end of the story of idioms, of course. One of the next questions is how the prosodic conditions proposed and discussed in this paper interact with syntactic conditions that have been proposed in accounting for syntactic properties of idioms or internal arguments in general, such as mobility of idiom part, scope, and so on (Bruening (2010)). Another interesting domain to look at is sign language. At this point, my knowledge of sign language is too limited for me to make any meaningful predictions. If sound and sign are two different modes of externalization, it should be the case that idioms in sign languages are constrained in a different way from spoken languages. In any case, investigation of the interaction of different types of principles should provide us with more insights into the architecture of the language faculty.

REFERENCES


Hoji, Hajime (1985) *Logical Form Constraints and Configurational Structures in*
Language 68, 251–276.
Selkirk, Elisabeth and Koichi Tateishi (1991) “Syntax and Downstep in Japanese,” Interdisciplinary Approaches to Language, ed. by Carol Georgopoulos and
Tokizaki, Hisao (this volume) “The Nature of Linear Information in the Morphosyntax-PF Interface.”

[received May 25 2011, revised and accepted September 24 2011]

Department of Foreign Studies
Bunkyo Gakuin University
1–19–1 Mukougaoka
Bunkyo-ku
Tokyo 113–0023
e-mail: kayono@fs.u-bunkyo.ac.jp