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3 The position of *to*/Ø-marked mimetics in Japanese sentence structure

Kiyoko Toratani

3.1 Introduction

This study examines morpho-syntactic characteristics of Japanese mimetics, or sound-symbolic expressions (Hamano 1998), focusing on their position within the sentence structure. The mimetics under investigation are those marked by *to*, generally accepted as 'quotative,' such as *koN-to* 'sound of a knock' in (1a), and those with no marking, such as *nikoniko* 'manner of smiling' in (1b), indicated as 'zero-' or 'Ø-marked.'[1]

(1) a. *Maki-wa* *koN-to* *tatai-ta.*
Maki-TOP MIM-QUOT hit-PST
'Maki knocked once (lit. Maki hit *koN*).'
b. *Maki-wa* *nikoniko* *warat-ta.*
Maki-TOP MIM laugh-PST
'Maki smiled (lit. Maki laughed *nikoniko*).'

The *to*/Ø-marked mimetics constitute the large majority of Japanese mimetics (Hamano 1998: 12; Miyauchi et al. 2011; Toratani 2013: 87) and are typically classed as adverbs or adverbials.[2] Their adverbial usage has been much discussed (e.g. Shibatani 1978; Tamori 1980, 1988; Kita 1997; Hamano 1998; Tamori & Schourup 1999; Akita 2009; Akita & Tsujimura 2016; cf. Akita 2013b). However, observations are interspersed across studies, with no attempt to consolidate them. Nor has any research focused on the structural positions of mimetics. Moreover, the application of a syntactic theory remains relatively rare. Although Toratani (2007) adopts Role and Reference Grammar (RRG) to analyze mimetics, her empirical coverage is limited, as she discusses only one type of *to*/Ø-marked mimetics.

This study offers a more comprehensive analysis of *to*/Ø-marked mimetics, focusing on (i) the position of mimetics with respect to the predicate in the linear order of the sentence, and (ii) the position of mimetics in syntactic structure. The first point is explored by examining the usage of *to*/Ø-marked mimetics in literary texts, with a view to grasping where they tend to occur in the sentence. This analysis finds that mimetics occur most frequently at the immediately preverbal position. The second point is explored by means of a syntactic analysis using the framework of RRG. Specifically, I seek to distinguish among different types of

to/Ø-marked mimetics with the aid of the diagnostic tests commonly used for identifying adverbs and adjuncts (omissibility, permutability, and substitutability) (cf. Givón 1984; Somers 1984). I find that *to*/Ø-marked mimetics contain both adjuncts and non-adjuncts and comprise more diverse subtypes than hitherto considered (Toratani 2007; cf. Figure 3.4 below). Finally, building on the findings on the position of mimetics, I consider the motivations for the positioning of mimetics in the sentence. Findings suggest that (i) structural requirements and pragmatic requirements account for those occurring at the immediately preverbal positions, (ii) variable positioning of mimetics away from the verb is likely to be accounted for by a pragmatic strategy to highlight the difference between demonstration (depiction) and description (McGregor 1994, 2001; cf. Dingemanse 2012, 2015), and (iii) the marking distribution of *to* and Ø is not completely random but closely related to the syntactic position of the mimetics.

The discussion proceeds as follows. Section 3.2 reports the result of a textual count of mimetics, on the basis of which three questions are generated on their position and marking. Section 3.3 moves to RRG analysis, examining the syntactic positions that mimetics occupy. Section 3.4 attempts to answer the questions raised in Section 3.2. Section 3.5 offers concluding remarks and situates the findings typologically.

3.2 Frequency count

3.2.1 Preamble

This section offers a frequency-count-based analysis of the positions of *to*/Ø-mimetics to obtain a general picture of their occurrences.

Mimetics are divided into the following four types based on their morphophonological shapes.

(2) a. Reduplicated:

nikoniko	'smilingly'
kotukotu	'click-click'
yotiyoti	'toddle-toddle'

b. One-time-instantiated:

toN	'a tap'
batyaQ	'a splash'
giiQ	'a squeak'

c. *Ri*-suffixed:

yuQkuri	'slowly'
hoNnori	'lightly'
taQpuri	'a lot'

d. Variant:

tyaQtyaki	'popping'
toN, toN, toN	'tap, tap, tap'
paraparaQ	'sprinkling'

The *to*/Ø-marked reduplicated forms (2a) have a fully reduplicated base, as in *nikoniko* 'smilingly,' with a single accent falling onto the initial vowel, as in /níkoniko/ (the accent will be indicated only when it becomes relevant). One-time-instantiated forms (2b) have a single, non-reduplicated or non-repeated base, as in

toN 'a tap.' *Ri*-suffixed forms (2c) consist of four morae, occurring in the CVCCV*ri* structure, which ends in the suffix *ri*, as in *yuQkuri* 'slowly.'[3] All others are categorized as 'variants;' these include a nonce form (e.g. *tyaQtyaki* '(peas) popping' (Aoki, 59)),[4] a repeated form of the one-time-instantiated form (e.g. *toN, toN, toN* 'tap, tap, tap') and a reduplicated form (e.g. *butubutu butubutu* 'mumble-mumble mumble-mumble'), a non-fully reduplicated form (e.g. *paraparaQ* 'sprinkling'), 'superexpressives' (an emphatic form of conventional mimetics such as *burororo-rooQ* 'vroooooom') (Akita 2009: 20) and 'innovatives' (a newly created mimetic or new use of a conventional mimetic such as *dodooN* 'ka-boom') (Akita 2013a: 332).

When these mimetics appear within a sentence, *to*-marking is obligatory for some but optional for others. This contrast is illustrated in (3). The example contains variants of *nikoniko* 'smilingly,' all conveying a manner of smiling but differing in the degree of iconicity (e.g. the broadness of the depicted smile, the duration of the smile).

(3) a. *Maki-ga* *nikoQ-to (*Ø)* *warat-ta.* [one-time-instantiated]
Maki-NOM MIM-QUOT laugh-PST
'Maki smiled (lit. laughed *nikoQ*).'

b. *Maki-ga* *nikoniko-to/Ø* *warat-ta.* [reduplicated]
Maki-NOM MIM-QUOT laugh-PST
'Maki smiled (lit. laughed *nikoniko*).'

c. *Maki-ga* *niQkori-to/Ø* *warat-ta.* [*ri*-suffixed]
Maki-NOM MIM-QUOT laugh-PST
'Maki smiled (lit. laughed *niQkori*).'

d. *Maki-ga* *nikonikoQ-to (*Ø)* *warat-ta.* [variant]
Maki-NOM MIM-QUOT laugh-PST
'Maki smiled (lit. laughed *nikonikoQ*).'

e. *Maki-ga* *nikoniko, nikoniko-to/Ø* *warat-ta.* [variant]
Maki-NOM MIM-QUOT laugh-PST
'Maki smiled (lit. laughed *nikoniko, nikoniko*).'

As the asterisk on the 'Ø' indicates, one-time-instantiated forms (3a) and some variant forms (3d) require *to*-marking to appear in a sentence.[5] Reduplicated forms (3b), *ri*-suffixed forms (3c), and some variant forms (3e) can appear in a sentence with or without *to*: i.e. *to*-marking is said to be syntactically optional (Tamori & Schourup 1999: 65–68; cf. Hamano 1998: 13). In such instances, the marking difference results in no difference in the truth conditional meaning, as the shared gloss indicates (cf. Section 3.4.3).

3.2.2 Data

Data for this study were manually compiled, with 1,322 tokens (455 types) of *to*/Ø-marked mimetics gathered from eight literary sources (see the primary sources reference section), to observe where mimetics generally occur within a sentence. While some previous studies have examined the positions of mimetics

Table 3.1 Type and token frequency of the data

	Tokens	*Types*	*Type/tokenRatio*
Reduplicated:	**325 (24.6%)**	142	43.7%
Ø-marked:	160 (12.1%)		
to-marked:	165 (12.5%)		
Ri-suffixed:	**398 (30.1%)**	66	16.6%
Ø-marked:	227 (17.2%)		
to-marked:	171 (12.9%)		
One-time instantiated: *to*-marked:	**550 (41.6%)**	204	37.1%
Variant:	**49 (3.7%)**	43	87.8%
Ø-marked:	5 (0.4%)		
to-marked:	44 (3.3%)		
Total	**1,322 (100%)**	455	

(Toratani 2006; Shibasaki 2009), they have looked only at the positions of reduplicated forms. To paint a more comprehensive picture of the position of mimetics, the present study includes all forms introduced in (2).

For each mimetic, the type of the form shown in (2) and the marking type (*to* or *Ø*) were recorded. Table 3.1 shows the distribution of the data in type and token frequency.

As indicated in the table, one-time-instantiated forms (obligatorily *to*-marked) occur the most frequently (41.6%), while *Ø*- and *to*-marked variants appear the least frequently (0.4% and 3.3% respectively). The remainder are distributed at a rate roughly around 12% to 17%. The type-token ratio is lower for *ri*-suffixed forms (i.e. more overlapped forms) than other forms (i.e. fewer overlapped forms), among which the variant forms have the highest type-token ratio.

Next, for each token, the position of the mimetic in terms of the distance between the mimetic and the host predicate was coded by slightly modifying the method used in Toratani (2006).[6] Elements of a sentence were segmented into a unit, tested by the insertability of the particle *ne* as shown in (4).

(4) a. *Kare-no*$_{ne}$ *me-o*$_{ne}$ *ziQ-to*$_{ne}$ *mi-ta.*
he-GEN eye-ACC MIM-QUOT look-PST
1 host verb
'She looked at his eyes *hard.*'

(Ikezawa, 113)

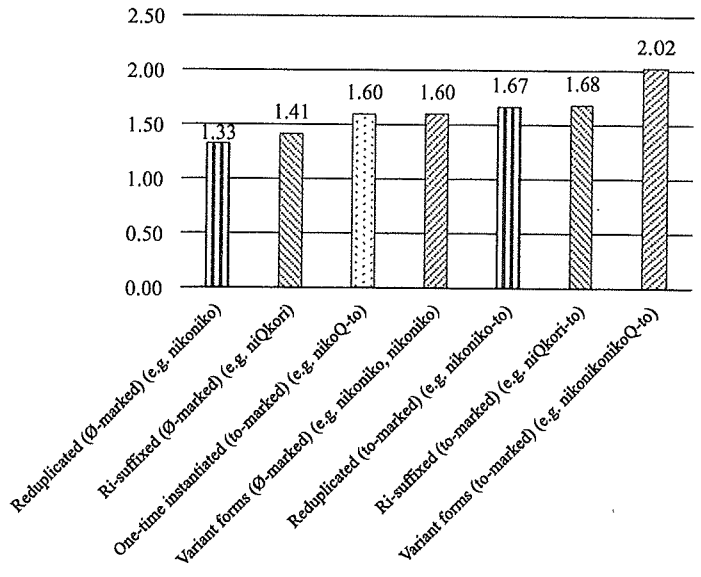
b. *KaraN, to*$_{ne}$ *doa-ni*$_{ne}$ *tuke-rare-ta*$_{ne}$ *kauberu-ga*$_{ne}$ *nat-te, . . .*
MIM QUOT door-LOC attach-PASS-PST cowbell-NOM ring-L
4 3 2 1 host verb
'*Clang,* the cowbell rang which is attached to the door and . . .'

The particle *ne* can be inserted after a unit, traditionally called *bunsetu* (lit. 'sentence section'); the unit is typically phrasal, such as a nominal combined with a particle as in *me-o* [eye-ACC] in (4a).[7] Every segmented unit was assigned a value incrementally, beginning with 1 (i.e. the immediately preverbal position) toward the beginning of the sentence. More specifically, for each occurrence of a mimetic, a value such as 1 in the case of (4a) or 4 in the case of (4b) was recorded as the distance of the mimetic from the host predicate. The use of the term 'host' indicates that the mimetic is semantically bound to the element. In other words, the host provides a foundational meaning on the basis of which the meaning of the mimetic can be properly interpreted.[8] Thus, the mimetic-host combination should yield a sensible meaning. The hosts are usually the mimetics' clause-mate verbs (e.g. *mi-* 'look' for *ziQ* 'a stare' (4a)) or adjectives, but can be verbs in far proximity, as in *nar-* 'ring' for *karaN* 'clang' (*karaN-to nar-* 'ring (going) *clang*'), rather than closer ones, as in *tuke-* 'attach' in (4b) (**karaN-to tuke-* 'attach (going) *clang*'). After recording the value for each token, the mean distance was calculated for each mimetic form.

3.2.3 Results

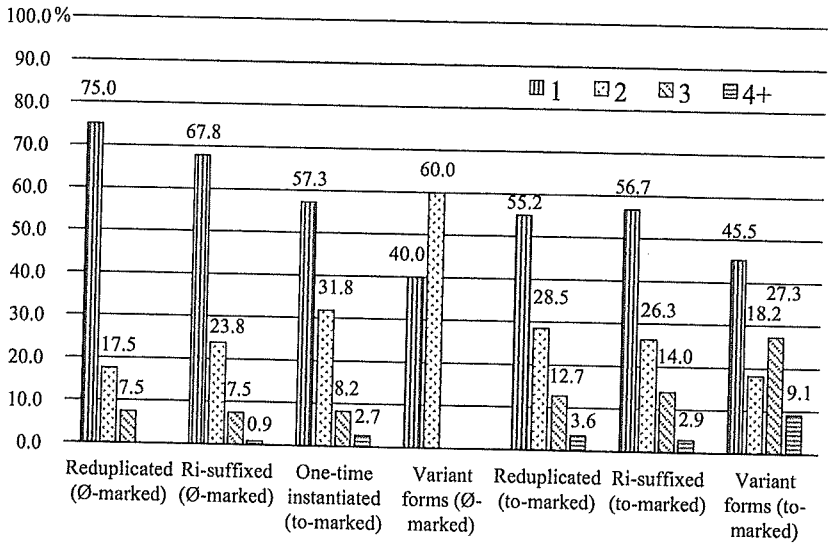
Figure 3.1 presents the mean distance of the mimetic from its host predicate by mimetic form.

As the figure shows, when the mimetic allows an alternative marking between *to* and *Ø*, the *Ø*-marked form has a smaller value than its *to*-marked counterpart (reduplicated: 1.33 vs. 1.67; *ri*-suffixed: 1.41 vs. 1.68; variant: 1.60 vs. 2.02). This result is consistent with the previous observation that *Ø*-marked reduplicated forms occur close to the verb more frequently than their *to*-marked counterparts (Toratani 2006: 417; cf. Shibasaki 2009: 87). In addition to this, these results show that the *ri*-suffixed and variant forms pattern analogously to reduplicated forms.[9] Additionally,



the overall mean distance is 1.38 for Ø-marked mimetics and 1.64 for *to*-marked mimetics, thus confirming that Ø-marked forms occur closer to the verb.

Furthermore, mean values range between 1.33 (Ø-marked reduplicated) and 2.02 (*to*-marked variant forms), suggesting that a fair number of tokens occur close to the host predicate, most likely at the immediately preverbal position, or Position 2. To verify this point, the results from Figure 3.1 are rearranged in Figure 3.2; the ratio of tokens per position is now more clearly indicated.



1	75.0 (120/160)	67.8 (154/227)	57.3 (315/550)	40.0 (2/5)	55.2 (91/165)	56.7 (97/171)	45.5 (20/44)
2	17.5 (28/160)	23.8 (54/227)	31.8 (175/550)	60.0 (3/5)	28.5 (47/165)	26.3 (45/171)	18.2 (8/44)
3	7.5 (12/160)	7.5 (17/227)	8.2 (45/550)	0.0 (0/5)	12.7 (21/165)	14.0 (24/171)	27.3 (12/44)
4+	0.0 (0/160)	0.9 (2/227)	2.7 (15/550)	0.0 (0/5)	3.6 (6/165)	2.9 (5/171)	9.1 (4/44)
Total	100.0 (160/160)	100.0 (227/227)	100.0 (550/550)	100.0 (5/5)	100.0 (165/165)	100.0 (171/17)	100.0 (44/44)

Figure 3.2 Token Frequency (%) by position

A few observations can be made about the distribution in Figure 3.2. First, the Ø-marked reduplicated forms occur at a higher rate at the immediately preverbal position ('1') (75%) than any other forms, with more limited distribution at Positions 2 and 3, indicating their high concentration at positions very close to the verb. Second, *to*-marked forms tend to be distributed more widely at different positions than Ø-marked forms, as indicated by the distributions of the bars at different positions: all *to*-marked forms have four bars, whereas among the Ø-marked forms, only *ri*-suffixed ones have four bars. Third, as the tallest bars on the left in Figure 3.2 indicate, mimetics occur most frequently in the immediate preverbal position, regardless of the form or the presence of *to*, except for Ø-marked variant forms, which constitute less than 0.4% of the data (cf. Table 3.1). This is consistent with the overall distribution of the tokens according to the position (disregarding the differences of forms), which reads as follows: Position 1=799 (61%), Position 2=360 (27%), Position 3=131 (10%), and Position 4 and above=32 (2%).

To summarize, first, *to*/Ø-marked mimetics tend to concentrate at the immediately preverbal position or in close proximity to their host predicates, although some forms may occur away from the verbs. Second, their distribution over different positions based on the marking difference does not seem random. These points raise the questions in (5):

(5) a. What accounts for the concentration of mimetics at the immediately preverbal position?
b. Why do some mimetics occur away from the verb, while many other mimetics occur at the immediately preverbal position?
c. How is the marking difference between *to* and Ø relevant to the positioning of mimetics?

I consider these questions in Section 3.4. First, however, I turn to a discussion of the structural positions that *to*/Ø-marked mimetics can occupy.

3.3 Structural positions

3.3.1 Theoretical assumptions

To discuss sentence structure, this study adopts a representation called the layered structure of the clause (LSC), as assumed in RRG (Van Valin & LaPolla 1997; Van Valin 2005). Figure 3.3 shows the LSC for *Yesterday, Chris read a book in the library.*

In the LSC, a clause consists of three layers: nucleus (NUC), core and clause. The nucleus is the innermost layer and contains the predicating element, in this case, the verb *read.* The core is the next layer; it contains the nucleus and the core arguments, here *Chris* and *a book.*[10] The clause is the outermost layer and contains the core.

The LSC labels lexical categories, such as V (verb) or ADV (adverb). How the lexical category of mimetics should be characterized is controversial (e.g.

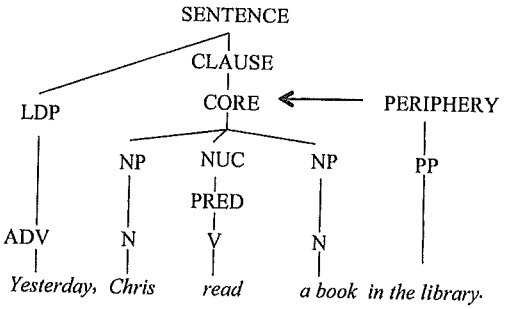


Figure 3.3 Constituent projection of the layered structure of the clause (LSC)

Newman 1968; Akita 2013b). While this study adopts terms such as 'mimetic adverb' and 'mimetic adjectival,' it uses 'mimetic' if the classic categorization fails to capture the characteristics or the function of the mimetic.

In Figure 3.3, the structure contains two additional units, 'periphery' and 'LDP.' In RRG, 'periphery' does not mean the element is 'at the edge' or 'at the clause boundary.' Rather, it "subsumes non-arguments of the predicate, e.g. setting locative and temporal phrases" (Van Valin 2005: 4). Periphery, therefore, is a structural unit containing an optional element of the clause (adjunct), such as the prepositional phrase *in the library*. The layer of the clause modified by the periphery can be the nucleus, the core, or the clause; an arrow is used to indicate which layer the element modifies. In Figure 3.3, the periphery containing the PP (*in the library*) is pointing at the core, indicating that it is a core modifier. Figure 3.3 also includes the adverb *yesterday* in what is called 'the left-detached position.' RRG posits two detached positions, the left-detached position (LDP) and the right-detached position (RDP). The detached positions refer to positions "outside of the clause but within the sentence"; the elements contained in the detached positions are "set off from the rest of the sentence by a pause or intonation break" (Van Valin & LaPolla 1997: 36). This serves as a diagnostic for determining whether the element belongs to a clause-internal position or a detached position.

3.3.2 Structure types: An overview

This section analyzes the syntactic structure of *to/Ø*-marked mimetics. Figure 3.4 provides an overview of the classification.

Here, *to-* or *Ø*-marked mimetics are classified into two major types: adjuncts and non-adjuncts. As adjuncts, mimetics are omissible and occur as modifiers of another element of the sentence ((A) and (B)). As non-adjuncts, mimetics are inomissible ((C), (D), and (E)).[11] While the presence of mimetics in both types is well recognized, syntactic analyses of these forms are infrequent: those in (A) have been analyzed (Shibatani 1978; Toratani 2007), but the rest remain virtually

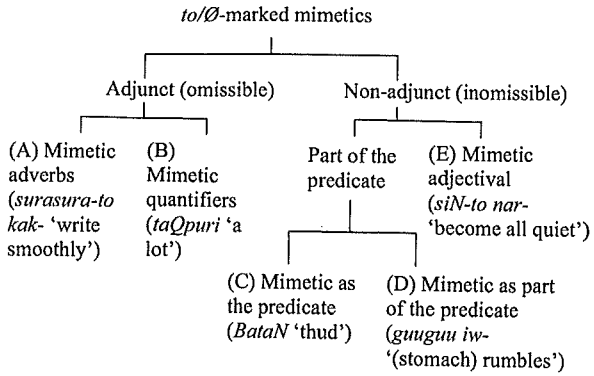


Figure 3.4 Classification of *to/Ø*-marked mimetics

unexplored. In terms of grouping, to the best of my knowledge, mimetics in (D) are treated as a subset of (A) but are syntactically distinct (cf. Toratani 2015). This classification is not intended to be complete or exhaustive; rather, it offers a basis for the development of future work.

The discussion proceeds in the alphabetical order indicated in Figure 3.4. It employs three diagnostic tests to examine adjunct status (e.g. Givón 1984; Somers 1984): (i) syntactic omissibility (the mimetic can be omitted from the sentence), (ii) permutability (the mimetic can have a variable sentence position), and (iii) substitutability (the mimetic expression can be replaced by an adverbial anaphoric expression).

3.3.3 Adjuncts: Mimetic adverbs

Mimetic adverbs constitute the majority of *to/Ø*-marked mimetics. They modify the host predicate, and the alternative marking between *to* and *Ø* is available to reduplicated (e.g. *nikoniko-to/Ø* 'smilingly') and *ri*-suffixed mimetics (e.g. *yuQtari-to/Ø* 'in a leisurely fashion'), as well as some variant forms (*poturi, poturi-to/Ø* 'one by one, one by one'). Although the characteristics of mimetic adverbs are discussed in Toratani (2007), as their adjunct status is not specifically evaluated therein, this section applies the three diagnostic tests introduced in Section 3.2 to confirm this.

As adjuncts, mimetic adverbs should pass the three tests. First, as (6) and (7) show, the *to*-marked mimetics pass the omissibility test: the (a) examples provide sentences with a mimetic adverb, and the (b) examples show their mimetic-less counterparts.

(6) a. *Roozin-wa* *herahera-to* *warat-ta.*
old.man-TOP MIM-QUOT laugh-PST
'(and) the old man laughed *foolishly*.'

(Asada, 142)

b. *Roozin-wa* *warat-ta.*
old.man-TOP laugh-PST
'(and) the old man laughed.'

(7) a. *Onna-ga* *suQ-to* *tat-te . . .*
woman-NOM MIM-QUOT stand-L
'The woman stood up *quietly*, and . . .'

(Ikezawa, 115)

b. *Onna-ga* *tat-te . . .*
woman-NOM stand-L
'The woman stood up, and . . .'

The mimetic-less sentences in the (b) examples are well formed and felicitous, confirming that the mimetics in the (a) examples can be omitted without damaging the grammaticality of the sentence or changing its basic meaning.

Second, as (8) shows, *to*-marked mimetics pass the permutability test.

(8) a. *guQ-to* *obi-ni* *tikara-o* *ire-te . . .*
MIM-QUOT belt-DAT strength-ACC put-L
'*with a jerk* putting all my strength into my belt, . . .'

(Aoki, 167)

b. *obi-ni* *guQ-to* *tikara-o* *ire-te*
belt-DAT MIM-QUOT strength-ACC put-L
'. . . putting all my strength into my belt *with a jerk*, . . .'

c. *obi-ni* *tikara-o* *guQ-to* *ire-te*
belt-DAT strength-ACC MIM-QUOT put-L
'. . . putting all my strength into my belt *with a jerk*, . . .'

(8a) contains the original sentence wherein the mimetic *guQ* 'with a jerk' occurs at the clause's initial position. (8b) and (8c) show that the mimetic can move toward the right to the sentence medial position and to the immediately preverbal position, respectively. Changing the position of the mimetic affects neither the grammaticality of the sentence nor the truth conditional meaning.

Finally, as (9) shows, mimetic adverbs pass the substitutability test, which is based on Fujita (2000: 206), who notes that some mimetics can be replaced by an adverbial anaphoric expression. Here, the (a)-sentences are the non-substituted sentences, and the (b)-sentences are the substituted versions.[12]

(9) a. *Emiko-ga* *nikoniko-to* *warat-ta.*
Emiko-NOM MIM-QUOT laugh-PST
'Emiko laughed *smilingly*.'

b. *Nikoniko-to,* *Emiko-ga* *sonna* *huuni* *warat-ta.*
MIM-QUOT Emiko-NOM such in.a.manner laugh-PST
'(lit.) *Smilingly*, Emiko laughed in such a manner.'

(Fujita 2000: 206)

(10) a. *Ringo-ga* *botyaQ-to* *ike-ni* *oti-ta.*
apple-NOM MIM-QUOT pond-into fall-PST
'The apple fell into the pond *with a splash*.'

b. *BotyaQ-to,* *ringo-ga* *sonna* *huuni* *ike-ni* *oti-ta.*
MIM-QUOT apple-NOM such in.a.manner pond-into fall-PST
'*With a splash*, the apple fell into the pond in such a manner.'

As in (9b), the mimetic *nikoniko-to* can be moved to the sentence's initial position, and an anaphoric expression *sonna huuni* 'in such a manner' can be substituted into the mimetic's original slot. (10b) shows the analogous point for the mimetic *botyaQ-to* 'with a splash.' The fact that *sonna huuni* 'in such a manner' is an adjunct and can substitute the mimetics suggests that the mimetics are likewise adjuncts.

Mimetic adverbs have been argued to contain two subtypes, (a) a nuclear modifier and (b) a core modifier, given their semantic and syntactic characteristics (Toratani 2007). First, mimetic adverbs must be nuclear or core modifiers, as the third option, clausal adverbs, is unavailable to them. The mimetic is unable to express a meaning usually expressed by a clausal adverbial, such as evaluative reading (e.g. *kooun.ni.mo* 'fortunately'). In English, manner adverbs such as *clumsily* can yield both a manner reading and a clausal reading, depending on where they occur within the sentence. For example, in *Chris dropped the glass clumsily*, the adverb refers to the manner of Chris's action, whereas in *Clumsily Chris dropped the glass* the adverb refers to the speaker's evaluation of what happened (see Jackendoff 1972: 49). This contrasts with mimetics: regardless of where they occur in the sentence, they are unable to yield a clausal reading. For instance, in (11), the mimetic *bataN* 'a thud' expresses the manner of how the door was closed, and the meaning of the sentence remains the same whether the mimetic occurs at the immediately preverbal position as in (11a), or crosses a topic as in (11b), indicating the inability to yield a clausal reading.

(11) a. *Taroo-wa* *to-o* *bataN-to* *sime-ta.*
Taro-TOP door-ACC MIM-QUOT close-PST
'Taro closed the door with a thud.'

b. *BataN-to* *Taroo-wa* *to-o* *sime-ta.*
MIM-QUOT Taro-TOP door-ACC close-PST
'Taro closed the door with a thud.'

(Toratani 2007: 320)

Second, some mimetics can be considered as nuclear adverbs. This is because they add a meaning to the internal information of the event denoted by the verb, such as aspect, which is a characteristic of nuclear adverbs. This point can be elaborated on by considering observations from Tsujimura and Deguchi (2007).

Tsujimura and Deguchi (2007) note that while an activity verb such as *nom-* 'drink' can be aspectually ambiguous between the telic (compatible with an *in*-phrase) and the atelic reading (compatible with a *for*-phrase), in a sentence

like (12a), the presence of the mimetic makes it clear that the verb has an atelic reading, as illustrated by its compatibility with the *for*-phrase (*gohunkan* 'for five minutes') and incompatibility with the *in*-phrase (*?*gohun-de* 'in five minutes') in (12b).

(12) a. *Kodomo-ga mizu-o gohunkan/gohun-de non-da.*
child-NOM water-ACC for/in five minutes drink-PST
'The child drank water for five minutes/in five minutes.'

b. *Kodomo-ga mizu-o gohunkan/*?gohun-de gokugoku non-da.*
child-NOM water-ACC for/in five minutes MIM drink-PST
'The child drank water (repeatedly) for/*?in five minutes.'

c. *Kodomo-ga gokugoku-to gohunkan/gohun-de mizu-o non-da.*
child-NOM MIM-QUOT for/in five minutes water-ACC drink-PST
'The child, *with a gulp-gulp*, drank the water for/in five minutes.'

In other words, the mimetic in (12b) participates in clarifying the aspectual interpretation of the verb, suggesting that it is a nuclear adverb. Other mimetic adverbs which do not display such sensitivity to aspect are considered core adverbs, including the mimetic in (12c) (Toratani 2007: 333–334); this example highlights the child's manner when engaging in the event expressed by the verb, leaving the telic or the atelic reading of the verb unaffected (note the mimetic's compatibility with both the *in*- and the *for*-phrase).

The structural difference of nuclear adverbs and core adverbs is illustrated in Figures 3.5 and 3.6. Figure 3.5 shows the LSC for the simplified version of (12b) 'The child *gulped* water,' where the mimetic *gokugoku* 'gulp-gulp' occurs as a nuclear modifier, while Figure 3.6 shows the LSC for the simplified version of (12c) 'The child drank (the) water *gulp-gulp*,' where the mimetic occurs as a core modifier.

As adjuncts, mimetic adverbs occur in the periphery, modifying the relevant layer of the clause, namely, the nucleus in Figure 3.5 and the core in Figure 3.6. Nuclear modifiers are expected to occur immediately before the verb

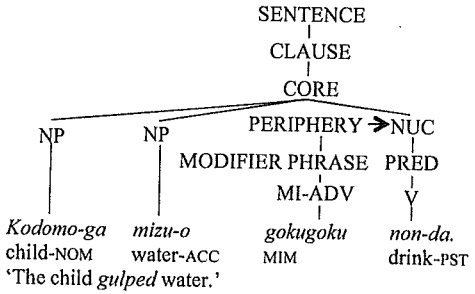


Figure 3.5 LSC for a sentence with a mimetic as a nuclear modifier (adapted from Toratani 2007: 333)

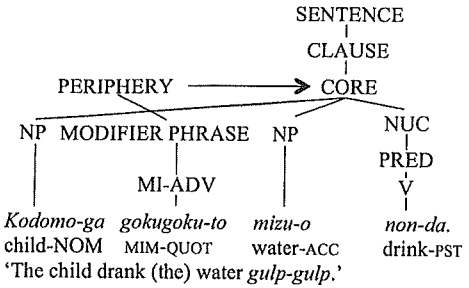


Figure 3.6 LSC for a sentence with a mimetic as a core modifier (adapted from Toratani 2007: 334)

(Figure 3.5), but core modifiers can freely cross other elements (e.g. *mizu-o* water-ACC) (Figure 3.6).

In addition to appearing in the peripheries, mimetic adverbs can occur in detached positions.[13] Examples discussed in Tamori (1980) are shown below in (13).

(13) a. *Ziroziro-to (??Ø) doroboo-ga atari-o mimawasi-te.i-ta.*
MIM-QUOT robber-NOM neighborhood-ACC look.around-PROG-PST
'With a *stare-stare* the robber was looking around here and there.'

b. *Pakupaku-to (??Ø) Zyon-ga pan-o tabe-ta.*
MIM-QUOT John-NOM bread-ACC eat-PST
'With a *munch-munch* John ate the bread.'

c. *Doroboo-ga atari-o mimawasi-te.i-ta, ziroziro-to (*Ø).*
robber-NOM neighborhood-ACC look.around-PROG-PST MIM-QUOT
'The robber was looking around here and there, with a *stare-stare.*'

d. *Zyon-ga pan-o tabe-ta, pakupaku-to (*Ø).*
John-NOM bread-ACC eat-PST MIM-QUOT
'John ate the bread, with a *munch-munch.*'
(Translation and glossing convention modified from Tamori 1980: 165)

Tamori (1980) uses the terms 'preposed' and 'postposed' to characterize the mimetics in (13) but in RRG terms the mimetics in (13a–b) and (13c–d) are argued to be in the left-detached position (LDP) and right-detached position (RDP), respectively; they occur outside the clause but within the sentence, set apart from the rest of the sentence by a phonological break (cf. Van Valin & LaPolla 1997: 36). As (13) suggests, there is a certain constraint on, or a preferred pattern in, the marking of reduplicated mimetics. First, the mimetics in the RDP must be *to*-marked (13c–d). Second, the mimetics in the LDP are seen more frequently with *to*, as Tamori's judgement raises questions about (13a–b).[14]

The representations of these mimetics are given below. Figure 3.7 shows the mimetic in the LDP using (13b); Figure 3.8 shows it in the RDP using (13d).

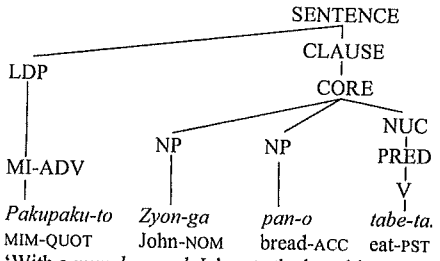


Figure 3.7 LSC for a sentence with a mimetic in LDP

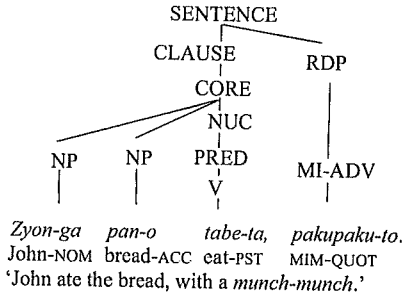


Figure 3.8 LSC for a sentence with a mimetic in RDP

To sum up, mimetic adverbs can occur in the peripheries as nuclear or core adverbs, or in detached positions. The mimetic adverbs are the only type discussed in Toratani (2007), but as the following discussion will show, there are more types of *to/Ø*-marked mimetics.

3.3.4 Adjuncts: Mimetic quantifiers

Mimetics that express quantity such as *taQpuri* 'a lot,' *taNmari* 'a lot,' and *tyoQpiri* 'a little' will be classed as 'mimetic quantifiers,' which are called *teido hukusi* 'adverbs of degree' in Tamori and Schourup (1999: 53). The application of the three diagnostic tests introduced in Section 3.2 shows that mimetic quantifiers do not pattern precisely like mimetic adverbs. Consider (14):

(14) a. . . . *syokuzi-wa* *ryoo-ga* *taQpuri* *at-ta.*
meal-TOP volume-NOM MIM exist-PST
'(lit.) as for the meal . . ., there was *a lot* of volume.'

(Ikezawa, 8)

a'. *Syokuzi-wa* *ryoo-ga* *taQpuri-to* *at-ta.*
meal-TOP volume-NOM MIM-QUOT exist-PST
'(lit.) As for the meal, there was *a lot* of volume.'

b. *Syokuzi-wa* *ryoo-ga* *at-ta.*
meal-TOP volume-NOM exist-PST
'(lit.) As for the meal, there was a volume.'

c. *Syokuzi-wa* *taQpuri-to/Ø* *ryoo-ga* *at-ta.*
meal-TOP MIM-QUOT volume-NOM exist-PST
'(lit.) As for the meal, there was *a lot* of volume.'

d. *?TaQpuri-to/??TaQpuri-Ø* *syokuzi-wa* *ryoo-ga* *at-ta.*
MIM-QUOT meal-TOP volume-NOM exist-PST
'(lit.) *A lot*, the meal had a volume.'

Example (14a) is the original sentence with the *Ø*-marked mimetic *taQpuri* 'a lot.' As (14a') shows, it can also be *to*-marked. Superficially, the mimetic behaves like a mimetic adverb in that it can be omitted from the sentence without affecting grammaticality ((14a/a') vs. (14b)). Yet it does not behave like a mimetic adverb in that it cannot freely change its position within the sentence: it can occur before the nominative-marked argument (14c) but is rendered infelicitous if it is placed at the sentence's initial position, regardless of whether it is marked by *to* or *Ø* (14d).[15]

Mimetics of this type refer to the nominal referent expressing quantity, thus leading us to analyze them as quantifiers modifying a noun phrase. In fact, the felicity of (14a) and (14c) and the infelicity of (14d) are consistent with the characteristics of Japanese numeral quantifiers. First, "the host NP and FQ [floating quantifier] are usually adjacent to each other" (Amazaki 2006: 51). This is observed in (14a) and (14c), where the mimetic quantifier *taQpuri* 'a lot' occurs next to the nominative-marked argument *ryoo* 'volume,' right and left respectively. Second, FQ cannot 'float' across a topic-marked nominal (Miyagawa 1989: 73–74; Amazaki 2006: 113). This point is substantiated by (14d) where the sentence is unacceptable when the mimetic *taQpuri* 'a lot' crosses the topic, *syokuzi* 'meal.'

Figure 3.9 uses (14a) to depict the structure into which the quantifier mimetic enters. As Figure 3.9 shows, the mimetic *taQpuri* 'a lot' is not in the periphery in the LSC but appears in the operator projection, modifying the nominal core. In RRG, quantifiers are represented in the layered structure of the noun phrase (LSNP) and are posited to modify the core of the NP represented in the operator projection (Van Valin & LaPolla 1997: 58; Amazaki 2006: 223), which is conventionally represented in the lower half of the LSC, on the side opposite to the LSC's 'constituent projection' (the upper half of LSC in Figure 3.9).

To sum up, there are two types of adjunct mimetics: mimetic adverbs and mimetic quantifiers. Mimetic adverbs usually occur in the periphery as nuclear or core modifiers but can also be placed in the LDP or RDP; mimetic quantifiers are represented in the operator projection modifying the core_N as shown in Figure 3.9. Though a limited number of mimetics express a quantity, such as *taQpuri* 'a lot', the need to recognize their presence in the classification of *to/Ø*-marked mimetics is clear. They are adjuncts because they can be removed from the sentence without

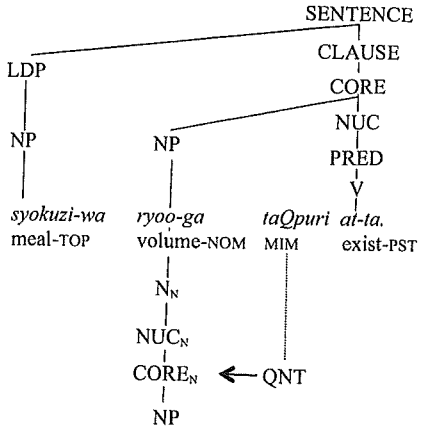


Figure 3.9 LSC for (14a), '(lit.) as for the meal, there was *a lot* of volume.'

affecting the grammaticality, but they are syntactically distinct from mimetic adverbs, as they are not modifiers of the nucleus or the core of the sentence.

3.3.5 Non-adjuncts: Mimetic as the predicate

The first type of non-adjunct mimetics occurs as the sole constituting element of the predicate, alternatively characterized as a holophrase (cf. Feist 2013). An example is shown in (15).

(15) a. *Sore-de* *haritukeru-n-da.*
that-INST paste-NMLZ-COP
'Using that, stick it.'
b. *Petapeta.*
MIM
'Slap-slap.'
c. *Soo-da.*
SO-COP
'That's it.'

(Asada, 155)

(15a) is a command, with a man ordering his subordinate to paste an armband onto something using glue; (15b) is a mimetic holophrase expressing a manner of sticking or pasting a flat object onto something; (15c) is the follow-up to the command.

The fact that the mimetic in (15b) is not an adjunct can be confirmed by applying the omissibility test: it simply fails the test. Nothing will be left if the mimetic is omitted, as it is the only constituting element of the clause.[16] Given this, what kind of structure will a holophrase like (15b) take? There are two possibilities, shown in Figure 3.10.

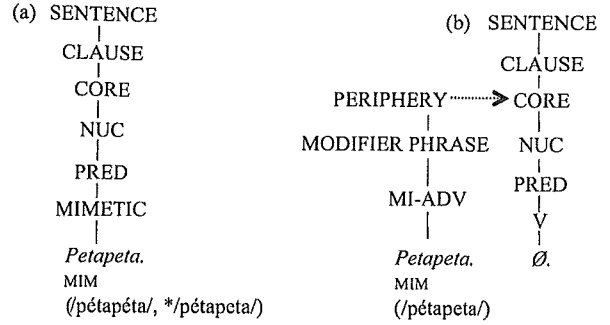


Figure 3.10 Two possibilities of LSC for (15b)

In one representation (Figure 3.10(a)), the mimetic is housed directly under the nucleus. This means that the mimetic is a zero-place predicate functioning as the nucleus of its utterance. In the second representation (Figure 3.10(b)), the clause is analyzed as 'verbless' (cf. Tamori 1988; Tamori & Schourup 1999; Okuda 2009), with the mimetic appearing in the periphery as a modifier of the core. The question is: how should (15b) be represented, as in Figure 3.10(a) or Figure 3.10(b)?

Two pieces of evidence support the representation in Figure 3.10(a). The first comes from the accentuation pattern. The mimetic *petapeta* has two possible patterns: a singly accented pattern as in /pétapeta/ or a doubly accented one as in /pétapéta/. The former provides the accentuation pattern of mimetic adverbs (Hamano 1998), and the latter represents an iconic mimicry sound of pasting something twice. Accordingly, if Figure 3.10(b) is the correct representation, (15b) should be pronounced with a single accentuation. However, the natural way of pronouncing (15b) is /pétapéta/, where the respective initial vowel of the bimoraic base is accented. Thus, the correct representation for (15b) cannot be Figure 3.10(b), leaving Figure 3.10(a).

The second piece of evidence favoring Figure 3.10(a) comes from the marking on the mimetic. If the mimetic is a modifier of the core as in Figure 3.10(b), it should take the marking of a mimetic adverb: reduplicated mimetics can be marked either by *to* or *Ø* when they modify a verb, as in (16a).

(16) a. *Petapeta-to/Ø* *hat-ta.*
MIM-QUOT attach-PST
'(I) attached it *slap-slap.*'
b. *Petapeta-Ø (/*-to).*
MIM
'Slap-slap.'

However, a holophrase rejects marking by *to* as shown in (16b); in this instance, the reduplicated form requires *Ø*-marking (i.e. the alternative marking is not an option). In other words, a holophrase follows a marking pattern distinct from that of a mimetic adverb. Thus, the correct representation for (15b) cannot be Figure 3.10(b), once again leading us to choose Figure 3.10(a).[17]

3.3.6 Non-adjuncts: Mimetic as part of the predicate

It is well known that the verbal forms of mimetics are created by combining mimetics with a verb *su-* 'do', and their characteristics have been extensively studied (e.g. Tsujimura 2005, 2014; Kageyama 2007; Akita, this volume). Less discussed is the case where mimetics are combined with a speech verb, with the notable exception of Hamano (1988). This section discusses the characteristics of mimetics co-occurring with speech verbs, arguing that the mimetics combined with a speech verb are non-adjunct (cf. Toratani 2015). Such a combination is shown in (17): (17a) contains the mimetic *huuhuu* 'manner of blowing' followed by *iw-* 'say', and (17b) contains the mimetic *gasagasa* 'the sound of rustling' followed by *iwase-* 'make say', the causative counterpart of *iw-* 'say.'

(17) a. *Yai-te* *kizyooyu-o* *tuke-te*
grill-L pure.soy.sauce-ACC dip-L
huuhuu *ii-nagara* *tabe-ru* *tanosimi . . .*
MIM say-while eat-NPST joy
'the joy of eating (the rice cake) by grilling it and dipping it into the unadulterated soy sauce while blowing on it (lit. saying *huuhuu*).'
(Ariyoshi, 98)

b. *kami-o* *gasagasa* *iwase-nagara*
paper-ACC MIM make.say-while
tatoogami-no *naka-ni* *tutun-da.*
paper.case-GEN inside-DAT wrap-PST
'. . . while making the paper *rustle*, she wrapped (the kimono) into the paper case.'
(Ariyoshi, 169)

This example has two unique characteristics. First, the host verbs no longer retain literal meaning as speech verbs but function as sound emission verbs, meaning 'to emit a sound' or 'to cause a sound to be emitted': in (17a), *huuhuu iw-* does not mean the protagonist 'said *huuhuu*'; rather, she 'blew air,' depicting the manner of blowing. In (17b), *gasagasa iwase-* does not mean the paper was 'made to say *gasagasa*'; instead, it was 'made to emit a sound that goes *gasagasa.*'

Second, the reduplicated mimetics must be Ø-marked. If they are *to*-marked, the host verbs are interpreted as having a literal meaning as speech verbs.

(18) a. *huuhuu-to* *ii-nagara* *tabe-ru*
MIM-QUOT say-while eat-NPST
'eat while saying *huuhuu*'

b. ? *kami-o* *gasagasa-to* *iwase-nagara*
paper-ACC MIM-QUOT make.say-while
'. . . while making the paper go *gasagasa*'

In (18a), the meaning of *iw-* is shifted back from 'emit a sound' to 'say.' (18b) sounds like someone is making the paper 'say' *gasagasa*, which is infelicitous. Stated differently, in both cases, the particle *to* is interpreted as the quotative particle proper (the content marked by *to* is interpreted as if it is a quoted speech) when it co-occurs with a speech verb.

The fact that mimetics of this type are not adjuncts can be demonstrated by applying the diagnostic tests. First, they fail the omissibility test. The mimetics cannot be omitted as shown in (19) and (20): the (a) examples are the basic sentences, and the (b) examples are the mimetic-omitted versions.

(19) a. *Hana-wa* *huuhuu* *ii-nagara* *tabe-ta.*
Hana-TOP MIM say-while eat-PST
'Hana ate it while blowing on it.'

b. *Hana-wa* *ii-nagara* *tabe-ta.*
Hana-TOP say-while eat-PST
'Hana ate it while saying (it).'

(20) a. *Hana-wa* *kami-o* *gasagasa* *iwase-nagara* *tutun-da.*
Hana-TOP paper-ACC MIM make.say-while wrap-PST
'Hana wrapped it while making the paper rustle.'

b. **Hana-wa* *kami-o* *iwase-nagara* *tutun-da.*
Hana-TOP paper-ACC make.say-while wrap-PST
'Hana wrapped it while making the paper say.'

The mimetic-less sentence in (19b) is grammatical, but it changes the truth-conditional meaning (from 'blowing' to 'saying'), and (20b) is simply nonsensical. Because it cannot be omitted (without radically changing the meaning), the mimetic is an obligatory element of the sentence to convey the intended meaning.

Second, the mimetics fail the permutability test, as shown in (21).

(21) a. **Huuhuu* *Hana-wa* *ii-nagara* *tabe-ta.*
MIM Hana-TOP say-while eat-PST
'(intended) Hana ate it while *blowing* on it.'

b. **Hana-wa* *gasagasa* *kami-o* *iwase-nagara* *tutun-da.*
Hana-TOP MIM paper-ACC make.say-while wrap-PST
'(intended) Hana wrapped it while making the paper *rustle.*'

c. **Gasagasa* *Hana-wa* *kami-o* *iwase-nagara* *tutun-da.*
MIM Hana-TOP paper-ACC make.say-while wrap-PST
'(intended) Hana wrapped it while making the paper rustle.'

In this example, when the mimetic is moved out of the immediately preverbal position (to the sentence initial position in (21a) and (21c), or to the position preceding the accusative-marked argument in (21b)), the sentences turn infelicitous. Lastly, the substitution test does not apply, since the mimetic cannot freely change position. Thus, the mimetics with *iw-* 'say' or *iwase-* 'make say' are shown to be

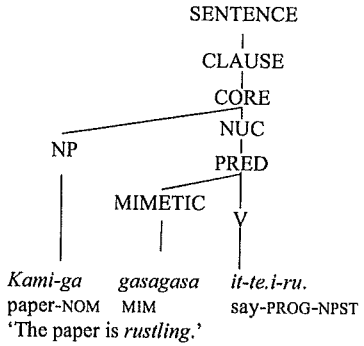


Figure 3.11 LSC for (22)

non-adjuncts. Further, they must occur at the immediately preverbal position and reduplicated mimetics must be *Ø*-marked.

The question is which position this type of mimetic occupies in the LSC. I propose to represent it as in Figure 3.11, which shows the structure for (22), a simplified and intransitivised version of (17b).

(22) *Kami-ga* *gasagasa* *it-te.i-ru.*
paper-NOM MIM say-PROG-NPST
'The paper is *rustling.*'

In Figure 3.11, the mimetic is contained in the PRED, being placed adjacent to the verb *iw-* 'emit a sound (lit. say).'[18] This is to capture the point that the mimetic forms a tight unit with the verb, making an indispensable semantic contribution to the predicate as a whole.

3.3.6 Non-adjuncts: Mimetic adjectivals

The next type, 'mimetic adjectivals,' is exemplified in (23).[19]

(23) a. *kyuuni* *hurahuraQ-to* *nat-ta.*
suddenly MIM-P become-NPST
'. . . suddenly, (she) became *staggered.*'

(Murayama, 57)

b. *Sosite,* *gyoQ-to* *nat-ta.*
and MIM-P become-NPST
'And, (I) became *startled.*'

(Murayama, 66)

As shown above, mimetic adjectivals express the state reached by the entity, such as the *staggered* state. It can be shown that these mimetics are not adjuncts. First,

they fail the omissibility test, as shown in the examples given in (24), the mimetic-less counterparts of (23).

(24) a. **kyuuni* *nat-ta.*
suddenly become-PST
'. . . suddenly, (she) became.'
b. **Sosite* *nat-ta.*
and become-PST
'And, (I) became.'

As it stands, these examples are nonsensical, as they lack critical information about what state the person reached. Their infelicity shows the mimetic is a required element of the clause.

Second, they fail the permutability test: (25a) shows the original sentence, and (25b) is the permuted version.

(25) a. *Dami-goe-ni* *haQ-to* *nar-u.*
guttural-voice-DAT MIM-P become-NPST
'I get *startled* at the guttural voice.'

(Murayama, 58)

b. *HaQ-to* *dami-goe-ni* *nar-u.*
MIM-P guttural-voice-DAT become-NPST
'Startled, I became the guttural voice.'

(25b) is grammatical, but moving the mimetic to the clause initial position drastically changes the meaning of the sentence; therefore, the mimetic must remain at the immediately preverbal position. With this constraint, the third test, the substitution test, does not apply, as it requires the mimetic to occur at the sentence initial position.

The structure for this type of mimetics might look like Figure 3.12, a modified version of (23a), 'She became *staggered.*'

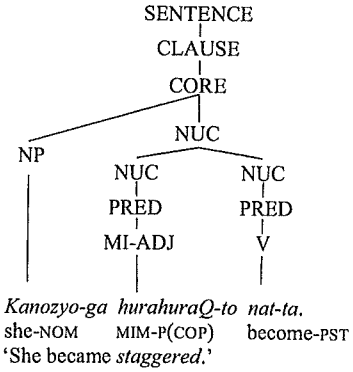


Figure 3.12 LSC for a sentence with a mimetic adjectival

In this representation, the mimetic and the verb together form a complex nucleus, each taking a nucleus of its own. Here, both the mimetic and the verb are predicating in that they participate in contributing the sole argument.

As Yang (1993) observes, a variety of mimetics can co-occur with *nar-* 'become' (*pace* Kita 1997: 392), as shown in (26): one-time-instantiated (26a), *ri*-suffixed (26b), variant (26c), and reduplicated (26d).

(26) a. *kiQ-to (/*-Ø)* *nar-u*
MIM-P(COP) become-NPST
'become *stern*'
b. *guNnari-to (/*-Ø)* *nar-u*
MIM-P(COP) become-NPST
'become *enervated*'
c. *hetahetaQ-to (/*-Ø)* *nar-u*
MIM-P(COP) become-NPST
'become *staggered*'
d. *zokuzoku-to (/*-Ø)* *nar-u*
MIM-P(COP) become-NPST
'become *shivery*'

(adapted from Yang 1993: 97–98)

Interestingly, *to*-marking is obligatory in these examples, including *ri*-suffixed and reduplicated mimetics, which can be optionally marked by *to* or Ø if they are mimetic adverbs (cf. (3)).

Why is *to* obligatory for mimetic adjectivals? Arguably, *to* in (26) is an inflectional ending necessary to function as the complement of the verb *nar-* 'become.' To substantiate this argument, (27) shows elements from different lexical categories occurring as complements of the verb *nar-* 'become.'

(27) a. *ooki.ku* *nar-u* [adjective]
big become-NPST
'become big'
b. *kiree-ni* *nar-u* [nominal adjective]
clean-P(COP) become-NPST
'become clean'
c. *kasyu-ni* *nar-u* [noun]
singer-P(COP) become-NPST
'become a singer'
d. *zokuzoku-to* *nar-u*[20] [mimetic adjectival]
MIM-P(COP) become-NPST
'become *shivery*'

The element preceding *nar-* 'become' must occur in a particular form in order to be linked to the verb. The *i*-ending of adjectives (e.g. *ookii* 'big') must be turned into *ku* as in *ookiku* (27a). Nominal adjectives (27b) and nouns (27c) must take *ni* (cf. Iwasaki 2013: 66), which is homophonous with the 'linking form' (*renyookee*) of the copular *nari* in Old Japanese. The fact that *to* 'quotative' is homophonous with the 'linking form' of another copula, *tari*, in Old Japanese leads me to posit that *to* on the mimetic in (23) and (26) is the 'linking form' of the copula *tari*, not the quotative particle *to* on mimetic adjuncts (e.g. *bataN-to otiru* 'fall with a thud').

A general discussion of mimetics often misses the point that not all *to*/Ø-marked mimetics are adjuncts. The close examination of their syntactic characteristics highlights that some non-adjunct mimetics have a specific marking requirement, *to* or Ø, across morphological forms (cf. Section 3.4.3 for more on this topic).

3.4 Discussion

This section considers the questions posed in (5) on the position of mimetics and marking options.

3.4.1 Mimetics at the immediately preverbal position

What accounts for the concentration of mimetics in the immediately preverbal position? There are two possible answers to this initial question: (i) structural requirements and (ii) pragmatic requirements.

First, it may be a structural requirement that mimetics occur in the immediately preverbal position. In Section 3.3, I discuss three structures with this requirement. Two are non-adjuncts: mimetics occurring as part of the predicate with the verb *iw-* 'say' (*guuguu iw-* '(stomach) rumbles') ((D) in Figure 3.4) and mimetic adjectivals (*hurahuraQ-to nar-* 'become staggered') ((E) in Figure 3.4). The third structure is a mimetic adverb occurring as a nuclear adverb (see Figure 3.5). In such cases, the mimetics must occur at the immediately preverbal positions.

Second, it may be a pragmatic requirement that mimetics occur in the immediately preverbal position. This placement is motivated by the information structure (Lambrecht 1996), or to be more precise, the 'focus structure,' i.e. "conventional association of a focus meaning with a sentence form" (Lambrecht 1996: 222). The elements of the focus are typically placed in the immediately preverbal position in Japanese (Kim 1988); such elements can be mimetic adverbs (Toratani 2006; Mine 2007). The focus type can be 'narrow focus' as in (28b) (the mimetic solely provides new information) or 'predicate focus' as in (28c) (the predicate, including the mimetic, provides new information).

(28) a. *Watasi-ga hutuuni arui-te.i-ru-to kanozyo-ga tui.te.ko-nai.*
I-NOM normally walk-PROG-NPST-when she-NOM follow-NEG.NPST
'When I was walking normally, (I noticed that) she was not following me.'
b. *Hurikaeru-to sita-o mui-te tobotobo-to arui-te.iru.*
turn.back-when down-ACC face-L MIM-QUOT walk-PROG
'When (I) turned back, (she) was walking *ploddingly* looking down.'
(Mure, 186, cited in Toratani 2006: 421)[21]

c. *Kanozyo-wa* *tobotobo-to/Ø* *arui-te.iru.*
she-TOP MIM-QUOT walk-PROG
'She is walking *ploddingly*.'

In (28a), the speaker says that her friend, whom she thought was walking along with her, is not catching up. This sentence turns the occurrence of the walking event into old information. Then, in (28b), since the manner of how her friend walked is newly introduced, narrow focus falls onto the mimetic and it is naturally placed in the immediately preverbal position. As in this case, the mimetic tends to be *to*-marked when narrow focus falls onto it (cf. Section 3.4.3). By contrast, (28c) instantiates a "'topic-comment' organization of information in a sentence" (Van Valin 2005: 70), where the topic (*kanozyo* 'she') marked by *wa* provides old information, and the comment (the entire predicate) provides new information. The focus falls onto the entire predicate, including the mimetic, which can be marked by *to* or *Ø*.

Although (28) contains a reduplicated mimetic (*tobotobo* 'ploddingly') and its typical host verb from its hyperonym category (*aruk-* 'walk'), in the predicate focus structure, mimetics can be of any form, with or without *to*, and the mimetic-host combinatory possibility can vary, as exemplified in (29).

(29) a. *Heri-wa* *kyuuni* *hurahuraQ-to* *yure-te . . .*
helicopter-TOP suddenly MIM-QUOT shake-and
'The helicopter suddenly shook *totteringly* and . . . '
[variant, with a typical host verb]
(Ikezawa, 187)

b. *Doa-wa* *gorori-to* *simat-ta.*
door-TOP MIM-QUOT close-PST
'The door closed (with a noise going) *gorori*.'
[atypical one-time-instantiated form for the host verb]
(Asada, 177)

c. *Watashi-wa* *boNyari* *tati-tukusi-ta.*
I-TOP MIM stand-thoroughly-PST
'I kept standing *mindlessly*.'
[*Ø*-marked *ri*-suffixed]
(Shimoda, 147)

The preceding argument about pragmatic requirement on focus structure seems to account for the large portion of mimetics at the immediately preverbal position, as it permits more varied mimetic-verb combinations than those accounted for by the structural requirements.

3.4.2. Mimetics away from the verb

Next, why do some mimetics occur away from the verb, while many others appear in the immediately preverbal position? To clarify, the mimetics under consideration are mimetic adverbs that do not occur at the immediately preverbal

position. Before I offer an answer, consider the syntactic environment wherein such mimetic adverbs occur.

The mimetics appearing at Position 2 (cf. Section 3.2.2) tend to cross a noun phrase required by the verb: e.g. a transitive verb with a noun phrase marked by *o* 'accusative' (30a), or an intransitive verb with a noun phrase marked by *ni* 'dative' (30b) or *ga* 'nominative' (30c).

(30) a. *Sibaraku* *mogumogu-to* *hoo-o* *ugokasi-te.i-ta.*
for.a.while MIM-QUOT cheek-ACC move-PROG-PST
2 1 host verb
'For a while, she was moving her cheeks, *munch-munch*.'
(Ariyoshi, 263)

b. *Sore-wa* *firumu-no.yoo.ni* *pitari-to* *kao-ni* *mittyaku.si-te.iru-node*
that-TOP film-like MIM-QUOT face-DAT attach-STAT.NPST-since
2 1 host verb
'Since it clung *tightly* to his face like a film, . . .'
(Murakami, 75)

c. *HoQ-to* *kimoti-ga* *yurun-da-toki, . . .*
MIM-QUOT feeling-NOM relax-PST-when
2 1 host verb
'*With a sigh of relief*, when one's attention relaxes, . . .'
(Aoki, 36)

In all cases, the noun phrase is structurally simple, with a noun and a case particle.

In contrast, the mimetics appearing at Position 3, or further away from the verb, tend to co-occur with multiple noun phrases and/or complex phrases.

(31) a. *Zabuzabu* *oyu-de* *kao-o* *arat-te . . .*
MIM hot.water-INST face-ACC wash-and
3 2 1 host verb
'*Splash-splash* I washed my face with hot water and . . . '
(Aoki, 18)

b. *Yoroyoro-to* *obotukanai* *asidori-de* *arui-te.i-ru.*
MIM-QUOT unsteady steps-INST walk-PROG-NPST
3 2 1 host verb
'*With a totter-totter*, she is walking in unsteady steps.'
(Fukada, 176)

c. *KiQ-to* *kibisii* *me-de* *tonari-no* *kodomo-o* *nirami.tuke-ta.*
MIM-QUOT sharp eyes-INST next-GEN child-ACC glare-PST
5 4 3 2 1 host verb
'*Fiercely*, I glared at the boy next to me with a sharp look.'
(Shimoda, 96)

In (31a), the mimetic crosses the *o*-marked phrase and the *de*-marked phrase. In (31b), the noun *asidori* 'step' is modified by an adjective *obotukanai* 'unsteady,' rendering the phrase complex. In (31c), the mimetic crosses three noun-particle sequences, and one of the nouns *me* 'eyes' is modified by an adjective *kibisii* 'sharp.'

The question is why these mimetics are moved away from the immediately preverbal position. I suggest that this is accounted for by the contrast of 'demonstration' (or 'depiction') vs. 'description,' first applied by McGregor (1994: 81–82, 2001: 216) to characterize the function of ideophones (cf. Dingemanse 2012: 655, 2015). McGregor's insight is inspired by Clark and Gerrig (1990: 764), who say that "quotations are a type of demonstration. Just as you can demonstrate a tennis serve, a friend's limp or the movement of a pendulum, so you can demonstrate what a person did in saying something." To this, McGregor adds, "[I]deophones can be said to designate their referents by demonstrating them" (2001: 216). He draws on Gooniyandi, an Australian aboriginal language, to illustrate his point, as shown in (32).

(32) *Wirri* *wirri* *wirri* *baboorro* *gardbani-* *wirrangi.*
tumble tumble tumble below it:fell 3SG.OBL
'Tumble, tumble, tumble, he fell down next to them.'
(McGregor 2001: 216)

According to McGregor, "the ideophone *wirri wirri wirri* serves to demonstrate the owl's tumbling down head over heels [. . .]. It is a vocal gesture demonstrating the action of tumbling" (McGregor 2001: 216), while the rest of the sentence, corresponding to 'he fell down next to them,' simply describes the situation. The sentences in (30) and (31) parallel the Gooniyandi example in that the mimetic demonstrates an event, whereas the rest of the sentence describes a situation. For instance, *zabuzabu* 'splash-splash' in (31a) demonstrates the energetic action of washing, perhaps splashing the water all over the place, while the rest of the sentence is a pure description of what happened: the protagonist washed her face with hot water. Or *kiQ* in (31c) demonstrates the action of giving someone a withering look, perhaps with an accompanying gesture (cf. Kita 1997), such as contracting the brows into a frown, whereas the rest of the sentence provides a description, namely, at whom the protagonist glared (i.e. the child) and in what way (i.e. with a sharp look).

This characteristic of demonstration seems related to what has been described as the 'dramaturgic function' of ideophones to "stimulate an event, an emotion, a perception through language" (Voeltz & Kilian-Hatz 2001: 3). A comparison of two sentences, one without a mimetic (33a) and the other with it (33b), is illustrative of this point.

(33) a. *Oyu-de* *kao-o* *arat-ta.*
hot.water-INST face-ACC wash-PST
'I washed my face with hot water.'

b. *Zabuzabu* *oyu-de* *kao-o* *arat-ta.*
MIM hot.water-INST face-ACC wash-PST
'*Splash-splash* I washed my face with hot water.'

The mimetic-less sentence (33a) expresses the simple fact of what happened, and the hearer is likely to interpret it literally. The one with the mimetic (33b) is more elaborative in a unique way. With the mimetic placed sentence-initially, the hearer is immediately provided with image-evoking information as to how the washing occurred: i.e. *splash-splash* (washing vigorously). Here, the mimetic "stimulates . . . a perception" (Voeltz & Kilian-Hatz 2001: 3) as it is a word that enables speakers to directly express what they 'sensate' (McVeigh 1996: 44). Arguably, the sentence-initial placement of the mimetic is the speaker's pragmatic strategy to give prominence to the dramaturgic effect or to the distinction between demonstration and description. In fact, the demonstration-description contrast seems much more salient when the mimetic appears sentence-initially than those closer to the verb (cf. (30b) vs. (31a)). It is left for future work to explore how to substantiate the difference on saliency.

3.4.3 Marking optionality between to and Ø

Finally, how is the marking difference between *to* and Ø relevant to the positioning of the mimetics?

First, recall a typical form-based description of marking described previously in (3). (34) provides a summary based on (3).

(34)

	Form of mimetics	Example	Marking	Optional?
a.	one-time-instantiated	*nikoQ-to (*Ø)*	*to*	No
b.	some variants	*nikonikoQ-to (*Ø)*	*to*	No
c.	reduplicated	*nikoniko-to/Ø*	*to* or Ø	Yes
d.	*ri*-suffixed	*niQkori-to/Ø*	*to* or Ø	Yes
e.	some variants	*nikoniko, nikoniko-to/Ø*	*to* or Ø	Yes

Briefly, one-time-instantiated forms and some variants must be obligatorily marked by *to*, with the rest of the forms marked either by *to* or Ø. However, as Section 3.3 shows, the actual marking distribution is not as simple as (34) suggests; marking is affected not only by the form of the mimetic but also by its structural position. In light of this, Table 3.2 provides a more comprehensive summary of the marking distribution.

In Table 3.2, the left-most column contains the structural positions outlined in Figure 3.4. The two right columns contain information about mimetics. The mimetics are divided into two groups based on the basic marking patterns shown in (34): the 'optional group' contains reduplicated, *ri*-suffixed and some variants; the '*to*-obligatory group' contains one-time-instantiated and some variants. The content of the two right columns shows the marking pattern: if the column

Table 3.2 Marking distribution

	Optional group	***To*-obligatory group**
• Adjunct (omissible)		
(A) Mimetic adverbs (*surasura-to/Ø kak-* 'write smoothly')		
a. Clause internal position:	*to* or *Ø*	*to*
b. Clause external position – LDP:	*to*, frequent; *Ø*, less frequent	*to*
– RDP:	*to*	*to*
(B) Mimetic quantifiers (*taQpuri* 'a lot') Clause internal position:*	*to* or *Ø*	*to*
• Non-adjunct (inomissible)		
(C) Mimetic as the predicate: (*BataN.* 'thud')	*Ø*	*Ø*
(D) Mimetic as part of the predicate: (*guuguu iw-* '(stomach) rumbles')	*Ø* (reduplicated)	*to*
(E) Mimetic adjectival: (*siN-to nar-* 'become all quiet')	*to*	*to*

*Note: The clause external position is not included because mimetics usually do not occur there.

contains only one marking (e.g. *to*), this means the marking is obligatory, unless a descriptive term follows (e.g. *to*, frequent).

As for non-adjuncts (see the bottom part of Table 3.2), there is only one choice of marking across the forms for (C) the mimetic as the predicate (i.e. mimetic holophrases), which must be *Ø*-marked, and (E) the mimetic adjectival, which must be *to*-marked (recall this *to* was analyzed as originating in copula and not a quotative marker). The marking of (D) the mimetic as part of the predicate depends on the form: reduplicated forms (or variants with a reduplicated base, repeated) must be *Ø*-marked (*bokiboki* (*bokiboki) iw-* 'it makes popping sounds'), and the rest of the forms must be *to*-marked (*bokiQ-to/bokibokiQ-to/bokiN-to iw-* 'it goes like *bokiQ/bokibokiQ/bokiN*').

The constraint on marking is more lax for mimetic adjuncts (see the top part of Table 3.2): (A) mimetic adverbs and (B) mimetic quantifiers follow the form-based general marking patterns indicated in (34). The only exceptions are mimetic adverbs in the detached positions. The RDP requires all forms to be *to*-marked; the mimetics in LDP can still be *Ø*-marked, though the *to*-marked form seems to be used more frequently. Stated differently, irrespective of the form, mimetic adverbs can occur anywhere within the sentence, as long as they are *to*-marked (cf. Kawase 2006).[22]

This point has already been noticed by Akita and Usuki (A&U henceforth). They observe that "bare [i.e. *Ø*-marked] mimetics are restricted in their distribution. *To*-marked mimetics can virtually occur wherever bare mimetics can" (2016: 255).[23] The distribution of the marking pattern in Table 3.2 substantiates their observation, specifying the positions for all forms of mimetics.

As A&U (2016) investigate the differences between *to*- and *Ø*-marked reduplicated mimetics, a short review of their work is necessary in order to clarify

the differences between their analysis and the present one. A&U (2016) offer an updated and detailed account of the differences between the *to*/*Ø*-marked forms of reduplicated forms, drawing on a variety of past findings and adding their own insights. They propose two distinct constructions, each of which takes only one of the forms of the mimetics: i.e. the marking indicates to which construction the mimetic belongs, as outlined in (35).

(35) a. *Kaeru-ga* *pyokopyoko-to* *hane-te.i-ta.*
frog-NOM MIM-QUOT jump-PROG-PST
'A frog was jumping around quickly.'
[*to*-marked → the quotative-adverbial construction]

b. *Kaeru-ga* *pyokopyoko* *hane-te.i-ta.*
frog-nom mim jump-prog-pst
'A frog was jumping around quickly.'
[*Ø*-marked: the bare-mimetic predicate construction]
(adapted from A&U 2016: 246-247)[24]

(35) contains a reduplicated mimetic, *pyokopyoko* 'jumping around quickly,' which appears in alternative markings: one marked by *to* (35a) and the other by *Ø* (35b), or in their terminology, 'bare.' More specifically, adopting Construction Morphology (Booij 2010), A&U (2016) claim the *to*-marked form appears in "the quotative-adverbial construction" (35a) but the *Ø*-marked form appears in "the bare-mimetic predicate construction" (35b). The details of the constructions are given below.

(36) The bare-mimetic predicate construction
$[[\underline{x}]_{MIM,i}\ [y]_{V/A^0,j}]_{VP/AP,k} \leftrightarrow$ [PRED [abstracted $\underline{SEM_i}$]]$_k$
| |
$\mu\mu\mu\mu$ . . ., nonfinally accented $\subset SEM_j$
(A&U 2016: 256)

(37) The quotative-adverbial construction
$[[x]_{MIM,i}\ to]_{Adv^0,j} \leftrightarrow [SEM_i;$ focused$]_j$
(A&U 2016: 257)

Notes: $\mu\mu\mu\mu$=a 4-mora sequence, X^0=a syntactic word of a category X such as adverb ($\rightarrow_{Adv^0}$)

There are three key differences between the two constructions: (i) the marking of the mimetic, (ii) the characteristics of the host predicate, and (iii) the semantics of the mimetics. First, the marking of the mimetic is distinct. The mimetic in the bare-mimetic predicate construction has no indicated marking (i.e. it is obligatorily 'bare'), whereas the mimetic in the quotative-adverbial construction

has the *to*-marking. Second, there is a clear indication that the mimetic in the bare-mimetic predicate construction co-occurs with a verb or an adjective. Furthermore, the meaning of the mimetic is designated as a subset of the meaning of the verb/adjective, as indicated by $SEM_i \subset SEM_j$. This means that the mimetic is required to co-occur with its typical host, such as *hane-* 'jump' for *pyokopyoko* 'jumping around quickly' (see (35a)). A&U posit that the mimetic-verb/adjective sequence forms a phrase, as indicated by VP/AP, and they characterize it as a type of complex predicate. By contrast, the quotative-adverbial construction has no information on the host predicate. This means there is no rigid semantic constraint on the *to*-marked mimetic as to with which verb/adjective it should co-occur. Another important point about the mimetic-verb relation, not apparent from the construction specifications, is that the bare mimetic must occur immediately before the verb, whereas the *to*-marked mimetic has no such indication; i.e. it can occur freely anywhere within the sentence. Third and finally, the bare mimetic has an abstracted meaning, i.e. is less iconic, whereas the *to*-marked is more iconic: A&U state that "*to*-marked (reduplicative) mimetics are more likely to represent auditory and iterative events than their bare counterparts" (2016: 262), and because of this, the event the *to*-marked mimetic depicts is "pragmatically foregrounded" (A&U 2016: 257; cf. Nuckolls 1996: 71) – that is, 'focused' as specified in the construction.

I agree with A&U (2016) in that the *to*-marking on the reduplicated mimetics is closely related to the focus structure. I also agree that one group of reduplicated mimetics forms a syntactically and semantically tighter unit with the verb than the other group. I analyze these as nuclear (tighter) and core (looser) adverbs. In A&U's analysis, the two reduplicated mimetics are realized in the two distinct constructions shown in (36) and (37). The main differences between the present study and A&U (2016) are the following. First, the empirical coverage is distinct. While the current chapter deals with different types of mimetics in terms of morphological forms and the types of verbs with which mimetics co-occur, as summarized in Figure 3.4, A&U (2016) deal with only one morphological form, i.e. reduplicated mimetics, analyzed herein as a subset of adjunct 'mimetic adverbs.'

Second, the structural representations for the two sentences in (35) are likely distinct between the two analyses. This study represents them in an identical constituent projection of the LSC, as both of the reduplicated mimetics in (35) are analyzed as nuclear adverbs (see Figure 3.5 for a representation with a nuclear adverb). In contrast, A&U's (2016) postulation of the two constructions in (36) and (37) implies that (35a) and (35b) will be realized in a distinct syntactic structure. That is, given the characterization in (36) and (37), the Ø-marked mimetic in (35b) is likely to occur as a sister to the verb, directly dominated by the VP, whereas the *to*-marked mimetic in (35a) must be external to the node containing the verb. In my view, both the *to* and Ø-marked mimetics in (35) must be nuclear adverbs. To begin with, they are both adjuncts, since they can be readily omitted from the sentence without damaging grammaticality or drastically changing meaning, whether they are *to*- or Ø-marked (cf. Section 3.3.1). The *to*- and Ø-marked mimetics in (35) must be nuclear adverbs, as both convey the meaning internal to the event

denoted by the verb regardless of the marking (cf. core adverbs would affect the interpretation of the nominal referents, and neither of the mimetics in (35) does so). The omissibility of the mimetics in (35) seems to go against the characterization of the mimetic as a required part of the complex predicate, implied by (36).

Third, the treatment of the marking difference differs between the two analyses. For one thing, as noted earlier, the empirical coverage is not alike; A&U's analysis covers the marking distinction of reduplicated mimetic adverbs only. By contrast, the present analysis views the marking difference as a general characteristic of mimetics, covering both adjuncts and non-adjuncts, and explores the hypothesis that the marking difference is directly relevant to the grammaticality of the sentence given the mimetic's syntactic position, as summarized in Table 3.2. As far as the marking differences on the reduplicate mimetic adverbs are concerned, A&U (2016) posit that the marking distinction is a realization of two distinct constructions, as specified in (36) and (37), thus implying that the marking by *to* or Ø on the reduplicated mimetic in (35) is a requirement to instantiate a given construction. This study, however, analyzes the marking difference between *to* and Ø on the reduplicated mimetic adverbs as syntactically optional (cf. A(a) in Table 3.2). The marking difference can be interpreted as reflecting the status of the focus structure, since the element onto which narrow focus falls tends to be marked by *to* (cf. Toratani 2006; A&U 2016: 265). This will be represented in the focus structure projection of the LSC, as RRG posits that the information structure (Lambrecht 1996) has its own projection, distinct from the constituent and the operator projections (see Van Valin 2005: 77).

It is yet to be determined whether A&U's characterization of the marking difference can be extended to cover non-reduplicated forms with the marking option. More studies are required to evaluate the ramifications of adopting two different frameworks, Construction Morphology and RRG.

Before closing, it is worth commenting on the glossing of *to*.[25] This study has glossed *to* on the mimetic as 'quotative' following the generally accepted convention (e.g. Shibatani 1978; Hamano 1998; A&U 2016). However, characterizing the function of *to* solely as 'quotative' remains debatable. If *to* is indeed quotative, the character of the mimetics should parallel the behavior of a quoted speech. Fujita (2000: 62) notes that quoted speech contained in a sentence like (38a) can be converted into a complex noun phrase, in which case, it serves as the head of the noun-modified phrase, as in (38b).

(38) a. *Siizaa-ga saigoni "Buruutasu, omae-mo-ka."-to it-ta.*
Caesar-NOM last "Brutus you-too-Q" -QUOT say-PST
'Caesar said at the end, "You too, Brutus?".'

b. *Siizaa-ga saigoni it-ta "Buruutasu, omae-mo-ka."*
Caesar-NOM last say-PST "Brutus you-too-Q"
'the "You too, Brutus?", which Caesar said at the end.'

Mimetics do not allow this type of conversion, regardless of whether the verb is a speech verb *iw-* 'say' or not, as shown below; the (a) examples show the

basic sentence with a mimetic, and the (b) examples show their noun-modified counterparts.

(39) a. *Maki-ga butubutu-to it-ta.*
Maki-NOM MIM-QUOT say-PST
'Maki said *grumblingly*.'
b. **Maki-ga it-ta butubutu.*
Maki-NOM say-PST MIM
'(lit.) The *grumbling* which Maki said.'

(40) a. *Karasu-ga kaa-to nai-ta.*
crow-NOM MIM-QUOT cry-PST
'The crow cawed (lit. the crow cried *kaa*).'
b. **Karasu-ga nai-ta kaa.*
crow-NOM cry-PST MIM
'(lit.) The *kaa* which the crow cried.'

The inability to convert a sentence with a mimetic into a noun-modified version shows that these mimetics do not represent the content of a quotation, which, in turn, indicates that *to* on the mimetics is not quotative proper. Granted, *to* has a close historical relationship with the particle of quotation, but it remains to be investigated how the function of *to* can be best characterized.[26]

3.5 Conclusion

This study examines the position of *to/Ø-marked* mimetics in Japanese sentence structure. Section 3.2 reports the results of a frequency-count-based analysis of the position of the mimetics with respect to the predicate in the linear order of the sentence: (i) 61% of mimetics occur at the immediately preverbal position; (ii) the overall mean distance of *Ø*-marked mimetics is shorter than *to*-marked mimetics (1.38 vs. 1.64); (iii) *Ø*-marked reduplicate forms have the shortest mean distance (1.33), while *to*-marked variant forms have the longest mean distance (2.02); and (iv) *ri*-suffixed forms pattern similarly to reduplicated forms in terms of the proximity to the host predicate. Section 3.3 offers an RRG analysis of the position of mimetics in syntactic structure. By applying the diagnostic tests for adjuncts (omissibility, permutability, substitutablity), it shows *to/Ø*-marked mimetics to consist of two types of adjuncts (mimetic adverb, mimetic quantifier) and three types of non-adjuncts (mimetic as predicate, mimetic adjectival, mimetic as part of the predicate), capable of appearing in more diverse positions in syntactic structure than previously suggested (Toratani 2007). Section 3.4 explores the rationale for variable positioning of mimetics, suggesting requirements of syntactic structure and focus structure account for many instances of mimetics at the immediately preverbal position; a pragmatic strategy based on the notion of demonstration (McGregor 1994, 2001) accounts for mimetics occurring far away from the verb. The distribution of the mimetics suggests that the marking differences between *to* and *Ø* are closely related to the syntactic position of the mimetics, corroborating Tamori (1980).

The findings of this study can be considered from a typological perspective. First, the identification of the mimetic as part of the predicate (*guuguu iw-* 'my stomach rumbles'-type) reaffirms that Japanese utilizes SAY verbs with mimetics (Hamano 1988; Toratani 2015). As Japanese also use DO verbs (e.g. Tsujimura 2005, 2014; Kageyama 2007), this places Japanese in the same category as many other languages using syntactic structures centered on verbs meaning DO and SAY for ideophones (cf. Creissels 2001).

Second, one of the findings from the textual count analysis calls into question the following characterization of mimetics:

> Basque, Japanese, and Turkish are all verb-final languages, and in all three, the ideophones occur early in the sentence. Processing strategies in such languages require the accumulation of information about participants and locations while waiting for the final predicate to tie the information together. This 'rightward slant' in processing might favour the development of ideophones or mimetics, placed early in the sentence.
>
> (Slobin 2004: 234)

In fact, Section 3.2 shows that the mimetic occurs earlier in the sentence much less frequently than in the immediately preverbal position, suggesting the opposite of the above: i.e. it is more favorable to place the mimetic closer to the verb to facilitate the unmarked sentence processing.

Third, contra Kita (2008: 31), who describes Japanese as a language that places sound-symbolic words "in a mid-sentence position," as compared to languages placing them "only at the periphery (beginning or end) of a sentence," this study finds that Japanese belongs to a third type which utilizes both positions. Other examples of this type include Pastaza Quechua (Nuckolls 1996) and Upper Necaxa Totonac (Beck 2007).

The latter two observations call for cross-linguistic quantitative studies investigating the relationship between word order and the position of ideophones and mimetics in the sentence structure to shed more light on the typological characteristics of ideophones and mimetics.

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Notes

1 The following abbreviations are used for Japanese examples and structural representations: ACC = accusative, COP = copula, COMP = complementizer, DAT=dative,

GEN = genitive, INS = instrumental, L = linker, LDP = left-detached position, LOC = locative, LSC = the layered structure of the clause, MIM = mimetic, N (as part of mimetic words) = moraic nasal (only for mimetics), NEG = negative, NOM = nominative, NMLZ = nominalizer, NPST = non-past, NUC = nuclear, P = particle (*zyosi* in Japanese), PASS = passive, POL = polite, PROG = progressive, PST = past, Q (as part of mimetic words) = first half of a geminate cluster (only for mimetics), Q (as part of the interlinear morpheme-by-morpheme glosses) = question particle, QUOT = quotative, RDP = right-detached position, SG = singular, STAT = stativizer, TOP = topic, and VOL = volitional.

2 Mimetics can also be marked by *ni* as in *kutakuta-ni* 'exhausted' (*kutakuta-ni tukareru* 'get dead tired'), classed as *kekka hukusi* 'resultative adverbs' in Tamori and Schourup (1993: 73). This type constitutes a smaller portion (roughly 10%) of mimetics.

3 This excludes mimetics consisting of three morae, such as *potori* 'a drip,' even though the form ends in *-ri*, as these are considered a type of one-time-instantiated form.

4 References to the primary sources will be indicated by the author's last name and the page number without the publication year.

5 The data were reanalyzed following Kimi Akita's insights (p.c.). He pointed out that some variant forms can be Ø-marked (e.g. *baQtan baQtan taore-ta* 'they fell going *baQtan baQtan*'). When the base consists of more than three morae and is repeated, it seems that the form can be marked by *to* or Ø; otherwise, the variants are obligatorily *to*-marked. This point requires future confirmation.

6 The frequency count in Toratani (2006) covers the instances in a simple sentence. The present study covers instances in both simple and complex sentences.

7 The pragmatic function of *ne* is complex and is the subject of on-going debate. Iwasaki notes *ne* appearing sentence-finally "is a marker of shared information, and it is used to mark a piece of information that presumably exists in both speaker's and addressee's territories" (2013: 303). Recognizing the occurrence of *ne* at various positions within a sentence, Morita (2012) proposes considering it as an interactional particle; a possible generalization of its previously identified functions such as a marker of 'sharedness of information,' 'politeness,' and 'femininity.'

8 For ease of exposition, the term 'host predicate' hereinafter may be replaced by 'host,' 'host verb,' or 'verb' if the context makes it clear that it refers to the verb (/adjective) relevant to the interpretation of the meaning of the mimetic.

9 The mean distance of mimetics (combining the *to*- and the Ø-marked forms) for each form is as follows: reduplicated = 1.50, *ri*-suffixed = 1.53, one-time-instantiated = 1.60, and variant forms = 1.98. In this distribution, the reduplicated forms have the shortest mean distance, and the variant forms have the longest mean distance.

10 In the current version of RRG, the node containing the core argument is represented by 'RP' (reference phrase) (Van Valin 2008). To facilitate the understanding of more general readers, the older convention of using 'NP' is employed in this chapter.

11 The analysis excludes a mimetic combined with the verb *su*- 'do' and its variants.

12 Fujita acknowledges the resulting sentence may sound slightly redundant.

13 Toratani (2007: 336) only briefly mentions the possibility of mimetic adverbs occurring in the LDP, without presenting the representation.

14 The marking remains unaffected if the form has no marking option to begin with: e.g. a form like *pakuQ* 'a snap' must always be marked by *to* within a sentence.

15 The substitutability test does not apply, as the mimetic quantifier cannot comfortably occur in the sentence initial position.

16 Neither the permutability nor the substitutability test applies, as there are no other elements within the clause.

17 A similar pattern is observed with a one-time-instantiated form. As a mimetic adverb, it must be obligatorily marked by *to* as in (a) but as a holophrase, it must be Ø-marked as in (b).

(a) *BataN-to* (/*Ø) *oti-ta.*
MIM-QUOT fall-PST
'(It) fell *with* a *bang*.'

(b) *BataN-Ø (/*-to).*
MIM
'Bang.'

18 The position, adjacent to V housed under the same PRED, has been proposed for a reflexive marker *si* in Italian (see Van Valin and LaPolla 1997: 411).

19 The term 'mimetic adjectivals' here covers only the mimetics combined with the verb *nar*- 'become'; it excludes the mimetics combined with *su*- 'do' appearing in a structure __ *sita N* (*kasakasa-sita hada* 'dry skin') (cf. note 11).

20 This example is supported by both Yang (1993: 98) and Atoda and Hoshino (1995: 253), even though some speakers may consider the [MIM-*to naru*] sequence more natural with non-reduplicated mimetics (e.g. *zokuzokuQ-to naru*) than with their fully reduplicated counterparts (*zokuzoku-to naru*), as Kimi Akita (p.c.) points out.

21 The text comes from: Mure, Yoko. 1984. *Gozen reiji no genmai pan* [Brown bread at midnight]. Tokyo: Kadokawa.

22 This dominance of *to*-marking seems consistent with Kawase (2006), who offers a diachronic study of *to*/Ø-marking on the reduplicate forms; while the *to*-marked form was much more dominant in the seventeenth century (roughly only 7–15% are Ø-marked), by the late nineteenth century, Ø-marked forms became more common (around 50% of the usage is Ø-marked).

23 A&U (2016: 255) note some exceptions: i.e. demimeticized forms express meaning such as degree and frequency.

24 To be consistent with the convention adopted in this paper, the glossing method is slightly modified from the original and the accentuation mark in the original is removed.

25 The particle *to* has been typically glossed as 'quotative' but some authors (e.g. Kita 1997) gloss it as 'complementizer' as illustrated below.

(a) *Zitensya-ga kabe-ni baaN-to butukat-ta.*
bicycle-NOM wall-DAT MIM-COMP run-hit-PST
baaN = 'intensive collision of heavy objects'
'A bicycle hit the wall really hard.'

(adapted from Kita 1997: 383)

If we assume that a complementizer is a marker identifying the element as a complement, *to* in (a) cannot be a complementizer, as *baaN* is a mimetic adverb modifying the clause-mate verb, which is an adjunct.

26 Alternatively, *to* can be considered the comitative marker, building on Takahara (1975–76). As one of the reviewers of this article notes, however, considering the function of *to* solely as comitative can pose problems. First, it implies the mimetic is a noun; this is problematic because this study argues that many of the *to*-marked mimetics are adverbs. Second, the availability of the alternative marking of a mimetic with *-tte*, the colloquial version of *to* 'quotative,' seems difficult to explain (e.g. *BotaN-to/BotaN-tte otita* 'fell (going) *bataN*'), if *to* is comitative.

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4 *Swarm*-type mimetic verbs in Japanese

Ann Wehmeyer

4.1 Introduction

As biologists, Parrish et al. (2002: 296) observe that the aggregated patterns of natural organisms appearing in nature are "often visually striking to human eyes." They also point out that such patterns are nearly "universal across living organisms, from bacteria to higher vertebrates." It is perhaps not surprising, then, that human language has lexicalized means of referring to dense clusters of organisms with words such as *swarm*. What is surprising is that in many languages, the *swarming* can be predicated either of the mass of organisms or of the space itself. In English, the predicates that refer to a bounded space being filled with animate organisms engaged in some kind of limited movement appear in a form of argument alternation, such that either the organism or the location can be realized as the subject of the sentence (Salkoff 1983; Jackendoff 1990; Levin 1993; Dowty 2000; Rowlands 2002).[1] This type of argument alternation is termed locative alternation and is regarded as the same type of alternation occurring with transitive verbs such as *spray* and *load*, in which either the locatum argument (the item that changes location) or the location argument may be realized as the object of the sentence, while the other is realized as the object of a preposition (Levin 1993: 50). The intransitive alternation, as found with *swarm*, is prototypically illustrated by the following examples (Dowty 2000: 112).[2]

(1) a. *Bees swarm in the garden.* (Theme-as-subject)
b. *The garden swarms with bees.* (Location-as-subject)

Fukui et al. (1985: 33) observe that the same type of alternation can be found in Japanese predicates, and provide the following pair of sentences in illustration:

(2) a. *Miti-ga* *hito-de* *ahurete* *iru.* (Location-as-subject)
street-NOM people-with swarming is.NPST
'The street is swarming with people.'
b. *Hito-ga* *miti-ni* *ahurete* *iru.* (Theme-as-subject)
people-NOM street-in swarming are.NPST
'People are swarming in the street.'
(Fukui et al. 1985: Examples (20a–b))