

## Mimetic Verbs and Innovative Verbs in the Acquisition of Japanese\*

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### 0. Introduction

The linguistic investigation of onomatopoeia and ideophones, subsumed under terms like mimetics or expressive words, has not been considered a mainstream topic in formal approaches and even in functional treatments, with only a few exceptions. The function of mimetic words has often been viewed as rhetorical, and its contribution to linguistic theory, if any, has been extrinsic at best. On the one hand, mimetics are attested in a wide variety of world's languages: Korean, Japanese, Malay, Chichewa (Bantu), Hausa (Chadic), and Georgian, to name just a few. On the other, English and European languages, on which a great deal of modern linguistic theories have customarily been built, do not employ extensive sets of expressive words, with sporadic instances such as *helter-skelter* and *bow-wow*. It seems undeniable that this latter fact has contributed to the scarcity of more scientific treatments about mimetics.

The foremost reason for putting mimetics on the sidelines is their unusual linguistic behavior that does not conform to regular patterns available in the language. Zwicky and Pullum (1987), for one, explain the difference between plain morphology and expressive morphology, the latter of which includes mimetics. They claim that expressive morphology exhibits all or most of the following characteristics: pragmatic effect, promiscuity with regard to input category, promiscuity with regard to input basehood, imperfect control, alternative outputs, interspeaker variation, and special syntax. Emphasizing the extrinsic nature based on these characteristics, they conclude that “[t]hey constitute a linguistic phenomenon that is not within the province of the theory of

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grammar as ordinarily understood, though it is certainly within the broader sphere of human linguistic abilities” (Zwicky and Pullum 1978:338). An extreme, and perhaps somewhat misleading, view of mimetics as linguistically insignificant is expressed in Newmeyer (1993:758), who states that “the number of pictorial, imitative, or onomatopoeic nonderived words in any language is vanishingly small.”

More recently, however, Newman (2001) demonstrates the significant contribution that mimetics make within a given language both synchronically and diachronically, and emphasizes that mimetics should be carefully examined in the context of the particular language. Elsewhere I have argued, like Newman, that exploring areas in which unconventional words like mimetics exhibit profound interaction and integration in a language is fruitful to linguistic exploration in general, because mimetics in those areas behave parallel to conventional, non-mimetic words (Tsujimura 2001, 2003a,b, 2005, to appear; Tsujimura and Deguchi, to appear). For example, while it is unquestionable that at least some aspects of linguistic behavior that mimetics exhibit are different enough to call for an independent set of analyses, some puzzling facts remain unexplained if their linguistic nature is unconventional and their linguistic contribution is only minor or is of the rhetorical nature. To illustrate one such puzzling fact, Japanese children start using mimetics quite early on (as early as the beginning of their second year and in some cases earlier than the emergence of non-mimetic vocabulary), and they do so accurately. As is stated earlier, the promiscuity in category is one of the characteristics of mimetics, but children are able to make the categorial distinction correctly, without confusion, according to the linguistic environment in which each instance of a mimetic appears. For example, an examination of a longitudinal study of a Japanese child compiled in Miyata (1995) shows that the child makes an accurate distinction in his use of the mimetic *tonton* around the same time: one as a noun (referring to a hammer) [2;4], one as an adverb (describing a going-up-the-stairs motion) [2;5], and one as (a part of) a verb (describing the action of drumming with a pencil) [2;11].

The rapid language acquisition of Japanese mimetic words is intriguing and problematic at the same time, especially given the fact that various theories of word acquisition assume that a given lexical item is associated with a definable meaning. Thus, the linguistically unconventional nature of mimetic words casts a challenge to language acquisition research. Focusing on verb acquisition in particular, the acquisition machinery involved in mimetic words, on the one hand, may well be different from the acquisition of lexical, non-mimetic verbs. On the other hand, given an increasing surge of theories in verb acquisition, such as syntactic vs. semantic bootstrapping, and given typological differences among specific languages, an investigation of how children acquire mimetic verbs and how mimetics interact with non-mimetic verbs should shed light on a general picture of children’s verb acquisition. With this ultimate goal in mind, in this paper I will present a preliminary report of the mimetic use of one monolingual Japanese child recorded in Noji (1973-77).

**1. Sketch of Syntactic Properties and Mimetic Words in Japanese**

Before going over the longitudinal data, I would like to give a brief description of syntactic properties and characteristics of mimetic words in Japanese that are relevant to our discussion below. The Japanese input language to which children are exposed provides little syntactic information as to whether an overt NP is an argument or an adjunct of a verb, how many argument NPs a verb is subcategorized for, and which grammatical function an argument NP is supposed to bear. This impoverished nature of syntactic information is due to zero pronouns, Case drop, scrambling, and combinations thereof, as illustrated in (1-4).

(1) Zero pronouns

- a. Taroo-ga tegami-o kaita.  
Taro-NOM letter-ACC wrote  
'Taro wrote a letter.'
- b. Taroo-ga kaita. (Object=zero pronoun)
- c. Tegami-o kaita. (Subject=zero pronoun)
- d. Kaita. (Subject/object=zero pronoun)

(2) Case drop

- a. Taroo(-ga) tegami(-o) kaita.  
Taro(-NOM) letter(-ACC) wrote  
'Taro wrote a letter.'

(3) Scrambling

- a. Tegami-o Taroo-ga kaita.  
letter-ACC Taro-NOM wrote  
'Taro wrote a letter.'

(4) Combination

- a. Tegami(-o) Taroo(-ga) kaita. (Case drop + scrambling)  
letter(-ACC) Taro(-NOM) wrote  
'Taro wrote a letter.'
- b. Tegami(-o) kaita. (zero pronoun + Case drop)  
letter(-ACC) wrote  
'(I/you/she/he) wrote a letter.'

(1a) represents the canonical order with all the verb's subcategorized arguments expressed overtly. The subject is normally marked with the nominative case marker *-ga* and the object with the accusative case marker *-o*. In (1b-d) the subject, the object, and both arguments are missing, respectively, but these zero pronouns are properly interpreted contextually. The nominative and accusative case markers indicate the grammatical function of the NPs to which they are suffixed, but they are optional, as is illustrated in (2), without changing the interpretation that is conveyed in (1a). The scrambling phenomenon, another

optional operation, allows permutation of arguments and adjuncts with great freedom. This is shown in (3). The phenomena of zero pronouns, Case drop, and scrambling can appear simultaneously, as shown in (4).

The phenomena of zero pronouns, Case drop, and scrambling are extremely common in input language, as is documented widely. Nakayama (1996), for example, surveyed 1259 sentences in 4 Japanese adults' spontaneous speech, and found that 71% of them contained zero pronouns. Rispoli (1991) also reports that of 226 transitive sentences spoken by 9 Japanese caregivers, only 1% were complete sentences with subject NPs marked with nominative case and object NPs marked with accusative case. Rispoli furthermore states that in the caregivers' transitive sentences, 32% appear only with a verb, and 46% occur with a verb and a single NP without any Case marker with it. Despite such seemingly impoverished input language, children understand the content of zero pronouns at a very high comprehension level. Nakayama (1996) conducted an experiment with 30 Japanese 3-year-old children, in which the children were asked to identify zero pronouns. In this experiment, the children identified zero pronouns with 82% accuracy.

Turning to mimetic words, Japanese employs an extensive inventory in this word class. (5) presents a list of mimetic words to illustrate that morphophonological shapes of mimetics may take various forms, ranging from two moras to four moras and from morphologically simple words to reduplicated words.

- (5) a. pin, pan, gan, kit(-to), paa, ...  
 b. kitin, garan, garari, zubari, baan, pitit(-to), pityat(-to), pesyari, ...  
 c. kuru-kuru, saku-saku, guri-guri, gura-gura, kan-kan, suya-suya, ...  
 d. dosun-dosun, dosin-dosin, katin-katin, gatan-gatan, ...  
 e. gossori, kossori, todabata, hunwari, pottyari, ...

As has been extensively discussed by many researchers (Hamano 1998, Tamori and Schourup 1999, Zwicky & Pullum 1987), mimetic words by themselves do not have distinctive categorial status. The word categories in Japanese are generally distinguishable by their inflectional patterns. Mimetics, on the other hand, appear in morphologically uninflected forms, and are not inherently associated with any particular category. To illustrate this property, consider the mimetic word *ira-ira*, as used in (6-8).

- (6) Kodomo-no seiseki-ga waruku iraira-ga tamatta. [Noun]  
 child-GEN grade-NOM bad irritation-NOM accumulated  
 'Since my child's grades have been bad, my irritation has accumulated.'
- (7) Ano hito-wa itumo iraira(-to) hanasu. [Adverb]  
 that person-TOP always irritated speak  
 'That person always speaks in an irritated manner.'



adults not only with mimetics but also with loanwords of various sorts, as is shown in (12).

- (12) a. Mimetics: chin-suru ‘microwave’, beto-beto-suru ‘gets sticky’...  
 b. English loans: deeto-suru ‘date’, doraibu-suru ‘take a drive’...  
 c. Chinese loans: benkyoo-suru ‘study’, kitai-suru ‘hope’...

The examples of Sumihare’s mimetic verbs include those in (13), where *shita* is the past tense of *suru*.

- (13) Mimetic + light verb *suru*
- |  |        |
|--|--------|
| a. poi-shita   | [1;8]  |
| ‘I threw it away’ (after throwing away chopsticks)                   |        |
| b. paan-shita  | [1;9]  |
| ‘I broke it’ (He hit a bottle against concrete and broke it.)        |        |
| c. ringo pan-shi-tai   | [1;10] |
| apple (mimetic)- <i>suru</i> -want                                   |        |
| ‘I want to have the apple split (into two).’                         |        |
| d. toon-shita  | [1;10] |
| ‘I hit (my head)’ (after hitting his head against a corner of a box) |        |

While a complex of a mimetic plus *suru* continues to emerge, following this stage, the child treats mimetic words on a par with non-mimetic, lexical verbs such as *taberu* ‘eat’ and *iku* ‘go’ in (10b) by adding the past tense morpheme *-ta* directly to mimetic words, without the mediation of the light verb *suru*. Crucially, these forms are ungrammatical in adult speech. This is shown in (14).

- (14) Mimetic + inflectional (tense) morpheme
- |   |        |
|---|--------|
| a. tonton-ta(a)   | [1;11] |
| ‘I hit it’ (after hitting a tile)   |        |
| b. taachan tabi pai-ta(a)   | [1;12] |
| Mommy sock  |        |
| ‘Mommy, I threw my sock away’   |        |
| c. okaze byuut-ta   | [1;12] |
| wind  |        |
| ‘The wind blew hard (in a <i>byuu</i> -way)’ (describing the cold wind during his outing with his father) |        |
| d. pachin-ta-yo   | [2;1]  |
| ‘(it) bursted’ (describing the firewood bursting)   |        |
| e. pachin pachin-ta(a)-naa  | [2;1]  |
| ‘I turned it on and off’ (as he has repeated turning the light on and off)                                |        |
| f. pyuut-ta-yo  | [2;1]  |
| ‘(it) blew in a <i>pyuu</i> -way’ (asked by his father to describe the rainy wind outside)                |        |

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- g. ton-ta-yo [2;3]  
 ‘I tripped over’ (upon falling)
- h. jan jaat-ta [2;3]  
 (upon hearing a metallic noise made in his neighbor’s house resulting  
 from having dropped something)

Significantly, it is at around the same time that non-mimetic, lexical verbs (more in the past tense) start appearing in his speech. The inventory of his non-mimetic verbs is in (15).

- (15) *atta* ‘there was/I found’ [1;10], *kita* ‘came’ [1;11], *ochita* ‘fell’ [1;11], *itta* ‘went’ [1;12], *kau* (present) ‘buy’ [2;1], *iu* ‘say’ (present) [2;1], *denai* ‘won’t come out’ (present, negative) [2;1], *deta* ‘came out’ [2;1], *waitenai* ‘hasn’t boiled’ (present) [2;1], *achobu* (for *asobu*) ‘play’ [2;1], *noru* ‘ride’ (present) [2;1], *hutta* ‘rained’ [2;1], *yanda* ‘stopped raining’ [2;1], *kieta* (for *kireta*) ‘was cut’ [2;2], *tootta* ‘passed’ [2;2]

It seems that Sumihare applies the morphological analysis concerning *-ta* to both non-mimetic verbs like those in (15) and predicative mimetics as in (14) in a parallel fashion.<sup>†</sup> As was noted above, those in (14) are not grammatical in adult speech while verbal forms in (15) are. Acceptable counterparts of (14) are either the mimetics with the light verb *suru* or the mimetics as adverbs modifying lexical verbs.

The most common pattern in adult speech in which mimetics appear is one where they function as modifiers for non-mimetic, lexical verbs. And, this is the pattern that emerges at the next stage, as Sumihare increases his inventory of lexical verbs of the type illustrated in (15). The child’s actual speech showing this pattern is given in (16), where the underlined words are mimetics that modify the verbs.

- (16) a. Ame zaazaa hutteru [1;12]  
 rain is raining  
 ‘It’s raining in a *zaazaa* manner.’
- b. Denki tsuita. Patto tsuita [2;3]  
 light got on got on  
 ‘The light got (turned) on. It got on in a *paQ* way.’
- c. Kore-ne, kachaan-te koboreta [2;4]  
 this fell  
 ‘This (sweets) fell in a *kachaan* way.’

<sup>†</sup> One may wonder if the past tense marker *-ta* is an undeveloped form of *-shita* just as those in (13). If that were the case, the undeveloped forms in (14) would be expected to emerge before those in (13). The forms in (14) are uttered after the morphological form *-shita* has fully been developed, and hence I consider *-ta* in (14) an independent occurrence of the inflectional morpheme to mark the past tense.

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- d. Hukuya-no booru-wa-ne, putsun-to kirete nakunattan-to [2;4]  
 Fukuya-GEN ball-TOP cut lost  
 ‘The Fukuya advertising balloon got its string cut off and got lost.’
- e. Imani zaat-to huru-yo [2;5]  
 soon will rain  
 ‘It will rain in a *zaa* way soon.’
- f. Konnani moo moo moeteta [2;5]  
 this way was burning  
 ‘It was burning in a *moo moo* way.’
- g. Bunbu-ga konnani bachan bachan yureru-yo [2;6]  
 boat-NOM this way shake  
 ‘The boat is shaking in a *bachan bachan* way.’
- h. Michin kuru kuru ugoku-desho [2;7]  
 sewing machine move  
 ‘The sewing machine moves in a *kuru kuru* way, doesn’t it?’
- i. guru guru maashitoru [2;8]  
 is stirring  
 ‘I’m stirring (the egg).’
- j. Koko-kara pyuut-to deta [2;8]  
 here-from came out  
 ‘(The medicine) came out from here in a *pyuuQ* way.’

As I mentioned above, the examples in (16) reflect the emergence of a wider range of non-mimetic verbs that Sumihare acquires during this period.

For the purpose of our discussion, I would like to focus on the two observations made above. First, recall that the morphological attachment of the past tense morpheme directly to mimetic words, as in (14), is not found in adult speech. The forms in (14), however, exhibit an intriguing resemblance to the adult use of what Clark and Clark (1979) call “contextuals” (cf. Aronoff 1980). Examples of contextuals in English are found with innovative denominal verbs, as is shown in (17-18).

- (17) a. My sister Houdini’d her way out of the locked closet. (‘escape by trickery’)  
 b. Joe got Houdini’d in the stomach yesterday. (‘hit hard without warning’)  
 c. I would love to Houdini those ESP experiments. (‘expose as fraudulent by careful analysis’) (Clark and Clark 1979:784)
- (18) a. bottle the beer, bottle the wine  
 b. We were stoned and bottled by the spectators as we marched down the street.  
 c. ...battered wives may be stabbed or bottled as well as punched. (Clark and Clark 1979:785)

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The crucial point of these examples is that the proper noun *Houdini* and the denominal verb *bottle* in each case receive a specific sense under different contexts. Thus, the particular interpretation is shared by the speaker and the listener only when they also share the background knowledge of Houdini or a unique context in which the verb *bottle* is used between the two. One of the very interesting patterns of innovative verbs of this sort in Japanese is the combination of shortening of a proper noun and the suffixation of verbal morphology such as the present/past tense morpheme *-ru* and *-ta*. Some of the examples that are actually attested are given in (19).

- (19) a. Starbucks → sutaba-ru, sutabat-ta  
b. McDonald's → maku-ru, makut-ta  
c. Panera (bakery) → pane-ru, panet-ta  
d. Domo (local Japanese restaurant) → domo-ru, domot-ta  
e. China Buffet (Chinese restaurant) → chaiba-ru, chaibat-ta

They generally mean that an individual goes to the location and does some activities such as consuming beverages or food as well as doing some additional things like reading or studying there. The specific content concerning the location and associated activities naturally relies on the contextual information shared between the speaker and the listener.

The innovative denominal verbs used by adults in (19) and Sumihare's mimetic verbs in (14) are similar in two interesting respects. First, the nature of the morphological analysis is the same. The verbal suffixes like *-ru* and *-ta* are generally for native verbs. So, Sino-Japanese loans and English loans, for instance, take the light verb *suru* to receive the verbal conjugation paradigm parallel to native verbs, as was shown in (12b-c). In (14) and (19), however, the child's mimetic words and adults' innovative noun bases accept the verbal suffixes *-ru* and *-ta* even though they do not belong to the native word class. Second, as noted before, the semantic nature of the verbs in (19) depends largely on contextual information: that is, in order to understand what they specifically mean, the contextual background is required of the speaker and the listener. The child's mimetic verbs in (14) also require contextual bases, as all the instances involve situation-specific descriptions of manner or sounds of events. For example, he uses the same mimetic verbs in (14d) and (14e) to describe very different situations. Furthermore, the mimetic he uses in (14h) is not very common to describe a metallic sound, and in fact this is the only occurrence of this mimetic expression in his speech data. Incidentally, as was briefly mentioned in the introduction, the mimetic *tonton* in (14a) is used by another child recorded by Miyata (1995) to describe a tapping sound when he climbs up stairs. Thus, putting these two aspects together, the morphological and pragmatic strategies observed in Sumihare's data in (14) very much resembles the way adult speakers of Japanese coin new innovative denominal verbs. Viewed as innovative verbs, the mimetic verb forms in (14) are consistent with Clark's (1993:117) claim that

children coin new words to compensate for their lexical limitation, such as *to flag* for “to wave like a flag” and *to rug* for “to vacuum the rug.”

The second point that is worthy of our discussion is the stage at which the child learns to use a mimetic word independently of a non-mimetic verb, whereby the mimetic plays an adverbial role to modify the verb, as is exemplified in (16). This development has an important implication for the lexicalization pattern of Japanese verbs (Talmy 1985). It has been observed that Japanese belongs to the typological group in which motion and path are more readily lexicalized in a verb than motion and manner are. Other members of this group include Romance, Semitic and Polynesian languages (Ozcaliskan and Slobin 1999, 2000). The exclusion of manner from lexicalization, furthermore, appears to be prevalent beyond motion verbs in Japanese. Verbs describing pain and verbs of looking, for instance, follow the same pattern. This seems to be partly because the language makes extensive use of mimetics as adverbial modifiers. As (20-21) illustrate, English has a rich inventory of verbs describing the walking motion and verbs describing pain, but in order to find their translation equivalents, Japanese employs an extensive list of mimetics along with a single motion verb that describes general walking (Hamano 1998, McClure 2000), as in (20), or a general verb to mean “hurt,” as in (21).

(20)	<u>English</u>	<u>Japanese</u>	
	waddle	choko-choko	} aruku ‘walk’
	trudge	teku-teku	
	trot	toko-toko	
	lumber	doshi-doshi	
	plod	tobo-tobo	
	stroll	bura-bura	
(21)	<u>English</u>	<u>Japanese</u>	
	throb	zuki-zuki	} itamu ‘hurt’/suru ‘do’
	prick	chiku-chiku	
	smart	hiri-hiri	
	tingle	piri-piri	
	gripe	siku-siku	
	splitting	gan-gan	

Interestingly, at the stage where Sumihare used mimetic verbs like (14), manner is one of many semantic components that are lexicalized in the verbs, and this is perhaps a very economical pattern especially at the one-word phase. As Sumihare increases the number of non-mimetic verbs, however, he also learns the language-specific principle of lexicalization that the manner component is excluded from a verb’s meaning. Lexical-semantic principles that dominate the lexicalization pattern have been applied once the child learns an increasing number of lexical verbs, although the question of how the child acquires these

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specific principles needs to be addressed in the future. I believe that the lexicalization pattern of non-mimetic verbs that excludes the manner component is the conventionality that the child aims at, as is discussed in Clark (1993), and once he reaches it around the stage exemplified in (16), he no longer finds a need for non-conventional verbs, particularly the innovative type of (14).

### **3. Summary**

To sum up I have described in this paper how a Japanese child develops his use of mimetics, both in the conventional and unconventional manner. Two observations have been singled out. First, I have pointed out that the child's suffixation of the past tense morpheme directly to mimetic words, which is an ungrammatical pattern in adult language, resembles adults' use of innovative verbs. We have discussed that not only the morphological mechanism but also understanding of pragmatic principles are shared by the two apparently separate phenomena. The nature of the child's use of seemingly unconventional mimetic morphology is not something that is unusual, but instead quite naturally fits the general acquisition strategy to make up for what is yet to be filled in the adult-like lexicon. Second, as the child learns language-specific lexicalization patterns for non-mimetic verbs, he applies such principles to less conventional mimetic words to achieve a higher level of conventionality. While a number of issues are still to be answered, this preliminary study suggests that investigations of a non-conventional word class such as mimetics together with its interaction with more conventional lexical classes make a large contribution to a better understanding of children's lexical acquisition in general.

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