

**Monosyllabic and disyllabic roots in
the diachronic development of mimetic
expressions**

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monosyllabic (CV or CVN) roots

paN

‘explosion of a balloon, hitting of a tensely stretched surface, etc.’

go

‘loud roaring sound’

- more naturally motivated
- more iconic
- less linguistically constrained

disyllabic (CVCV) roots

pata

‘the manner in which a light flat object hits a surface’

gobo

‘the manner in which a large bubble rises’

- unique to Japanese
- have close affinity to the regular lexical stratum

Significance of the distinction

- Essential for principled explanations of morphological, phonological, semantic, and syntactic properties of mimetics
- Essential for the understanding of diachronic changes

Case studies

coda-nasal /N/

root-internal /h/

Structure of the presentation

1. synchronic contrasts between monosyllabic and disyllabic roots
2. diachronic development of the coda nasal /N/ in mimetic words
3. diachronic development of the glottal fricative /h/
 - Stability of the language-specific disyllabic template
4. some implications to broader issues of the evolution of the Japanese language.

Morphological derivations

Applying to both monosyllabic and disyllabic roots

compound mimetic verb formation $\sigma\sigma$ - $\sigma\sigma$ -*suru*

kii-kii-suru 'to squeak'

gata-gata-suru 'to rattle/to be busy'

Applying only to disyllabic roots

suffixes *-meku* and *-tuku*

kira-meku 'to shine elegantly'

kira-tuku 'to shine gaudily'

suffix *-ri*

kata-ri 'rattling'

pika-ri 'flashing/glimmering'

Sound-meaning associations

	In the onset of monosyllabic roots	C ₁ in disyllabic roots	C ₂ in disyllabic roots
p	Hitting or explosion of a tensely stretched surface	Tensely stretched surface	Explosion or explosive movement
t	Hitting a relatively lax surface	Lax surface	Hitting or coming into contact
k	Striking a hard surface or involvement of a hollow object	Hard surface	In-out or up-down movement
s	Sliding over a smooth surface	Smooth surface	Friction

Effects of positional differentiation

/t-k-/ vs. /k-t-/

/toku/ ‘gurgling sound of liquid flowing from a narrow opening’

/kotu/ ‘tapping a hard surface’

	C₁ in disyllabic roots	C₂ in disyllabic roots
t	Lax surface	Hitting or coming into contact
k	Hard surface	In-out or up-down movement

/k-s-/ vs. /s-k-/

/kusu/ ‘chuckling’

/suku/ ‘growing healthily’

Phonotactics

Ban on two voiced obstruents in a single root

obstruent voicing = ‘weight’; root-initial; once per mimetic root

/pata/ ‘light flat object hits a surface’

/bata/ ‘heavy flat object hits a surface’

/pata/ vs. */pada/

pseudo-mimetic /sizu/ ‘walking ceremoniously’ vs. */zizu/

apparent exception; intervocalic /b/

/zubō/ ‘sinking into something soft’ < /zupo/

Phonotactics

Ban on two instances of contrastive palatalization

/patya/ 'splashing' vs. */pyatya/

/kyukyuQ/ 'squeaking sounds' = /kyu-kyu-Q/

Phonotactics

Palatalization docks onto a coronal consonants /t/, /d/, /s/, /z/, or /n/.

/kotya/ 'meaning'

/nyoro/ 'meaning'

If a root contains none of them, palatalization docks on to the root-initial consonant.

/pyoko/ 'meaning'

Violations

*/kyota/

*/noryo/

*/pokyol

Diachronic development

coda nasal /N/

root-initial /h/

Diachronic development of coda nasal /N/

more abstract sounds in disyllabic roots	>	sounds in monosyllabic roots
/N/ with disyllabic roots affix	>	/N/ in monosyllabic roots part of CVN root

Coda nasal /N/ in monosyllabic roots

‘resonating sounds’

/piN/ ‘sound of a tightly drawn string’

/poN/ ‘small popping sound’

/paN/ ‘explosion or hitting of a tensely stretched surface’

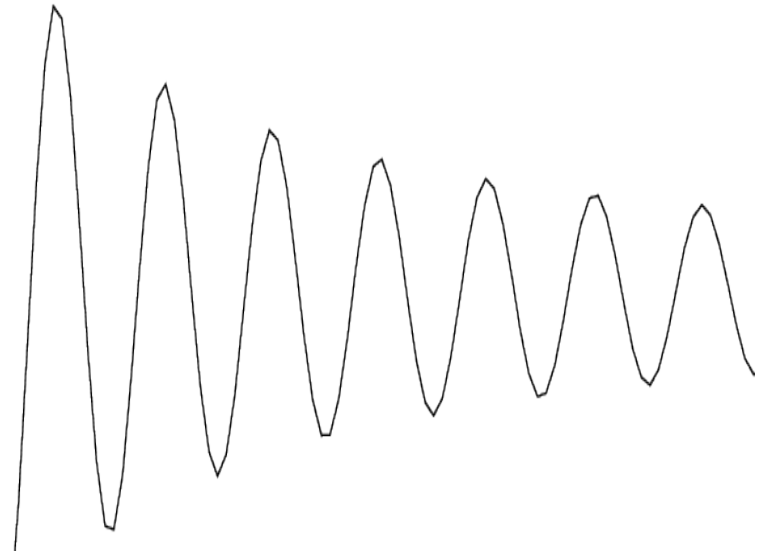
/koN/ ‘sound of tapping a hard surface’

/kyaN/ ‘yelping’

/miN/ ‘cicada’s singing’

/hiN/ ‘horse’s neighing’

/waN/ ‘dog’s barking’



Coda nasal /N/ in monosyllabic roots

‘nasal sounds’

/huN/ ‘snorting’ (as opposed to /huQ/ ‘sound of exhaling a puff of air’)

/kuN/ ‘sniffing’

‘nasal passage’

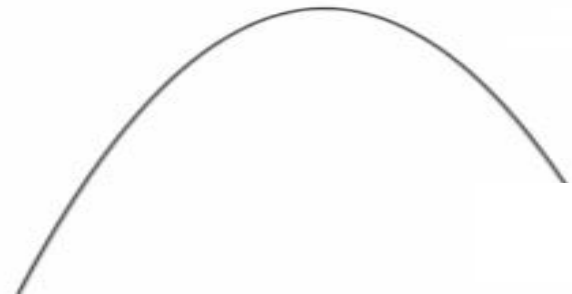
/tuN/ ‘stinging sensation in the nose’

‘movement with a curving trajectory’ or ‘bouncy, forceful movement’

/poN/ ‘the manner of throwing casually’

/pyoN/ ‘hopping’

/guN/ ‘moving forward forcefully’



Suffixal /N/ attached to disyllabic roots

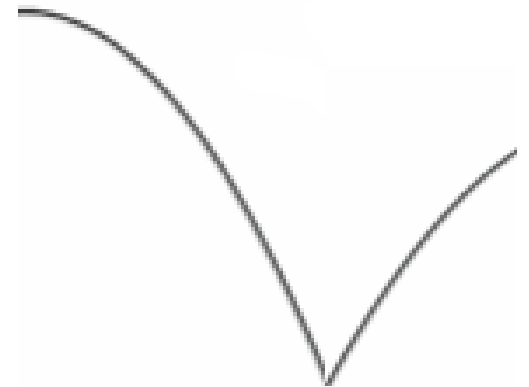
‘redirection of the main movement denoted by the root’

/potoN/ ‘a drop of liquid falls, hits a surface, and bounces upward’

/gokuN/ ‘food or liquid going through the mouth and down the food pipe’

/dosiN/ ‘hitting a surface and bouncing’

/potoN/ = /poto/ + /N/
 ‘drop of liquid falls + ‘bouncing’
 hits a surface’



Coda nasal /N/ in monosyllabic roots

no systematic relation between comparable CV roots and CVN roots

/pi/ ‘sound of a whistle or a chick’

/piN/ ‘plucking a string’

/ka/ ‘flaring up’

/kaN/ ‘sound of a bell’

/kya/ ‘humans screaming’

/kyaN/ ‘a dog yelping’

Universal coda nasal symbolism = ‘resonating sound’

English (Oswalt 1994, Rhodes 1994)

–ng in *bonk, clank, clunk, clink, boink, and bang*

–m in *boom*

Czech (Fidler 2014)

bum ‘resonating sound of a large object hitting a hard surface’

pum ‘gun shot sound’

vrum ‘the sound of an engine’

čim ‘sparrow’s chirping’

bzum ‘the sound of a rocket being shot up’

Korean(Kim-Renaud 2009)

ttang ‘sound of a gong’ (cf. *ttak* ‘sound of an arrow hitting a target’)

Siwu of Ghana (Dingemans through Akita 2013)

gbiim ‘bang’

Diachronic perspective on /N/: CVN

Manyooshuu, Old Japanese (7th – 8th century)

rhebus

i	bu	se	ku	'gloomily'	
移	夫				(poem 4113)
馬聲	蜂音				(poem 2991)
'horse voice'	'bee sound'				

pun within a 7-syllable line

桧橋從 (5 syllables)	来許武 (2 syllables; 3 characters; 2 words)
<i>hi.ba.si.yo.ri</i>	<i>ko.mu.ko.mu</i>
'from Hibashi'	'will come/fox's crying' '(fox) will come crying from Hibashi'

Diachronic perspective on /N/: CVN

Old Japanese (7th – 8th century): absent in the regular lexical stratum

Early Middle Japanese (9th – 12th century): change in the canonical syllable structure → characters or letters representing the syllables [mu], [ni], [i] or [u] used to represent /N/ in regular lexical items **and in monosyllabic mimetic roots** including the three animal sounds above

Explanation: at the stage of Old Japanese these animal sounds were monosyllabic and already had a nasal coda.

Horse: /iN/

Bee: /buN/

Fox: /koN/

Diachronic perspective on /N/: **CVCVN**

Late Middle Japanese (12th - 16th century)

Appearance of /N/ with **disyllabic mimetic roots**

/toboN/ ‘sound or manner of something falling into water’

Early Modern Japanese (17th – 18th century)

/supoN/

/pokaN/

Modern Japanese (19th century)

abstract meaning with disyllabic mimetic roots

/kyotoN/ ‘the state of being dazed from surprise’

/toroN/ ‘the state of being drowsy’

Diachronic perspective on /N/: Summary

Old Japanese (7th – 8th century): absent in the regular lexical stratum **but present in monosyllabic mimetic roots**

Early Middle Japanese (9th – 12th century): characters or letters representing the syllables [mu], [ni], [i] or [u] used to represent /N/ in regular lexical items and **monosyllabic mimetic roots**

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Diachronic perspective on /h/: standard view

Generally accepted view: non-sibilant fricatives /h/ {[ϕ] ~ [h] ~ [ç]} developed only as a result of weakening of [p] (Frellesvig 2010, Pintér 2015)

Old Japanese and Early Middle Japanese (7th century – 12th century) lacked /h/.

Loanwords from Chinese that had [h] in initial position were incorporated into Japanese as k-initial words.

‘Chinese character’

kanji (Japanese), *hanzi* (Chinese), *hanja* (Korean)

Diachronic perspective on /h/: standard view

by **Early Middle Japanese**

morpheme-initially

p > φ

intervocally

p > φ > w (> Ø ___ / i, u, e, o)

kopaki ‘awe-inspiring’ > koφaki > kowai ‘scary’

[φ] analyzed as a new sound-symbolic unit with a more abstract and aesthetic sense of ‘weakness/fragility/elegance’

fappato ‘fragrance spreading’

fararito ‘fluttering’ (Portuguese-Japanese dictionary of 1603/1604)

Diachronic perspective on /h/: standard view

in the second half of the 17th century

morpheme-initially

$\phi > h/ _ e, a, o$

$\phi > \text{ç}/ _ i$

(pa 'leaf' >) $\phi a > ha$

Modern Japanese

/huka/ [ϕ uka] 'being soft' vs. /puka/ 'floating'

/horo/ [horo] 'crying elegantly' vs. /poro/ 'round object rolling'

/hira/ [ç ira] 'fluttering elegantly' vs. /pira/ 'fluttering cheaply'

/hana/ 'flower' (regular lexical stratum)

/hira/ 'fluttering' (disyllabic mimetic)

/huN/ 'snorting' (monosyllabic mimetic)

Diachronic perspective on /h/

Exceptions? Apparent root-internal /h/ in disyllabic roots

/goho/ ‘sound of coughing’

/ehen/ ‘sound of clearing the throat’

/ahaha/, /ihihi/, /ehehe/, /ohoho/, /uhuhu/, /wahaha/, /gyahaha/, etc.

Expansion to the right

/ahaha/ ‘loud laughter’ → /ahahaha/

*/kerara to warau/ ‘(intended) to laugh *kerara*’

*/katiti to naru/ ‘(intended) to sound *katiti*’

Reanalysis

/go-ho/, /e-hen/, /a-ha-ha/, /i-hi-hi/, /e-he-he/, etc.

Diachronic perspective on /h/: new proposal

Symbolism of /h/

In disyllabic roots: **'weakness/elegance'**

/hira/ 'fluttering elegantly' vs. /pira/ 'fluttering'

In monosyllabic roots: **'respiration/breath/laughter'**

/hin/ 'neighing'

/huu/ 'breath'

/ha-ha/ 'laughing'

/huN/ 'snorting'

New proposal: **Glottal fricative /h/ existed in monosyllabic mimetic roots long before it was added to the regular lexical stratum and subsequently to disyllabic mimetic roots.**

Hashimoto's view revisited

(Hashimoto 1950)

- The neighing of horses, originally expressed as $い$ i or $いん$ iN , began to be recorded as $ゐ$ or $ゐん$ during the Edo period (Early Modern Japanese).
- This was because the phonetic value of the letter $ゐ$ changed from $[\phi i]$ to $[\ç i]$ as a result of the labial weakening.
- The change points to the time when $[\phi i]$ changed to $[\ç i]$.

“when the Japanese language did not have $[hi]$, it was natural that they used the letter i to represent horses' neighing because there was no other sound as close as $[i]$ for horses' neighing.”

Hashimoto's view revisited: alternative view

[h] or [ç] existed separately from [p] or [ɸ] in monosyllabic mimetic roots; neighing of horses had been perceived as something close to [çiN] long before the writing system could accommodate the representation of initial /h/.

Otherwise, why would Early Modern Japanese speakers have been motivated all of a sudden to add the weakened reflex of [p] with the symbolism of 'weakness' and 'elegance' to the clamorous sound of neighing *and* at the same time to appropriate the letter with the new sound value?

Diachronic perspective on /h/: supportive evidence

Expressions of laughter

Nakazato (2007) found most expressions of laughter began to appear in literature for the first time beginning in **Early Middle Japanese**:

huQ, hu-huN, ha-ha-ha-ha-ha, a-ha-a-ha-a-ha-to, i-hi-hi-i-hi-i-i-hi-hi-hi-hi-hi-to, e-he-he-he-he, wo-ho-ho-ho-ho, wa-ha-wa-ha, and u-ha-ha-ha-ha-ha

Modern Japanese

gya-ha-ha, wa-ha-ha, a-haa, ha-ha-ha, wa-ha-wa-ha, ihi-hi, u-hu-hu, hu-hu, huN, hu-huN, huQ, e-he-he, he-he, ho-ho, o-ho-ho, u-ha-u-ha, u-ha-ha-ha, and even nya-ha-ha, u-hya-hya

Summary regarding /h/

/h/ in disyllabic roots and /h/ in monosyllabic roots have different histories

/h/ probably existed in monosyllabic mimetic roots long before it began to appear elsewhere, with the meaning of ‘respiration’, a phonetically grounded iconic meaning.

The connection between the graphemes ㇰ ㇱ ㇲ ㇳ ㇴ and the sounds [ɸa, ɸi, ɸu, ɸe, ɸo] was first established in the regular lexical stratum and possibly in disyllabic mimetic roots -- the latter with abstract and aesthetic sound-symbolic meanings.

Subsequent sound changes to [ha, çi, ɸu, he, ho] happened in both regular lexical stratum and disyllabic mimetic roots. At this point, the use of the graphemes ㇰ ㇱ ㇲ ㇳ ㇴ spread to monosyllabic roots, which had already contained these sounds.

Summary

Monosyllabic mimetic roots are at one end of the iconicity continuum (Akita 2013), distinct from disyllabic mimetic roots. They are less constrained by structural properties of Japanese in general.

Disyllabic mimetic roots are more linguistically and language-specifically constrained. They share many structural properties with regular lexical items in Japanese.

The distinction between monosyllabic and disyllabic mimetic roots is relevant diachronically, too.

Implications to cross-linguistic discussions of mimetics

Monosyllabic mimetic roots of the type CV or CVN are more universal than disyllabic mimetic roots.

Monosyllabic mimetic roots should have a long stable history in many languages.

Iwasaki, Brown, Kita, and Vinson (2013) report that, when prompted by identical cues, speakers of Japanese and Korean produce similar monosyllabic mimetic forms, but they are more likely to produce dissimilar disyllabic mimetic forms.

Implications to cross-linguistic discussions of mimetics

Notable: The disyllabic root template has remained intact at least since Old Japanese.

Further, Ryukyuan mimetic roots are also divided into monosyllabic and disyllabic roots.

Ryukyuan disyllabic mimetic roots

kwata-kwata, kwata-kwataa (cf. gutu-gutu)

nuura-kwaara (cf. nuru-nuru)

sikai-tu, sikaQ-tu (cf. sikkari)

Could be a defining characteristic of the Japonic language family.

Disyllabic mimetic roots in “Coastal Pacific languages (Matsumoto 2007)”?