

The phonological regularity of Japanese mimetics: Segmental markedness in mimetic neologisms

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Topics in this talk

- Phonological regularity of Japanese mimetics
 - (1) Sound-symbolism and phonological regularity
 - Obstruent voicing
 - Palatalization
 - (2) Segmental (un)markedness of mimetic neologisms
 - The initial CV syllable in mimetic neologisms
 - Unmarked feature combinations are favored

Sound-symbolism: Obstruent voicing

- Voicing contrast in the initial obstruent of mimetic stems
 - kata-kata ‘light clicking or tapping sound’
 - gata-gata ‘A clattering sound caused by huge tremors’
- Sound-symbolism of voicing
 - Negative or pejorative meaning
 - e.g. roughness, dirtiness, unpleasantness, heaviness, dullness, crudeness, disgusting, hugeness... etc.

(Komatsu 1981, Hamano 1986, 1998, Labrune 2012)

Sound-symbolism: Palatalization

- Plane vs. Palatalized contrast in consonants
 - kata-kata > katya-katya [katɕa-katɕa]
 - ‘A light clattering or rattling sound made by relatively thin metallic or other very hard objects knocking together repeatedly’
(Takehi, Tamori, and Scourup 1996: 598)
- Sound-symbolism of palatalization
 - ‘childishness, immaturity, instability, unreliability, uncoordinated movement, diversity, excessive energy, noisiness, lack of elegance, and cheapness’ (Hamano 1986: 238)

Phonological regularity

- Obstruent voicing and Lyman's Law
- Lyman's Law
 - A restriction limiting morphemes to a single voiced obstruent.
 - *takara-*guzi* / takara-*kuzi* 'lottery'
- Lyman's Law in mimetic stratum
 - Mimetic stems containing two voiced obstruents are banned.
 - gata-gata* : **gada-gada* 'clattering'
 - basa-basa* : **baza-baza* 'rustling'
 - doku-doku* : **dogu-dogu* 'gurgling'

Phonological regularity

- The phonotactic constraints on palatalization

(Hamano 1986, 1998; Mester & Ito 1989)

- Coronal Dominance: katya- / *kyata- 'a light clattering sound'
tyoko- / *tokyo- 'bustling'
- Dextrality: dosya- / *dyosa- 'pouring (rain)'
mosya- / *myosa- 'scraggly'
- Rhotic Exclusion: gyoro- / *goryo - 'with goggling eyes'

Mimetic neologisms

- Recently created novel mimetic forms
 - Frequently used in Japanese *manga* (comics)
 - Containing unconventional or bizarre patterns compared with ordinal existent mimetic words

barorororoooo 'sound expressing a car is driving away' [Golgo 13]

mugigigigi 'clenching teeth' [Ribingu Geemu]

zutyutyuuu 'slurping' [Maison Ikkoku]

dopapapa 'sweeping with machine-gun fire' [Dragon Ball]

gugyugyugyu 'choking one's neck with both hands' [NARUTO]

The initial CV syllable

- Phonological structure of the initial CV is remarkable
- Violation of the phonotactic constraints
 - Lyman's Law **zuga-** (*zugaan* 'sound of a mighty blast')
 - Dextrality **syuta-** (*syutaa'* 'moving briskly with quick steps')
- The initial CV syllable has a special status as a prefix
 - Isolating the initial CV from the residue, no violation takes place in the base.
 - (zu-) **gaan** : the base *gaan* has only one voiced obstruent.
 - (syu-) **taa'** : the base *taa'* has no palatalized coronal.

The initial CV syllable

- The remaining part other than the initial CV syllable corresponds to the form of existing mimetic words.
 - zugaan: (zu) gan > **gan** ‘A large sound made by a relatively hard object striking something hard with force’ (KTS 1996:366)
 - syutaa’: (syu) taa’ > **taa’** ‘The manner of running at high speed’ (KTS 1996: 1168)
- The initial syllable (C₁V₁) reflects unique properties of mimetic neologisms
 - it is reasonable to examine the sound pattern of the initial CV syllable so as to reveal phonological characteristics of newly created mimetic stems.

Data

- 393 mimetic expressions from 18 comics (Nasu 2004)
 - Partially reduplicated patterns *zudododooN* *batatata'*
 - Disyllabic CVCV stems *zudo*(*dodooN*) *bata*(*tata'*)
- 280 stems are recognized as newly created ones
 - Basis of judgement: Kakehi, Tamori, and Schourup (1996)
 - *bata-* : *bata-bata* (KTS 1996: 45-49) > existing stem
 - *zudo-* : **zudo-zudo* (no entry in KTS) > newly created one

Types of the initial consonant (C1)

Newly created stems

C1	p	b	m	w	t	d	s	z	n	y	r	k	g	h	N	total
n=	7	28	11	3	11	22	7	25	8	1	2	15	42	12	3	197
(%)	3.6	14.2	5.6	1.5	5.6	11.2	3.6	12.7	4.1	0.5	1.0	7.6	21.3	6.1	1.5	100.

Syllables containing a palatalized onset (n=41) and onsetless syllables (n=42) are removed.

Existing stems (based on Hamano (1998: 41))

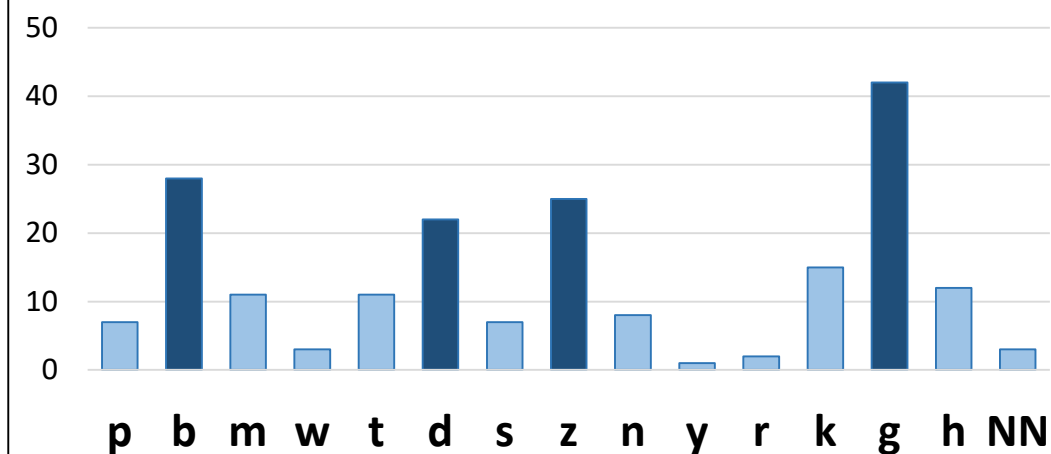
C1	p	b	m	w	t	d	s	z	n	y	r	k	g	h	N	total
n=	44	41	24	4	26	19	28	23	18	6	0	36	48	26	0	343
(%)	12.8	12.0	7.0	1.2	7.6	5.5	8.2	6.7	5.2	1.7	0.0	10.5	14.0	7.6	0.0	100.

Onsetless syllables (n=23) are removed.

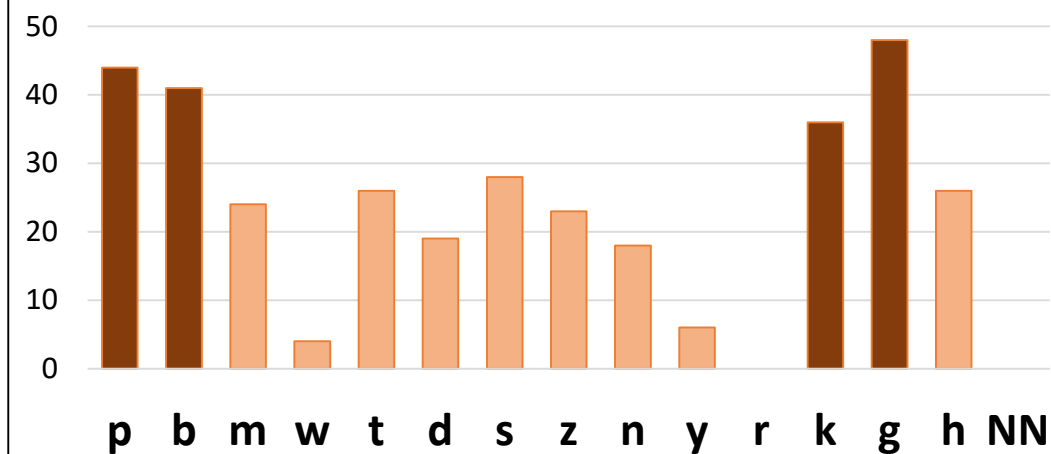
The ranking of lexical frequency

	Existing	(%)	Neologisms	(%)
1	g	14.0	g	21.3
2	p	12.8	b	14.2
3	b	12.0	z	12.7
4	k	10.5	d	11.2
5	s	8.2	k	7.6
6	t	7.6	h	6.1
7	h	7.6	m	5.6
8	m	7.0	t	5.6
9	z	6.7	n	4.1
10	d	5.5	p	3.6
11	n	5.2	s	3.6
12	y	1.7	w	1.5
:	:	:	:	:

C1: Neologisms



C1: Existing stems



Vowel in the initial syllable (V1)

Existing stems

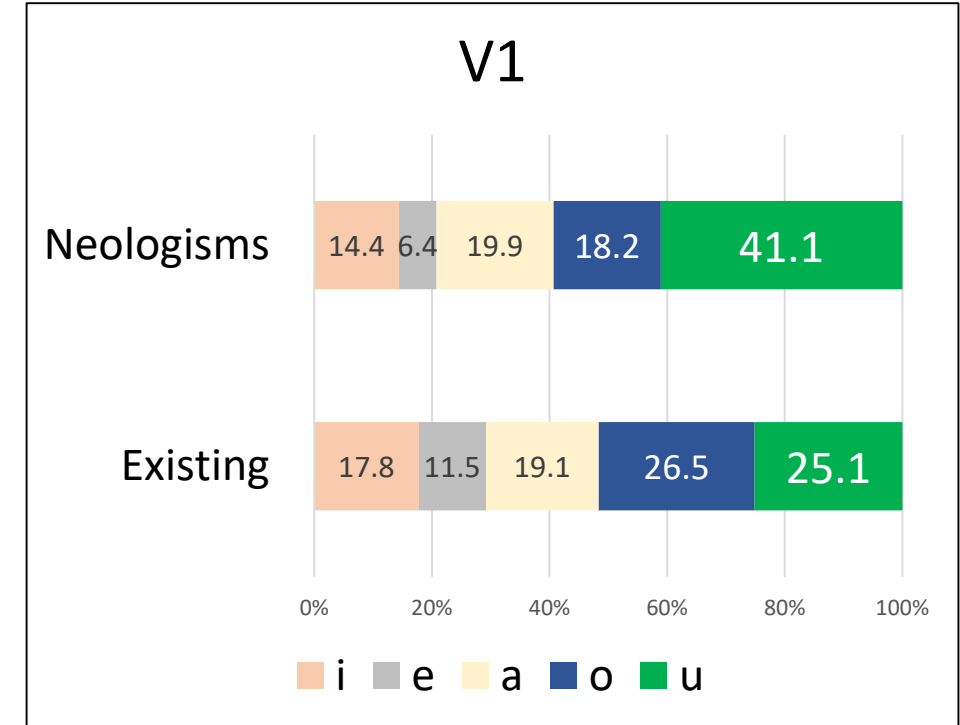
V1	n	(%)
i	65	17.8
e	42	11.5
a	70	19.1
o	97	26.5
u	92	25.1
total	366	100.0

Based on Hamano (1998: 47)

Newly created stems

V1	n	(%)
i	34	14.4
e	15	6.4
a	47	19.9
o	43	18.2
u	97	41.1
total	236	100.0

Syllables containing a palatalized onset (n=41) or a syllabic nasal /NN/ (n=3) are removed.



Segmental properties of neologisms

- Remarkable segments in mimetic neologisms
 - C1: voiced coronal obstruents /d/, /z/
 - V1: high back vowel /u/
- *Unmarked* nature of these segments is a key to understand phonological characteristics of newly created mimetics.

Unmarkedness of coronals

- **Inventory frequency** (Maddiesson 1987, Paradis & Prunet 1991, etc.)
 - The most frequent articulator in many languages
 - Japanese: **Cor** {t, d, s, z, c, n, j, r} > Lab {p, b, m, w} > Dor {k, g}
- **Transparency** (Kiparsky 1985, Avery & Rice 1988, Paradis & Prunet 1989ab, Cho 1991, etc.)
 - Coronals are more prone to undergo assimilation
 - Gemination in Sino-Japanese (Ito & Mester 1996)
 - T-stems /zit/ z**ipp**u ‘real father’, z**itt**ai ‘entity’, z**iss**ai ‘actual’, z**ikkoo** ‘practice’
 - K-stems /gak/ *g**app**i, *g**att**ai, *g**assei** / g**akkoo** ‘school’

Unmakedness of /u/ in Japanese

- The most frequent element as an epenthetic vowel
- Epenthesis in loanwords (NINJAL 1990)

/u/

p- kappu *cap*

b- pabu *pub*

k- piNku *pink*

g- baggu *bag*

s- misu *miss*

z- noizu *noise*

θ- basu *bath*

f- tahu *tough*

v- seebu *save*

ʃ- kyassyu *cash*

ʒ- beezyu *beige*

ts- buutsu *boots*

dz- niizu *needs*

m- hamu *ham*

l- beru *bell*

/o/

t- paato *part*

d- hando *hand*

/i/

tʃ- kyatti *catch*

dʒ- oreNzi *orange*

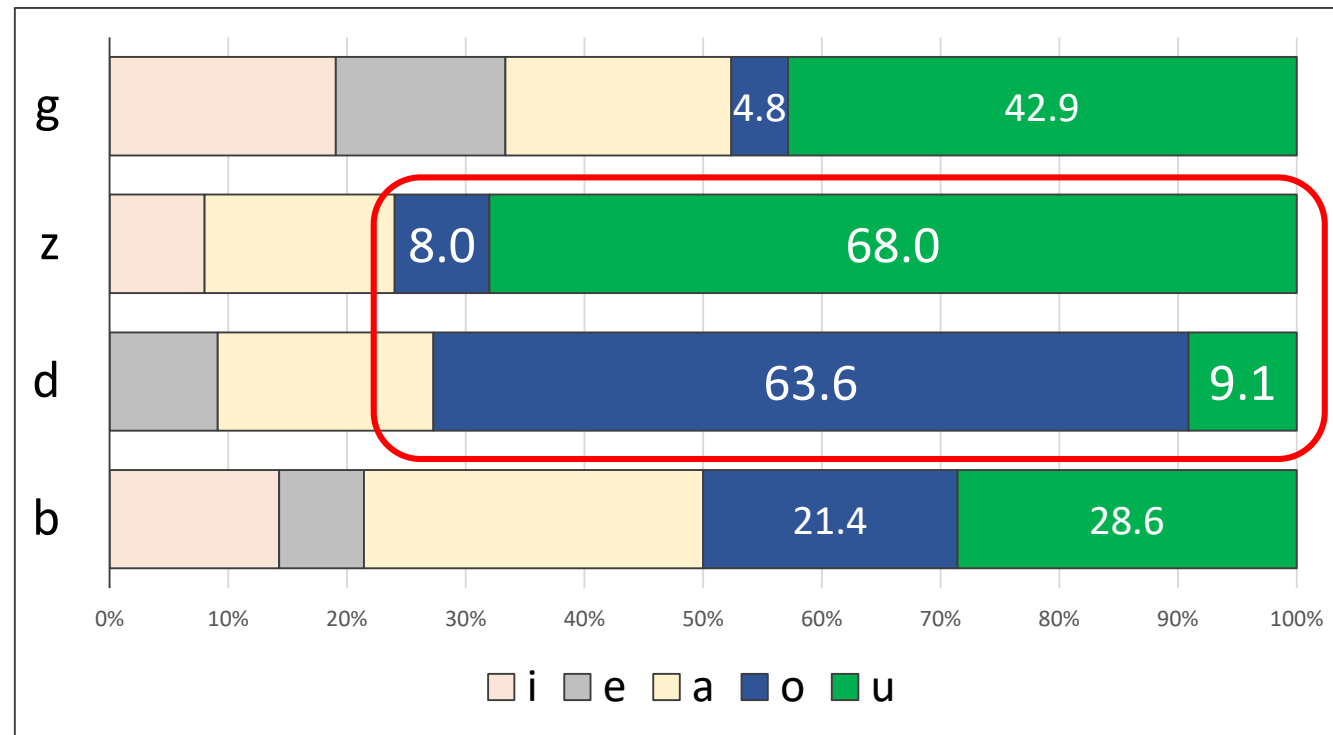
Combination of C1 and V1

- Combination of C1 and C2 in mimetic neologisms

	p	b	m	w	t	d	s	z	n	y	r	k	g	h
i	3	4	0	0	0	0	2	2	2	0	0	2	8	2
e	1	2	0	0	0	2	0	0	0	0	0	2	6	2
a	1	8	1	3	1	4	0	4	1	1	1	3	8	0
o	0	6	3	0	6	14	0	2	3	0	0	1	2	2
u	2	8	7	0	4	2	5	17	2	0	1	7	18	6

Combination: C1+V1

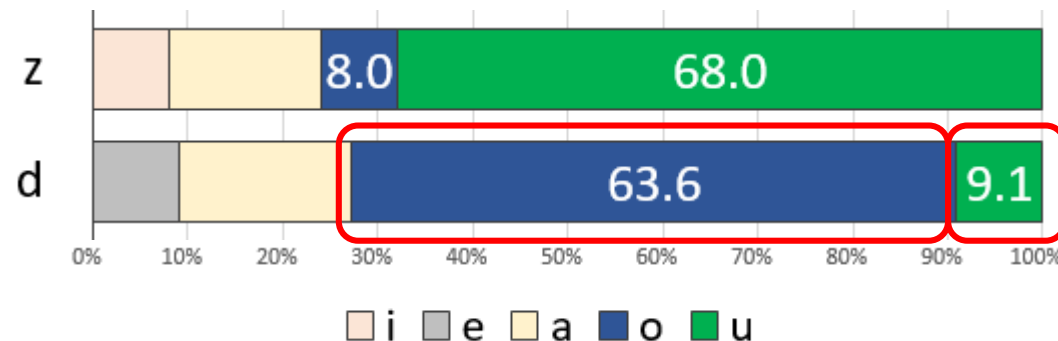
- Complementary distribution (between /u/ and /o/)



Gaps in Japanese syllabary

- ***/du/** as a gap in the syllabary

C1 \ V1	a	i	u	e	o
Z-	za	zi	zu	ze	zo
D-	da	(di)	(du)	de	do



--- **/do/** >> **/*du/**

Vowel epenthesis in loanwords

- Complementary distribution of epenthetic vowels
 - /u/: if the preceding coronal is /z/
 - /o/: if the preceding coronal is /d/

<i>noise</i>	noiz <u>[u]</u>	<i>bed</i>	bed <u>[o]</u>	*bedd <u>[u]</u>
<i>pause</i>	pooz <u>[u]</u>	<i>stand</i>	sutand <u>[o]</u>	*sutand <u>[u]</u>
<i>jazz</i>	zyaz <u>[u]</u>	<i>side</i>	said <u>[o]</u>	*said <u>[u]</u>
<i>rhythm</i>	riz <u>[u]</u> mu	<i>dream</i>	d <u>[o]</u> riimu	*d <u>[u]</u> riimu
<i>puzzle</i>	paz <u>[u]</u> ru	<i>handle</i>	hand <u>[o]</u> ru	*hand <u>[u]</u> ru
<i>raspberry</i>	raz <u>[u]</u> berii	<i>cadmium</i>	kad <u>[o]</u> miumu	*kad <u>[u]</u> miumu

/u/~/o/ distribution

- The phonological configuration of mimetic neologisms has something in common with that of non-mimetic items
 - CV combination in the initial syllable of mimetic neologisms
zu-gagaan / do-gagaan (*du-gagaan)
 - Phonotactic gaps in the syllabary
z-: zu, zo / d-: (du), do
 - Loanword epenthesis
noiz[u] / said[o] (*said[u])

Conclusion (1)

- Unmarked segments are favored as constituents of the initial CV syllable of mimetic neologisms.
 - Voiced coronal obstruents /d, z/ are likely to occur as C1 in neologisms whereas they are not so frequent in conventional mimetics.
 - /u/ is overwhelmingly favored as V1 in neologisms.
 - Segmental unmarkedness
 - Coronal is an unmarked articulator.
 - /u/ serves as a default vowel in the process of epenthesis.

Conclusion (2)

- Continuity between mimetic and non-mimetic vocabularies
- Phonological configurations of mimetic neologisms is not so novel but instead conventional.
 - /u/ does not appear if the preceding consonant is /d/ due to the phonotactic restriction in Japanese.
 - /zu/~do/ distribution patterns together with loanword epenthesis.
 - /zu, do/ serve as emphatic prefixes in non-mimetic words as well.

do-gitui 'garish' (<kitui)

do-siroot 'greenhorn' (<sirooto)

do-konzyoo 'guts' (<konzyoo)

zu-butoi 'foolhardy' (<hutoi)

zu-nukeru 'outstanding' (<nukeru)

zuQ-kokeru 'have a bad fall' (<kokeru)

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