

Iambic Feet in the Hokkaido Dialect of Japaneseⁱ

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Abstract: Although the feet in Japanese have been said to be trochaic, Poppe (2016) observes that the foot type in the Maisaka dialect language is iambic. This paper draws attention to the Hokkaido dialect of Japanese and demonstrates that the feet in the Hokkaido dialect are also iambic. Vowel shortening and consonant gemination with diminutive markers exemplify the preference for iambic feet.

Key words: Iamb, foot, syllable, vowel shortening, diminutive

1. Vowel Shortening

Shibata (2003) classifies the Hokkaido dialect of Japanese into two major subcategories: i) the inland dialect closer to the Tokyo dialect, and ii) the coastal dialect closer to the northern Tohoku dialect (see also Dallyn 2016). In both dialects, some word-initial long vowels in the Tokyo dialect are shortened, as shown in (1–3). In the following examples, the pitch accent is marked by the accent symbol.

- | | | | |
|-----|----|---|---------------------------------------|
| (1) | a. | Do-shi-ta?
[do:'.çi.ta]
($\sigma_{\mu\mu}\sigma_{\mu}$) σ_{μ}
(HL)L
how-do-PAST
“What happened?” | (Tokyo) |
| | b. | Do-shi-ta?
[do.çi.ta']
σ_{μ} ($\sigma_{\mu}\sigma_{\mu}$)
L(LL)
how-do-PAST
“What happened?” | (Hokkaido) |
| (2) | a. | So-shi-tara
[so:'.çi.ta'.ra]
($\sigma_{\mu\mu}\sigma_{\mu}$) $\sigma_{\mu}\sigma_{\mu}$
(HL)(LL)
so-do-then
“You can do so.” | i-yo. (Tokyo)

good-PAR |

- b. So-shi-tara is-sa. (Hokkaido)
 [so.çi.ta'.ra]
 $\sigma_{\mu}(\sigma_{\mu}\sigma_{\mu})\sigma_{\mu}$
 L(LL)L
 so-do-then good-PAR
 “You can do so.”
- (3) a. So-da-ne. (Tokyo)
 SO-DEC-PAR
 [so'o.da.ne]
 $(\sigma_{\mu\mu} \sigma_{\mu})\sigma_{\mu}$
 (HL)L
 “I agree.”
- b. So-da-ne. (Hokkaido)
 SO-DEC-PAR
 [so.da.ne:']
 $\sigma_{\mu}(\sigma_{\mu}\sigma_{\mu\mu})$
 L(LH)
 “I agree.”

It is not always the case that long vowels are shortened. In the examples (4–5), long vowels in demonstratives do not undergo shortening.

- (4) a. Aa-shi-ta. (Tokyo)
 /a: .çi.ta./
 $(\sigma_{\mu\mu}\sigma_{\mu})\sigma_{\mu}$
 (HL)L
 that-do-PAST
 “You did it that way.”
- b. Aa-shi-ta. (Hokkaido)
 */a. çi.ta'./
 $\sqrt{/a: .çi.ta./}$
 $\sigma_{\mu\mu} \sigma_{\mu}\sigma_{\mu}$
 HLL
 that-do-PAST
 “You did it that way.”
- (5) a. Ko-shi-ta. (Tokyo)
 /ko: .çi.ta./
 $(\sigma_{\mu\mu}\sigma_{\mu})\sigma_{\mu}$
 (HL)L
 this-do-PAST

- b. “I did it this way.” (Hokkaido)
 Ko-shi-ta.
 */ko.çi.ta./
 √/ko:çi.ta./
 σ_μσ_μσ_μ
HLL
 this-do-PAST
 “I did it this way.”

Although such differences should be accounted for, the vowel shortening or mora lightening in the examples in (1–3) results in iambic feet.

2. Iambic Structure

The data in (1–3) suggest that the iambic moraic structure is observed in vowel shortening. While the examples in the Tokyo dialect have a trochaic structure, the Hokkaido dialect has an iambic preference marked by an accent.

- (6) The foot structure preference in Hokkaido Japanese is iambic.

As the tableau in (9) suggests, the trochaic candidate is penalized by the iambic constraint defined in (8) which outranks another constraint against metricizing the final syllable in (7).

- (7) **NON-FINALITY**
 No foot is final in PrWd. (Kager 1999)
- (8) **RHTYPE=I**
 Feet have final prominence. (Prince and Smolensky 1993, Kager 1999)
- (9)

Input: /do:'.çi.ta/	RHTYPE=I	NON-FINALITY
[(do:'. çi).ta]	*!	
☞ [do. (çi.ta')]		*

Thus, the iambic rhythm in the Hokkaido dialect motivates vowel shortening in the Japanese language.

3. Diminutive marker *-ko*

In the Hokkaido dialect of Japanese, there is a diminutive marker *-ko*, “child,” which attaches to nouns. The diminutive marker attachment geminates the coda consonant of nouns. The final syllable receives a high pitch accent and prominence, and the feet become non-canonical iamb.

The data in (11–12) are examples of the diminutive marker attachment. C stands for a consonant while V represents a vowel. Coda consonants are counted as moraic, following Kubozono (1989) and others, which means the constraint WEIGHT-BY-POSITION is ranked higher than the constraint militating against bimoraic syllables (Hayes 1989, Sherer 1994, Kager 1999).

(10) **WEIGHT-BY-POSITION**

Coda consonants are moraic.

The diminutive *-ko* ‘‘child’’ itself means ‘‘a child.’’ In older generations, *-ko* ‘‘child’’ may attach to almost all nounsⁱⁱⁱ. (11) appears to be the epenthesis driven by the minimal word, the formation of a single metrical foot that consists of two syllables (Broselow 1995, for Iraqi Arabic).

- (11) a. ko
[ko]
CV
 σ_μ
L
‘‘a child’’
- b. kok-ko
[kok.kó]
CVC.CV.
($\sigma_{\mu\mu}$ σ_μ)_{foot}
(HL)
child-DIM^{iv}
‘‘a small child’’
- (12) a. futon
[fu.ton]
CV.CVC
(σ_μ $\sigma_{\mu\mu}$)
LH
‘‘comforter’’
- b. futon-ko
/fu.ton.kó/
CV.CVC.CV
 σ_μ ($\sigma_{\mu\mu}$ σ_μ)
L(HL)
futon-DIM
‘‘small comforter’’

- (13) a. o-cha
/o.tja/
LL
μ μ
HON-tea
“tea”
- b. o-chak-ko
/o.tjak.kó/
V.CVC.CV
σ_μ(σ_{μμ} σ_μ)
L(HL)
HON-tea-DIM
“tea”

Although *futon-ko* “futon-DIM” is acceptable only among older generations (those in their seventies or eighties), the diminutive attachment is widely observed.

The geminated consonants are split across syllable boundaries. The first syllable of another candidate [kokk.o] is trimoraic against the constraint in (14), and coda consonants are complex, violating a constraint in (15). The other candidate, [ko.kko], violates the complex onset prohibition in (16).

(14) ***3μ**

No trimoraic syllables.

(15) ***COMPLEX^{cod}**

* CC]_σ (‘Codas are simple.’)

(16) ***COMPLEX^{ons}**

*[_σ CC (‘Onsets are simple.’)

The diminutive marker insertion geminates consonants and results in Heavy-Light syllable sequences. The tendency toward HH or HL in (17) outranks a constraint against gemination, as in (18).

(17) **PROSF_{FORM}**

Words must end in Heavy-Heavy or Heavy-Light sequences.

(Kubozono et al. 2009)

(18) **PROS FORM** >> ***GEM**

Pitch accent on the light syllable violates WSP in (19) (Kager 1999).

(19) **WSP**

Heavy syllables are stressed.

- (20) a. bo
 /bo:/
 CVV
 $\sigma_{\mu\mu}$
 H
 stick
 “stick”
- b. bok-ko'
 /bok.ko'/
 CVC.CV
 $(\sigma_{\mu\mu} \sigma_{\mu})$
 (H L)
 stick-DIM
 “a small stick”
- (21) a. dojo
 [do.ɖzo:]
 $\sigma_{\mu} \sigma_{\mu\mu}$
 LH
 loach
 “loach”
- b. dojok-ko
 [do.ɖzok.kó]
 $\sigma_{\mu} \sigma_{\mu\mu} \sigma_{\mu}$
 L(HL)
 loach
 “loach”
- (22) a. mi
 [mi]
 σ_{μ}
 L
 meat
 “meat”
- b. mik-ko'
 [mik.ko']
 $\sigma_{\mu\mu} \sigma_{\mu}$
 HL
 meat-DIM
 “fish meat”

- (23) a. bakur-u
 /ba.ku.ru/
 CV.CV.CV
 $\sigma_\mu\sigma_\mu\sigma_\mu$
 (LL)L
 exchange-NONPAST
 “to exchange with each other”
- b. bakurik-ko-suru
 /ba.ku.rik.kó.su.ru/
 CV.CV.CVC.CV.CV.CV
 $\sigma_\mu\sigma_\mu\sigma_\mu\sigma_\mu\sigma_\mu\sigma_\mu$
 LL(HL)LL
 exchange-DIM-do
 “to exchange with each other”

(23b) is an example of *do*-support for the noun phrase *bakurik-ko* "exchange-DIM."

- (24) ochan-ko
 V.CVC.CV
 $\sigma_\mu\sigma_\mu\sigma_\mu \sigma_\mu$
 L(HL)
 sit-DIM
 “sit”

Therefore, the diminutive marker attachment creates non-canonical iambic rhythm HL in violation of WSP (WSP, PROS FORM >> *GEM).

The diminutive marker attachment in Tokyo Japanese is more restricted and the examples (b) in (11–13), (20) and (22) exist only in the Hokkaido dialect, and not in Tokyo Japanese. (23a,b) and (24) are all Hokkaido dialect. The following examples of diminutive marking are observed in both the Tokyo and Hokkaido dialects.

- (25) a. hashi
 “edge/side”
- b. hashik-ko
 edge-DIM
 “edge/side”
- (26) a. sumik-ko
 corner-DIM
 “corner”
- b. an-ko

- red.bean.paste-DIM
“red bean paste”
- c. chibik-ko
small.kid-DIM
“small kid”
- c. nyan-ko
cat-DIM
“cat”
- d. wan-ko
dog-DIM
“doggy”

4. OT Tableau

(27) is a tableau for diminutive marking. Another geminated candidate, [kok'ko], is eliminated by prioritizing the iambic rhythm. The non-geminated candidate, [ko.ko], gives way to the preference to HH or HL structure.

(27)

Input: /ko+ko/	RhType=I	PROSFORM	*GEM
ko.ko		*!	
☞ kok.ko'			*
kok'ko	*!		

The vowel shortening discussed in section 1 suggests further ranking among constraints. In addition to the requirement for the iambic rhythm, the feet should be aligned to the right edge of the prosodic word (ALL-FT-RIGHT in (28)). Along with WSP, only [do. (ci.ta')] type examples survive these constraints. The winning candidate is penalized by PROSFORM, which implies domination by other constraints.

(28) ALL-FT-RIGHT

Every foot stands at the right edge of the prosodic word.

(McCarthy and Prince 1993, Kager 1999)

(29)

Input: / do:.ɕi.ta/	RhType=I	ALL-FT-RIGHT	WSP	PROSFoRM
(do:.ɕi.)ta	*!	*!		
do:. (ɕi.ta')			*!	
[☞] do. (ɕi.ta')				*
(do. ɕi'.)ta		*!		*
do. (ɕi'.ta)	*!			*

5. Conclusion

This paper drew attention to: i) vowel shortening and ii) consonant gemination with a diminutive marker in the Hokkaido dialect of Japanese. Unlike Tokyo Japanese, the Hokkaido dialect prefers an iambic rhythm that shortens vowels and geminates consonants. Although other phonological patterns should provide more support to this claim, it is not the Hokkaido dialect alone whose moraic structure differentiates it from Tokyo Japanese.

References

- Broselow, Ellen (1995) "Skeletal Positions and Moras," *The Handbook of Morphology*, ed. by John Goldsmith, 175-205, Blackwell, Oxford.
- Dallyn, Thomas (2016) "Hokkaido Hogen-no Inrītsutekina Tokucho-ni kansuru Kijutsutekikenkyū: Hokkaido Hogen-no Meishi Akusento-ni tsuite," *Kenkyū Ronshū* 15: 229-252. Hokkaido University.
- Hayes, Bruce (1989) "Compensatory Lengthening in Moraic Phonology," *Linguistic Inquiry* 20, 253-306.
- Kager, René (1999) *Optimality Theory*, Cambridge University Press.
- Kubozono, Haruo (1989) "The Mora and Syllable Structure in Japanese: Evidence from Speech Errors," *Language and Speech* 32(3), 249-78.
- Kubozono, Haruo, Junko Ito, and Armin Mester (2009) "Consonant Gemination in Japanese Loanword Phonology," *Current Issues in Unity and Diversity of Languages. Collection of Papers Selected from the 18th International Congress of Linguists [CIL 18]*, ed. by The Linguistic Society of Korea, 953-973, Dongam Publishing Co., Republic of Korea.
- McCarthy, John and Alan Prince (1993) "Generalized Alignment," *Yearbook of Morphology 1993*, eds. by Geert Booij and Jaap van Marle, 79-153, Kluwer, Dordrecht.
- Poppe, Clemens (2016) "Iambic Feet in Japanese: Evidence from the Maisaka Dialect," *Gengo Kenkyū* 150: 117-135.
- Prince, Alan and Paul Smolensky (1993) "Optimality Theory: Constraint Interaction in Generative Grammar" ms., Rutgers University, New Brunswick and University of Colorado, Boulder.
- Sherer, Tim (1994) *Prosodic Phonotactics*, PhD thesis, University of Massachusetts, Amherst.
- Shibata, Takeshi (2003) "Nihon Zendo no Hogen," *Gekkan Gengo* 32, January: 26-29.

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^{iv} DIM stands for a diminutive marker.