

Nasal Lengthening in Japanese Traditional *Jiuta* Songs

Sumiyo Nishiguchi

Abstract

This paper examines nasal lengthening or gemination in Japanese traditional song, *jiuta* style music. Nasal coda consonants are prolonged or geminated in order to carry additional timing units. The nasal lengthening demonstrates that the faithfulness constraint that preserves the number of music-motivated mora outranks the prohibition against voiced geminates.

1 Restricted Gemination in Japanese

Ito and Mester (2007) indicated that no voiced consonants are known to be geminated in native Japanese language phonology. In (1a,b), the voiceless /f/ undergoes gemination when the prefix *ma* is attached. However, the voiced /m/ is not geminated. Only voiceless consonants such as /k/ in (1c) or /p/ as in (1d) are geminated with suffixation.

- (1) a. mas-shiro

/maf.ʃiro/

“real white”

- b. *mam-midori, ma-midori

/mammidori/, /ma.midori/

“real green”

c. hashik-ko

/haʃik.ko/

“edge”

d. saki-po

/saki.po/

“top”

In contrast, in English loanwords, obstruents are geminated.

(2) a. beddo

/bed.do/

“bed”

b. doggu hoteru

/dog.gu. ho.te.ru/

“dog hotel”

c. tonneru

/ton.ne.ru/

“tunnel”

Ito and Mester (2007) and Kubozono (2017) argued that the universal constraint against voiced geminate *Voiced Geminate is dominant in native phonology of Japanese.

(3) *Voiced Geminate (*VoiGem)

Voiced geminate consonants are prohibited.

On the other hand, in loanword phonology, nasal geminates occur as in (4).

(4) a. Hanna

/han.na/

Hanna

“Hanna”

(Aoyama 2002)

- b. penne pasuta
/pen.ne pa.su.ta/
penne pasta

“penne pasta”

- c. Anne-no nikki
/anne.no nik.ki/
Anne-GEN diary

“Anne (Frank)’s Diary”

I would like to point out that, nasal coda consonants are lengthened and geminated in native Japanese *jiuta* music. The nasal consonant in Japanese is uvular nasal /N/. While vowel lengthening has been studied in the literature, consonant lengthening has not been discussed much in the literature. This paper presents the data that the nasal consonant is lengthened in Japanese traditional music.

Jiuta refers to Japanese traditional songs composed during the *edo* period between the seventeenth and the nineteenth centuries. *Jiuta* songs are typically accompanied by the *shamisen* string instruments.

The *jiutas Yuki* and *Obiya* are sung with vowel lengthening and nasal gemination as indicated below in (5-6).

- (5) ware-o machi-ken.
/ware:-o:machi:-keNNNNNNNNN/
me-ACC wait-should.PAST
“(He) should have waited for me.”

(*Yuki*, Hauta-mono, the end of 19th century)

- (6) a. iw-an-to sur-edo
/i: wa: NN.to: su:re.do:/
say-will-COMP do-but
“Even though (I) tried to say”

(*Obiya*: *Jiuta*, Shigetayu-mono, *You Tube*,

<https://www.youtube.com/watch?v=yt3VWgL1v2A>, played by Seikin
Tomiyama)

b. hyoonna
/hjo:.NN.na:/
unexpected
“unexpected”

(ibid.)

Coda consonants in Japanese are moraic. Moraic nasal is counted as a single timing unit in Japanese traditional songs (in the twentieth century) (Kubozono 2017).

“The mora’s role as a timing unit also shows itself in the text–tune relationship in music (Vance 1987). In traditional Japanese songs, mora and note usually have a one-to-one correspondence, with every mora assigned to an independent note and vice versa.”

(Kubozono 2017)

2 Constraint Ranking

Let us explicate nasal gemination in *jiuta* music in the framework of Optimality Theory (Prince and Smolensky 1993). The following two constraints determine the presence of nasal geminate in *jiuta* music: i) Cross-linguistically observed constraint NO-GEMINATE which constraints the output of geminates; and, ii) the faithfulness constraint that preserves music-motivated mora in the output. Specifically, IDENT-R[μ] is the weight preservation constraint in some relations. In this case, the relation holds between the input-the rhythm-and output number of morae.

(7) a. NO-GEMINATE (Ito and Mester 2003)

b. IDENT-IO[μ]

IDENT-R[μ]: Let $weight(\alpha)$ be the moraic value of α and R any correspondence relation. Then xRx' implies that $weight(x) = weight(x')$. The instantiation of IDENT-R[μ] is IDENT-IO[μ] which preserves the weight between input and output. It has been said that coda consonant is moraic in Japanese.

The two constraints in (7) are ranked as in (8):

(8) Constraint Ranking:

Ident IO[μ] > NO-GEMINATE

/machi-keN+ μ^7 /	IDENT-R[μ]	NO-GEMINATE
a. machi-keN/	*!	
☞ b. machi-keNNNNNNNN		*

Tableau 1 /machikeN/ (*Yuki*)

As shown in Tableau 1, the prioritized weight-preserving constraint penalizes the non-geminate candidate b. Since IDENT IO[μ] outranks NO-GEMINATE, the geminated output turns out to be the winning candidate.

3 More on *Jiuta*

The coda consonant of each word is lengthened and geminated in *jiuta*. Vowel lengthening is peculiar with *jiuta*. In other genres of Japanese traditional music, vowel lengthening may or may not occur. All vowels /a, e, i, o, u/ at the end of lexical words are lengthened. On the other hand, the vowels in the middle of content words are not always lengthened—Sometimes they are, but not always. In the example (9),

- (9) haru-no no-ni ide-te
 /haru:no: noni: i:de:te:/
 spring-GEN field-GOAL go.out-then
 “I go out to spring field”

(*Yaegoromo*, Tegoto-mono, song by Michiko Inoue,
<https://www.youtube.com/watch?v=iX3QDt-ed7k>)

- (10) yo-mo shinshinto
 /jo.mo: jiN:.jiN:.to/
 night-also grow.late
 “even the night grew late”

(*Kyokunezumi*, Tegoto-mono)

Without nasal lengthening, /jiN/ is supposed to have one syllable with CVC (consonant-vowel-consonant) structure. With nasal lengthening, /jiN:/ also has one syllable but a heavy one, considering coda consonants moraic. If an epenthetic vowel /u/ is inserted after the nasal, the word would be resyllabified into two syllables, /ji:.Nu:/. However, it is not the case. Singing causes nasal lengthening, but not vowel epenthesis.

- (11) Tenma
 /tenma/
 “Tenma”
- (*Kamiji*, Shigetayu-mono)

Nasal gemination is observed in *yoruri* in (12) and in *nagauta* too in (13).

- (12) ryugan-o
 /rju:.gaij.o/
 the face of the son of the heaven-ACC
 “(to see) the face of the son of the heaven”
- (*Yoshitsune Senbon Zakura*, Bunraku, Yuda 1965)
- (13) jaken-no yaiba-ni sakidach-ite
 /ʒa:.ke:N:no: jai:.ba:.ni.sa.ki.dat.te./
 ill-treatment-GEN sward-LOC precede-and
 “prior to the ill-treatment”

(*Sagimusume*, Nagauta)

Even though nasal lengthening is observed in *yoruri* and *nagauta*, the vowel lengthening constantly occurs in *jiuta* unlike in other types of traditional songs. Therefore *jiuta* appears to be a suitable target to examine lengthening.

4 Conclusion

This paper explored *jiuta*, the Japanese songs in Edo era. The nasal coda consonant is geminated or lengthened for the sake of melodies and rhythm. The identity constraint on weight outranks the prohibition against nasal gemination, which explains why nasal lengthening happens.

Acknowledgment

I am thankful to Mihoko Nogawa for providing data and giving useful comments while this paper was under development. I also appreciate the conversation at ACAL 54.

References

- Aoyama, Katsura. 2002. Quantity contrasts in Japanese and Finnish: Differences in adult production and acquisition.
- Ito, Junko, and Armin Mester. 2003. *Japanese morphophonemics: Markedness and word structure*. The MIT Press.
- Ito, Junko, and Armin Mester. 2007. The phonological lexicon. In *A handbook of Japanese linguistics*, ed. Natsuko Tsujimura. Oxford: Blackwell.
- Kubozono, Haruo. 2017. Mora and syllable. In *The handbook of Japanese linguistics*, ed. Natsuko Tsujimura.

Prince, Alan, and Paul Smolensky. 1993. Optimality theory: Constraint interaction in generative grammar.

Vance, Timothy J. 1987. *An introduction to Japanese phonology*. State University of New York Press.

Yuda, Yoshio. 1965. Bunraku jorurishu, Nihon Kotenbungaku Taikei 99. Tokyo: Iwanami Shoten.