

絶対運命黙示録

出生登録・洗礼名簿・死亡登録

絶対運命黙示録

世界の終わり

夢想をして

気まゝに

遊ばせろ

# nasalised vowels in Middle Japanese: phonetics, phonology or something completely different?

世界の中心でアイを叫んだけもの

# Early Middle Japanese and graphemics of the nasalised vowels

- the Early Middle Japanese a.k.a. the Classical Japanese period during the Hei'an era (IX–XII CE) is crucial for the history of Japanese writing tradition and the development of loanword vocabulary
- it is also the period characterised by emergence of nasal vowels ⟨ĩ, ã⟩ and general departure from the strict Old Japanese CVCV word structure
- ⟨ĩ, ã⟩ are complex graphemes composed of signs for syllables with -i, -u nuclei + anusvara diacritic of Indian Siddham script
- anusvara was used with both kana and kanji
- from the multitude of synonymous Classical Japanese kana glyphs only two sets are sufficient for our purposes:

hiragana    katakana

⟨ĩ⟩      いゝ      イゝ

⟨ã⟩      うゝ      ウゝ

# ⟨ĩ, ũ⟩ in Sinitic loanwords

- ⟨ĩ, ũ⟩ are primarily known in Sinitic loanwords
- Middle Chinese ɲ# > Early Middle Japanese ⟨ĩ, ũ⟩

双, MidCh \*sãŋ<sub>Karlgren</sub> > OJ \*sugu > EarMidJ \*soũ~\*saũ > Late MidJ, ModJ ⟨sou⟩ ‘set of two, pair’

- a potentially endless set of examples of many thousands lexemes strong

EarMidJ	*toũ	⟨to-ũ⟩	とう.	東 ‘East’
ModJ	tou	⟨to-u⟩	とう	
EarMidJ	*kiaũ	⟨ki-ia-ũ⟩	きやう.	京 ‘capital’
ModJ	kjou	⟨ki- <sub>io</sub> -u⟩	きょう	
EarMidJ	*k <sup>w</sup> auũ	⟨ku-wa-ũ⟩	くわう.	光 ‘source of light’
ModJ	kou	⟨ko-u⟩	こう	
EarMidJ	*siaũ	⟨si-ia-ũ⟩	しやう.	生 ‘life’
ModJ	sjou	⟨si- <sub>io</sub> -u⟩	しょう	
EarMidJ	*iaũ	⟨ia-ũ⟩	やう	陽 ‘sunligh; South; Yang’
ModJ	jou	⟨io-u⟩	よう.	

# reflexes of Early Middle Japanese ⟨ĩ, ũ⟩

- reflexes in Auslaut of lexical tokens  
⟨ĩ, ũ⟩ > Late Middle Japanese /i, u/ > Modern East, West Japanese, Hatizyou /i, u/
- reflexes on morphemic boundaries:  
EarMidJ ⟨ĩ, ũ⟩ > later /i, u/ or ⟨ŋ⟩
- basically, there is no extant Yamatoic idioms that would preserve the original articulation of the «nasalised vowels»
- this situation is unique as both in the North and South of Hondo island there are a number of idioms which retain EarMidJ \*k<sup>w</sup>, \*g<sup>w</sup>, \*si, \*ti, \*di, \*tu, \*du, \*t#, \*[ϕ]/\_ {a, o}, \*[u], \*[j]/\_e and even traces of OJ synharmonism

# ⟨ĩ, ũ⟩ in Yamato lexemes

- ⟨ĩ, ũ⟩ are regular results of a subtype of onbin – the «euphonic sound changes»

some onbin subtypes

			romaisation	hiragana	katakana	
Old Japanese	*ni, *nu, *ri, *ru	>	so-called «placeless phoneme /N/» – a nasal/_C, _# ([N] in Modern Japanese)	⟨ŋ, mu, Ø⟩	ん, ん, -	ン, ム, -
Old Japanese	*ri, *ru, *ti, *tu,	>	so-called «placeless phoneme /Q/» – an obstruent/_C(+obstruent), C(+fricative)	⟨tu, Ø⟩	つ, -	ツ, -
Old Japanese	*bi, *bu, *mi, *mu, *gu, *gi	>	«nasalised vowels» or /N/			

- onbin subtypes we are interested in are restricted for morpheme boundaries which is hardly a sign of a purely phonetic process

## contexts for ⟨ĩ, ã⟩ in Yamato lexemes

found word-internally as a result of vowel apocopation in the following contexts:

1a. in place of former OJ **second** syllable of the first root in composites of CVCV-CVCV structure

1b. in place of former OJ first syllable of the **second** root in composites of CV-CVCV, CVkV-CVCV structure

2. in place of former OJ stem final CV in verbal, adjectival forms

in all cases ⟨ĩ, ã⟩ behave the same way ⟨ŋ⟩ does: \*C(+voice)VC(-voice)V > {ĩ, ã, ŋ}C(+voice)V

# 1. compounds

	OJ		EarMidJ	
*bi, *bu	”aki-bitō <sub>2</sub>	>	*akiūde	‘tradesman’
*mi, *mu	”ko <sub>1</sub> -miti ”pi-muka	>	*koūdi *huiūga	‘small road > narrow pass’ ‘sun-facing’
*gu, *gi,	*kagi-puri	>	*kaūburi	‘headwear’

## 2. derivation – ⟨ĩ, ã⟩ and other onbin types

	OJ		EarMidJ	
*ri, *ru	”sir-itĒ	>	*sitte	‘know-CVB’
*ti, *tu	”ut-itĒ	>	*utta	‘hit-CVB’
*ni, *nu	”sin-itĒ	>	*sinde	‘die-CVB’
*ri, *ru	”ar-umeri	>	*anmeri	‘be-CVB’
*bi, *bu	”i <sub>o</sub> ib-itĒ	>	*i <sub>o</sub> ũda	‘call-CVB’
*mi, *mu	”tum-itĒ	>	*tuũde	‘pluck_pick-CVB’
*gu, *gi	”tug-itĒ	>	*tuĩde	‘follow-CVB’



- as one can see  
in Early Middle Japanese ⟨ĩ, ã⟩ contrast with /N/
- in Sinitic lexemes the nasalised vowels are in complementary distribution:  
ã/{a, o, u}\_,  
ĩ/e\_
- in Yamato morphemes the distribution is etymological:  
ã < {\*bi, \*bu, \*mi, \*mu, \*gu},  
ĩ < \*gi
- as yet, the exact phonological status of ⟨ĩ, ã⟩ is hard to defy

# traditionally proposed changes behind the EarMidJ onbin mutations

(a)	(b)	(c)	(d)	(e)
-pu ⇒	[b <sup>w</sup> u ~ β <sup>w</sup> u]	[β <sup>w</sup> ɰ]	>	/U, Q/
-pi ⇒	[bji ~ βji]	[βjɰ]	>	/U, Q/
-ki ⇒	[gji ~ γji]	[γjɰ]	>	/I/
-ku ⇒	[g <sup>w</sup> u ~ γ <sup>w</sup> u]	[γ <sup>w</sup> ɰ]	>	/U/
-gi ⇒	[ <sup>ŋ</sup> gji ~ <sup>ŋ</sup> γji]	[ <sup>ŋ</sup> γjɰ]	>	/ĩ/
-gu ⇒	[ <sup>ŋ</sup> g <sup>w</sup> u ~ <sup>ŋ</sup> γ <sup>w</sup> u]	[ <sup>ŋ</sup> γ <sup>w</sup> ɰ]	>	/ũ, N/
-bi ⇒	[ <sup>m</sup> bji ~ <sup>m</sup> βji]	[ <sup>m</sup> βjɰ]	>	/ũ, N/
-bu ⇒	[ <sup>m</sup> b <sup>w</sup> u ~ <sup>m</sup> β <sup>w</sup> u]	[ <sup>m</sup> β <sup>w</sup> ɰ]	>	/ũ/
-mi ⇒	[mji]	[mjɰ]	>	/ũ, N/
-mu ⇒	[m <sup>w</sup> u]	[m <sup>w</sup> ɰ]	>	/ũ, N/
-ni ⇒	[nji]	[njɰ]	>	/N/

kogi-te	/ko <sup>ŋ</sup> gi-te/	>	[ko <sup>ŋ</sup> j <sup>ɰ</sup> te]	koi-de	/koi <sup>ɰ</sup> de/
yaki-te	/jaki-te/	>	[jaç <sup>ɰ</sup> te]	yar-te	/jai-te/
yomi-te	/jomi-te/	>	[jom <sup>j</sup> te]	yon-de	/jon <sup>ɰ</sup> de/
yupi-te	/juɸi-te/	>	[juɸ <sup>j</sup> te]	yuq-te	/juq-te/

[Languages of Japan and Korea: 218]

[Frellesvig 2010: 197]

Bjärke Frellesvig. a History of the Japanese Language, Cambridge, 2010

- (d) either consonants or vowels
- (e) allocated lexically!
- this generally improbable hypothesis is an attempt to actualise Modern East Japanese allophonic rules – Cu > C<sup>w</sup>/\_{k, t, p, s}, Ci > C<sup>j</sup>/\_{k, t, p, s} –, for far earlier periods though ancient idioms are bound to differ highly from any midern dialect group

- thus, it is usual to propose a whole set of «placeless phonemes» – ModJ /N, Q, H/ with the addition of /C, I, U, Ñ, Û/. Somehow /N/ contrasts with /N/

	labial	coronal	palatal	dorsal	labiodorsal	PLACELESS	
nasal	m	n		N (allophone of /n/ in /_{C, #}?)		N	Ñ, Û
stop	p b	t d		k g	k <sup>w</sup> g <sup>w</sup>	Q	C
affricate							
affricate							
fricative	h						
fricative		s z					
glide			j		w	H	I, U
liquid		l					

after [Frellesvig 2010: 189–191, 195]

- NB: MidJ consonants are thought to be of the same articulatory properties as ones that are characteristic of Modern Metropolitan Toukyou dialects of East Japanese (no argumentation is given)

# typology

- a similar phenomenon exists in Nanic languages (a.k.a. South Tungusic) – Nāni, Uilta, Nānai topolects
- there  $n\#$ ,  $\text{N}\#$ ,  $m\#$  are always realised as nasal consonants and never undergo place assimilation, while a special phoneme /ŋ/ does undergo complete assimilation and in Auslaut is realised as either [ŋ̃], [ŋ̃<sup>f</sup>] or [ŋ̃<sup>v</sup>]

/baldaҺaŋ/	‘be_born:PRAET.PTCP.ABS’	[baldAHã·ũ̃]	//balda-HAŋ-ŋ-Ø//
/baldaҺaŋ da/	‘be_born:PRAET.PTCP.ABS=FOC’	[baldAHã·ũ̃.dA]	//balda-HAŋ-ŋ-Ø=da//
/baldaҺam̋bɪ/	‘be_born:PRAET.PTCP.ABS.1SG’	[baldAHAm̋bɪ]	//balda-HAŋ-ŋ-Ø-BY//
/baldaҺam̋bɔ/	‘be_born:PRAET.PTCP.ACC’	[baldAHAm̋bA]	//balda-HAŋ-ŋ-BA//
/baldaҺandɔ/	‘be_born:PRAET.PTCP.INES’	[baldAHAndɔ]	//balda-HAŋ-ŋ-dW//
/baldaҺan/	‘be_born:PRAET.PTCP.ABS.3SG’	[baldAHAn]	//balda-HAŋ-Ø-n(Y)//
/baldaŋdaҺan/	‘be_born:ANDAT.PRAET.PTCP.ABS.3GS’	[baldANdaҺAn]	//balda-ŋdAŋ-HAŋ-n(Y)//
/baldam̋tɕa/	‘be_born:CVB.SUBJ’	[baldAm̋tɕA]	//balda-m̋tɕAŋ//

Nāni

# Nanic graphemics

- though there is no consistent written tradition for Nanic idioms  
there is a number of academic sources on Nanic idioms of XIX–XXth centuries,  
where ad hoc graphic systems are used (Cyrillic, Latin, katakana)
- nowadays native orthographies have been also documented
- in both types of sources /ŋ/ is written inconsistently as one of the following  
glyphs:
  - n
  - ŋ
  - ñ / {i, i:, ɪ, ɪ:} \_
  - Ñ + Ø
  - Ø

# phonology of EarMidJ

- it is logical to treat EarMidJ «nasalised vowels» the same way
- graphemes ⟨ĩ, ã⟩ should have been different representations of a single nasal phoneme
- as there is already a nasal possible in Auslaut (N or n), the only other candidate is /m/
- nevertheless, the data contradicts this hypothesis: if ⟨ĩ, ã⟩ represent phonemic  $Vm/_\{C, \#\}$  it is impossible to motivate phonetic changes in Sinitic loanwords, where one finds the following correspondences:

MidCh \*m#        } > EarMidJ ⟨ŋ⟩  
MidCh \*n#        }

MidCh \*ŋ#        > EarMidJ ⟨ĩ, ã⟩

- another solution would be to postulate an «altogether new» phoneme – /N/
- as EarMidJ could hardly have the same set of phonetic segments as those of Modern East Japanese, we propose the following system:

EarMidJ ⟨ŋ⟩     ⇒ /n/     > ModEJ /N/

EarMidJ ⟨ĩ, ã⟩ ⇒ /V<sub>N</sub>/ > ModEJ VØ (NB: a parallel to pJaponic \*n# > JO Ø)

- if so, no specific reason is needed for C(-voice) > C(+voice)/{⟨ĩ, ã⟩}\_, as /N/ would naturally trigger the same change that /n/ (⟨ŋ⟩) would

# morphophonology

- while ⟨ĩ, ũ⟩ are restricted to specific phonetic contexts in loanwords, they function separately in native paradigmatic forms
- if ⟨ĩ⟩ < \*gi and ⟨ũ⟩ are to be analysed as independent morphophonemes on EarMidJ, there will be a clear motivation for some morphophonological changes in conjugation of \*m-, \*m-, \*b-, \*b-, \*g-verbs:
- during Ear MidJ period in the said verb conjugations most etymological /N/ were replaced with /n/ of \*n-conjugation

## I. //n// lost

EarMidJ	⟨mu⟩, ⟨ŋ⟩ > ⟨ũ⟩	(む), (ん) > (う.)	‘COP;TENT.FIN	<	*=am-u
ModEJ	⟨u⟩	(う)			

## II. //ũ// lost

EarMidJ	⟨huŋde⟩!	(ふんで)	‘step\CVB’	⇐	⟨humi⟩ ‘step:CONT’ (ふみ)
ModEJ	⟨huŋde⟩!	(ふんで)			
EarMidJ	⟨iõũde⟩, ⟨iõŋde⟩	(よう.で), (よんで)	‘read\CVB’	⇐	⟨iõmi⟩ ‘read:CONT’ (よみ)
ModEJ	⟨iõŋde⟩	(よんで)			

etc.

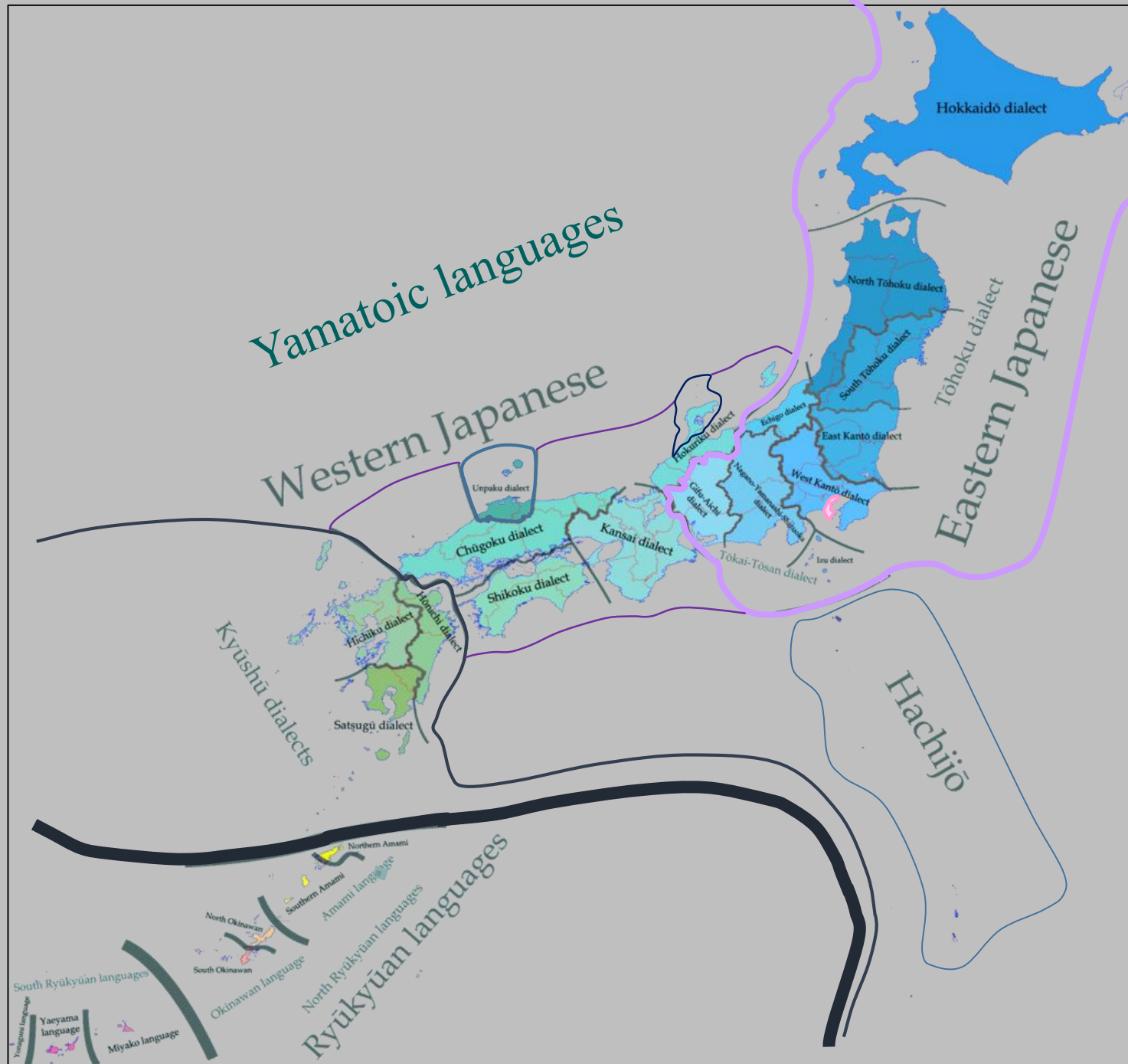
## III. //ĩ// retained always

EarMidJ	⟨koĩde⟩	(こい.で)	‘row\CVB’	⇐	⟨kogi⟩ ‘row:CONT’ (こぎ)
ModEJ	⟨koide⟩	(こいで)			

these innovative forms are the only possible variants in East Japanese dialects, Ankou, Unpaki and West Japanese of Hondo, as their geographic distribution shows, this conjugative type should be considered an areal feature rather than an inherited one, same is true for East Japanese //u-t// ⇔ //t-t// (EarMidJ /kawitaru/ > LatMidJ /kauta/ ⇔ ModEJ /katta/ ‘row:STAT.PTCP’ > ‘row\CONT.PRAET’, OJ \*kapi-taru)



geography  
of the change I:  
Yamatoic  
and Ryūkyūan

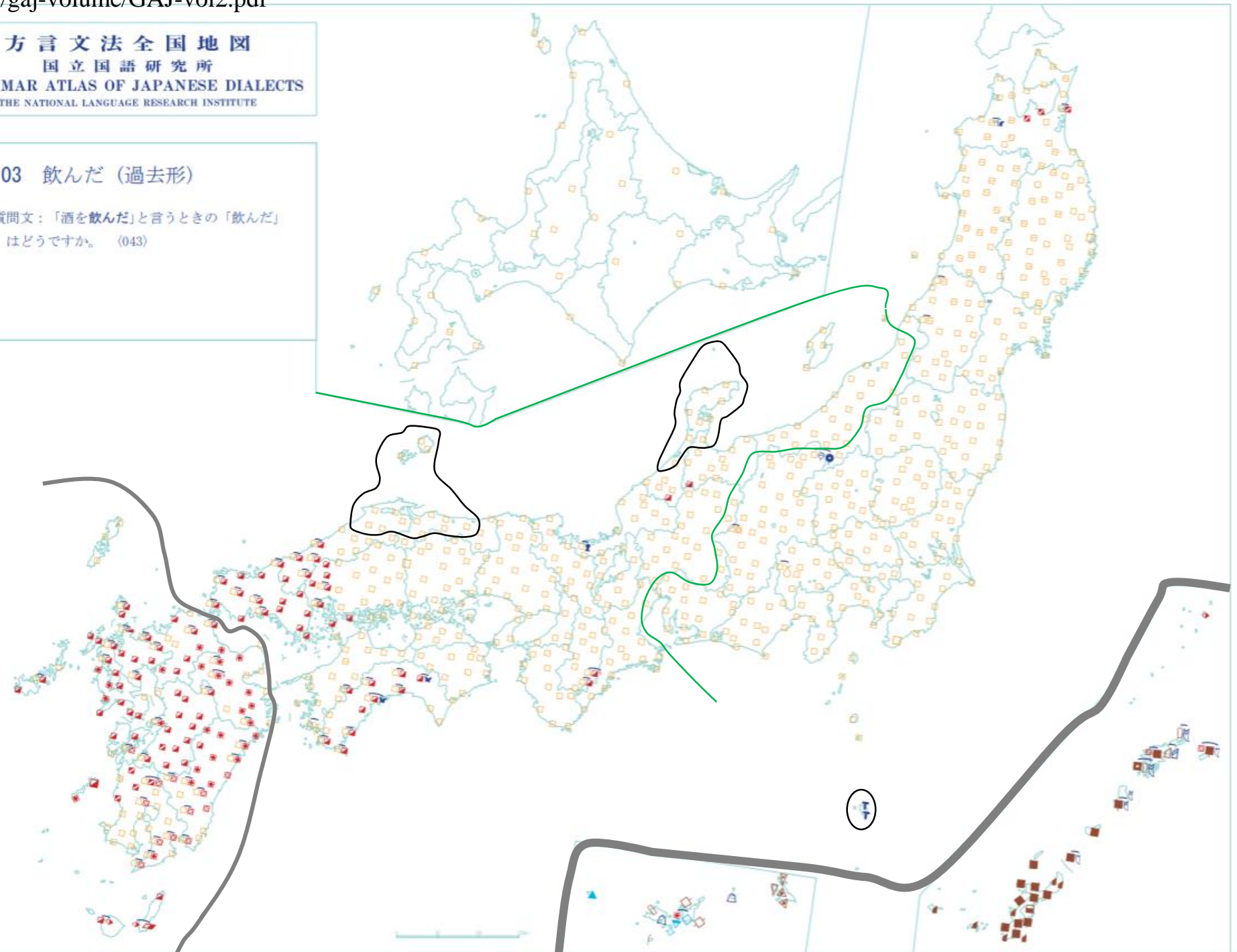


geography  
of the change II:  
nonda ⇔ \*noūda  
'drink\CONT.PRAET'  
in Yamatoic

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THE NATIONAL LANGUAGE RESEARCH INSTITUTE

103 飲んだ (過去形)  
質問文: 「酒を飲んだ」と言うときの「飲んだ」  
はどうですか。 (043)

- <nonda>
- ◇ <nonda-dea, jja>
- <nodda>
- <no[nda>
- <nondaa>
- ◇ <nondo-ja>
- <nondoo>
- <nooda>
- <nuuda>
- <njuuda>
- <noda>
- <nuda>
- <noodaa>
- <noodja>
- <noora>
- <noorno>
- ◇ <nonge>
- <nomokke>
- ⊥ <nomara>
- ⊥ <nudi>
- ⊥ <nudʼi>
- ⊥ <nudʼiʼ>
- ⊥ <nurʼiʼ>
- △ <numii>
- ▼ <kuroota>
- ▼ <maguratta> maguratta
- ⊥ <abutta>



traditional

proposed

*toũ	⟨to-ũ⟩	とう,	*toun	‘East’
*kiaũ	⟨ki-ia-ũ⟩	きやう,	*kiaun	‘capital’
*k <sup>w</sup> aũ	⟨ku-wa-ũ⟩	くわう,	*k <sup>w</sup> aun	‘source of light’
*siaũ	⟨si-ia-ũ⟩	しやう,	*siaun	‘life’
*ioũde	⟨io-ũ-de⟩	よう,で	*io(u)nda	‘call\CVB’
*tuũde	⟨tu-ũ-de⟩	つう,で	*tu(u)nde	‘pluck_pick\CVB’
*tuĩde	⟨to-ĩ-de⟩	とい,で	*tuinde	‘follow\CVB’
*koĩde	⟨ko-ĩ-de⟩	こい,だ	*koinde	‘row\CVB’

# conclusion

- ⟨ĩ, ã⟩ both represented phonemic clusters /VN/
- /N/ was distant from /n/ (⟨ŋ⟩ > Modern J /N/)
- there were two separate morphophonemes – //ĩ// for \*gi-stems and //ã// for other stems
- Early Middle Japanese N-/C\_ and n-/C\_ doublets were not a result of a mysterious phonetic change, instead they were a result of an ongoing morphophonological process – //ã// ⇔ //n//
- placeless phonemes and esoteric sound changes are unnecessary

>	—	phonetic change
⇒	—	representation on a lower hierarchical level
⇒⇒	—	morphological derivation
⇒	—	replaced by
”	—	morpho(phono)logical reconstruction
∪	—	morphophoneme with alternants /e <sub>1</sub> /, /e <sub>2</sub> /
h	—	h or φ
CONT	—	continuative aspect (a.k.a. «infinitive», 連用形);
PRAET	—	praeteritum
FIN	—	finitive form (a.k.a. «conclusive», 終止形)
COP	—	copula
TENT	—	tentative
STAT	—	stative Aktionsart
NONEV	—	non-evidential
ANDAT	—	andative
CVB	—	converb
PTCP	—	participle
SUBJ	—	subjunctive
1SG	—	first person singular
3SG	—	third person singular
ABS	—	absolute case
ACC	—	accusative case
INES	—	inessive case
FOC	—	focal particle
∅	—	null

もくし くしも  
しもく くもし  
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