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The short vowels of Vietnamese (1952)

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translated by Alexis Michaud

Abstract

In addition to the two short vowels *ă* [ǎ] and *â* [ǣ], a young Vietnamese phonetician, Mr. Nguyễn Bạt-Tụy, has discovered four other short vocalic phonemes.

Vietnamese vowels easily lend themselves to an analysis into a system consisting of two subsystems. Two short vowels:

close: *â* [ǣ]

open: *ă* [ǎ]

contrast with a subsystem of twelve full [long] vowels, shown in Table 1 in Vietnamese orthography.¹

[Table 1. The twelve full vocalic phonemes of Vietnamese²]

front	central	back
<i>i</i> [i]	<i>ư</i> [u]	<i>u</i> [u]
<i>iê</i> [iə] [allograph: ia]	<i>ươ</i> [uə] [allograph: ua]	<i>uô</i> [uə] [allograph: ua]
<i>ê</i> [e]	<i>ơ</i> [ɤ]	<i>ô</i> [o]
<i>e</i> [ɛ]	<i>a</i> [a]	<i>o</i> [ɔ]

1. For details, see Lê Văn-Lý (1948: 17–44).
2. [The IPA equivalents of the Vietnamese orthography have been added by the editors. They are based on the table of rhymes by Michel Ferlus: see the Appendix to this article. Short vowels are marked by the breve; long vowels are unmarked.]

However, the detailed phonetic description provided by Dubois³ (1909) shows that full vowels can become shortened under certain conditions. The short vowels thus obtained are not independent phonemes, but contextual variants of the full vowels.

“-NG final: it causes a shortening of the vocalic part of the syllable, except in the case of the two rhymes *ang* [aŋ] and *ong* [oŋ], which contrast with the short rhymes *ăng* [ăŋ] and *âng* [âŋ], respectively, and *eng* [eŋ], which is clearly a rare and exceptional case. The elements *iê*,⁴ *ươ*, *uô* [iə, uə, uə], which by themselves are long, can combine with *-ng*, yielding the long sounds *iêng*, *ương*, *uông* [iəŋ, uəŋ, uəŋ].” (Dubois 1909: 54)

“-NH final: ...is inseparable from the brevity of the sound...” (Dubois 1909: 59)

At first blush, it seems that the palatal final *-nh* [ɲ] neutralizes vowel length contrasts, but the distribution of vowels before velar finals is more difficult to explain.

In fact, all vowels do not combine freely with palatal and velar finals. There are only three vowels, *i* [i], *ê* [e] and *a* [a], that can be followed by a palatal final, yielding the combinations *inh* [iɲ], *ênh* [eɲ], and *anh* [aɲ]; two of these vowels, *i* [i] and *ê* [e], cannot be followed by the velar nasal. Table 2 presents the distribution of vowels with palatal and velar nasal finals.

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3. Dubois indicates that *ong* [oŋ] is a rare rhyme; Lê Văn-Lý and Emeneau ignore it altogether. All that matters for the purpose of the present analysis is that this combination is potentially allowed by the system of the language.
 4. [Dubois’s mistaken spelling of *iê* as *ie* was corrected in the present translation.]

[Table 2. Palatal and velar nasal-final rhymes in Vietnamese⁵]

<i>long</i>	—	<i>iêng</i>	—	<i>eng</i>	<i>ang</i>	<i>ong</i>	<i>ơơng</i>	<i>uông</i>	—	—	—	—
		[iəŋ]		[eŋ]	[aŋ]	[ɔŋ]	[uəŋ]	[uəŋ]				
<i>short</i>	<i>inh</i>	—	<i>ênh</i>	—	<i>anh</i>	—	—	—	—	—	—	—
	[iŋ]		[eŋ]		[aŋ]							
<i>short</i>	—	—	—	—	<i>ăng</i>	<i>âng</i>	—	—	<i>ưng</i>	<i>ung</i>	<i>ông</i>	<i>ong</i>
					[aŋ]	[ɔŋ]			[uŋ]	[uŋ]	[oŋ]	[ɔŋ]

This distribution is best analyzed as a case of neutralization between velar and palatal finals. The three rhymes *ang*, *anh* and *ăng* are the only proof of the phonemic status of final *nh* [ɲ] distinct from *ng* [ŋ].

Emeneau, in his recent description of Vietnamese, mentions that he has found a word containing the rhyme *êng* [eŋ] (Emeneau 1951: 15 note 1), and that the vowel of the rhyme written as *anh* must belong to the phoneme /ɛ/, written as *e* in the orthography [hence /eŋ/ instead of the /aŋ/ of Table 2] (1951: 9 §1.3.1.1). He concludes that palatal and velar finals are to be distinguished phonologically, on the basis of the opposition of *anh* [eŋ] to *eng* [eŋ], and of *ênh* [eŋ] to *êng* [eŋ].

A self-taught Vietnamese linguist, Nguyễn Bạt-Tụy, adopting a phonetic point of view, considers that the vowel in *anh* is indeed an *e* [ɛ], and that its final *nh* [ɲ] is identical with the *ng* [ŋ] in *ăng* [ăŋ] (Nguyễn Bạt-Tụy 1949).

From a phonological point of view, this is to be interpreted in the following way: in Vietnamese, a short vowel is never observed in absolute final position,⁶ and the following consonant is “firmly linked” (in Trubetzkoy’s words: Trubetzkoy 1939: 234–236) to the vowel. In this position, final velars assimilate to short front vowels to such an extent that they are heard as palatal by foreigners. Thus, the final *nh* [ɲ] is simply a

5. [An approximative phonetic value has been added by the editors. The length of the vowel is indicated by Haudricourt’s line headings.]

6. [As mentioned earlier, except for the context before /ŋ/, short vowels are limited to close *â* [ɨ] and open *ă* [ɛ], which do not occur in open syllables. All other phonetically short vowels are found before /ŋ, ɲ/.]

contextual variant of *ng* [ŋ] after a front vowel, whether phonologically short or phonetically shortened.⁷

The *i* in *inh* is a [phonetically] shortened variant of a full vowel, since all close vowels are shortened when they are followed by the velar nasal final. (Thus the vowels in *uŋg* [uŋ] and *uŋ* [uŋ] are realized as short vowels.) This short *i* [ɪ] is simply a contextual variant of the full *i* [i]. In contrast, the *ê* [ɛ̃] in *ênh* [ɛ̃ŋ] and the *a* [ɛ̃] in *anh* [ɛ̃ŋ] are phonologically short vowels, constituting independent phonemes, since the corresponding full vowels are attested in the rhymes *êng* [eŋ] and *eng* [eŋ].

In dictionaries, we find that words ending in *eng* [the long rhyme] are either expressive or onomatopoeic: *eng-éc* ‘pig grunting’, *leng-keng* ‘to trot’, *pheng* ‘noise of cymbals’, *xeng* ‘metallic noise’, or recently borrowed words, such as *seng* ‘sapeque’⁸ (Hue 1937).

This is a clear instance of what is called *gap-filling* in phonology.

Concerning the corresponding back rhymes *ong* and *ông*, the most common dictionaries do not provide any indication [about length]. I asked Mr. Nguyễn Bạt-Tụy for examples, and he gave me the following information.

He mentioned that some recent dictionaries, such as Đào Văn-Tập (1950), distinguish *oong* [oŋ], as in *gòong* ‘trolley’ (< Fr. *wagon*) or *bu-loong* ‘bolt’ (< Fr. *boulon*), from *ong* [ɔŋ] as in *gong* ‘frame, framework’ or *long* ‘disjointed’. He added further examples (Table 3) which had not been reported previously.

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7. Palatal finals, which are absent in Chinese and Tai, exist in Mon-Khmer languages, and also in Muong dialects, which are related to Vietnamese (e.g. Muong /moč/ [moc] ‘one’, corresponding to Vietnamese *một* [mot⁸]). But the final palatal of the Burmese script, which occurs only after *a*, must be due to the same mistake as the final palatals of the Vietnamese romanized script. [We could observe that in the case of final stops, it is not necessary for the front vowel to be short for the final consonant to be palatalized, since final /k/ which does not shorten the vowel, is also palatalized and written *ch* [ç] after /i, e, ε/ and is written *c* [k] after the other vowels.]
8. [The sapeque was a coin introduced in the second half of the 19th century with the aim of replacing earlier Vietnamese coins.]

[Table 3. Examples of contrasts between *oong* and *ong*]

<i>boong</i> ‘bell sound’	<i>bong</i> ‘to detach itself (paper, poster...)’
<i>boong</i> ‘deck (of a boat)’ (<Fr. <i>pont</i>)	<i>bóng</i> ‘shade, shadow’
<i>bóong</i> ‘to live at someone else’s expense’	
<i>coong</i> ‘sound of a small bell’	<i>cong</i> ‘bent, curved’
<i>loong-toong</i> ‘sentinel’ (Fr. <i>planton</i>),	<i>long-tong</i> ‘to trot around, to walk about (e.g. in fear)’
<i>ba-toong</i> ‘stick’ (Fr. <i>bâton</i>)	<i>tong</i> ‘lost without a trace’
<i>xoong</i> ‘cooking-pot’ (Fr. <i>casserole</i>)	<i>xong</i> ‘finished, completed’

In the case of this rhyme, *oong*, it is clear that the systemic gap-filling process initiated by onomatopoeia has continued with loanwords from French.

The *ôông* [o:ŋ] rhyme is still rare. It is exemplified by *bôông* ‘sound of a gong’ vs. *bông* ‘cotton’.

To sum up, with a final velar nasal there are six pairs of rhymes distinguished by quantity:

vowel type	e	ɛ	ɤ	a	o	ɔ
short	<i>ênh</i> /ɛ̃ŋ/	<i>anh</i> /ɛ̃ŋ/	<i>âng</i> /ɤ̃ŋ/	<i>ăng</i> /ẵŋ/	<i>ông</i> /õŋ/	<i>ong</i> /ɔ̃ŋ/
long	<i>êng</i> /ẽŋ/	<i>eng</i> /ɛ̃ŋ/	<i>ơng</i> /ɤ̃ŋ/	<i>ang</i> /ãŋ/	<i>ôông</i> /õŋ/	<i>oong</i> /ɔ̃ŋ/

This demonstrates the existence of six phonologically short vowels:

half-close:	<i>ê</i>	<i>â</i>	<i>ô</i>
	[ɛ̃]	[ẵ]	[õ]
half-open:	<i>e</i>	<i>ă</i>	<i>o</i>
	[ɛ̃]	[ẵ]	[ɔ̃]

Comments

This article is an exercise in synchronic phonological analysis, which at the time (early 1950s) was still a relatively new tool. Haudricourt gives credit to a young colleague for the discovery of four short vowel phonemes in Vietnamese: /ɛ̃/, /ɛ̄/, /ɔ̃/ and /ɔ̄/. From a synchronic point of view, since an opposition of length is found for the sounds at issue in one context (before a final velar nasal), the four short vowels must be granted phonemic status; and this length opposition must be considered to be neutralized in all other contexts.

These length oppositions were not present in the state of the language reflected in Written Vietnamese (mid-17th century): they were introduced by recent evolutions whereby onomatopoeics and loanwords came to occupy structural slots left empty by the phonetic evolution of certain rhymes. A phonological analysis of the rhymes of Written Vietnamese is shown in table form at the end of this section; it does not include the new combinations *eeng*, *êêng*, *oong*, *ôông* (/ɛŋ/, /ɛ̄ŋ/, /ɔŋ/, /ɔ̄ŋ/) which Haudricourt mentions in the article.

This aspect of the Vietnamese phonological system is open to several analyses: while the length difference is phonetically robust, “the fact that such pairs are also distinguished by differences in the articulation of the coda segment has led to some debate on the proper phonological treatment of the vowel system” (Kirby 2011: 384). Many authors choose to consider these length oppositions as exceptional (*e.g.* Cao Xuân Hạo 2007a, b), partly due to a reluctance to adopt an analysis that departs from that encapsulated in Written Vietnamese. On the other hand, Haudricourt’s analysis draws attention to ongoing evolutions, which gradually lead to restructuring of the system.

Among other useful perspectives for research, the article draws attention to the special situation of final velar nasals. Final /ŋ/ caused a general vowel shortening, whereas vowels were long in front of final /m/ and /n/ (while leaving the length contrasts for /ɜ/ and /a/ unaffected). Then, a second development took place: onomatopoeics and loanwords filled the gaps created by the absence of long vowels followed by final /ŋ/. The pressure towards gap-filling must have been increased by the high frequency of long vowels in front of the other two nasals, /m/ and /n/.

The asymmetry between final /ŋ/ and other final nasals is not peculiar to Vietnamese: it seems that, in the entire Austroasiatic family, more vowel contrasts are observed before /ŋ/ than before other nasals.

Michel Ferlus and Alexis Michaud

[Appendix: Table of the rhymes of Written Vietnamese (M. Ferlus)]

This table was created by Michel Ferlus in 1991 and revised in 2015 (see Michaud et al. 2015). It provides a phonemic interpretation of all the rhymes of Written Vietnamese. This constitutes a form of reconstruction, abstracting away from two related sources of asymmetries: (i) the phonetic distance between sounds analyzed as allophones of the same phoneme; and (ii) the complexities introduced by expressive or onomatopoeic words and relatively recent loanwords from Western languages. Thus, the phonemic combinations /oŋ/, /ɔŋ/ and /eŋ/ have undergone a phonetic evolution to [ʁoŋm], [ʁɔŋm] and [eŋ], leaving the phonetic slots [oŋ], [ɔŋ] and [eŋ] empty, and the rhymes written as *ôông*, *oong* and *eng*, introduced by loanwords and expressive forms, filled these structural gaps, as explained in Haudricourt's article. Under a flatly synchronic approach, all of the six pairs of length contrasts among Vietnamese vowels presented in Table 5 in Haudricourt's paper should be present in the table of rhymes, as these pairs contrast in front of a nasal velar final: *ênh* /ɛ̃ŋ/ vs. *êng* /eŋ/, *anh* /ãŋ/ vs. *eng* /eŋ/, *ông* /õŋ/ vs. *ôông* /oŋ/, and *ong* /ɔ̃ŋ/ vs. *oong* /ɔŋ/. The choice made when drawing up the table of rhymes below was to abstract away from these phenomena to provide a bird's eye view of the origin of the rhymes of Written Vietnamese. The analysis is thus essentially the same as that proposed by Cao Xuân Hạo (2007b: 102).

The choice of IPA symbols for vowels is based on Kirby (2011). It is not a narrow notation aiming at the greatest synchronic phonetic precision. For instance, the vowels *ơ* and *â* are transcribed as /ɔ̃/ and /ɑ̃/ respectively, reflecting their interpretation as a vowel pair distinguished by phonemic length, and overlooking the slight difference between them in terms of vowel quality (a difference which led René Gsell to adopt a transcription by /ɔ̃/ and /ɑ̃/ respectively: see Gsell 1980).

The hyphen (-) in the top row (in **-k**, **C^w-m**, etc.) materializes the position of the vowel within the consonantal structure of the syllable. Medial rounding is transcribed as a superscript ^w to the right of the symbol

C (for Consonant). Thus, the rime *uê*, as in the word *quê* ‘countryside, home village’, is located in column **C^w-**, line **e**. A dash (—) indicates that the combination at issue is not found in the language. Some of the complexities of the orthography are not reflected in the table, such as the encoding of the contrast between the rhymes /^w**a**/ and /**uə**/ by the use of different *consonant* symbols (and identical *vowel* symbols) in *qua* /**k^wa**/ vs. *cua* /**kuə**/.

Table of the rhymes of Written Vietnamese, by Michel Ferlus

	C- Cw-	C-k Cw-k	C-ŋ Cw-ŋ	C-t Cw-t	C-n Cw-n	C-p —	C-m Cw-m	C-j Cw-j	C-w Cw-w
i	i uy	ich ych	inh uynh	it uyt	in —	ip —	im —	—	iu uyu
e	ê uê	êch uêch	ênh uênh	êt uêt	ên uên	êp —	êm —	—	êu —
ɛ	e oe	ach oach	anh oanh	et oet	en oen	ep —	em —	—	eo oeo
iə	ia uya	iêc —	iêng —	iêt uyêt	iên uyên	iêp —	iêm —	—	iêu —
u	ư —	ưc —	ững —	ưt —	ưn —	—	—	ưi —	ưu —
ɤ	ơ uơ	—	—	ơt uơt	ơn uờn	ơp —	ơm —	ơi —	—
ɤ̃	—	ác —	âng —	ât uât	ân uân	âp —	âm —	ây uây	âu —
a	a oa	ac oac	ang oang	at oat	an oan	ap —	am oam	ai oai	ao oao
ă	—	ắc oắc	ăng oăng	ắt oắt	ăn oăn	ăp —	ăm oăm	ay oay	au —
uə	ưà —	ườc —	ường —	ườt —	ườn —	ườp —	ườm —	ười —	ườu —
u	u —	uc —	ung —	ut —	un —	up —	um —	ui —	—
o	ô —	ôc uôc	ông —	ôt —	ôn —	ôp —	ôm —	ôi —	—
ɔ	o —	oc —	ong —	ot —	on —	op —	om —	oi —	—
uə	ua —	uôc —	uông —	uôt —	uôn —	—	uôm —	uôi —	—

References

- Đào Văn-Tập. 1950. *Từ-điển Việt-Pháp phổ-thông / Dictionnaire général vietnamien-français* [General Vietnamese-French dictionary]. Saigon: Vĩnh Báo.
- Dubois, Lieutenant Marcel. 1909. *Cuộc-ngữ et mécanisme des sons de la langue annamite : étude phonétique pratique* [Quốc-ngữ and the mechanism of sounds in the Annamese language: a practical phonetic study]. Hanoi/Haiphong: Imprimerie d'Extrême-Orient.
- Emeneau, Murray Barnson. 1951. *Studies in Vietnamese (Annamese) Grammar*. Berkeley: University of California Press.
- Hue, Gustave. 1937. *Dictionnaire annamite-chinois-français* [Annamese-Chinese-French dictionary]. Hanoi: Trung-Hoà.
- Lê Văn-Lý. 1948. *Le parler vietnamien : sa structure phonologique & morphologique fonctionnelle : esquisse d'une grammaire vietnamienne* [The Vietnamese language: its phonological and morphological-functional structure: outline of a Vietnamese grammar]. Paris: Huong Anh.
- Nguyễn Bạt-Tuy. 1949. *Chữ và vần Việt Nam khoa học* [Scientific study of Vietnamese letters and syllables]. Saigon: Ngôn-ngữ.
- Trubetzkoy, Nikolaus S. 1939. *Grundzüge der Phonologie* [Principles of phonology]. *Travaux du Cercle Linguistique de Prague* 7.

Additional references

- Cao, Xuân Hạo. 2007a. Về cách phân tích âm vị học một số vần mẫu có nguyên âm ngắn trong tiếng Việt [On the phonological analysis of some Vietnamese rhymes containing short vowels]. In *Tiếng Việt: mấy vấn đề ngữ âm, ngữ pháp, ngữ nghĩa* [Vietnamese: issues of phonetics, grammar and semantics]. Nhà xuất bản Giáo dục, T.P. Hồ Chí Minh. 88–102. (Originally published in 1962 in *Thông báo Khoa học* [Scientific reports], Hanoi, issue 2. 146–154.)
- Cao, Xuân Hạo. 2007b. Thêm mấy giải pháp âm vị học cho các vần mẫu có nguyên âm ngắn của tiếng Việt [Additional solutions for the phonemic analysis of Vietnamese rhymes containing short vowels]. In *Tiếng Việt: mấy vấn đề ngữ*

âm, ngữ pháp, ngữ nghĩa [Vietnamese: Issues of phonetics, grammar and semantics]. Nhà xuất bản Giáo dục, T.P. Hồ Chí Minh. 103–115.

Ferlus, Michel. 1992. Histoire abrégée de l'évolution des consonnes initiales du vietnamien et du sino-vietnamien [A short history of the evolution of Vietnamese and Sino-Vietnamese initial consonants]. *Mon-Khmer Studies* 20. 111–125.

Gsell, René. 1980. Remarques sur la structure de l'espace tonal en vietnamien du sud (parler de Saïgon) [Some remarks on the tonal space in Southern Vietnamese (Saigon dialect)]. *Cahier d'Etudes Vietnamiennes* 4. Paris: Département de Langues et Civilisations de l'Asie Orientale de l'Université Paris 7.

Henderson, Eugénie J.A. 1951. The phonology of loanwords in some Southeast Asian languages. *Transactions of the Philological Society*. 131–158.

Henderson, Eugénie J.A. 1965. The articulation of final '-nh' and '-ch' in Vietnamese. *Fifth International Congress of Phonetic Sciences*, Karger. 348–352.

Kirby, James. 2011. Vietnamese (Hanoi Vietnamese). *Journal of the International Phonetic Association* 41(3). 381–392.

Michaud, Alexis, Michel Ferlus & Minh-Châu Nguyễn. 2015. Strata of standardization: the Phong Nha dialect of Vietnamese (Quảng Bình Province) in historical perspective. *Linguistics of the Tibeto-Burman Area* 38(1). 124–162.

Nguyễn Bạt-Tụy. 1959. *Ngôn ngữ học Việt Nam* [Vietnamese linguistics]. Saigon: Ngôn-ngữ.

Nguyễn Như Ý. 1999. *Đại từ điển tiếng Việt* [Comprehensive Vietnamese dictionary]. Hanoi: Nhà xuất bản Văn hoá - Thông tin.

Thompson, Laurence C. 1967. The history of Vietnamese final palatals. *Language* 43(1). 362–371.