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The Articulation of Final '-nh' and '-ch' in Vietnamese

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The official romanized writing system of Vietnamese has four conventions for the spelling of nasal consonants, namely: 'm', 'n', 'ng'¹ and 'nh'. There is general agreement that in syllable initial position these represent bilabial, alveolar, velar and palatal nasals respectively. Most scholars from the seventeenth century onwards have assumed that in Northern Vietnamese the same four-fold distinction is also valid in syllable final position, both for nasals and for stops, the latter being spelt 'p', 't', 'c' and 'ch'. In Southern Vietnamese the position is quite different in that finally non-labial articulations are regularly post-alveolar after front vowels, and velar after central and back vowels.

Writing of Tonkinese pronunciation in 1651², *Alexandre de Rhodes* described the pronunciation of 'nhà' *house* as being the same as that of the Italian sequence 'gna', and that of 'manh' *strong* as being like Portuguese 'manha' pronounced without the final vowel, thus implying palatal articulations both initially and finally. In similar fashion he equated the initial sound of Vietnamese 'cha' *father* with that of Italian 'cia', Portuguese 'cha', and the pronunciation of Vietnamese 'cách' *manner* with that of Portuguese 'cacha' with the final vowel omitted. Subsequent lexicographers, grammarians and phonologists³ down to this day have, almost without exception⁴, followed *de Rhodes* in assuming identical or very similar articulations of 'nh' and 'ch' initially and finally in Northern

¹ 'ngh' before front vowels.

² In the short description of the language appended to the *Dictionarium Annamiticum*.

³ E.g. *Bonet*, *Génibrel*, and *Legrand de la Liraye* among lexicographers; *Barbier*, *Bulleau*, *Chéon*, *Diguët*, *Dirr*, *Emeneau*, *Gouzien*, *Julien* and *Vallot* among grammarians; *A.C. Day* and *Le Van Ly* among phonologists.

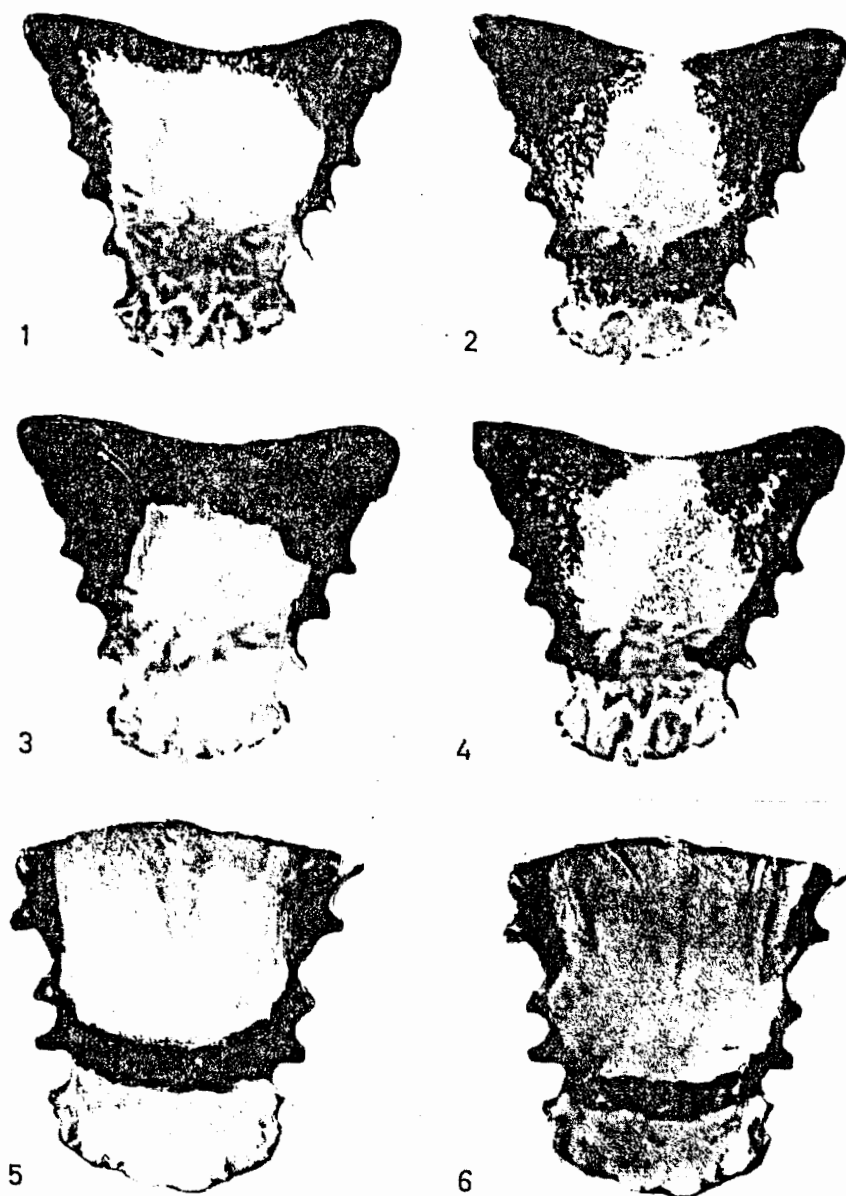
⁴ A notable exception is the Vietnamese scholar *Nguyen Bat Tuy*.

Vietnamese, although some⁵ have recognized that finally (certain onomatopes and loans apart) they are in complementary distribution with the velars. The spelling has undoubtedly played an important part in the perpetuation of this assumption, as have certain peculiarities in the pronunciation of syllables containing final 'nh' and 'ch'. There is, for example, in the NV pronunciation of such syllables, a clearly perceptible palatal on-glide to the final consonant, which inclines the listener to expect a following 'palatal' articulation. Moreover, the three vowels (of three degrees of openness) that may occur before 'nh' or 'ch' are always pronounced very short and are markedly centralized, which makes their identification with vowels in other contexts difficult. The seventeenth century solution was to write these vowels 'i', 'ê' and 'a', and the co-existence of written forms 'ang' and 'ac' beside 'anh' and 'ach' has seemed to many scholars since then to support, and indeed to require, the hypothesis of four-fold systems of final nasals and of final stops. Misled by such considerations, the present writer⁶ also at first concluded that syllables spelt with final 'nh' and 'ch' were closed by palatal articulations not materially different from those found in syllable initial position. Subsequent experience both in listening to a variety of NV speakers and in teaching NV pronunciation to English students gave rise to doubts as the accuracy of this conclusion which were confirmed by palatographic investigation of the speech of a typical NV speaker, a native of Hanoi. In the course of the investigation scores of palatograms were made over a period of some months, and to encourage naturalness of pronunciation whole phrases and sentences, as well as isolated words, were used. Subsequently a similar investigation of SV pronunciation was carried out. Fig. 1-4 on page 350 are photographs of characteristic NV utterances of phrases which may be freely translated as follows: 1. There's no pulse 2. Your grandson 3. Your younger brother 4. He is at home. Fig. 5 and 6 show photographs of characteristics SV utterances of the first and third phrases.

Palatograms of initial 'nh' and 'ch' in both dialects regularly indicated raising of the sides of the tongue in the alveolar or post-alveolar region so as to narrow the air passage, and sometimes even to block it completely, together with some bunching and narrowing of the sides of the rear part of the tongue towards the back of the

⁵ E.g. *Emeneau* and *Day*.

⁶ See *Le Maître Phonétique*, No. 79, 1943.



1. NV Không có mạch

2. NV Châu của ông

3. NV Em của anh

4. NV Ông ở nhà

5. SV Không có mạch

6. SV Em của anh

hard palate (see fig. 2 and 4). NV final 'nh' and 'ch', on the other hand, never showed the slightest sign of contact or narrowing in the alveolar region, but regularly indicated firm contact of the back of the tongue extending over quite a considerable area of the back of the hard palate (see fig. 1 and 3). SV final 'nh' and 'ch' showed, as expected, a firm post-alveolar contact, (see fig. 5 and 6) which contrasted sharply with that shown for NV utterances of the same phrases (see fig. 1 and 3)⁷. It is clear that whatever articulatory labels we may attach to initial 'nh' and 'ch', the same labels cannot properly be applied to the NV final sounds also. If it is decided to label the NV finals 'fronted velars' or 'palatalized velars'⁸ the label 'palatal' may without ambiguity be retained for the initials, although the articulations so designated are not of the dorso-palatal type commonly adduced for the palatal column in the IPA consonant chart. If, on the other hand, the finals are considered as displaying sufficient contact with the hard palate to justify the label 'palatal', some other term must be found for the initials. Since final 'nh' and 'ch' are, in phonemic terms, clearly the allophones after front vowels of phonemes written 'ng' and 'c' in other contexts, the label 'fronted velar' has the advantage both of suggesting the congruence of phonetic substance and phonemic interpretation and of emphasizing the fact that the final consonantal alternance, whether of nasals or of stops, is one of three terms, not of four.

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Discussion

Fujimura (Stockholm): The NV "fronted velars" in final position are here described as phonetically different from the corresponding consonants in initial position. It would be good if the shift in the phonetic value could be accounted for from a general point of view, e.g. by considering the physiological constraints in articulation or general trends of the pertinent language (dialect) in contrasting finals to initials, or more specifically, by giving a systematic set of rules that would prescribe the differences depending on the position of the sound.

Annan (Leeds): The Vietnamese recognize diphthongs before certain nasals in final position, but is this a question of loan-words and/or linguistic sophistication?

⁷ It is emphasized that the statements made in this paper about articulation are valid for a variety of contemporary Vietnamese only. It is, of course, impossible to say whether or not a similar articulatory pattern existed in the Tonkinese of de Rhodes' day.

⁸ This is the term used by the writer for these sounds in an article that appeared in the Transactions of the Philological Society of Great Britain for 1951.

Mangold (Saarbrücken): How would you transcribe the finals in questions in narrow transcription for practical touching purposes?

Gage (Washington): First, I should like to ask what the action of the tongue tip is for the sounds you are discussing, since for initial 'nh-' and 'ch-', at least for Southern Vietnamese, the tongue tip can easily be seen to be pressed quite firmly against the back of the lower front teeth.

As my personal feeling, I would say that the existence of the 'eng' and 'éc' types of words, and similarly words with 'oong', has gone beyond the point where they can easily be regarded as really outside the system.

And you somewhere overstate the case when you say that "phonemically nobody has ever been in doubt it was an allophone of ϵ " in 'ahh' or that "final 'nh' and 'ch' are, in phonemic terms, clearly the allophones after front vowels of phonemes written 'ng' and 'c' in other contexts". Most authors who have treated these sounds as / η / and / k / have written / ay / in 'anh', as with *Jones* and *Thông*, or *Hòa*. And *Emmenneau*, including 'eng' words in his system, phonemicised 'anh' as / a +palatal n /, with the same vowel as 'an'. And, probably prejudiced by listening mostly to Southern Vietnamese, and by my ideas about its phonemic system, I usually hear 'anh' as starting with a vowel sound closest to that usually spelled 'â'. It is of course quite clear historically and from internal reconstruction that these sounds were the allophones of / η / and / k / after front vowels at some earlier time, but their present phonemic status is not quite such a straightforward matter.