PHONETIC PROPERTIES OF VIETNAMESE TONES ACROSS DIALECTS

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0. INTRODUCTION[1]

Although Vietnamese tones have been extensively studied in quite a few works, the more detailed phonetic descriptions based on instrumental analysis have all concentrated on Northern Vietnamese (henceforward NV), e.g. Lê Văn Lý (1948), Andreev and Gordina (1957), Nguyên Hàm Dương (1962), Han (1969), Han and Kim (1972) and Earle (1975), while Central Vietnamese and Southern Vietnamese (henceforward CV and SV) have had fewer and mainly impressionistic descriptions, with the exception of Trần Huong Mai (1969) which was only partially based on instrumental records. Mine is an attempt to provide a more comprehensive description of Vietnamese tones by presenting data from all three major dialects in their various aspects.

1. AN OVERVIEW OF VIETNAMESE TONES

The official spelling recognises six tones in Vietnamese, which represent what can be termed the underlying phonological tones of standard literary Vietnamese and also of NV, which is regarded as a prestige dialect. Table 1 summarises the system in three dialects. The English labels, taken from Han (1969) and preferred to others because they are short and suggestive of the basic contours of each tone, and the phonological notations, taken from official spelling diacritics with the addition of the macron for the level tone, will be used throughout this work. The phonetic notations, a modified version of Chao's (1930), was first based on auditory impressions and later readjusted in some cases by taking pitch values calculated from the data through various normalisation and conversion procedures described elsewhere (Vũ Thanh Phương 1981).

TABLE 1

THE TONES OF VIETNAMESE

Number	1	2	3	3B	4	4B	5	6
Vietnamese Names	ngang	huyền	sắc	sắc (tắc)	nặng	nặng (tắc)	hỏi	ngã
English Labels*	level tone	falling tone	rising tone	stopped rising tone	drop tone	stopped drop tone	curve tone	broken tone
Phonological Notations*	/-/	/ˋ/	/ˊ/	/ˊs/**	/.̀/	/.s/**	/ˀ/	/˜/
Phonetic Notations*								
NV	[33]	[21]	[35]	[45s]**	[21]**	[21s]**	[212]	[325]**
CV	[55]	[42]	[24]	[34s]**	[31]	[31s]**	[312]**	
SV	[33]	[21]	[35]	[35s]**	[212]	[21s]**	[214]	
Examples	/hāj/ *'two'*	/hàj/ *'slipper'*	/háj/ *'to pick (fruit)'*	/hát/ *'to sing'*	/hạj/ *'harm'*	/hạt/ *'grain'*	/hảj/ *'sea'* (in compounds only)	/hãj/ *'scared'*

* See comments in the text.

** s represents the syllable-final voiceless stop which conditions the occurrence of the tone.

= marks the laryngealisation characteristic of the tone.

2. PROCEDURES

2.1. *INFORMANTS*

This study was based on the recorded voices of thirty-four native speakers of Vietnamese (11 NV, 12 CV and 11 SV), whose home towns are indicated on Map 1 (p.58). They included 14 females and 20 males, respectively represented by F and M and numbered in increasing order in the southward direction within each sex group and each dialect. Being mostly university students or staff, they spoke an educated and standardised variety of their respective dialects.

2.2. *WORD LISTS*

In order to pinpoint dialectal variations of tones in similar phonetic environments, I decided on a restricted number of syllables in two word lists. One consisted of five syllables

/ta/ /t^{h}a/ /da/ /na/ /sa/

occurring with all the six tones (five in CV and SV), and

/tak/ /t^{h}ak/ /dak/ /nak/ /sak/

occurring with the two stopped tones.

The other consisted of the syllables /ta/ (for non-stopped tones), and /tak/ (for stopped tones), each repeated three times after a frame sentence.

The idea was to minimise possible perturbations caused by consonants and vowels of various types which might differ phonetically in the three dialects. Comparison with data from Han (1969) and Earle (1975), which included a greater variety of syllables, showed that the tone shapes obtained from my material were essentially the same as theirs.

2.3. *INSTRUMENTS*

Recordings were made at various times in Canberra, Sydney, Hanoi, Hue and Ho Chi Minh City through a UHER 4000 Report IC Recorder with reel-to-reel BASF tapes. Mingograms were made through the use of an F-J Fundamental Frequency Meter, an F-J Intensity Meter, a Sony 8-Channel Mixer and an Elema-Schonander Mingograf, and spectrograms were made from a Voiceprint Spectrograph, at the Phonetics Laboratory of the Department of Linguistics, The Faculties, Australian National University.

2.4. *MEASUREMENTS*

After I decided to look at four parameters that appeared to characterise Vietnamese tones, namely Fo, intensity, duration and

MAP 1

DISTRIBUTION OF INFORMANTS' NATIVE PLACES IN VIET NAM