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► **To cite this version:**

Michel Ferlus. Toward Proto Pearic: problems and historical implications. Mon-Khmer Studies, 2011, Mon-Khmer Studies Special Issue No. 2: Austroasiatic Studies - papers from ICAAL4, pp.38-51. halshs-00992631v2

**HAL Id: halshs-00992631**

**<https://shs.hal.science/halshs-00992631v2>**

Submitted on 19 May 2014

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## Toward Proto Pearic: Problems and Historical Implications

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### Abstract

The reconstruction of Proto-Pearic phonology allows us to consider the following hypothesis: The contrast /tense vs lax/ in Vietic, Katuic and Pearic was formed under the influence of Ancient Chinese along the trade route leading from North-Vietnam to the gulf of Thailand.

### 1. Introduction

This text will examine essential facts about Pearic: the problem of the two-way shift of voiceless initial plosives; the origin of the final glottal stop; and the origin of the two layers of registers (creaky and breathy). I will present a chronology of phonetic changes and attempt an explanation in terms of propagation along ancient trade roads through Southeast Asia.<sup>1</sup>

### 2. Ethnonymes in Pearic subgroup

‘Chong’, also ‘Song/Xong/Kasong’, originates in \*kjo:ʔŋ as the genuine autonym of Pearic populations. It is attested as *Tchouang* in the phrase “Tchouang thieves” (zhuàng zéi 撞賊) in the Tcheou Ta-kouan description of Cambodia, from the end of the 13th century (Pelliot 1902: 156; 1951: 70). In modern Khmer: *jan ជំរំ ច្បង* 1. “barbare”, 2. “nom de tribu à demi sauvage” (Guesdon 1930); and “Chong (name of a tribe), barbaric, wild” (Jacob 1974) with a strong derogatory connotation. The meaning “barbaric” perhaps allows a connection with *zhuàng* 壯 “Zhuang people”, also *zhuàng/chuáng* 撞.

‘Por’ and ‘Pear’ originate from skt. *varṇa*- “color, caste”, following two distinct treatments in Khmer.

‘Por’: from skt. *varṇa*- through the treatment \*bər > \*bər > \*bər. It is attested in Khmer dictionaries as “color, appearance”; *bar ព័រ ប័រ* > *pər* (Guesdon 1930: 1203).

‘Pear’: from skt. *varṇa*- through the literate treatment \*bar > khmer *bər ព័រ / ba(r)ṇ ព័រ ព័រ pər* > *pə* (Ferlus, 1981). Its use by the Khmer and French administrations explains the present name of the so-called Pearic subgroup.

‘Pol’: from skt. *bala* “army, guard”. The Pol were at the disposal of the King for the guard of monuments and other places (Bregues 1905), they were composed of war prisoners, convicts and mountain peoples. Contrary to appearances, Pol is not a variant of Por.

‘Samrê’, also ‘Somre/Somræ/Somray’ *səmre:/səmraj*: formed of *sre*: “field, cultivate” infix by *-m-* meaning “cultivators”.

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<sup>1</sup> Abbreviations used in this paper: MK: Mon-Khmer; PMK: Proto Mon-Khmer; PP: Proto Pearic; EPP: Early Proto Pearic; LPP: Late Proto Pearic; OC: Old Chinese; MC: Middle Chinese. T: tense; L: lax.

‘Saoch’, or the Chung of Kompong Som. This exonym is used only by Khmer speakers. In Chung, it would be \***so:ʔc**. Saoch has been connected to the Khmer *s’ŭc* ស្រុក **sʔo:c** “scarlet fever” (Diffloth, in Isara 2007: 60). Guesdon (1930: 1841) gives “pimply”. Derogatory ethnic names are rare, so why would the Khmer, who used ‘Pear’ to name other groups, have marginalized Chung people with the derogative ‘Saoch’? Saoch was also thaicized into ‘Kha Saut’ and ‘Ut’ **ʔut** in King Rama V’s travelogue to name the Chung Yul of Thailand (Isara 2007: 60, 26-27).

‘Khamen Boran’ of Pursat (Bastian 1868: 264-6) spoke a Pearic language although this designation usually names the Khmer Daeum (Martin, personal communication).

The exonym ‘Suay’ of Kompong Speu Pear is shared to name some Katuic population.

### 3. Pearic Languages and dialects:

There are four generations of linguistic data:

- Before 1900: short vocabularies.
- From 1900 to 1970: consistent vocabularies collected by attentive investigators but not linguists, French in the majority, knowing the Khmer language or working with Khmer assistants. These vocabularies give a satisfactory idea of the consonants and, a little less, of vowels.
- The data of Marie Martin, which recognizes the existence of register features.
- The 1980s mark a transition with the arrival of professional linguists in Pearic studies. We now have good data and scientific analyses. The register system is now clearly described (e.g. Huffman 1985; Theraphan 1984, 1991).

Data of the pre-linguistics period make it possible to date the shifts of finals \***-r**, \***-l** and \***-s**. French investigators normally distinguish clearly \***-r** and \***-l** which are noted *-l* and *-rr* by Baradat. The final spelled *-s* is not consistent, it represents \***-s** as well as \***-h**. It can be explained by Khmer writing in which final *-s* is generally pronounced **-h** these days. The rules of Khmer spelling were transliterated into Latin spelling, and there is also, in certain authors, an improper use of the empty *-r*, as in khmer *ʔnikar* អ៊ុកកា **ʔəŋka:** “husked rice” in which *-r* is not significant.

The Proto Pearic of Headley (1985) was elaborated with pre-linguistic data. Despite this handicap, this work remains a milestone in the Pearic studies and a good basis for further research.

Pearic languages	Authors	Date
Chong	Crawfurd	1828
Samreh d’Angkor	Bastian	1868
Khamen boran	Bastian	1868
Xong	Bastian	1868
Xong	Garnier	1873
Khamen boran	Garnier	1873
Kouys - Porrh	Harmand	1878-79
Saoch	Pavie	1881-82
Sâmre (Siem Réap), Pors (Pursat)	Moura	1883
Sâauch	[Leclère]	1900
Porr (Pursat)	Bregues	1905
Saoch	Pannetier	?

Peâr de Kranhung	Pannetier	?
Souy	Pannetier	?
Saoch	Ménétrier	1926
Chawng (Ban Dan Champon, Tratt)	Isarangura	1935
Pear des Cardamomes (Phnom Krevanh)	Morizon	1936
Chông de Siam (= Chong of Trat)	Baradat	1941
Péâr de l'Ouest	Baradat	1941
Péâr de l'Est (Peam Prus)	Baradat	1941
Kompong Suoi de Kompong Speu	Baradat	1941
Péâr de Thom	Baradat	1941
Saoch (Kompong Som)	Ellul	1968-
Saoc (Komong Som)	Purtle	1970-
	( <i>in</i> Headley)	
Chong ໂວ (Chanthaburi)	Martin	1974
Chong hæp (Chanthaburi)	Martin	1974
Sômray (Kranhung, Batdambang)	Martin	1974
Sômree (Peam Prus, Pursat)	Martin	1974
Chong (Klong Phlu, Chanthaburi)	Surekha	1982
Samree (Borai, Trat)	Theraphan	1984
Chong (Klong Phlu, Chanthaburi)	Huffman	1985
Chong (Klong Phlu, Chanthaburi)	Sirikarn	1987
Chong (Klong Phlu, Chanthaburi)	Saifon	1991
Chong (Klong Phlu, Chanthaburi)	Theraphan	1991
Chong (Klong Phlu, Chanthaburi)	Edmonson	1996
Kasong (Khlông Saeng, Trat)	Kunwadee	1996
Chong (Klong Phlu, Chanthaburi)	Siripen	2001
Samre (Trat)	Pornsawan	2001
Chong (Klong Phlu, Chanthaburi)	Isara	2002
Kasong (Khlông Saeng, Trat)	Noppawan	2003
Kasong (Khlông Saeng, Trat)	Sunee	2003
Chong (Klong Phlu, Chanthaburi)	Isara	2004
Chung Yul (Kampong Som)	Isara	2007
Chung Yuy (Thung Na, Kanchanaburi)	Isara	2007
Chung (Kanchanaburi & Kampong Som)	Isara	2009

Table 1: Chronology of Pearic data

#### 4. Register System of Pearic

Acoustic analyses of Chong by Theraphan (1991) once and for all demonstrated the existence of a four registers system in Pearic that preceding works foresaw to some extent (Martin 1974a; Surekha 1982; Huffman 1985).

The system combines the modal feature /clear/ with the marked features /breathy/ and /creaky/ to form four syllabic combinations.

R1 [CVC] <i>Clear modal</i>	R2 [CVʔC] <i>clear-creaky</i>
R3 [CYC] <i>breathy</i>	R4 [CYʔC] <i>breathy-creaky</i>

Table 2: Pearic registers

Exemples (Siripen 2001):

- R1 **ka:k** “armpit”, **tʰa:k** “span”, **cʰo:k** “pound”, **kla:ŋ** “branch”
- R2 **kəta:ʔk** “tongue”, **kəna:ʔk** “crow”, **kəso:ʔŋ** “ladder”, **kʰla:ʔŋ** “owl”
- R3 **tʰa:k** “water”, **kəla:ŋ** “ear”, **cʰo:k** “shine”, **kəpʰo:k** “hole”
- R4 **kəla:ʔk** “swallow”, **kəla:ʔŋ** “sand”, **cʰo:ʔŋ** “Chong”, **ŋa:ʔj** “far”

Syllables ending in -Ø, -ʔ and -h are only attested with R1 et R3.

### 5. Reconstruction of initial plosives:

As in many languages of Southeast Asia, Pearic dialects underwent a phonetic restructuring of the initial plosives:

Low series (or series 2): devoicing of voiced initial plosives, generally **\*/b d ɟ g/ > /p t c k/**; in Chong Klong Phlu **/pʰ tʰ cʰ kʰ/**. These shifts are associated with vowel raising and breathiness.

High series (or series 1): Comparison shows two types of treatment of voiceless initial plosives. In the first type, the most simple initials remain unchanged, **\*/p t c k/ = /p t c k/** as in Khmer and in Thai. In the second type, which is more marked, a change takes place from **\*/p t c k/** to **/pʰ tʰ cʰ kʰ/**. A vowel lowering can be associated with this. An exception: Kompong Thom Pear, surrounded by Khmer speakers, only attests the simple shift.

According to the principle of the regularity of sound change, this two-ways treatment would be an anomaly. Headley (1985) had adopted a provisional solution by reconstructing two series of plosives, **\*/P T C K/** for the simple type, and **\*/p t c k/** for the marked type. The state of knowledge at the time did not permit a solution to the problem.

Proto Pearic		Pearic dialects	Kg Thom
Ferlus	Headley 1985		
<b>*p</b>	p <sup>1</sup>	*p	p <sup>h</sup>
	p <sup>2</sup>	*P	p
<b>*t</b>	t <sup>1</sup>	*t	t <sup>h</sup>
	t <sup>2</sup>	*T	t
<b>*c</b>	c <sup>1</sup>	*c	c <sup>h</sup>
	c <sup>2</sup>	*C	c
<b>*k</b>	k <sup>1</sup>	*k	k <sup>h</sup>
	k <sup>2</sup>	*K	k

Table 3: Proto-Pearic plosives according to Headley (1985)

In my notation, superscripts <sup>1</sup> and <sup>2</sup> are only used to differentiate the two types of correspondences.

Ferlus	Headley	exemples
*p (p <sup>1</sup> )	*p	p <sup>h</sup> o:j <sup>R1</sup> [p <sup>h</sup> o:j] “after”, p <sup>h</sup> o:n <sup>R2</sup> [p <sup>h</sup> o: <sup>?</sup> n] “four”
*p (p <sup>2</sup> )	*P	pa:ŋ <sup>R1</sup> [pa:ŋ] “flower”, kəpa:t <sup>R2</sup> [kəpa: <sup>?</sup> t] “cotton”
*t (t <sup>1</sup> )	*t	t <sup>h</sup> a:ŋ <sup>R1</sup> [t <sup>h</sup> a:ŋ] “weave”, t <sup>h</sup> a:m <sup>R2</sup> [t <sup>h</sup> a: <sup>?</sup> m] “crab”
*t (t <sup>2</sup> )	*T	to:t <sup>R1</sup> [to:t] “head”, kəta:k <sup>R2</sup> [kəta: <sup>?</sup> k] “tongue”
*c (c <sup>1</sup> )	*c	c <sup>h</sup> o:j <sup>R1</sup> [c <sup>h</sup> o:j] “to plant”, c <sup>h</sup> i:n <sup>R2</sup> [c <sup>h</sup> i: <sup>?</sup> n] “ripe”
*c (c <sup>2</sup> )	*C	co:k <sup>R1</sup> [co:k] “run”, ca:t <sup>R2</sup> [ca: <sup>?</sup> t] “knife”
*k (k <sup>1</sup> )	*k	k <sup>h</sup> e:n <sup>R1</sup> [k <sup>h</sup> em] “son”, k <sup>h</sup> o:n <sup>R2</sup> [k <sup>h</sup> o: <sup>?</sup> n] “mouse”
*k (k <sup>2</sup> )	*K	ka:ŋ <sup>R1</sup> [ka:ŋ] “moon”, kə:t <sup>R2</sup> [kə: <sup>?</sup> t] “low”

The type \*/p t c k/> /p<sup>h</sup> t<sup>h</sup> c<sup>h</sup> k<sup>h</sup>/, named “mutation germanique” by Haudricourt (1965), is sporadically attested in the Austroasiatic area. Apart from Pearic, it exists in Khasi and in Phay/Tin. Its rarity compared to the simple type could allow one to consider it the standard shift in Pearic. As for the type \*/p t c k/= /p t c k/, very largely spread, it is attested in particular in Khmer and Thai, languages in contact with Pearic. I think that this latter type, when found in Pearic, is due to the influence of Khmer. It is known that in Khmer and Thai the phenomena of the restructuring of initials occurred in second half of the seventeenth century. At this time the Pearic dialects would have formed a continuous territorial unit, except for the isolated Kompong Thom Pear in which the marked process did not occur.

It is thus necessary to re-examine the historical phonetics of Pearic by taking account the influence of the Khmer language.

## 6. Origin of final -ʔ in Pearic

Generally, final glottal stop -ʔ in Pearic does not correspond regularly to PMK -ʔ which is preserved in Khmu, Waic, Mon (except \*-iʔ > today oa -ay) and partially in Vietic.

	Chong	register	Khmu	*Waic	Mon
hand	ti:	R1	tiʔ	teʔ	toa <i>tay</i>
louse	c <sup>h</sup> i:	R1	seʔ	siʔ	coa <i>cay</i>
pestle	kəhi:	R1	cn <sup>h</sup> reʔ	ŋriʔ	
fruit	p <sup>h</sup> li:	R1	pleʔ	pliʔ	
eight	kəti:	R1		snteʔ	
rattan	se:	R1			ri <sup>?</sup> <i>ri</i>
rice field	(wa:j3) se:	R1	<sup>h</sup> reʔ		
grand father	ta:	R1	taʔ	taʔ	
monkey	wa:	R1	<sup>h</sup> vaʔ	hwaʔ	
eat	c <sup>h</sup> a:	R1		saʔ	cε <sup>?</sup> <i>ca</i>
grass	kətu:	R1		tīʔ	
grandson	co:	R1	ʃoʔ	sīʔ	
dog	c <sup>h</sup> o:	R1	soʔ	soʔ	
sesame	kəŋo:	R3		ŋaʔ	
leg	p <sup>h</sup> lu:	R3	bluʔ		
forest, woods	p <sup>h</sup> ri:	R3	briʔ	breʔ	
banyan tree	(ne:m2) c <sup>h</sup> i:	R3	ʃriʔ		səa <i>jay</i>
day	k <sup>h</sup> əŋiʔ	R1 (<*R2)	sŋiʔ	sŋeʔ	təŋoa <i>tīay</i>
ground, soil	t <sup>h</sup> eʔ	R1 (<*R2)	pteʔ	kteʔ	təeʔ <i>tī</i>

leaf	laʔ	R1 (<*R2)	<sup>h</sup> laʔ	hlaʔ	hlaʔ <i>sla</i>
stone, rock	k <sup>h</sup> əmoʔ	R1 (<*R2)		smoʔ	məʔ <i>tmaʔ</i>
dream	p <sup>h</sup> oʔ	R1 (<*R2)	mpoʔ	rmoʔ	kəpəʔ <i>lpaʔ</i>
shell	k <sup>h</sup> lɔʔ	R1 (<*R2)	klɔʔ	nlɔʔ	kənaoʔ <i>knu</i> <MM <i>kinloʔ</i>
paddy	(ha:j1) kɔʔ	R1 (<*R2)	rŋkoʔ	rŋkoʔ	
rain (n.)	kəmaʔ	R3 (<*R4)	kmaʔ		məʔ <i>kma</i>
thorn	kəlaʔ	R3 (<*R4)	crlaʔ		həlɛʔ <i>khala</i>

Table 4: Distribution of final glottal stop

In the older transcriptions, the final -ʔ of Chong corresponds to a glottal constriction on the vowel while giving an impression of disyllabism. Let us compare some transcriptions of Suôy Kompong Speu (Baradat 1941) with those of Chong Klong Phlu (Siripen 2001).

	Suôy (Baradat)	Chong (Siripen)
Ground, soil	<i>thé-é</i>	t <sup>h</sup> eʔ
Leaf	<i>sla-a</i>	laʔ
Stone, rock	<i>thmaû-aû</i>	k <sup>h</sup> əmoʔ
Acid, sour	<i>chô-ô</i>	c <sup>h</sup> oʔ
Skin	<i>trâlô-aû</i>	k <sup>h</sup> aloʔ

However, there are exceptions. It should not be forgotten that the former authors, in spite of their merits, were not professional linguists. Historically, the final -ʔ in Pearic comes from a glottal constriction, this is the reason why it does not correspond to PMK final glottal stop. Current -ʔ is only the result of a recent secondary development. By writing the glottal constriction as -<sup>2</sup>-, one can propose the syllabic evolution CV<sup>2</sup>v > CVʔ.

At this point, two important facts are highlighted: (i) Pearic -ʔ does not originate from PMK -ʔ, (ii) Pearic -ʔ (CVʔ) must be reinterpreted as a syllabic glottalization (creakiness) -<sup>2</sup>- (CV<sup>2</sup>v). As a consequence, final -ʔ must be removed from Early Proto Pearic. The system of final plosives thus had only four units \*/p t c k/.

In Chong (Siripen 2001), open syllables -Ø and syllables in -ʔ (only short vowels) are attested with only registers R1/R3. On the basis of preceding remarks, it is possible to reorganize the two sub systems (syllables -Ø and -ʔ) in a sole system while transferring syllables ending in -ʔ from R1/R3 into R2/R4 on the model of other final vowels (table 5). As a consequence, Pearic languages must be reconstructed without final -ʔ as in Khmer (Ferlus 1992), in Katuic and in Bahnaric (Sidwell 1998, 2005).

Syllables -Ø and -ʔ With two registers	R1 [Cv]	R1 [Cvʔ]
	R3 [Cv̥]	R3 [Cv̥ʔ]
↓		↓
Reorganization: syll. -Ø with four registers	R1 [Cv]	R2 [Cvʔ] < [Cv <sup>2</sup> v]
	R3 [Cv̥]	R4 [Cv̥ʔ] < [Cv̥ <sup>2</sup> v]

Table 5: Reorganization of Pearic registers by syllable types

Following this reorganization, the distribution of new open syllables in the four registers is of the same type as that of the closed syllables (table 6).

Syllables -Ø: four registers	R1	[Cv]	R2	[Cv <sup>?</sup> v]
	R3	[Cṿ]	R4	[Cṿ <sup>?</sup> v]
Closed syllables: four registres	R1	[CvC]	R2	[Cv <sup>?</sup> C]
	R3	[CṿC]	R4	[Cṿ <sup>?</sup> C]

Table 6: : Distribution of Pearic registers by syllable types

The most recent Proto Pearic (Late Proto Pearic), the stage preceding the devoicing of voiced plosives initials, must be reconstructed with the contrast /creaky vs modal/. It will be explained later (*see* §.8), on the one hand, that this contrast does not come from the PMK, and on the other hand, that it can be explained by an ancient syllabic contrast /tense vs lax/ (henceforth /T vs L/), possibly due to the influence of Middle Chinese. At this stage, my hypothesis is based primarily on the geographical and temporal coincidence that three Mon-Khmer groups lying along a known Chinese trade route developed similar /T vs L/ contrasts.

### 7. Stages of the evolution from PMK to Pearic

It is now possible to present a chart showing the principal steps of the phonetic shifts of the Pearic branch from the PMK stage up to modern times.

Stages	States <i>Shifts</i>
(1) Proto Pearic Mon-Khmer	Syllables with final *-ʔ.
<i>Loss of final *-ʔ &gt; formation of syllables -Ø</i>	
(2) Early Proto Pearic	No syllable with final -ʔ.
<i>Formation of /tense vs lax/ (influence of Middle Chinese) which evolve to /creaky vs modal/. Note: Loss of final *-ʔ was also propagated in Bahnaric, Katuic and Khmer. In Monic, it affected only the rime *-iʔ (oa -ay in modern Mon).</i>	
(3) Late Proto Pearic	No syllable with final -ʔ. Marked register /creaky/.
<i>Devoicing of plosives initials: */b d ʃ g/ &gt; /p t c k/ (in general). Reinforcement of unvoiced plosives initials: */p t c k/ &gt; /p<sup>h</sup> t<sup>h</sup> c<sup>h</sup> k<sup>h</sup>/ (regular) or preservation as /p t c k/ (influence of Khmer). Formation of register contrast /clear vs breathy/.</i>	
(4) Pearic at registral stage	No final -ʔ. Four registers system: /clear/, /creaky/, /breathy/ and /breathy-creaky/.
<i>Recreation of final -ʔ in tense syllables -Ø.</i>	
(5) Current Pearic languages	New final -ʔ. Four registers system: /clear/, /creaky/, /breathy/ and /breathy-creaky/. Diversification by final consonants.

Table 7: from PMK to Pearic languages



## 8. Origin of creakiness

The creakiness is not very widespread in MK languages, it exists only in Vietic, in a part of Katuic and in Pearic (Diffloth 1989). I already showed how a syllabic contrast /T vs L/ of Old Chinese had been propagated in Vietic while modifying its phonation (Ferlus 2004). On this model, one can suppose that the contrast /creaky vs modal/ in Pearic can be also explained by this old syllabic contrast /T vs L/ of OC. However, it is difficult to prove this categorically.

### 8.1 Formation of contrast /T vs L/ in Ancient Chinese.

The syllabic type in OC was (Cv)CV(C), a part of the vocabulary was made up of monosyllables CV(C) the other part of sesqui-syllables CvCV(C). The coalescence of initials in sesqui-syllables developed a tenseness /T/, while monosyllables became lax /L/. Thus syllabic contrast CvCV(C) vs CV(C) was coupled with contrast /T vs L/. The evolution was continued by the monosyllabization and the formation of a syllabic contrast CV(C)/T vs CV(C)/L in MC, associated with modifications of vocalic aperture, vowel lowering in T-syllables and vowel raising in L-syllables (Ferlus 2009).

Old Chinese	Middle Chinese	<i>transferred to Vietic, Katuic and Pearic</i>
CvCV(C) (tenseness)	CV(C)/T (v. lowering)	<b>T</b> (ense)
CV(C) (laxness)	CV(C)/L (v. raising)	<b>L</b> (ax)

Table 8: Chinese Register Development

It will consider here only the contrast /T vs L/ which I will argue was propagated into Vietic, Katuic and Pearic.

### 8.2 Transfer and evolution of contrast /T vs L/ in Vietic (Ferlus 2004)

	Early Proto Vietic syll.	Late Proto Vietic finals			
		<i>*/p t c k/</i>	<i>*/s h/</i>	<i>*/ʔ/</i>	<i>*/m n ɲ r l w j/</i>
<b>T</b>	CvCVC	not affected	not affected	<b>*ʔ &gt; Ø</b> <sup>(1)</sup>	glottalization <b>m<sup>2</sup> n<sup>2</sup> ...</b> <sup>(2)</sup>
<b>L</b>	CVC	not affected	not affected	<b>ʔ unchanged</b> <sup>(2)</sup>	not affected <sup>(1)</sup>
		sắc-nặng	hỏi-ngã	<sup>1</sup> ngang-huyền <sup>2</sup> sắc-nặng	<sup>2</sup> sắc-nặng <sup>1</sup> ngang-huyền

Table 9: Vietic Register Development

The most outstanding fact of Vietic is the creation of open syllables in Late PVM. This fact created conditions for the formation of the three fundamental tones represented by *ngang-huyền*, *sắc-nặng* and *hỏi-ngã* in Vietnamese. Of note: the feature /T/ is strong enough to cause the loss of final -ʔ, but not enough to affect the voiceless final plosives. The voiced finals were glottalized and are represented by *sắc-nặng* tones in Vietnamese.

### 8.3 Transfer and evolution of the contrast /T vs L/ in Katuic (Diffloth 1989)

	Early Proto Katuic syll.	Late Proto Katuic finals			
		<b>*/p t c k/</b>	<b>*/m n ɲ ŋ/</b>	<b>*/r l s h w j/</b>	<b>*Ø</b>
T	CvCVC	<b>m² n² j² ʔ</b>	<b>m² n² ɲ² ŋ²</b>	<b>r² l² s² h² w² j²</b>	<b>v²</b>
L	CVC	<b>p t c k</b>	<b>m n ɲ ŋ</b>	<b>r l s h w j</b>	<b>Ø</b>

Table 10: Katuic Register Development

Contrast /T vs L/ has affected only some dialects (Katang, Talan, Yir/Ong) in the East of Katuic. Other Katuic languages (Suoy, Kuy/Kuoy, Sô/Bru, ...) were not affected. To simplify, I did not take account of the vocalic length in the development of /T/. The effect of tenseness is more important in Katuic than in Vietic.

### 8.4 Transfer and evolution of the contrast /T vs L/ in Pearic

	Early Proto Pearic syll.	Late Proto Pearic finals				
		<b>*/p t c k/</b>	<b>*/m n ɲ ŋ/</b>	<b>*/r l s w j/</b>	<b>*/h/</b>	<b>*Ø</b>
T	CvCVC	<b>p² t² c² k²</b>	<b>m² n² ɲ² ŋ²</b>	<b>r² l² s² w² j²</b>	<b>h</b>	<b>v² &gt; vʔ</b>
L	CVC	<b>p t c k</b>	<b>m n ɲ ŋ</b>	<b>r l s w j</b>	<b>h</b>	<b>Ø</b>

Table 11: Pearic Register Development

One can observe the re-creation of syllables -ʔ. Except for the syllables -h, all the others were glottalized under the effect of the tenseness. The Pearic languages are those where the effects of tenseness are generalized the most, but where the finals are the least corrupted. Exception, in Chung Yul, final plosives were nasalized at creaky register: /p² t² c² k²/ > /m² n² ɲ² ŋ²/ while merging with nasals of the same register (Isara 2009). This phonetic change is recent because it also affects the final /s² > t²/ (> /n²/).

## 9. The Han trail and its Linguistic Implications

During the 3rd-8th centuries CE, Chinese texts reveal the existence of dependencies of the Chinese Empire, located between the Middle Mekong and the north of present Cambodia.

The Records of the Three Kingdoms (*sān guó zhí* 三國志) record that to the 3rd century, a state named T'ang-ming (*táng míng* 堂明), located north of present Cambodia, sent embassies to the emperor of China (Pelliot 1903: 251). This practice indicates a nominal authority of China over this area.

In his great treatise of geography (*shí dào zhì* 十道志), the author Kia Tan (*Jia dān* 賈耽), 8th century, details the land route from the Chinese possession of Kiao-tche (*jiāo zhǐ* 交趾; Sino-Vietnamese: *Giao chi*), the present north of Vietnam, and leading to the dependency of Wen-tan (*wén dān* 文單) (Pelliot 1904: 210). It is thought that Wen-Tan was just one of the names of Tchen-la (*zhēn là* 真臘), in other words Ancient Cambodia which extended farther north than present day Cambodia.

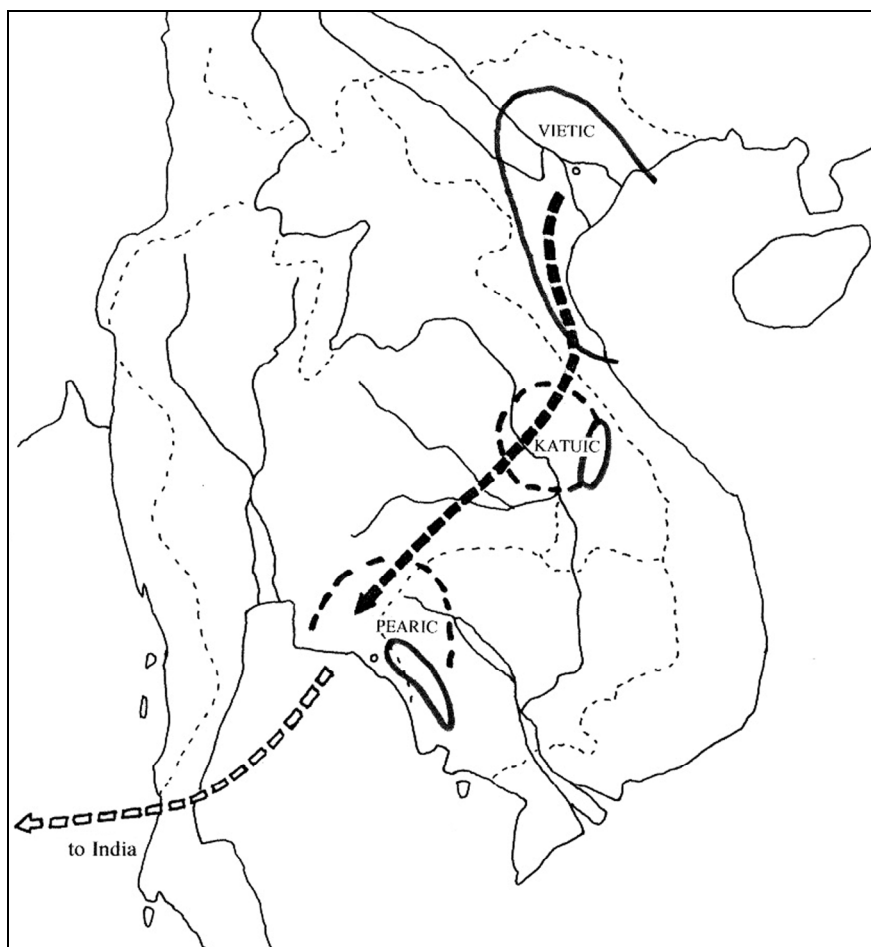


Figure 1: A tentative map of the trans-peninsular trade route or *Han trail*, leading from Kiao-Tche (ancient Vietnam) to the gulf of Thailand and, and beyond to India.

What would be the reason of the existence of these dependencies in an outlying region from China and linked to Kiao-Tche by roads cut through geographical obstacles? It is clear that the roads described in the texts were only those controlled by the Chinese, of the great transcontinental trade route connecting southernmost China to the gulf of Thailand, and becoming a sea route toward India by a portage through the Isthmus of Kra. This land route, a priori difficult, was essential to avoid the Cham who controlled the sea route from China to India by the strait of Malacca. Tatsuo Hoshino (2002) remarkably studied the trans-Mekong route to the Wen-Tan, despite various difficulties of locating the places quoted by the Chinese sources. We will call the part of the transcontinental trade route located between Kiao-Tche and the gulf of Thailand the “Han Trail”.

What is the relation of the Pearic populations, now scattered in Cardamomes, with these trade route? According to the ethnologist Marie Martin, the oral traditions of Samre mention a Chong kingdom before the arrival of the Khmers. In addition, the Khmers of Chanthaburi had the memory of an old Chong capital located on present Phnom Seap (Martin 1997: 70). These places, located between the Great Lake and the Gulf of Thailand, are the possible homeland of Pearic and a natural point of arrival of a trade route coming from central Indochina.

I have argued above that the contrast /T vs L/ of Ancient Chinese (OC > MC) had been transferred into Vietic, Katuic (partially) and Pearic. It can be objected that only a small part of Katuic attests this sound change, but I think that it is due to the expansion of the West Katuic, which was not influenced by Chinese.

While at the same time the Tchen-la of Land<sup>2</sup> pushed back the East Katuic towards the margins (into the hills east of the Mekong). Let us recall that the basic population of Land Tchen-la before the unification of Cambodia was mainly the Bru (*pó lòu* 婆鑊) ethnic group as documented by Chinese authors (Ferlus 2005). However, these three linguistic groups are precisely located at the both ends and in the middle of this trade route which during centuries was covered by Chinese travellers and traders. This coincidence between a linguistic fact, formation of /T vs L/ in Vietic, Katuic and Pearic, and a trade route where the Chinese carrying this contrast circulated, is sufficiently remarkable to deduce from it that this fact is not due randomly.

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<sup>2</sup> The Chinese sources distinguished Tchen-la of Land and Tchen-la of Water, apparently referring to Cambodia in-land from Cambodia around the Great Lake and lower Mekong.

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