

Toward Proto Pearic: problems and historical implications

Michel Ferlus

► **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://halshs.archives-ouvertes.fr/halshs-00992631v2>

Submitted on 19 May 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Toward Proto Pearic: Problems and Historical Implications

Michel Ferlus
Independent Researcher (ret. CNRS, France)

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.¹

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” infixed by *-m-* meaning “cultivators”.

¹ 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’uc* 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			
*p	p ¹	*p	p ^h	p
	p ²	*P	p	p
*t	t ¹	*t	t ^h	t
	t ²	*T	t	t
*c	c ¹	*c	c ^h	c
	c ²	*C	c	c
*k	k ¹	*k	k ^h	k
	k ²	*K	k	k

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

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

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

The type */p t c k/> /p^h t^h c^h k^h/, 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 ^h i:	R1	seʔ	siʔ	coa <i>cay</i>
pestle	kəhi:	R1	cn ^d reʔ	ŋriʔ	
fruit	p ^h li:	R1	pleʔ	pliʔ	
eight	kəti:	R1		snteʔ	
rattan	se:	R1			ri [?] <i>ri</i>
rice field	(wa:j3) se:	R1	^h reʔ		
grand father	ta:	R1	taʔ	taʔ	
monkey	wa:	R1	^h vaʔ	hwaʔ	
eat	c ^h a:	R1		saʔ	cε [?] <i>ca</i>
grass	kətu:	R1		tɨʔ	
grandson	co:	R1	ɔʔ	sɨʔ	
dog	c ^h o:	R1	sɔʔ	sɔʔ	
sesame	kəŋo:	R3		rŋaʔ	
leg	p ^h lu:	R3	bluʔ		
forest, woods	p ^h ri:	R3	briʔ	breʔ	
banyan tree	(ne:m2) c ^h i:	R3	ɟriʔ		səa <i>jay</i>
day	k ^h əŋiʔ	R1 (<*R2)	sŋiʔ	sŋeʔ	təŋoa <i>tñay</i>
ground, soil	t ^h eʔ	R1 (<*R2)	pteʔ	kteʔ	təeʔ <i>tí</i>

leaf	laʔ	R1 (<*R2)	^h laʔ	hlaʔ	hlaʔ <i>sla</i>
stone, rock	k ^h əmoʔ	R1 (<*R2)		smoʔ	məʔ <i>tmaʔ</i>
dream	p ^h oʔ	R1 (<*R2)	mpoʔ	rmoʔ	kəpəʔ <i>lpaʔ</i>
shell	k ^h 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 dissyllabism. 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 ^h eʔ
Leaf	<i>sla-a</i>	laʔ
Stone, rock	<i>thmaû-aû</i>	k ^h əmoʔ
Acid, sour	<i>chô-ô</i>	c ^h oʔ
Skin	<i>trâlô-aû</i>	k ^h 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 -²-, one can propose the syllabic evolution CV²v > 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) -²- (CV²v). 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 ² v]
	R3 [Cv̥]	R4 [Cv̥ʔ] < [Cv̥ ² 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 [?] v]
	R3	[Cṿ]	R4	[Cṿ [?] v]
Closed syllables: four registres	R1	[CvC]	R2	[Cv [?] C]
	R3	[CṿC]	R4	[Cṿ [?] 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 > 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/ > /p t c k/ (in general). Reinforcement of unvoiced plosives initials: */p t c k/ > /p^h t^h c^h k^h/ (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)	T (ense)
CV(C) (laxness)	CV(C)/L (v. raising)	L (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>
T	CvCVC	not affected	not affected	*ʔ > Ø ⁽¹⁾	glottalization m² n² ... ⁽²⁾
L	CVC	not affected	not affected	ʔ unchanged ⁽²⁾	not affected ⁽¹⁾
		sắc-nặng	hỏi-ngã	¹ ngang-huyền ² sắc-nặng	² sắc-nặng ¹ 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			
		<i>*/p t c k/</i>	<i>*/m n ɲ ŋ/</i>	<i>*/r l s h w j/</i>	<i>*∅</i>
T	CvCVC	m² n² j² ʔ	m² n² ɲ² ŋ²	r² l² s² h² w² j²	v²
L	CVC	p t c k	m n ɲ ŋ	r l s h w j	∅

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				
		<i>*/p t c k/</i>	<i>*/m n ɲ ŋ/</i>	<i>*/r l s w j/</i>	<i>*/h/</i>	<i>*∅</i>
T	CvCVC	p² t² c² k²	m² n² ɲ² ŋ²	r² l² s² w² j²	h	v² > v²ʔ
L	CVC	p t c k	m n ɲ ŋ	r l s w j	h	∅

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 chí*), 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.

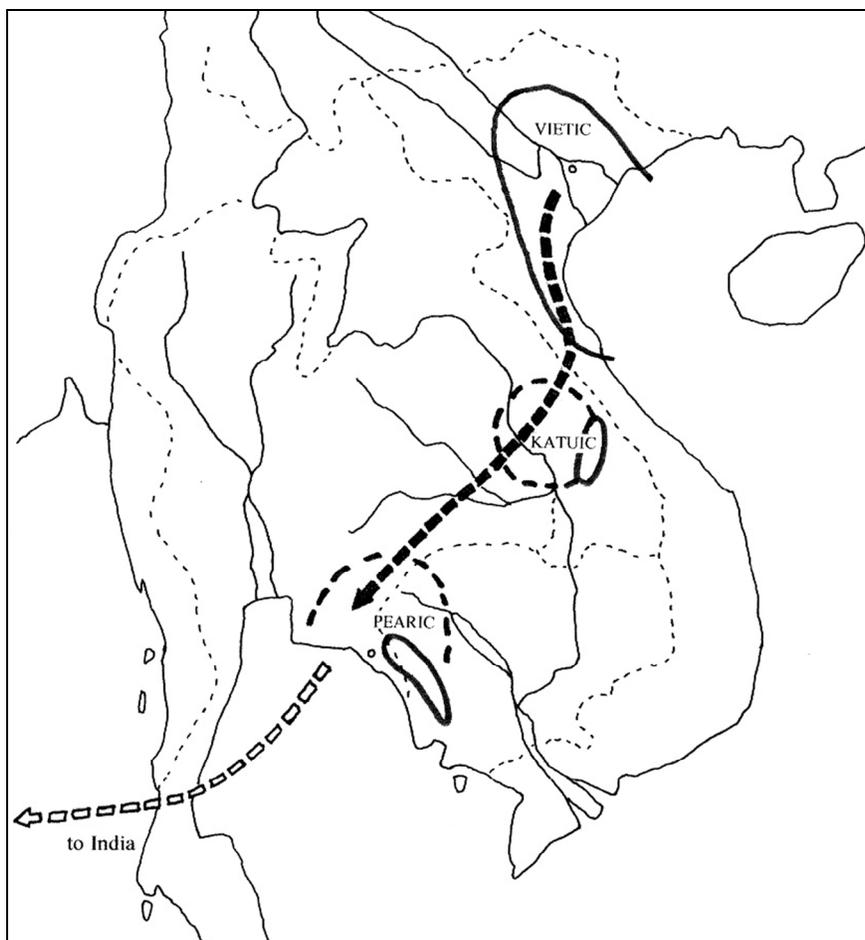


Figure 1: A tentative map of the trans-peninsular trade route or *Han trail*, leading from Kiao-Tche (ancient Vietnam) to the gulf of Thailand and, and beyond to India.

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 Land² 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.

References

- ASEMI: *Asie du Sud-Est et Monde Insulinien*; BEFEO: *Bulletin de l'École Française d'Extrême-Orient*; BSEI: *Bulletin de la Société des Etudes Indochinoises*; ILCRD: *Institute of Languages and Culture for Rural Development*; JSS: *The Journal of the Siam Society*; MKS: *Mon-Khmer Studies*.
- Antelme, Michel Rethy & Hélène Suppya Bru-Nut. 2001. *Dictionnaire Français-Khmer*. Paris, L'Asiathèque.
- Baradat, R. 1941. *Les dialectes des tribus sãmre*. Manuscrit de l'École Française d'Extrême-Orient, Paris. 267p.
- Baradat, R. 1941. Les sãmre ou Peãr, population primitive de l'Ouest du Cambodge. *BEFEO* 41: 1-150.
- Bastian, Adolf. 1868. *Reise durch Kambodja nach Cochinchina*, tome 3. Herman Gostenoble, Jena. [samreh 89-90; khamen boran 264-265; xong 295-298]
- Blagden, Charles Otto. 1894. Early Indo-Chinese influence in the Malay Peninsula, as illustrated by some of the dialects of the aboriginal tribes. *Journal of the Straits Branch of the Royal Asiatic Society* 27: 21-56.
- Bregues, Docteur Jean. 1905. Notes sur les populations de la région des montagnes des Cardamomes. *JSS* 2(1): 19-47.
- Cabaton, Antoine. 1905. Dix dialectes indochinois recueillis par Prosper Odend'hal. Etude linguistique par Antoine Cabaton. *Journal Asiatique*, 10^e série, 5: 265-344.
- Crawford, John. 1828 [2000]. *Journal of an Embassy from the Governor-General of India to the Courts of Siam and Cochin China*. London: Henri Colburn. [reprint 2000, New Delhi]
- Diffloth, Gérard. 1989. Proto-Austroasiatic Creaky Voice. *MKS* 15: 139-154.
- Edmondson, Jerold A. 1996. Voice qualities and inverse filtering in Chong. *MKS* 26: 107-116.
- Ellul, Jacques. 1968. *Enregistrement magnétique de vocabulaire saoch, région de Veal Renh, Cambodge*.
- Ferlus, Michel. 1981. A propos d'un allongement vocalique devant la finale r en khmer ancien. *ASEMI* 12(1-2): 101-109.
- Ferlus, Michel. 1992. Essai de phonétique historique du khmer (Du milieu du premier millénaire de notre ère à l'époque actuelle)", *MKS* 21: 57-89.
- Ferlus, Michel. 2004. The origin of tones in Viet-Muong. In *Papers from the Eleventh Annual Meeting of the Southeast Asian Linguistics Society 2001*. Edited by Somsonge Burusphat. Arizona State University: 297-313.
- Ferlus, Michel. 2005. L'intérêt linguistique des transcriptions chinoises concernant le Cambodge ancien (Fou-nan et Tchen-la). *Dix-neuvièmes Journées de Linguistique de l'Asie Orientale*, 30 juin - 1^{er} juillet, 2005. Paris: CRLAO (EHESS-CNRS).
- Ferlus, Michel. 2009. What were the four Divisions of Middle Chinese ? *Diachronica* 26(2): 184-213.
- Filippi, Jean-Michel. 2000. *Lexique et analyse phonétique du Saoch*. Manuscrit.
- Filippi, Jean-Michel. 2008. *Recherches préliminaires sur les langues des minorités du Cambodge*. Publié par l'UNESCO et l'IDSSC, Phnom Penh, Editions Funan.
- Garnier, Francis. 1873 [1976]. *Voyage d'exploration en Indo-Chine effectué pendant les années 1866, 1867, et 1868...* Paris, Hachette. Vol. 2: 498-506.
- Gregerson, Kenneth J. 1976. Tongue-root and register in Mon-Khmer. *Austroasiatic Studies Part 1*, Oceanic Special Publication N° 13. Edited by Philip N. Jenner, Laurence C. Thompson & Stanley Starosta. The University Press of Hawaii: 323-369.

² 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.

- Gubler, J. s d. *Liste de mots pears recueillis dans les Phnom Krevanh*. Manuscript.
- Guesdon, Père Joseph. 1930. *Dictionnaire cambodgien-français*, 2 vols. Paris: Plon.
- Harmand, J. 1878-79. Notes de voyage en Indo-Chine: les Kouys – Ponthey-Kakèk. *Annales d'Extrême-Orient* 1: 322-339.
- Haudricourt, André-Georges. 1965. Les mutations consonantiques des occlusives initiales en Mon-Khmer. *Bulletin de la Société de Linguistique de Paris* 60(1): 160-172.
- Headley, Robert K. 1977. A Pearic vocabulary. *MKS* 6: 69-149.
- Headley, Robert K. 1978. An English-Pearic vocabulary. *MKS* 7: 61-94.
- Headley, Robert K. 1985. Proto-Pearic and the classification of Pearic. In *Southeast Asian Linguistic Studies presented to André-G. Haudricourt*. Edited by Surya Ratanakul, David Thomas, & Suwilai Premsrirat. Bangkok, Mahidol University: 428-478.
- Henderson, Eugénie J.A. 1952. The main features of Cambodian pronunciation. *Bulletin of the School of Oriental and African Studies* 14(2): 149-174.
- Hoshino, Tatsuo. 2002. Wen Dan and its Neighbours: The Central Mekong Valley in the Seventh and Eighth Centuries. In *Breaking new Grounds in Lao History, Essays on the Seventh to Twentieth Centuries*. Edited by Mayoury Ngaosrivathana and Kennon Breazeale. Chiang Mai, Silkworms Books.
- Huffman, Franklin E. 1976. The register problems in fifteen Mon-Khmer languages. *Austroasiatic Studies Part 1*, Oceanic Special Publication N° 13. Edited by Philip N. Jenner, Laurence C. Thompson & Stanley Starosta. The University Press of Hawaii: 575-589.
- Huffman, Franklin E. 1985. The Phonology of Chong, A Mon-Khmer Language of Thailand. In *Southeast Asian Linguistic Studies presented to André-G. Haudricourt*. Edited by Surya Ratanakul, David Thomas, & Suwilai Premsrirat. Bangkok, Mahidol University: 355-388.
- Isara, Choosri. 2002. Dialects of Chong. *MKS* 32: 55-70.
- Isara, Choosri. 2004. Chaak and other Chong place names: linguistics remains of a Mon-Khmer people in Eastern Thailand. *MKS* 34: 67-77.
- Isara, Choosri. 2007. *Investigating Contact-induced Language Change: Cases of Chung (Saoch) in Thailand and Cambodia*. Thesis, Mahidol University.
- Isara, Choosri. 2009. Chung (Saoch) of Thailand and Cambodia: phonological and lexical comparisons. *MKS* 38: 69-85.
- Isarangura, Nai Noe. 1935. Vocabulary of Chawng words collected in Krat Province. *JSS* 28: 173-186.
- Jacob, Judith M. 1974. *A Concise Cambodian-English Dictionary*. London, Oxford University Press.
- Kanika Kenikanon & al. 1979. *Chong*. Bangkok, Bannakij. [in Thai]
- Kunwadee Phaetphithak. 1996. *Phaasaa Chong Muu Baan Khlong Saeng, Tambon Dan Chumphon, Amphoe Borai, Changwat Trat*. MA Thesis. Silapakorn University. [A description of the Chong language in Khlong Saeng village, Borrai district, Trat province]
- [Leclère, Adhémar. ~1900]. *Vocabulaire français-sâauch-cambodgien*. Manuscrit de l'Ecole Française d'Extrême-Orient, Paris. 65p. [identified by the spelling *sâauch* only used by Leclère, see *BSEI* 57, 1910]
- Leclère, Adhémar. 1910. Les Sâauch. *BSEI* 57: 91-114. La langue des Sâauch, 112-114.
- Malone, Dennis L. 2001. Language development in a minority language community: Report of the Chong Writers Workshop. *MKS* 31: 141-152.
- Martin, Marie A. 1974a. Remarques générales sur les dialectes pear. *Asie du Sud-Est et Monde Insulindien* 5(1): 25-37. Paris, Centre National de la Recherche Scientifique.
- Martin, Marie A. 1974b. Esquisse phonologique du sòmree. *ASEMI* 5(1): 97-106. Paris, Centre National de la Recherche Scientifique.
- Martin, Marie A. 1975. Les dialectes Pear dans leurs rapports avec les langues nationales. *JSS* 63(2): 86-95.
- Martin, Marie A. 1997. *Les Khmers Daeum «Khmers de l'origine»*. *Société montagnarde et exploitation de la forêt. De l'écologie à l'histoire*. Paris: Presses de l'EFEO.
- Ménétrier E. 1926. *Monographie de la Circonscription résidentielle de Kampot*. Saigon: Editions d'Extrême-Orient. 89p. [saoch vocabulary p. 41-42]
- Morizon, René. 1936. *Essai sur le dialecte des populations Pears des Cardamomes*. Paris, Editions Inter. 65p.
- Moura, J. 1883. *Le royaume du Cambodge*. Paris, Ernest Leroux, 2 vols. [porr and samreh vocabulary, vol. 1: 440-447]

- Noppawan Thongkham. 2003. *The phonology of Kasong at Khlong Saeng Village, Danchumphon Sub-District, Bo Rai District, Trat Province*. MA Thesis, Mahidol University, Thailand.
- Pannetier, Adrien Louis Marie. s. d. *Notes sur les Pears, accompagné d'un vocabulaire*. Manuscript. Paris, EFEO. [not easily usable]
- Parkin, Robert. 1991. *A Guide to Austroasiatic Speakers and Their Languages*. Oceanic Linguistics Special Publication N° 23. Honolulu: University of Hawaii Press.
- Pavie, Auguste. 1881-82. Excursion dans le Cambodge et le Royaume de Siam, III. *Excursions et Reconnaissances* 4(10): 99-146. [voc. tchiong 114-116]
- Pelliot, Paul. 1902. Mémoires sur les coutumes du Cambodge. *BEFEO* 2(2): 123-177. Traduction du texte de Tcheou Ta-Kouan.
- Pelliot, Paul. 1903. Le Fou-nan. *BEFEO* 3(2): 248-303.
- Pelliot, Paul. 1904. Deux itinéraires de la Chine en Inde à la fin du VIIIe siècle. *BEFEO* 4: 131-413.
- Pelliot, Paul. 1951. Mémoires sur les coutumes du Cambodge. *Œuvres posthumes de P. Pelliot*. Paris: Adrien Maisonneuve. Traduction revue et augmentée de 1902.
- Pinnow, Heinz-Jürgen. 1959. *Versuch einer historischen lautlehre der Kharia-Sprache*. Wiesbaden, Otto Harrassowitz.
- Pornsawan Ploykaew. 2001. *Samre grammar*. Thesis. ILCRD, Mahidol University.
- Pornsawan Ploykaew. 2001. The phonology of Samre. *MKS* 31: 15-27.
- Pornsawan Ploykaew. 2005. The study of Samre's world view: the belief in sorcerer spirits. *MKS* 35: 171-182.
- Purtle, Dale. 1970. Manuscript vocabulary of Chong collected at Veal Renh, Kampot Province.
- Saifon Luamkhan. 1991. *Phaasaa Chong Muu Baan Nam Khun 1, Khlong Phlu, Amphur Makham, Changwat Chanthaburi*. MA thesis. Silapakorn University.
- Schmidt, Pater Wilhelm. 1907, 1908. Les peuples mon-khmer, trait d'union entre les peuples de l'Asie centrale et de l'Australasie. *BEFEO* 7 (1907): 213-263 & *BEFEO* 8 (1908): 1-35.
- Schmitt, J. 1904. Les chôngs. *Revue Indochinoise* II(3): 161-162.
- Seidenfaden, E. 1943. Review of R. Baradat, Les sâmré ou Peâr, population primitive de l'ouest du Cambodge, *BEFEO* 41: 1-150, 1941. *JSS* 34(1): 73-80.
- Sidwell, Paul. 1998. *A Reconstruction of Proto-Bahnaric*. Thesis, University of Melbourne.
- Sidwell, Paul. 2005. *The Katuic Languages, Classification, Reconstruction and Comparative Lexicon*. Lincom Europa.
- Sirikarn Charoentham. 1987. *Phaasaa Chong Muu Baan Thung Ta-In, Changwat Chanthaburi* [Chong Language, Thung Ta-In village, Chanthaburi province]. Thesis. Silapakorn University.
- Siripen Ungsitipoonporn. 2001. *A phonological comparison between Khlong Phlu Chong and Wangkraphrae Chong*. MA thesis. ILCRD, Mahidol University.
- Skeat, Walter William & Charles Otto Blagden. 1906. *Pagan Races of the Malay Peninsula*, two vols. London: Franck Cass & Co. Reprint 1966, New York: Barnes & Noble. [vocabularies from Doudart de Lagrée & Francis Garnier 1873: 498-517, and Moura 1883: 440-447]
- Sunee Kamnuansin. 2002. The syntax of an endangered language: A case study of Kasong. Paper presented to *The 8th International Conference on Thai Studies* (January 9-12, 2002). Nakhorn Pathom, Thailand.
- Sunee Kamnuansin. 2002. *Kasong syntax*. MA thesis. ILCRD, Mahidol University.
- Sunee Kamnuansin. 2003. Syntactic characteristics of Kasong: An endangered language of Thailand. *MKS* 33: 167-182.
- Surekha Suphanphaiboon. 1982. *The phonological system of Chong language*, Muban Takhianthong, Tambon Takhianthong, Amphoe Makham, Changwat Chanthaburi. M.A. Thesis, Srinakharinwirot Prasarnmit University, Bangkok. [in Thai]
- Surekha Suphanphaiboon. 1987. Kan Suksa Klum Chatiphon Chao Chong. Research paper presented to *The Social Science Association of Thailand*.
- Suwaphat Chanmekha. 2003. The Hidden Language: a case Study of Kasong Language Attitudes, Uses and Habilities in three Villages in Trat Province, Thailand. Thesis, Mahidol University. [in Thai]
- Suwilai Premsrirat. 2001. Austroasiatic languages and peoples. In *Annotated Bibliography for Ethnic Minorities in Thailand* N°2. Nakhon Pathom, ILCRD, Mahidol University. [unpublished ms in Thai]
- Suwilai Premsrirat. 2004. *Ethnolinguistic Maps of Thailand*. Ministry of Culture and Mahidol University.

- Suwilai Premsrirat. 2008. *Chong Dictionary*. Center for Revitalization of Endangered languages, Institute of Language and Culture for Rural Development.
- Tcheou Ta-Kuan. 1295/1296. *See* Paul Pelliot 1902.
- Theraphan L. Thongkum. 1984. Samre language. *Journal of Thammasat University* 15(1): 16-128. [in Thai]
- Theraphan L. Thongkum. 1988. Phonation types in Mon-Khmer languages. In *Vocal Physiology: Voice Production, Mechanisms and Function*. Edited by Osama Fujimura: 319-333.
- Theraphan L. Thongkum. 1991. An Instrumental Study of Chong Register. In *Austroasiatic Languages. Essays in honour of H.L. Shorto*. Edited by J.H.C.S. Davidson. School of Oriental and African Studies, University of London: 141-160.
- Thomas, David D. & Robert K. Headley. 1970. More on Mon-Khmer subgroupings. *Lingua* 25: 398-418.
- Ueda, H. & Okada, T. 2003. Saoch vocabulary. Reports on minority languages in mainland Southeast Asia.
- Webber, Karl E. 1976. Ethnographic notes of the Chong population in Chanthaburi province southeast Thailand. *Thailand Research Project Diffusion of Innovation Coast Hinterland - Continuum Preliminary*. Office of Senior Research Fellow of Southeast Asia Institute of Heidelberg University of German Culture.