

## THE MUTATION OF \*R IN PRE-THAVUNG

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### 1. *Introduction*

Thavung (Thavung) is a language of the Vietic<sup>1</sup> branch of Mon-Khmer which is, or was until recently, spoken in the Annamite Cordillera near the Laos-Vietnam border.<sup>2</sup> It does not now have an /r/ as do the better-known Vietic languages, Vietnamese and Muong (Mường). Comparison with these latter and with other languages of the area reveals, however, that /r/ was in the phonological inventory of an earlier stage of the language, which I shall call pre-Thavung.

In his "Lexique thavung-français" Michel Ferlus established that Thavung \*/r/ underwent two changes. The proto-phoneme became a voiceless laryngeal spirant in initial and certain cluster environments but a voiced lateral after labial and velar stops and in word-final position. In this paper I propose to review these two changes and present others not reported by Ferlus. Lexical data from Mon-Khmer and Daic languages will be adduced in support of the posited changes, and morphological developments relevant to the history of pre-Thavung \*/r/ will be discussed.

The Thavung lexicon comprises only 770 words. Most changes are hence poorly represented by the data, while in some cases only one example is available. I have tried to cite all material available. Cognate data have been transcribed directly from the listed references, unless otherwise specified.

### 2. *Initial \*R*

The pre-Thavung vibrant occurred initially in monosyllabic

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<sup>1</sup>*Vietic* is used here for *Viet-Muong* to avoid any confusion that might arise from current use of the latter for reference both to the branch and to the subgroup comprising Vietnamese and Muong.

<sup>2</sup>Michel Ferlus collected the only known Thavung lexical material among refugees in Khammouan province, Laos, in 1965 and 1970 (Ferlus, 1974c, 1979). Whether other speakers exist is unknown. Ferlus reported that it was going out of use among the refugees.

words and in the main or second syllable of dissyllabic forms. In both environments it mutated to the voiceless laryngeal spirant /h/. This change is an areal innovation attested in Vietic (see examples below) and in Southwestern Daic languages,<sup>3</sup> which have had considerable influence on Thavung. The liquid has become /h/ in Lao, but has remained /r/ in Siamese.

This mutation of initial \*/r/ can be shown by comparison with related Mon-Khmer languages. Because of merger of the reflexes of pre-Thavung \*/r/ and \*/h/, the liquid can be identified only through cognates showing reflexes of \*/r/. Hence the following list is probably not complete.

<i>Thavung</i>	<i>Pre-Thavung</i>	<i>Cognates</i>
həə <sup>1</sup> 'que'	*ree	See ahəə <sup>1</sup> 'quoi', below.
haa <sup>1</sup> 'se laver (visage)'	*raa	Souei sraa? 'se laver (la tête)'
hoo <sup>1</sup> 'tortue'	*roo	Khen hò, VN rùa 'turtle'.
hot <sup>1</sup> 'tout, tous'	*rot	VN rôt 'the last'.
hooc <sup>1</sup> 'intestins'	*rooc	Khen rọch, VN ruột 'intestines'.
hok <sup>1</sup> 'crapaud'	*rək	Rengao kīt adrək, Khasi hnrə? 'toad'.
heh <sup>1</sup> 'racine'	*rɛh	Souei rɛsh, VN rễ 'root'.
ahəə <sup>1</sup> 'pilon'	*ʔaree	Souei ntrè, Khen khây 'pestle'.
ahəə <sup>1</sup> 'quoi'	*ʔaree	VN rây 'these'.
hahing <sup>3</sup> 'pou de corps'	*hariñ	Souei ntrin, Khen khậnh 'body louse'.

The mutation of \*/r-/ can also be established by comparison of Daic loans with their ancient and modern Daic forms.<sup>4</sup>

<sup>3</sup>This Daic branch consists of Siamese, Lao, White Tai, Black Tai, and others (Li, 1977: 14).

<sup>4</sup>Daic reconstructions are based on Li (1977) if preceded by L; otherwise they are from Ferlus (1979). Li did not list proto-forms, which I have improvised for greater clarity; any errors in these are my responsibility. For the four proto-Daic proto-tones I have used Li's letter identifications, replacing Ferlus's \*1 and \*2 with \*B and \*C. Siamese lexical entries are from Li, Lao ones from Ferlus, if not otherwise specified.

<i>Thavung</i>	<i>Pre-Thavung</i>	<i>Daic Cognates</i>
hap <sup>1</sup> 'accepter, recevoir'	*rap	L *rap D, Siamese rap D2, Lao hap 'to receive, accept'.
hɛɛt <sup>1</sup> 'rhinocéros'	*rɛɛt	*rɛɛt D, Lao hɛɛt D2.
hu? <sup>1</sup> 'savoir, connaître'	*ru?	L ruu C, Siamese ruu C2, Lao huu, Lung-chow ɦuu? 'to know'.
hEEm <sup>2</sup> 'mouvement descendant (lune)'	---	*rɛɛm A, Lao hɛɛm A2.
hEEŋg <sup>2</sup> 'fort'	---	L *rɛɛŋ A, Siamese rɛɛŋ A2, Lao hɛɛŋ 'force, strength'.
hAAŋg <sup>2</sup> 'divorcer'	---	*raaŋ C, Lao haang C2.
hAAy <sup>2</sup> 'en colère'	---	*raay C, Lao haay C2.
ahian <sup>2</sup> 'étudier'	---	*rian A, Lao hian A2.

### 3. *Medial \*R*

Pre-Thavung \*/r/ also occurred as the second segment of initial and medial clusters.

After \*/m/ the vibrant changed to /h/ and conditioned the devoicing of the nasal:

<i>Thavung</i>	<i>Pre-Thavung</i>	<i>Cognates</i>
mahing <sup>1</sup> 'dragon'	*mr(i)ŋ	VN rông 'dragon'
mahii <sup>1</sup> 'forêt'	*mrii	Mah Meri mrii, Khmu? bri?
mahɛɛ <sup>1</sup> 'beaux-parents'	mre(h)	VN rê <sup>2</sup> 'son-in-law', Pacoh alêh 'brother-in-law'.

The \*/sr/ changed to an aspirated apical stop, \*/th/:

thoo <sup>3</sup> 'taro'	*sro?	Khmu? sro?, VN sọ 'taro'.
thAng <sup>2</sup> 'bois, vegetal'	*(s)raŋ	Phon-Soung slang.
thaang <sup>1</sup> 'mois lunaire'	*sraaŋ	Khen khang, VN tháng 'month'.
thɛh <sup>1</sup> 'sable'	*srɛh	Khmu? srɛh 'sand'.

In clusters with simple stops \*/-r-/ developed in two patterns, dependent on whether the cluster was word initial or medial. In initial clusters it changed to a voiceless preaspirated lateral after labial, apical and velar plosives. These consonants then assimilated the aspiration.

When the cluster initial was a palatal or glottal stop, the result was also a lateral but the initial phoneme remained unaffected:

clɔɔk <sup>1</sup> 'ruisseau'	*croɔc	Khen hóI, VN suôI 'stream'. <sup>6</sup>
clung <sup>2</sup> 'gros, gras'	*jrɔŋ	VN, Khen rɔŋg 'wide, big'.
clɔŋg <sup>2</sup> 'cru (viande)'	*jroŋ	Khen không, VN sông 'raw'.
alɔɔ <sup>3</sup> 'riz paddy'	*ʔaʔrɔʔ	Katu haró, VN lúa 'rice'.
balip <sup>1</sup> 'plonger'	*paʔrip	VN sâp 'to damp, moisten'.
kalɔɔl <sup>1</sup> 'loup'	*kaʔrɔɔl	VN sói 'wolf'.
malɔɔy <sup>2</sup> 'pluie'	*maʔræj <sup>7</sup>	Old Mon brey 'rain(fall), Hung ploŋy 'sky', VN trời 'sky, weather'.

The medial cluster \*/dr/ coalesced to form a voiced preglottalized apical stop, /ʔd/, in five lexical items:

kdii <sup>1</sup> 'cerf'	*kdrii	Old Mon drāy 'hog deer', Stieng drai 'a deer', Khen đai, VN nai 'deer'.
dam <sup>1</sup> 'cinq'	*dram	Chrau prăm, Khen đăm, VN năm 'five'.
cdang <sup>1</sup> 'droit'	*cdraŋ <sup>8</sup>	VN rặng, Khen giặng 'row'.
adaang <sup>1</sup> 'griller sous la braise'	*ʔadraaŋ	VN rang; Daic L *raaŋ A, Siamese raang A2 'to roast'.

<sup>5</sup>The irregular finals are unexplained. Note also Daic L \*xruəi C 'mountain stream', Khmer jroḥ 'idem', and proto-Chamic \*croh 'stream'.

<sup>6</sup>Most Vietic forms have the lateral, but three show a retroflex sibilant, which can indicate \*/r/ (cf. Maspero, 1912: 81), and four have aspirated stops preceding the lateral, suggesting parallel development.

<sup>7</sup>Relationship to Daic L \*ʔdiŋ B, Siamese ding B1 'vertical, straight down; to pour', and to VN thẳng 'straight, direct, right' is not clear.

aduung<sup>1</sup> 'cageot à poulet'      \*ʔadruuŋ Khmer *druŋ*, Pacoh tarrúŋ 'coge'.

In two words the cluster evolved differently. In the first, the \*/-r-/ disappeared while aspirating the presyllable initial; a nasal element precluded preglottalization. In the other, the cluster metathesized to \*/-rd-/, and the vibrant disappeared while conditioning the simultaneous aspiration of the presyllable initial and the preglottalization of the main-syllable initial stop. This pattern is also seen in the development of pre-syllabic \*/r/ (§5).

khad00ng<sup>2</sup> 'carapace'      \*kndrɔŋ Arem roong, Palaung krɔŋ 'back'.

phadɔŋ<sup>1</sup> 'il fait chaud'      \*pdrɔŋ Chrau prǎŋ 'sunny', VN  
nǎŋ 'sunshine', nǒng  
nǎy 'to be hot (of  
weather)', Katu charóŋ  
'sunshine'.

The apical stop in this cluster was anaptyctic and the product of phonetic conditioning in an older \*/nr/ cluster (see §6 for discussion of its morphological origin). Similar formations are seen elsewhere in Mon-Khmer. Smalley mentions a [dr] allophone of Khmuʔ /r/ occurring after /n/: cf. *koonrook*, phonetically [kɔɔndrook] 'orphan'.<sup>8</sup> The same conditioning is suspected in Rengao *kít drók* 'toad'; cf. Khasi *hnɔʔ* 'idem' (see Thavung *hok*<sup>1</sup> in §2).<sup>10</sup> With one exception, the nasal element was lost before these changes took place, and is not reconstructed here. The preglottalized reflex has since been simplified to Thavung /d/, a voiced simple apical stop.

The \*/dr/ cluster has apparently had a long history in Austroasiatic, and its reduction is evidently a widespread and recurrent phenomenon. Its recurrence is attributable to its relationship to morphological \*/r/ (see §6). The following examples are merely suggestive:

<i>gloss</i>	<i>liquid forms</i>	<i>stop forms</i>
water	Nicobar (Teressa) raak	Kharia ɗaʔ, Khen ɗác.
to cover	Sora rub, Mon grop	Kharia ɗa'b, Palaung ɗǎp.

<sup>8</sup> Smalley, 1961: 4.

<sup>9</sup> The Khasi and Rengao forms are cited by Gérard Diffloth in his *Etymological Dictionary of Mon-Khmer* (in preparation).

back	Palaung kɔɔŋ	Sora kəndɔŋ.
eel	Pear məlɔŋ	Khmer <i>andañ</i> .
duck	Kharia ɣeɣe	Khmer <i>ḍā</i> .
five	Chrau prām	Proto-North Bahnaric *baqdām.
crow	Old Mon kil'āk	Mnong-Rlam daak, Chrau can- ḍaq.

The Daic loan vocabulary exhibits a variety of changes involving medial \*/r/. Some of these can be identified as pre-Thavung innovations; others represent developments proper to Daic. The following items reveal pre-Thavung patterns; three of them were probably prefixed after borrowing.

<i>Thavung</i>	<i>Pre-Thavung</i>	<i>Daic Cognates</i>
khaliang <sup>2</sup> 'objets, affaires'	*griɑŋ	L *griɑŋ, Siamese khriang B2, Lao khiang 'apparatus, thing'.
khalAng <sup>2</sup> 'stick laque'	*graŋ	*graŋ B, Lao khang B2.
sleɛw <sup>1</sup> 'vert'	*saʔrɛɛw	L *xiau A, Siamese khiau A1, Ahom khriw, Lao khiau/hɛɛu 'green'.
kalAA1 <sup>2</sup> 'chauve'	*kaʔraal <sup>11</sup>	*laan C, Lao laan C2, VN sôl 'bald'.
looy <sup>1</sup> 'cent'	*ʔrɔɔy	*rɔɔy A, Lao hooy A2.

Fang Kuei Li reconstructed for proto-Tai several initial clusters containing \*/r/; six appear in the next two word lists. Most of these clusters coalesced to form single phonemes, but in some the nonliquid segment dropped out after leaving its imprint on the tone. The following items reflect initial merger in Daic. Whether the similarity of the Daic \*/ʔdr/ and pre-Thavung \*/dr/ reductions is fortuitous or indicative of a causal relationship is not clear at present.

phaak <sup>1</sup> 'front'	(*phaak)	L *phraak D, Siamese phaak D1, Lao phaak 'forehead'.
khAA1 <sup>2</sup> 'herse'	---	*graat D, Lao khaat D2.

<sup>10</sup>This word has been classified as Daic because of its vowel; it may actually be a Vietic form borrowed by Daic.

dian <sup>1</sup> 'mois'	(*?dian)	L *?brien A, Siamese dian A1, Lao dian 'month'.
kdia <sup>1</sup> 'ergot'	(*k?dia)	L *?driai A, Siamese diai A1, Lao diai 'spur of cock'.

One loanword listed by Ferlus does not appear in the preceding list: he cites the correspondent of kOOK<sup>2</sup> 'enclos, prison' as \*grook D, whence Lao khook. According to Li, \*grook is to be reconstructed for proto-Southwest Tai, which gives the same form in Lao and \*grook (rather than \*grook) in pre-Thavung and thence kOOK<sup>2</sup>.

In the following forms the initial dropped out of the Daic cluster probably before the word entered Thavung: \*/thr/ became \*/hr/ and then /h/ in Lao and Siamese (see \*/hr/ below).

hɛɛp <sup>1</sup> 'couteau à riz'	(*rɛɛp)	L *threɛp D, Lao hɛɛp D1.
hiat <sup>1</sup> 'punaise'	(*riat)	L *driat D, Siamese riat D2, Lao hiat 'bedbug'.
mahuu <sup>1</sup> 'sueur'	(*maruu) <sup>12</sup>	L *thr(ia) D, Siamese hia B1, Ahom ruu 'sweat'.
ahiiw <sup>1</sup> 'tenir'	(*?ariiw)	L *thriu C, Siamese hiu C1 'to carry something hanging down from one's hand'.

Li also reconstructed a voiceless vibrant, \*/hr/, which has evolved to /h/ in both Lao and Siamese:

hAA <sup>2</sup> 'génie des épidémies'	---	*hraa B, Lao haa B1.
hot <sup>1</sup> 'arroser, asperger'	(*rot)	*hrot D, Lao hot D1.

Voiceless liquids appear in other Mon-Khmer languages, and Laurence C. Thompson has reconstructed \*/hr-/ for proto-Viet-Muong. There is however no clear evidence that pre-Thavung ever had a voiceless vibrant or even copied that articulation in the Daic loans possessing that phone. In Mon-Khmer /hr/ would often appear to be the reflex of \*/sr/, which in pre-Thavung has mutated to \*/th/, as is shown above. In one case, hahing<sup>3</sup> 'pou de corps', it appears possible that \*/hr/ was a pre-Thavung initial.

<sup>12</sup>Possibly a contaminated form: cf. VN mō hōi, Souei puhūul, Pacoh pahōr 'sweat'.

But, if so, the change was to \*/hh/ or \*/hah/, not to /h/ as in Lao.

Thavung asuu<sup>2</sup> 'trou' would appear to evidence the reflex of a Daic stem that was prefixed twice after borrowing: cf. L \*ruu A, Siamese ruu A2, Lao huu 'hole'. The underlying form is apparently \*jruu, which became \*chuu<sup>2</sup> upon devoicing, and then \*ʔachuu<sup>2</sup>. The mutation of \*/ch/ to \*/s/ is another areal innovation shared by Thavung, some other Vietic languages, and Lao. Siamese does not have it. The word is classified as a loan because of its semantic content, but its resemblance to Khmu? jruʔ, Chrau jru, and Vietnamese sâu 'deep' is inescapable.

#### 4. Final \*R

Pre-Thavung final \*/r/ merged into the final lateral, as Ferlus has shown:

<i>Thavung</i>	<i>Pre-Thavung</i>	<i>Cognates</i>
asil <sup>3</sup> 'renifler'	*ʔachir	Pacoh caxĕr, Chrau chĕr 'to blow nose'.
vɛɛl <sup>1</sup> 'gauche'	*ʔwɛɛr	Pacoh avear 'left'.
atsɛl <sup>1</sup> 'crier, appeler'	*ʔatɛɛr	Pacoh ntĕr 'to tell on someone, report'
apɛəl <sup>1</sup> 'lèvres'	*ʔapɛər	Katu buʔr, Pacoh tambir 'lip'.
atal <sup>1</sup> 'corde, fil'	*ʔatar	Pacoh ntār, VN dāy 'cord'.
haal <sup>1</sup> 'deux'	*rʔaar	Proto-Waic *lʔar, Khen hal 'two'.
jAal <sup>2</sup> 'détendre'	*nyaar	Khmer yār, Souei pyaal 'to stretch out'.
hul <sup>1</sup> 'voler (oiseau)'	*hur	Khmer hǣr 'to fly' or hūr 'to flow' (?).
kpuul <sup>1</sup> 'chaux'	*kpuur	Khmer kām̄por, Loven kpoor 'chalk, lime'.
jool <sup>3</sup> 'se lever'	*ʔyoor	Pacoh ayōr 'to raise to feet'.
khamool <sup>3</sup> 'termite'	*krmoor	Pacoh camoar, Khen mōl 'termite'.

#### 5. Presyllabic \*R

The occurrence of \*/r/ as a presyllable and as a segmental



member of other presyllables in pre-Thavung can be established only by comparison with the few Mon-Khmer languages that have retained the liquid or its reflexes in the same environments. Once the patterns are established, some rather spectacular results can be obtained.

In the presyllable, \*/r/ appeared as a nucleus preceded by a simple stop. If a vowel had separated the two phonemes at one time, the phonetic effects of the vibrant on contiguous segments suggest that it had been lost before the mutation of \*/r/ began. That mutation proceeded in two environmentally conditioned ways.

When the main-syllable initial was a nonglottal stop, \*/r/ disappeared in the process of conditioning simultaneously the aspiration of the preceding plosive and the preglottalization of the following stop:

Thavung	Pre-Thavung	Cognates
phadæ <sup>1</sup> 'enceinte'	*prtə(h)	Khen đ̣ <sup>3</sup> 'to blossom', Jeh đ̣dah 'sprout'.
phadaan <sup>1</sup> 'cloison'	*prtɑɑ(ñ)	Pacoh cartâng 'partition'.
aboh <sup>1</sup> 'bec'	*(?)rph	Brou rab <sup>6</sup> h, Ngeq carb <sup>6</sup> h 'beak'.
khaboh <sup>1</sup> 'écorce'	*krph	Khen p <sup>6</sup> q, VN v <sup>6</sup> o 'bark, rind'.

When the following main-syllable initial was a glottal stop or resonant, \*/r/ changed into a spirant and then coalesced with the presyllable initial as aspiration. The following consonant was not affected.

phalεε <sup>1</sup> 'hameçon'	*prlε(h)	Pacoh parlêh 'hook'.
phalə <sup>3</sup> 'fruit'	*prle?	Khmu? prle? 'épis', ple? 'fruit'.
phanuu <sup>2</sup> 'sein'	*brnuu	Khen p <sup>6</sup> ú, VN v <sup>6</sup> ú 'breast'.
phaləəm <sup>1</sup> 'sangsue d'eau'	*prləəm	Souei pləəm, Jeh plēm 'water leech'.
phayong <sup>1</sup> 'jeune homme'	*pryɔŋ	Middle Mon gayoñ 'hus- band'.
thanuu <sup>1</sup> 'fièvre'	*trnuu	Thavung tuu <sup>1</sup> 'malade'.
thamoo <sup>1</sup> 'corde'	*trmoo	Proto-Waic *ʔmoʔ, Khmu? cməʔ 'rope'.
thaloo <sup>3</sup> 'tombeau'	*trloʔ	Pacoh llôq 'grave'.

thanuk <sup>1</sup> 'ciseau, burin'	*trruk	VN đục 'to chisel'.
sngAAy <sup>2</sup> 'loin'	*jrŋaay	Khasi jŋgái, VN ngái 'far'.
khaʔεε <sup>1</sup> 'excrément'	*krʔεεʔ	Pacoh cal-eaq 'to spit up (baby)'.
khaʔɔɔ <sup>3</sup> 'uriner'	*krʔɔʔ	Pacoh ti-ôq, VN ụa 'to vomit'.
khaloot <sup>2</sup> 'ronger (un os)'	*grloot	VN lột 'to strip'.
khaloot <sup>1</sup> 'peau, cuir'	*krloot	VN lột 'to change, shed'.
khaʔaak <sup>1</sup> 'cracher'	*krʔaak	Khmer k'ak 'to cough'.
khaʔaak <sup>1</sup> 'corbeau'	*krʔaak	Old Mon kil'āk, VN ác 'crow'.
khalong <sup>1</sup> 'intérieur'	*krlɔŋ	Pacoh callúng, VN trong 'in'.
khaloong <sup>1</sup> 'graine'	*krlɔoŋ	Pacoh callong, Souei kloong 'seed'.
khamool <sup>3</sup> 'termite'	*krmoor	Pacoh camoar, Khen mól 'termite'.
khamaa <sup>1</sup> 'jeune fille'	*krmaay	Pacoh tarmai 'daughter- in-law'.

\**/r/* may be reconstructed in the following forms, for which no cognates have yet been found, on the basis of the patterns established above:

khabool <sup>1</sup> 'pangolin'	*krpool	Cf. Pacoh yól 'pangolin'?
thanuu <sup>2</sup> 'péter'	*drnuu	
thalik <sup>1</sup> 'se défaire (de soi-même)'	*trlik	Thavung lik <sup>1</sup> 'défaire, dé- nouer'.
khavong <sup>1</sup> 'paon'	*krwɔŋ	Cf. Katu kuông 'peacock'?
khaʔal <sup>1</sup> 'ventre'	*krʔal	
khamayh <sup>1</sup> 'rire'	*krmayh	

The occurrence of \**/r/* as a presyllable itself can be posited with assurance in only one form. In that form and one other the vibrant appeared before the glottal occlusive; it shifted to */h/*, and the glottal disappeared. Note that the apical in the second form, apparently a reflex of \**/s/*, was not aspirated, as in the \**/sr/* cluster:

haal <sup>1</sup> 'deux'	*rʔaar	Proto-Waic *lʔar, hal 'two'.	Khen
tahooʔ <sup>1</sup> 'bâiller'	*srʔooʔ	Souei sʔaap, VN ngáp 'to yawn'.	

Establishment of these presyllabic \*/r/ developments permits the following reconstructions, which would otherwise appear unlikely:

khiat <sup>1</sup> 'affûter'	*kryit	Ngeq harjit sharp'.	'really'
thavOong <sup>2</sup> 'moustique'	*dryooŋ	Katu rayōng, Pacoh rayōng 'mosquito'.	
thavaak <sup>1</sup> 'aisselle'	*tr(p)aak <sup>13</sup>	Souei lampaaʔ, 'shoulder'.	Khen wac
phañoõñ <sup>3</sup> 'cordon ombi- lical'	*prsooñ <sup>14</sup>	Khong Kheng suiñ, thúl, VN rôn 'navel'.	Khen
sakhoʔ <sup>1</sup> 'un panier' <sup>15</sup>	*krcoʔ	Ngeq troh kacoq, kacoq 'basket'.	Lao

## 6. Morphological \*R

The phoneme /r/ appears or has appeared in a morphological role in several Mon-Khmer languages. According to Jacob, it occurred in Middle Khmer in five prefixes and one infix.<sup>16</sup> The prefixes (and their grammatical functions) are: pr- 'general nominalizer', pr- 'causative', and r-, tr- and kr- 'formation of attributive verbs'. The liquid consonant occurs additionally in modern Khmer sr-, which Jacob indicated to be an intensifier. The infix -rn- was, in Jacob's terminology, a utensil nominalizer. Ferlus labeled it an instrumental infix and described its usage in Khmuʔ, where it has variants -r- and -n-. The infix forms substantives designating the instrument or result of an action. Pacoh, a language which has provided many cognates useful to this study, has three verbal prefixes including /r/. They are par- 'nominalized action', par- 'causative reciprocal', and

<sup>12</sup>Reconstruction of the labial is still uncertain because of the Khen labial semivowel. Cf. also Chrau quaq 'armpit', Pacoh lampaq 'shoulder'.

<sup>13</sup>The palatal articulation of the medial nasal may indicate \*/s/, a Vietic phoneme that has merged initially with \*/s/ outside the Viet-Muong subgroup.

<sup>14</sup>Presumably via \*chkhoʔ.

<sup>15</sup>Jacob, 1976: 602-9.

tar- 'reciprocal'.<sup>17</sup> Pacoh also has a nominalizer infix, -an-, which has a large variety of allomorphs, including -al-, -ar-, -arn-, -r-, and -l-. The nouns it forms designate the result or location of an action, or the instrument used in doing it.

The reconstruction of pre-Thavung medial and presyllabic \*/r/ permits the firm identification of one infixal morpheme and reveals the probable existence of two prefixes.

The infix is the instrumental \*/-rn-/, of which Ferlus has found traces in Viet-Muong.<sup>18</sup> The full form is found in the following three reconstructions:

Base		Derivative	
Thavung	Pre-Thavung	Thavung	Pre-Thavung
---	(*pʔuu?)	phanuu <sup>2</sup> 'sein'	*brnuu
tuu <sup>1</sup> 'malade'	*tuu	thanuu <sup>1</sup> 'fièvre'	*trnuu
tuk <sup>1</sup> 'ciseler'	*tuk	thanuk <sup>1</sup> 'ciseau'	*trnuk

The base represented (\*pʔuu?) is formulated according to the external evidence and is itself not attested in the lexicon. It is already an affixed form. The root is (\*ʔuu?) — cf. Khen ú, Pacoh uq 'to suck' — to which the morpheme (\*p-), a causative prefix found in Middle Khmer and elsewhere,<sup>19</sup> has been attached. The resultant sense was probably 'to suckle': cf. Pacoh pa-uq 'to give suck, nurse', VN bú 'to suckle'. In Khmu?, the full form of the instrumental infix is used in bases with single consonant initials. Hence the hypothesis that (\*-rn-) was inserted to give (\*p-ʔ-rn-uu?) seems warranted, despite the awkward consonant sequence.<sup>20</sup> This form was reduced to the pre-mutation \*brnuu, which of course had the meaning 'breast' or, analytically speaking, 'that which one is caused (given) to suck'. The derivation of 'chisel' from 'to chisel' is self-explanatory, while 'fever' is quite reasonably a result of being 'sick', if not the agent making one so.

As in Khmu?, the pre-Thavung instrumental infix had a vibrant allomorph, demonstrated in the following list. Its usage

<sup>16</sup>Watson, 1966: 15 ff.

<sup>17</sup>Ferlus, 1977: 53-4.

<sup>18</sup>Jacob, 1976: 603; Watson, 1966: 17-20.

<sup>19</sup>Infixation of the affixed base is not suspect, for \*prʔuu? should then follow. The pre-mutation form \*brnuu is apparently from earlier \*ʔbrnuu?, itself directly from \*pʔrnuu?.

apparently approximated that of Khmu?, where /-r-/ is inserted between clustered consonants (the second may not be the liquid).

Base		Derivative	
Pre-Thavung		Pre-Thavung	Thavung
(*ptəh 'to sprout, bud, blossom') Cf. Jeh ddah 'sprout'.		*prtə(h)	phadə <sup>1</sup> 'enceinte'
(*cpəh 'to snap at') Cf. Chrau simvōh 'to snap at, bite'.		*(?)rpəh	abəh <sup>1</sup> 'bec'
(*ple? 'to bear fruit') Cf. Khmu? ple? 'fruit'.		*prle?	phalə <sup>3</sup> 'fruit'
(*tlo? 'to make a hole') Cf. Old Mon kirloḥ 'to penetrate' (?).		*trlo?	thaloo <sup>3</sup> 'tombeau'
(*jŋaay 'distant point') Cf. Old Mon jamṇay 'distant point'.		*jrŋaay	sngAAy <sup>2</sup> 'loin'
(*kʔεε? 'to defecate') Cf. Brou crêq 'feces'.		*krʔεε?	khaʔεε <sup>1</sup> 'excrément'
(*kloot 'to shed skin') Cf. VN lôt 'to change or shed skin'.		*krloot	khaloot <sup>1</sup> 'peau, cuir'
(*kʔaak 'to caw') Cf. Souei kʔaa? 'crow'.		*krʔaak	khaʔaak <sup>1</sup> 'corbeau'
(*kloŋ 'to be inside') Cf. Khmu? kluang 'to be inside'.		*krləŋ	khalong <sup>1</sup> 'intérieur'
(*kloəŋ 'to plant') Cf. VN trồng 'to plant'.		*krləəŋ	khaləəŋ <sup>1</sup> 'graine'

None of the above bases are present in the Thavung lexicon, but the extrapolated forms and their hypothesized meanings are in most instances clearly corroborated by the cognate material.

In the following list, the bases cannot be formulated either because the cognates reveal no indication of a verbal base or because there is no cognate presently available. We also cannot be sure that the presyllable is not a component of the root.

In other cases, the base cannot be formulated because the cognates reveal no indication of a verbal base or there is no cognate presently available. We also cannot be certain that the presyllable is not a component of the root. None of the many forms cognate to Thavung phaləəm<sup>1</sup> 'sangsuë d'eau', for example, has either a verbal sense or a reflex of the instrumental infix.

Thus we cannot be sure which is the root, \*plæm or \*prlæm.

The third variant of the Khmu? instrumental affix is /-n-/, which is employed in clusters containing the liquid as second element. The derivative of pru? 'sécher au feu', for example, is pnru? 'séchoir', phonetically [pndru?]. In §3 seven proto-forms with \*/-dr-/ were presented, and it was stated that this cluster is the reflex of an older \*/-nr-/. In five of the seven, it would further appear that the hypothesized nasal was actually the instrumental infix. These five are listed again below, with the forms reconstructed above now designated Late Pre-Thavung and the bases shown here as Early Pre-Thavung:

Base		Derivative	
Late PT	Early PT	Late PT	Early PT
---	(*pram 'five')	*dram 'five'	(*pnram)
---	(*craŋ 'row')	*cdraŋ 'straight'	(*cnraŋ)
---	(*cruuŋ 'to cage')	*ʔadruuŋ 'cage'	(*cnruuŋ)
---	(*prɔŋ 'sunshine')	*pdrɔŋ 'to be hot'	(*pnrɔŋ)
---	(*krɔɔŋ 'back')	*kndrɔɔŋ 'turtleshell'	(*knrɔɔŋ)

The structure of (\*cruuŋ) is suggested by VN chuông 'cage'; cf. also Pacoh crúng 'to imprison, cage'. The vocalic alternation of the cognates of (\*prɔŋ), namely VN nóng náy 'to be hot (weather)' and nắng 'sunshine', suggests reduplication, and it is not presently clear whether (\*prɔŋ) or (\*praŋ) was the Vietic root.

The pre-Thavung \*/-rn-/ infix had clearly an instrumental function, for most of the cited derivatives are instruments or results of actions denoted by the base form. The infix occurs in Khmu? primarily as a modifier of verbal bases, but is not restricted to them. The same freedom is noted in pre-Thavung, but the derivatives of nonverbal bases are not properly instrumental in some cases. They represent a specialized, or perhaps intensified, sense of the base's general meaning. (\*knrɔɔŋ), for example, is a particular type of 'back', i.e. 'turtleshell', while (\*krɔɔŋ) is evidently 'back' in a broader sense. Somewhat differently, \*jrŋaay 'far' is evidently a specialized adjectival sense of (\*jŋaay 'distant point'). These points may be moot, for the word in Southeast Asian languages often has verbal as well as other grammatical functions. Thus (\*jŋaay) may have been 'to be a distant point' and \*jrŋaay 'far', the result of that state. This seems also to be true of the \*tuu : \*trnuu pair.

Determining whether presyllables with liquid nuclei are prefixal morphemes and, if so, what their grammatical function was is not so easy as with the instrumental affix. The surface form in which the latter is visible is typically nominalized, while here it usually has verbal meaning.

In two items \*/kr-/ apparently formed verbs from nominal roots. Both of these roots would appear to be onomatopoeic, but the semantic shift in Thavung and some cognates makes this uncertain. This prefix seems to equate to the Middle Khmer /kr-/, which was used to form attributive verbs.

Base	Verb	Thavung
(*ʔɔʔ)	*krʔɔʔ	khaʔɔɔ <sup>3</sup> 'uriner'
	Cf. VN ụa, Pacoh ti-ôq 'to vomit', Ngeq qooq 'to defecate'.	
(*ʔaak)	*krʔaak	khaʔaak <sup>1</sup> 'cracher'
	Cf. Khmer k'ak 'to cough', VN khạc, Pakatan kōhak 'to spit'.	

In her discussion of Pacoh verbal affixation, Sandra K. Watson stated that the reciprocal affix tar- means 'to do something to each other' and sometimes carries the idea of antagonism.<sup>21</sup> It would appear that the presyllable of \*trlik (cf. Thavung thalik<sup>1</sup> 'se défaire (de soi-même)' and lik<sup>1</sup> 'défaire, dénouer') carries the latter nuance. With regard to the first meaning, it has a reflexive rather than reciprocal connotation.

In the following two examples, prefixes may have been used to give a specialized meaning, in which case they might be termed intensifiers. But it is just as likely that the instrumental infix was applied to the bases \*pyɔŋ and \*kmaay to bring about the same qualification.

(*yɔŋ)	*pryɔŋ	phayɔŋ <sup>1</sup> 'jeune homme'
	Cf. Khmu? yong 'father', Middle Mon gayoñ 'husband'.	
(*maay)	*krmaay	khamaay <sup>1</sup> 'jeune fille'
	Cf. VN mái 'female (birds)', Pacoh tarmai 'daughter-in-law'.	

In the following items, presyllables \*/kr-, dr-/, etc., were possibly used to form verbs, but in only one instance is there

<sup>20</sup>Watson, 1966: 20.

any inkling as to whether a base existed and to what its original meaning was. If the reconstruction \*kryit holds, the presyllable can be recognized as the attributive verb prefix.

<i>Thavung</i>	<i>Pre-Thavung</i>
khalOOt <sup>2</sup> 'ronger (un os)'	*grlOOT
khaʔəy <sup>1</sup> 'se promener'	*krʔəy
thanuu <sup>2</sup> 'péter'	*drnuu
khamayh <sup>1</sup> 'rire'	*krmayh
tahooʔ <sup>1</sup> 'bâiller'	*srʔooʔ
khiat <sup>1</sup> 'affûter'	*kryit

### 7. Conclusion

The pre-Thavung liquid consonant has had an unusual and interesting history. From its strong influence on neighboring phonemes, it had unusual characteristics as well. Li described the proto-Tai \*/r/ as probably a tongue-tip vibrant or trill requiring some breath to achieve.<sup>22</sup> This description seems ready-made for the pre-Thavung phoneme, and it is quite possible that its manner of articulation was a result of Daic or Vietic contact. That contact perhaps created a period of instability, with rivalry between a socially prestigious vibrant or trill allophone and a less dramatic allophone of the old Vietic \*/r/ which ended with complete mutation of the liquid consonant. The general area trend to monosyllabism also undoubtedly played its mysterious role in some changes, particularly in those involving presyllabic \*/r/.

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<sup>21</sup>Lee, 1977: 142.



## REFERENCES

- Barker, Milton and Muriel, 1976. *Muong-Vietnamese-English Dictionary*. SIL, Huntington Beach. Microfiche.
- Costello, Nancy A., 1971. *Katu Vocabulary*. Bo Giao Duc, Saigon.
- Diffloth, Gerard, 1975. "Les langues mon-khmer de Malaisie, classification historique et innovations," in *ASEMI*, VI.4: 1-19.
- , 1977. "Proto Waic and the Effects of Register on Vowel Gliding," paper given at Tenth International Conference on Sino-Tibetan Languages and Linguistics, Georgetown.
- Ferlus, Michel, 1974a. "Le groupe viet-muong," in *ASEMI*, V.1: 69-77.
- , 1974b. "Lexique souei-français," in *ASEMI*, V.1: 141-59.
- , 1974c. "Problemes de mutations consonantiques en thavung," in *BSLP*, LXIX.1: 311-23.
- , 1977. "L'infixe instrumental RN en khamou et sa trace en vietnamien," in *Cahier de Linguistique Asie Orientale*, 2: 51-5.
- , 1979. "Lexique thavung-français," in *Cahier de Linguistique Asie Orientale*, 5: 71-94.
- , 1980. "Formation des registres et mutations consonantiques dans les langues mon-khmer," in *MKS VIII*: 1.76.
- Gradin, Dwight, and Thong, 1979. *Jeh Vocabulary*, edited by Patrick Cohen. SIL, Huntington Beach.
- Headley, Robert K., 1977. "A Pearic Vocabulary," in *MKS VI*: 69-149.
- Henderson, Eugénie J.A., 1976. "Vestiges of Morphology in Modern Standard Khasi," in *Austroasiatic Studies*, I: 477-522. Oceanic Linguistics Special Publication No. 13. The University Press of Hawaii, Honolulu.
- Jacob, Judith M., 1974. *A Concise Cambodian-English Dictionary*. Oxford University Press, London.
- , 1976. "Affixation in Middle Khmer with Old and Modern Comparisons," in *Austroasiatic Studies*, I: 591-623. Oceanic Linguistics Special Publication No. 13. The University Press of Hawaii, Honolulu.
- Lee, Ernest W., 1966. *Proto-Chamic Phonologic Word and Vocabulary*. Unpublished doctoral dissertation, Indiana University.

- Li, Fang Kuei, 1977. *A Handbook of Comparative Tai*. The University Press of Hawaii, Honolulu.
- Maspero, Henri, 1912. "Etudes sur la phonétique historique de la langue annamite: les initiales," in *BEFEO*, 12.1: 1-127.
- Miller, Carolyn and John, 1967. *English-Brou Language Familiarization Manual*. SIL, Saigon.
- Nguyen Dinh Hoa, 1971. *Vietnamese-English Student Dictionary*. Southern Illinois University Press, Carbondale.
- Pinnow, Heinz-Jürgen, 1959. *Versuch einer historischen Lautlehre der Kharia-Sprache*. Otto Harrassowitz, Wiesbaden.
- Shorto, H.L., 1971. *A Dictionary of the Mon Inscriptions from the Sixth to the Sixteenth Centuries*. Oxford University Press, London.
- Smalley, William A., 1961. *Outline of Khmu? Structure*. American Oriental Society, New Haven.
- Smith, Kenneth D., 1972. *A Phonological Reconstruction of Proto-North-Bahnaric*. SIL, Santa Ana, California.
- Smith, Ronald L., 1976. *Ngeq Dictionary*. SIL, Huntington Beach. Microfiche.
- Thomas, David, and Tho Sang Luc, 1966. *Chrau Vocabulary*. Bo Giao Duc, Saigon.
- Thompson, Laurence C., 1976. "Proto-Viet-Muong Phonology," in *Austroasiatic Studies*, II: 1113-203. Oceanic Linguistics Special Publication No. 13. The University Press of Hawaii, Honolulu.
- Vuong Hoang Tuyen, 1963. *Các dân tộc nguồn gốc nam á ở miền bắc Việt Nam* (The Aboriginal South Asian Peoples in Northern Vietnam). Nha Xuat Ban Giao Duc, Hanoi.
- Watson, Richard and Sandra, and Cubuat, 1979. *Pacoh Dictionary*. SIL, Huntington Beach.
- Watson, Sandra K., 1966. "Verbal Affixation in Pacoh," in *MKS II*: 15-30.