NOTES

REANALYZING REANALYSES IN KATUIC AND BAHNARIC

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In the following notes I shall offer alternative analyses of the morphology of some Katuic and Bahnaric languages. It will become apparent that a synchronic analysis of the data yields results very different from an internal reconstruction. Whilst I do not wish to question the descriptive validity of those earlier interpretations, those affix-systems that were hitherto recognized for Katuic and Bahnaric prove to be historically erroneous; for instance, current interpretations would include a **/tər-/ prefix for the 'reciprocal' when a diachronic analysis would lead to recognizing an *[-r-] infix.

This problem is not confined to some of the Vietnam highland languages; in fact, the conflict between synchronic analysis and historical reconstruction is ever present in the study of Mon. Literary Mon has a syllabic prefix [l-] /lə-/ which corresponds to earlier infixes [-r-] or [-N-]; LM also has a syllabic prefix [t[-]/r-/ which corresponds to the earlier prefix [-r-]:

(01.1) LM lə?a < OM rənər < *r-N-ənər ~ *nər
(01.2) LM lənant < OM nənəjac < *n-r-əjac ~ *nəjac
(01.3) LM təsək < OM sərsək < *s-r-əsək ~ *səsək

My alternative interpretations will suggest that (i) extracted infixation is more widespread in Mon-Khmer than hitherto recognized, and may even be reconstructed for PMK, and that (ii) reanalyses, or morphological back-formations through analogical levelling, proliferate.

Furthermore, there is increasing evidence that proto-Mon-Khmer had a verbal infix for the 'frequentative' ([N-]) and a verbal infix for the 'reciprocal' ([r-]). Evidence, however tenuous at first sight, does exist in Mon (02) and Khmer (03) for a reciprocal [-r-]:

(02.1) MM tit / dərtit 'to go out' / 'to deliver'
(02.2) OM *kluh / kərluh 'to pierce' / 'to penetrate'
(02.2a) SM kluh / kəluh 'to pierce' / 'to penetrate'
(03.1) mv:1 / prəmaəl 'to look at' / 'to contemplate'
(03.2) mu:1 / prəmə:1 'to be round' / 'to gather'

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(03.3) ɓaok / prəɓaok 'to strike' / 'to strike each other'

The Khmer forms in (03.1) – (03.2) can be reconstructed as *m-r-µyːl and *m-r-µuːl respectively or, alternatively, as *p-r-µyːl and *p-r-µuːl in which case we have a derivative incorporating both the causative prefix *p- and the reciprocal infix *-r-. In (03.3) the modern form can be interpreted as the reflex of an earlier *p-r-pok. However, in view of the fact that it is initial voiceless alveolar and bilabial stops that underwent voicing and implosion (as early as pre-13th c.) it is more likely that (03.3) is a reanalyzed form, with the rhotacized initial /prə-/ having taken on the function of the 'reciprocal'.

1. Pakoh

I shall argue that in the first paradigm given below an infix [-r-] for the 'reciprocal' has to be recognized for (1.1) and (1.2) and that the derivative in (1.3) is a reciprocal form reanalyzed as a 'transitive/causative'; in the second paradigm the derivatives (2.1) and (2.2) contain masked infixes. I shall provide alternative analyses to Watson (1966).

(1.1) caːo / təɾcaːo 'to threaten' / reciprocal [-r-]
(1.2) sue / təɾsue 'to look for' / reciprocal [-r-]
(1.3) caː / təɾhoːm 'to have a bath' / transitive [-r-]

(2.1) caː / cicaː 'to eat' / causative [-X-]
(2.2) caː / tacaː 'to eat' / involuntary [-X-]
(2.3) caː / tanaː 'to eat' / 'food' [-n-]
(2.4) caː / pacaː 'to eat' / causative [p-]
(2.5) caː / pəɾcaː 'to eat' / caus., rec. [p-, [-r-]

For the first paradigm Watson (1966:20) recognizes a [təɾ-] prefix attached to monosyllabic bases and its allomorph [-r-] occurring in disyllabic bases, as in

(3.1) kiduh / kəɾduh 'to bump' / reciprocal [-r-]
(3.2) kakaːŋ / kəɾcaŋ 'to laugh' / reciprocal [-r-]

However, the presyllable /təɾ-/ attached to monosyllabic bases can be segmented into the affix /-r-/ with /t-/ being the result of dissimilation of the base-initials /c-/ (1.1) and /s-/ (1.2). Furthermore, we have to recognize extracted affixation; for the derivational pairs (1.1) and (1.2) we can reconstruct

(1.1*) caːo / *caːɾcaːo < *c-r-caːo
(1.2*) sue / *səɾsue < *s-r-sue
in analogy to Mon /sərs-/ > /səs-/ > /dəs-/ > /təs-/
(corresponding in spoken Mon to /kəs-/; an innovation not yet seen in Pakoh and some varieties of Khmer following a parallel
development), and Mon /corc-/ > /cəc-/ > /dəc-/ (corresponding
in spoken Mon to /həc-/). The fact that medial /-r-/ has been
retained in Pakoh but lost in Mon (along with other infixes)
may be due to a number of factors such as unifunctionality,
continuous reanalyses and high productivity.2

To illustrate my way of arguing we would have to examine
whether extracted infixation occurs in Pakoh; this is the case
as shown in

(4.1) tiː? / tərțiː? 'to obey' / reciprocal [-r-]
(4.2) toː? / tərtoː? 'to talk' / reciprocal [-r-]
(4.3) pɨʔ? / pərpiʔ? 'to dig' / frequentative [-r-]

Pakoh also has a causative prefix [p] which may be combined with
the reciprocal infix [-r-]; in a form derived by extracted
infixation the repeated base-initial is replaced by the prefix
[p-], or one could choose a more elegant solution in regarding
[-f-] infixation as a late derivational rule following [p-]
prefixation. Such multiple affixed forms are attested in Pakoh
(as they are in Mon):

(5.1) cə:m / pərcə:m 'to know' / caus., rec.
(5.2) caː / pərcaː 'to eat' / caus., rec.
(5.3) dok / pərdok 'to be angry' / caus., rec.
(5.4) həːm / pərhəːm 'to have a bath' / caus., rec.
(5.5) heːʔ / pərhɛːʔ 'to warm by fire' / caus., rec.

Additional forms are given by Watson (1966:23-24) interpreted as
nominalized forms; no examples in sentence-contexts are given
but the glosses suggest a function similar to Mon
'attributives'.3

(6.1) kaːt / pərkaːt 'to burn (food)'
(6.2) keaːt / pərkeaːt 'to cut around'
(6.3) bəːn / pərbəːn 'to pile up'
(6.3a) / pəbəːn
(6.3b) / təbəːn

(6.3a) and (6.3b) are variants which can be interpreted in a
number of ways: (6.3a) can be either a reanalyzed form of a
simple causative derivative or it may be due to
mediocluster-reduction /rb-/ > /-b-/ and subsequent reanalysis.
The variant (6.3b) is a more innovative form where /pəb-/
initial has been dissimilated to /təb-/, as attested in
(7.1) bo:n / təbɔ:n 'to have' / 'to marry' (reciprocal)
although a case where /pərb-/ has been retained is attested
(7.2) bi? / pərbi? 'to lie down' / frequ. ~ attr.

Having established that Pakoh has extracted infixation, and that
one of the extracted infixes is the 'reciprocal' [-r-] which may
also be combined with the prefix [p-] for the 'causative' we
would have to explain why a form such as (2.1) /cica:/ occurs at
all since we have claimed that /cəc-/ and /səs-/ initials
shifted to /təc-/ and /təs-/ respectively.

Watson (1966:16) points out that Pakoh open presyllables may
have three different vowels (again, like Old Mon) /a, i, u/
which are weakened to /a/ in closed presyllables of the form
/CvC-/. A further rule, not given by Watson but deducible from
her data (and conform to Old Mon data), is that before labials
the vowel of the minor syllable is /u/, whereas in all other
contexts it is /i/, unless weakened to /a/.

The derivative in (2.1) /cica:/ is a strong form which has
inhibited the shift /cəc-/ to /təc-; the reason for it to be a
strong form can only be the result of a mediocluster-reduction
/cəCc- > /cəc-, in which case the mediocluster must have
contained an infix. This does, not, however, explain why we have
two causative forms for 'to eat' in Pakoh, /cica:/ and /paca:/.
I rather suspect the former to be an old frequentative in which
case the masked infix may be [-N-].

The second problem is the origin of the 'involuntary'
prefix [t-] /ta-/, as exemplified in (2.2). The list given in
Watson (1966:23) shows a limited number of base-initials,
restricted to palatals, both stops and nasals, /l-/ and /p-/.
The former can be interpreted as *cəCcCVC undergoing
mediocluster-reduction (thus losing the infix) and subsequently
shifting /cəc-/ to /təc-, as above, the latter as reanalyses of
shifted /tə- as a proper prefix.

Forms like

(8.1) kap / təkap 'to bite' / reciprocal
(8.2a) kəŋ / takəŋ 'to wear on wrist' / causative
(8.2b) / pakəŋ / causative

can also be interpreted as reanalyses of phonologically
conditioned /tər- / initials (<< *cəc- ~ *səs-), in the case of
(8.1), and as reanalyses of /təc-/ /təŋ- / initials (<< *cəc- ~
*cəXc- ~ *ŋəŋ- ~ *ŋəXŋ-), in the case of (8.2a).
Three further points in Watson's outline of Pakoh morphology warrant comments: (i) frequentative forms, (ii) vocalic infixes, and (iii) strengthening and affix-extraction, all three of them having parallel developments in Mon.

Watson (1966:27) posits the following forms as having a continuative reduplicated prefix:

9.1) bâ:l / bibâ:l 'to illuminate' < *b-m-bâ:l
9.2) ca: / cîca: 'to eat' < *c-n-ca:
9.3) pi: / pâpi: 'to talk' < *p-m-pi:
9.4) krâ:n / kakrâ:n 'to surround'

It is tempting to interpret these forms as having a masked infix or the 'frequentative' (likely to have been a nasal) with the exception of (9.4) which again is a reanalysed form. The eanalysis may have gone a step further in the case of the velar pseudo-prefix /ka/- in (9.4) which was subsequently applied to verbs with velar stop initials confined to the semantic areas of cutting, breaking, plying, shaving.

The second point concerns vocalic infixes in Pakoh. These are easy to identify in her list (1966:24-25); two examples must suffice:

10.1) kleaŋ / kaleaŋ 'to bar door' / 'door-bar' [−ə−]
10.2) krûp / karûp 'to cover' / 'cover' [−ə−]

These vocalic infixes are in complementary distribution with the nasal infix [−n−] for the 'instrumental', the former occurring in bases with complex initials CC−, the latter in bases with simple initials.

The third point is relevant to strengthening of presyllables and subsequent affix-extraction, that is, the separation of the affix from the derivative (or inflected form in the case of Mon, but not in Pakoh). Watson noticed that the causative prefix [p−] has two phonological realizations, a weak form /pa−/ and a strong form /pi−/, if the prefix is syllabified.

11.1) hâ:o / pîha:o 'to spend' / causative
11.2) nôt / pînot 'to be hungry' / causative
11.3a) pâp / pîpâp 'to be full' / causative
11.3b) / tîpâp / causative
11.4) hâ:kk / pahâ:kk 'to learn' / causative
11.5) da:l / pâda:i 'to wear' / causative

The strengthening of the presyllable has led, just like in Mon,
to the former causative prefix [p-] being separated from the derivative and being reinterpreted as a verbalizer of nouns, as in

(12.1) pu:t / pipu:t 'stack of brush' / 'to stack brush'
(12.3) noh / panoh 'name' / 'to name'

2. Katu

Costello (1966:67) recognizes a vocalic infix in Katu, being an allomorph of the syllabic infix [-n-] for the 'instrumental'; the vocalic infix is the result of a mediocluster-reduction of the type /-nl-/ and /-nr-/ > /-l-/ /-r-/ , as in

(13.1) pru:ŋ / pəru:ŋ 'to blow fire' / 'pipe'
(13.2) klanŋ / kəlanŋ 'to prop' / 'prop'

A morphophonemic rule can be deduced from the data given (1966:69) whereby /pəŋ/ initial sequences are phonotactically impossible thus explaining the existence of an allomorph /təŋ/ in such contexts where otherwise [p-] prefixed forms would appear:

(14.1) paŋ / təpaŋ 'to shoot' / causative
(14.2) pəŋ / təpeŋ 'to play (music)' / causative
(14.3) puəŋ / təpuəŋ 'to dry (in sun)' / causative
(14.4) ca / pəca 'to eat' / causative
(14.5) təc / pətəc 'to chop tree' / causative
(14.6) həw / pəhəw 'to wreck' / causative

The complementary distribution of [p-] and [t-] in different phonological contexts has led to reanalysis, and to cases where derivatives with both [t-] and [p-] prefixes can be found:

(15.1) diər / pədiər 'to go backwards' / tədiər
(15.2) go:t / pəgo:t 'to cut hair' / təgo:t

On the basis of the data provided no reciprocal infix [-r-] can be reconstructed internally, nor could we prove the existence of extracted infixation were it not for the evidence we find in Pakoh and Bahmar. Costello recognizes a reciprocal prefix /tə-/ which is attached to base-initials /k-, t-, p-, n, l-/. The same prefix /tə-/ derives attributive verbs.
Similar variation occurs in the following case:

(16a) cet / ʔəcet 'to die' / attributive
(16b) / kəcet / attributive

A possible explanation is, again, reanalysis. Old Mon has a derivational pair /kəcet/ 'to die' and /kəcət/ 'to kill' (with the phonologically neutral vowel spelt u). Shorto lists in DMI a Kuy cognate, /kəcet/ 'to die' and /kəməcet/ 'to kill' where the infix [-m-], just like in Khmer, is an allomorph for the causative prefix [p-] when applied to complex base-initials (the same rule applies to Mon, only that the allomorph is the vocalic infix). Now, it may be that the Katu form /kəcet/ is a weak form of a former */kucet/ or a reduced form of an earlier */kəxəcet/ (with an unspecified infix (possibly a nasal) as the causative allomorph of [p-] in other contexts). Co-existence of both strong and weak form */kucet/ and /kəcet/ may have led to the presyllable being interpreted as a lexical formative, and then being applied to phonologically conditioned initial sequences such as

(17.1) su:h / kəsu:h 'to poke' / attributive
(17.2) sir / kəsir 'to close' / frequentative
(17.3) saŋ / kəsaŋ 'to hear' / frequentative

corresponding to earlier forms like */təs- < *səs- < *səx- (where X is an unspecified extracted infix). Other morphologically complex forms with initial sequences like /kət-/, /kək-/, and /kəg-/, given by Costello (1966:73) can be interpreted in such a way (especially when bearing in mind that semantically this set is restricted to 'frequentatives').

3. Bahnar

The Bahnar data as presented by Banker (1964) permit the reconstruction of extracted infixation. Consider the following three cases:

(18.1) mu:ih / bəmu:ih 'field' / 'field' [-X-]
(18.2) mat / bəmat 'to enter' / 'West' [-X-]
(18.3) ʔənʔap / təʔnap 'to cover' / 'cover (n.)' [-n-]

Analogous cases exist in Mon where OM /məm-/ (containing the extracted infix [-r-]) shifts to MM /bəm-/, SM /bəm-/. Hence (18.1) and (18.2) can be reconstructed as */m-X-mu:ih and *m-X-mat/. The derivative in (18.3) corresponds to an earlier */nʔap/ which subsequently underwent (i) devoicing */təʔnap/ (unless it follows a morphophonemic rule attested in OM) and (ii) mediocluster-reduction */nʔd- > /-ʔn-/.
Banker analyzes (18.1) and (18.2) as having a prefix /\tθ-/ , an allomorph of [-n-] when applied to nasal base-initials. Yet, the existence of a form like (18.3) makes extracted infixation an equally likely possibility, if not a more plausible one given the fact that the derivatives in (18.1) and (18.2) are not true 'instrumentals' or 'resultatives'. One could even speculate that we have a masked infix *[-r-] if we remember that OM has [-r-] nominalizations, and that there the reconstruction of reciprocal [-r-] infixes is rather tenuous.

Causative prefixes [p-] /\pθ-/ and /\tθ-/ are in complementary distribution, /\tθ-/ being attached to labial base-initials, except /\w-/ which shows variation.

A reciprocal prefix /\tθ-/ is recognized by Banker (1964:107-109) but the examples given do not permit any generalizations about phonotactic restrictions. The data presented include only bases with stop initials; an allomorph /\kθ-/ has not been recognized for base-initial /d-/:

(19.1) kap /\tθkap 'to bite' / reciprocal
(19.2) to:n /\tθto:n 'to hit' / reciprocal
(19.2) dah /\kədah 'to kick' / reciprocal

4. Jeh

Jeh has vocalic infixes and vestiges of extracted infixation, neither of them recognized by Gradin (1976).

(20) \rɔt / rə\rɔt 'to saw' / 'saw (n.)'

follows the rule given in Bauer (1989). Vocalic infixes are exemplified in

(21.1) klap /\kəlap 'to cover' / 'lid'
(21.2) kle:m /\kəle:m 'to patch' / 'patch (n.)'
(21.3) troh /\təroh 'to pull away' / 'unimpeded'

[-o-] is an allomorph for [-n-] and an unspecified verbal prefix attached to simple base-initials.

Gradin's analysis recognizes 'reciprocal' affixes, in this case /\tθ-/ (1976:35-36):

(22.1) ta:p /\təta:p 'to slap' / reciprocal
(22.2) kap /\təkap 'to bite' / reciprocal
(22.3) liem /\təliem 'to be good' / reciprocal

He also notes that /\tθ-/ may alternate with a reduplicated (or
lenghtened?} initial consonant as in

(23.1a) joh / təjoh 'to peck' / reciprocal
(23.2b) / j:oh / reciprocal

Gradin further recognizes a 'frequentative' function, to be assigned to the prefix /ra-/ in his analysis (1976, 388-39):

(24.1a) top / rətop 'to pounce on'
(24.1b) / top
(24.2) ca / rəca 'to eat'
(24.3) ?oih / rə?oih 'to lie down'
(24.4) re:ŋ / rəre:ŋ 'to go searching'
(24.5) rień / rərient 'gnaw bone (n.)' / 'to grind teeth'
(24.6) kəpök / rəŋok 'to jump up' / 'to jostle up and down'

The contexts in which /ra-/ initials occur are very restricted (provided the data given in (1976) are exhaustive): These are confined to base-initials /l-, r-/; /ʔ-, /r-, c/-, /ŋ-, n-/ and CC- complex initials (which may be interpreted as later back-formations). As I have pointed out before (1989), if this is a parallel development to Mon, we can posit a morphophonemic rule whereby derivatives which are the result of extracted infixation do not repeat the base-initials /ʔ-, l-/ but replace them by initial /r-/ in which case we may reconstruct for

(24.3*) *rəXʔoih

In turn, (24.2) 'to wear down' may be interpreted as a reanalyzed form, or corresponding to an earlier *c-r-ca > *r-ca > /rəca/. Notice reduplication of initial in (23.2b) and (24.1b); (23a) and (24.1a) may be back-formations, the former having a masked infix.

5. Chrau

Thomas (1969) recognizes separate prefixes, /tə-/ and /pəN-/; internal reconstruction shows that Chrau, like Khmer, has two distinct affixes, [p-] for the 'causative' and [-N-] for the 'frequentative'. A 'frequentative' function, however, is recognized by Thomas (1969: 105)—called by her "resultant adjective", corresponding to "resultant nouns" of words also derived by the infix [-n-]—assigned to the simple infix [-n-], as in

(25.1) kah / kənah 'to remember'
(25.2) voh / vənəh 'to know'
(25.3) pən / pənən 'to shoot'
(25.4) ko:ih / kano:ih 'to whittle'
(25.5) chɔk / cinhɔk 'to be fierce'/
(25.6) khun / kenhun 'to steal' / synonymous forms
(25.7) kɔŋ? / kɔnŋ? 'to be weedy' /

Evidence for extracted infixation is rather meagre but can be reconstructed internally, given a form like

(26.a) ?um / tənum 'to have a bath' / 'to bathe'
(26.b) / təʔum

and cases where a [p-] prefixed form contrasts with multiple affixed forms [p-] and [-N-], as in

(27.1) gən / pəgən 'to go across' / 'crosswise'
(27.2) ɬɛ: / pɛlɛ: 'to dodge' / 'to roll over'
(27.3) lə:m / pələ:m 'to lure' / 'to mislead'

(28.1) dəːp / pəndəːp 'to hand, give' / 'to reach, grab'
(28.2) wiːl / pənwiːl 'to mistake road' / 'to lead astray'
(28.3) jeːŋ / pinjeːŋ 'to become' / 'to beget, create'

The syllabification of /pə-/ prefixed forms derived from bases with base-initials /l-, r-/ warrants an explanation since Chrau permits /pr-, pl-/ clusters.

Problematic is also the fact that 'frequentatives' derived by [−n−] follow a rule of simple infixation and not extracted infixation.

6. Sedang

Sedang morphology as presented by Smith (1979:146-152) includes a causative prefix [p-] and its allomorph /moː-/ attached to bases with voiced stop initials. A reciprocal /tə-/ prefix is also recognized; the examples given, however, do not permit any generalization about the distribution of this prefix (base-initials are restricted to /k-, c- v-, hλ-/): the presyllable /tə-/ is the least restricted in Sedang but Smith points out that only 30-40% of verbs found with the presyllable /tə-/ are reciprocals (1979:148). By contrast, infixation patterns yielded by derivations with [−n−] are regular (1979:150).

Some of the Proto-Mon-Khmer affixes discussed here and their reanalyzed reflexes in Katuic and Bahnaric are listed in Figure 1.
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Figure 1: Proto-Mon-Khmer affixes and their re-analyzed reflexes in Katuic and Bahnaric
NOTES

*I am grateful to David Thomas for comments and for checking and correcting my IPA retranscriptions of SIL orthographies.

1. The glosses are as follows: (01.1) 'to take away' / 'to go'; (01.2) 'sight' / 'to see'; (01.3) 'mane, body-hair' / 'hair'. Many of the affixes identified by Shorto in DSM (1962) are internally reconstructed. - In the following I have converted SIL orthographies in Quoc Ngú back into IPA; [y] refers to a tense vowel, [v] to a breathy vowel.

2. In Mon medioclusters of the form /-mC-/ were the last to be simplified.

3. Actually, the term 'nominalized forms' is partially correct here because 'attributives' can never be part of the predicate, at least not as they are analyzed in Mon.

4. Again, similar to what we witness in Mon.

REFERENCES


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Institute of Language and Culture for Rural Development