

FORMOSAN REFLEXES OF PAN NASAL/ORALS¹

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The P[roto]A[ustro]N[esian] nasal/orals, consisting of nasal + homorganic obstruent or spirant, correspond directly to similar elements in P[roto]M[iao]Y[ao] and have regular reflexes in P[roto]T[hai] (Benedict 1975: Introduction to Glossary). It is a puzzling fact, however, that these elements are poorly represented in all three groups of Formosan languages (East Formosan = Paiwanic, Atayalic, Tsouic). At the 'other end' of the AN domain, the P[roto]E[astern]O[ceanic] reflexes have presented a problem, but the reflexes worked out by Biggs (1965) appear to fit fairly well in the over-all A[ustro]T[hai] pattern:

TABLE 1

PEO. CONSONANTS AND THEIR PAN. AND PPN. CORRESPONDENCES

PAN	p	b	mp	mb	t	nt	d	D	nd	nD	l	r	s	z	c	j	Z	ns	nz	nc	nj	nZ	
PEO	p		mp		t	nt	d		nd		l	r		s						ns			
PPN	f		p		t		r		l					s						h			

PAN	k	g	ŋk	ŋg	m	n	ñ	ŋ	w	q	R	h	y
PEO	k		nk		m	n		ŋ	w	?	R	ø	y
PPN		k			m	n		ŋ	w	?	ø	ø	(ø)

TABLE 2
ORAL AND NASAL GRADE REFLEXES OF PEO. PHONEMES

PEO.	*p	*mp	*t	*nt	*d	*nd	*s	*ns	*k	*ŋk
Fijian	v	b	t	d	r	dr	s	c	k	q
Samoaan	f	p	t	t	l	l	s	∅	?	k
Tongan	f	p	t	t	∅	l	h	h	k	k
Maori	wh/h	p	t	t	r	r	h	∅	k	k
Saʔa	h	p/q	∅	d	r	d	t/s	d	?	k
Nggela	p/v	mb	t	nd	r	nd	s	h	k/g	ngg
Mota	v/w	p/q	t	t	r	r	s	s	k/g	q

Biggs, who distinguishes between oral 'grade' and nasal 'grade', points out that there are many doublets in the daughter languages (e.g. Fi. kari *scrape*, qari *scratch*) and that the correlation among cognates is imperfect. Many scholars, including Biggs (op cit.) and Haudricourt (1962), have speculated as to a possible underlying morphemic process, with the latter writer (Haudricourt 1965) specifically pointing to the rarity of this 'nasal grade' in Formosa as an indication of a relatively late origin for the feature. This would indeed represent a cogent argument for a late origin, given the generally archaic nature of Formosan phonology, were it not for the correspondences with nasal/orals or specific reflexes in the mainland AT languages; cf. the following table (from Benedict 1975):

TABLE 3
AUSTRO-THAI CONSONANTS (NASAL/ORAL AND NASAL)

AT	Indo-nesian	Form: East	Kadai [>Thai]	Miao-Yao
mp	mp/p	b	b	mp(h)
mb	mb/b	mb [~] m	mb [~] m	mb
m	m	m	m	m
nt	nt/t	nt [~] d	d	nt(h)
nd	nd/d	n	n	nd
n	n	n	n	n
nts	nt'/t'	dz	dz [~] z	nts(h)
ndz	nd'/d'	-	n	ndz
ns	nh	ns	n/z	s
nz	nd/d	n	n	ń

Table 3 (cont.)

AT	Indo- nesian	Form: East	Kadai [>Thai]	Miao-Yao
nc	ńk'/k'	-	j	-
nj	ńg'/g'	-	n	-
[ńś]	ń	-	z	ń~n
[ńź]	ńz	-	ńj[>ń]	-
ńy	ń	-	ńy[>ń]	-
ń	ń	ń	ń	ń
ŋk	ŋk/k	g	g	ŋk(h)~nts(h)
ŋg	ŋg/g	-	ŋ/ø	ŋg~ndz
ŋ	ŋ	ŋ	ŋ/ø	ń
Nq	(ŋ)k/k	ŋ~k	g[>ɣ]	Nq(h)
NG	ŋ(g)/g	-	N[>n]	NG~ŋg
N	-	-	N	ŋ

Further details are spelled out in an additional table from the same source (Benedict 1975):

TABLE 4

AUSTRO-THAI REFLEXES FOR ORALS AND NASAL-ORALS

Austro-Thai	*p	*mp	*b	*mb
Hova (IN)	f	(m)p	v	mb
Proto-Oceanic	*p	*mp	*p	*mp
Samoan (PN)	f	p	f	p
Dobu (SEP)	ø	b	ø	b
Tsou (Form.)	p	b	f	b
Pazeh (Form.)	p	b	b	m
Thai	*p	*b	*b	*m
Lao	p (h.t.)	p (l.t.)	p (l.t.)	m
Miao: PE	*p (h.t.)	*p (h.t.)	*p (l.t.)	*m
Yao: PY	*p (h.t.)	*b (h.t.)	*p (l.t.)	*b (l.t.)

As indicated in the above table, which makes use of the labial series by way of illustration, the P[roto]Y[ao] reflexes for P[roto]AT *mp and *mb parallel those of Tsou (Formosa) but with a tonal distinction, while the PT reflexes throughout are precisely those of Pazeh (Formosa). The material bearing on these reflexes in Tsou, Pazeh and other Formosan languages is in general very scanty, especially for the Atayalic and Tsouic groups. Atayal itself lacks nasal/orals and the few examples

(labials only) found in the related Sedik appear to be largely secondary; cf. Sed. *simburanan spear* (cf. Ata: Ci'uli dial. *sinbažanan*); *kəmpah work* (cf. *komopach*, id., cited by Bullock 1874); *?mpusal 20* (cf. Ata: Ci'uli *mapusal* < *ma/pusal); *səmpu count*, from *s/m/[i]pu[ɣ] (cf. Pai. *səmpu*, Bun. *mašipul*). There is, however, one bit of evidence for Atayalic *b as the reflex of PAN *mp: cf. Ata: Ci'uli *bokwi the back*, *bukwi back/behind*; Sed. *bukwi the back; back/behind*, from *buku[r] via *bukui; IN *puŋku[r] *hind-part* (Ja. *behind*); PEO *mpuku: Fi. *buku pointed hind-end, tail* < PAN *(m)pu(ŋ)kur, a comparison greatly strengthened by the Pazehe cognate (below). Atayal also has the doublet *baŋ-lyeq ~ maŋ-lyeq hibiscus*, from *(m)ba[ɣ]u-; IN *baŋu = *(m)baŋu (Hova *varu* = *baru*), id. Initial *(N)q- is to be reconstructed for Atayalic for the following root: Ata. *qumah to work the field, qəmayah field (dry)*, from *q u m/a!ah (Ata. -y- < *-!-); Sed. *kəmpah* < *kumupah *work* (above), *kəmpahan field (dry)*, from *kumu[h]- < **Nqumu[h]- < *Nquma[h]- (vocalis assim. as in Rukai, below) < Atayalic *(N)qum[ah]; East Formosan *qumah and (Sai.) *qum/qumah *field (dry)*; also (Pax.) *quma/mah and (Ruk.) *qumu/umah [*< *qumah/qumah* by assim.], id.; also (Ami Sir.) *m/qumah *work*; IN *?uma *cultivated field*; PEO *?uma *garden; to work/plant/clear ground*; PPN *kumala *sweet potato (= the cultivated plant; contrast same infix form in Ata. = the cultivated land)*, from *kum/a!a < *Nqum/a!a[h]; PT *man *potato/sweet potato/yam* [generic term], from *[qu]ma! [ah]; PLi *mwal *sweet potato*, from *uma! < *[q]uma! [ah] < *[q]um/a! [ah]. Finally, Ata. r < *d ~ *dz apparently reflects an earlier *nt in *pareq < *padiq intestinal worm*, from *pantiaq < *pantiaq (regular Formosan shift); PT *t!ak*, id., from *[]tyak < PAT * [pa](n)tiaq; also an earlier *nts in *ramo? < *dzamu? blood*, from *ntsamu? (see below), while Ata. ŋ reflects an earlier *ŋg in *ŋəbuŋ wasp*, from *ŋəbuŋ (stressed form); P[roto]Li (Kadai) *voŋ < *bwoŋ < []obŋ *classifier for bee*; P[roto]M[iao] *ŋg[ai] *wasp/bee*, from PMY *ŋg[ou] < *ŋgow < *ŋgob[ŋ] < PAT *ŋgobŋ.

The Tsouic evidence for reflexes of PAN nasal/orals in even more limited, if anything, with almost no reliable comparative material bearing on the problem. Tsou and Kakanabu occasionally show clusters (probably secondary) of this type; cf. Tsou *nsou breath, eansoua breath*; Tsou *mpusku 20* from a prefixed *ma/ form (cf. Sedik, above; also Kan. *mapusauu*, Saa. *mapua* < *ma/pusal); Kan. *kinti thorn*; Kan. *ŋkou monkey* (cf. Tsou *ŋu?xou ~ ŋu?hou ~ ŋhou*); Kan. *tsuŋkutsu bridge* (cf. Saa. *tokoso*). As indicated in the above table, Tsou regularly has initial f- for PAN (and Tsouic) *b; Tsou initial b- appears to be the reflex of PAN *mb- as well as *mp-; cf. Tsou *ba?i grandmother* (also in East Formosan: Kuv. *ba:i*, id.); IN *bayi = (m)ba[?]i (Tg. *ba?:i mother/*