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‘East Formosan’ and the PAN palatals<sup>1</sup>

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Abstract

This paper shows that the putative ‘East Formosan’ subgroup proposed in Blust (1999) on the basis of a sound change allegedly turning a voiced palatalized velar stop into an alveolar nasal, pays no attention to the geographical principle of conservation by the periphery, and to the need for phonetically natural sound changes in historical interpretations. It argues that the phoneme known as \*j was a palatal nasal rather than a voiced palatalized velar stop, and proposes for it the new label \*nʸ. With support from the history of the Chinese palatal nasal, it argues that \*nʸ evolved to a sound combining nasality and friction, and that denasalisation of that sound occurred for lack of a prenasalized series in which it could be integrated. The paper also shows, based on an earlier proposal by Dahl, that the putative phoneme known as PAN \*ñ, which competes with \*nʸ for the palatal nasal slot in the PAN consonant system, arose no earlier than PMP, with an independent parallel development in the Formosan language Kanakanabu, when the outcome of the merger of PAN \*niV and \*NiV became palatalized. It concludes that reconstructing PAN by validating Dempwolff’s PMP is a counter-productive strategy and advocates reconstructing PAN directly on Formosan evidence.

1. Introduction

In attempting to solve problems of historical phonology, linguists can rely on certain general principles:

-sound change is grounded in speech production and perception. Many theoretically possible changes are not natural from a production or perception point of view, and probably never happen. High on the list are changes involving simultaneous and unrelated modifications in independent phonetic parameters, like  $m > d$  (nasality, place, manner). Historical interpretations which rely crucially on such sound changes should be viewed with suspicion.

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-sound change takes place in space. Certain spatial patterns are susceptible of historical interpretation. Perhaps the most broadly recognized is conservation by the periphery. The principle was first made extensive use of by the Swiss scholar Jules Gilliéron in his studies on French dialects (for instance in Gilliéron and Roques 1912); later Gilliéron's student Dauzat (1922), the Italian linguist Bartoli (1925), Bloomfield (1935) endorsed and illustrated it. Here are Chambers and Trudgill (1994:98):

“(…) in this pattern one finds a particular isogloss delimiting areas in more than one part of the survey region, with no continuity. In other words, a linguistic feature exists in two or more parts of the region but those parts are separated from one another by an area in which a different, or opposing, feature occurs. Such a pattern indicates a late stage in the displacement of a formerly widespread linguistic feature by an innovation. In earlier times, the feature which now occurs in isolated areas was also found in the in-between areas. Its status is now that of a RELIC feature, and the in-between areas show the progress of the innovation.”

Well-known examples of conservation by the periphery are: the peripheral distribution of stop syllable endings in Chinese dialects; of non-palatalized reflexes of Latin \*ka in French dialects; of post-vocalic -r in English dialects (Illustration 1 below).



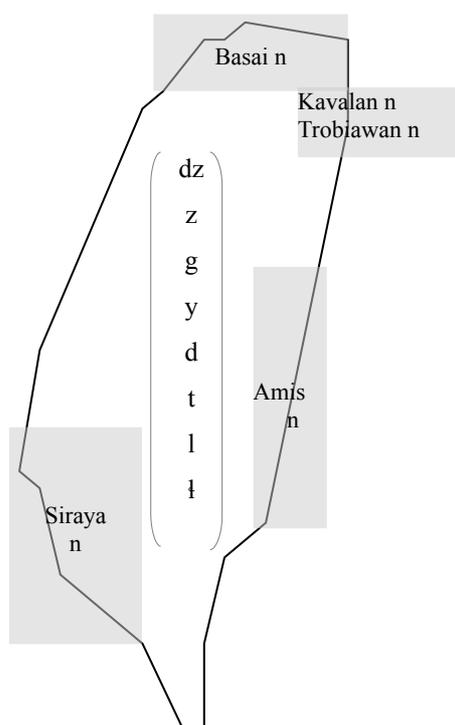
*Illustration 1: Post-vocalic -r in English dialects. A: presence; B: absence. Source: Hughes and Trudgill (1979)*

Illustration 1 shows post-vocalic -r (in *e.g. car, birth* etc.) preserved in three relic areas—the southwest, Scotland and a region close to Liverpool; while r-less pronunciations have spread from the southeast to occupy a continuous zone in the centre, up to Scotland in the north, and in Wales.

Misidentification of the conservative side in such a geographical pattern fairly automatically leads to the positing of a bizarre sound change trying to capture the putative evolution from an innovated form into its precursor. This in turn may lead to the following argumentative sequence (observe how an error transforms itself into a winning argument !): because the likelihood of a bizarre sound change taking place convergently in separate regions is low, the change will be said to have occurred only once. A subgroup will be posited. A migration transporting the putative change's output to the other relic areas will be proposed. The proposed subgroup will of course not be supported by any other innovations: but the bizarre character of the sound change said to define it will be felt to provide sufficient evidence of its existence.

## 2. ‘East Formosan’

The argumentative sequence just outline is in essence Blust’s argument for his ‘East Formosan’ (Blust 1999). This putative subgroup includes geographically disconnected languages: Siraya (southwest coast), Amis, Kavalan, Basai, Trobiawan (east and north coasts) which form several relic areas at the periphery of the island (Illustration 2).



*Illustration 2: Formosan reflexes of PAN \*j, with relic areas in grey.*

These languages share a /n/ reflex of the PAN phoneme known as \*j. They are separated by an unbroken area, continued to the south by the MP languages and Tai-Kadai, where non-nasal sounds are found. There are no nasal reflexes of \*j outside of Taiwan. Table 1 gives a sampling of PAN forms reconstructed with \*j by Blust (Blust and Trussell, ongoing, accessed July 7, 2015; the glosses have been simplified and some Siraya data have been introduced from Adelaar 2014).

	rice plant	how much ?	smell	yo. sibling	gall	dove	spring	mountain
PAN (Blust)	*pajay	*pija	*Sajek	*Suaji	*qapeju	*baRuj	*Cebuj	*bukij
Atayal	<i>pagay</i>	<i>pira?</i>	<i>sok</i>					
Seediq	<i>payay</i>	<i>pia</i>		<i>swai</i>				
Saisiyat	<i>pazay</i>	<i>piza?</i>	<i>s&lt;om&gt;azek</i>			<i>baLoz</i>		
Pazeh	<i>pazay</i>		<i>sa-sazek</i>	<i>suadi,</i> <i>suazi</i>	<i>apuzu</i>			
Thao	<i>pazay</i>			<i>suadi</i>		<i>falhuz</i>		
Siraya		<i>pina</i>			<i>parno</i>			<i>vukin</i>
Bunun	<i>paað</i>	<i>piza</i>				<i>balu</i>		
Tsou	<i>pai</i>							
Kanakanabu	<i>paláy</i>							
Rukai	<i>pagay</i>							
Kavalan	<i>panay</i>			<i>suani</i>		<i>banur</i>		
Amis	<i>panay</i>	<i>pina</i>	<i>sanek</i>				<i>tfon</i>	
Paiwan	<i>paday</i>	<i>pida</i>			<i>qapedu</i>		<i>tsevud</i>	<i>vukid</i>
Puyuma				<i>wadi</i>	<i>Hapedu</i>			

Table 1: A sampling of PAN words with \*j in Formosan languages. Sources: Blust and Trussell, ongoing; Adelaar (2014).

Geography strongly implies that nasality in reflexes of \*j is a retention, but Blust treats it as innovative: he thinks the PAN phoneme \*j, interpreted by him as [g<sup>j</sup>], has changed to \*n. This bizarre sound change simultaneously involves three phonetic dimensions: place, manner and nasality, without any detectable link between them. Evidently the bizarre character of this change is a consequence of failing to realize that the distribution of /n/ in Illustration 2 is that of a relic: but Blust (1999) sees in it the defining innovation of his new subgroup. In his view, the PAN phoneme \*j preserves its non-nasal character in central Taiwan and in all of Malayo-Polynesian. As to why the alleged innovation is represented on both coasts, Blust states that there has been a migration from east to west. In response to observations that there are absolutely no other innovations, whether lexical (Gray et al. 2009), or, as I am claiming here, phonological or morphological, that support East Formosan, Blust stresses the change's unusual character and the fact that it did not happen anywhere in Austronesian outside of Taiwan: this in his view justifies his claim of a subgroup and a prehistoric migration.

While 'East Formosan' is Blust's proposal, the phonetic interpretation of PAN \*j as a voiced stop in

the palatal or velar region is common to most investigators. Blust merely drew it to its logical conclusion. The phonetic interpretation of PAN \*j was originally arrived at by Dempwolff (UIN \*ǵ, a palatalized velar) on the basis of MP evidence, and only later projected back onto PAN as a kind of default. That \*j is in certain contexts reflected as /g/ in Atayalic and in Rukai was taken as corroboration.

### 3. Another scenario.

Another scenario, already outlined in Sagart (2004), explains the facts more naturally, in conformity with the geographical principle of conservation by the periphery and without supposing a bizarre sound change. It requires us to abandon the view that the phoneme known as PAN \*j was a stop. Note that as traditionally understood \*j lacks a voiceless stop counterpart, so that removing it from the PAN voiced stop inventory improves the balance of the consonant system (in e.g. Blust 2009:547).

In the new account, the innovative reflexes of the phoneme known as \*j are the non-nasal sounds in the central Formosan area, as geography clearly indicates. The nasal reflexes on the west and east coasts are also innovative as phonemes, but *the nasality itself* is preserved from PAN: the phoneme known as PAN \*j was a nasal. It contrasted with \*n and \*ŋ, as it still does in a majority of Formosan languages and in PMP. Because it has both velar, palatal, and alveolar reflexes, it was most likely a palatal [ɲ], possibly with fricative off-glides [ɲ<sup>z</sup>]: I label it PAN \*n<sup>y</sup>. The choice of this notation to replace \*j is intended to underline its nasal character while distinguishing it from the putative PAN phoneme known as \*ń or \*ñ (I argue below that that phoneme did not exist).

All the members of the palatal series of which PAN \*n<sup>y</sup> —Tsuchida's and Blust's \*j— was part were continuants: \*n<sup>y</sup> itself and \*y [j]. There were no palatal stops—I am leaving open the question as to whether there was also a voiceless palatal fricative. No Austronesian language retains PAN \*n<sup>y</sup> in its original phonetic shape: as already mentioned it has merged with \*n as /n/ in Siraya, Amis, Kavalan, Basai, Trobiawan—the merger must have taken place independently in Siraya and in the east-coast languages. In all other Formosan languages, it has denasalized:

/dz/ Hoanya

/z/ Saisiyat, Pazeh, Thao

/g/	Atayal, Sediq, Rukai (some contexts)
/y/	Sediq (some contexts)
/d/	Favorlang/Babuza, Papora, Puyuma, Paiwan
/t/	Pazeh (word-finally), Taokas
/l/	Kanakanabu
/ʎ/	Saaroa
zero	Bunun, Tsou

The phonetic mechanism producing non-nasal reflexes can be outlined. PAN  $*n^y$  either had fricative off-glides in PAN,  $[n^z]$ , presumably as phonetic enhancement of the acoustic contrast with the nasals on both sides of it, or it developed them soon after PAN; in a further development, this  $[n^z]$  underwent fortition to  $[n^{dz}]$ . Due to the lack of a prenasalized series into which it could be integrated,  $[n^{dz}]$  lost its nasal element. This resulted in  $[dz]$ , out of which the non-nasal reflexes can be derived. This is a much more natural sequence than  $g^j > n$ . No change in place of articulation is supposed; fortition is due to the insertion of a parasitic stop between a nasal and a following continuant, a cross-linguistically common change (cp. Spanish *homre* > *hombre*; Greek *ἀνήρ*, *ἀνδρός*; Latin *humilis* > French *humble*). Denasalization results from systemic pressure. The phonetic pathways needed to derive the denasalized reflexes from denasalized  $[dz]$  are not very different from those under the received view:  $[dz]$  and  $[g^j]$  are, after all, phonetically similar.

It is undecidable whether the  $[n]$  reflexes in the peripheral languages were formed directly out of  $[n]$ ,  $[n^z]$  or went through the fortition stage.

Even denasalized,  $[dz]$  was not well integrated to the system, having no voiceless counterpart. A majority of Formosan languages have solved the problem by merging  $[dz]$  with an existing phoneme: only Atayalic, Saisiyat and Paiwan appear to have non-merged reflexes of  $*n^y$ . This tendency is also detectable among the MP and Tai-Kadai languages. In the peripheral languages Amis, Siraya etc., merger with  $[n]$  probably also aimed at resolving systemic imbalance caused by the phonetic strangeness of  $[n^z]$  (or  $[ndz]$ ).

Many phonetic pathways can describe the evolution from  $[dz]$  to the various non-nasal reflexes of  $*n^y$ . Describing them is beyond the scope of this paper, yet these partial observations can be made:

- Atayal appears to have recruited  $[dz]$  to recreate a /g/ phoneme after the devoicing of original  $*g$  to  $*k$ . Subsequently the phoneme was well integrated into the system and

escaped pressure to merge. In Rukai, however, /g/ results from the partial merger of PAN \*nʷ and \*g.

- Kananabu and Saaroa /l/ and /ʎ/ are also reflexes of PAN \*y: evolution of [dz] to these laterals was most likely by way of [y].

#### 4. The parallel of Chinese.

In Chinese too, an old palatal nasal has developed non-nasal reflexes. Towards the end of the Old Chinese period, like all the other Old Chinese non-pharyngealized alveolar consonants, \*n became palatalized (Baxter and Sagart 2014). This palatal consonant is known as the *rì* 日 initial in traditional Chinese phonology (/ny/ in the Middle Chinese notation of Baxter and Sagart 2014). It either had fricative off-glides [ɲz] as a result of the palatalization process (which also changed \*t to [tɕ], \*d to [dʒ], etc.) or developed friction in later evolution. Karlgren (1915-1926:457-469) reconstructed a nasal affricate for Middle Chinese: ńz. Reflexes in the modern Sinitic languages are nasal and non-nasal (Table 2):

	nasal reflexes										non-nasal reflexes																	
Chinese	n	ɲ	ɲ̃	ɲ̃	ɲ̃	m	ɲg	ndz	ndʒ	ɹ	dz	dʒ	dɹ	dʒ	g	ts	tɕ	z	ʒ	z	ɣ	v	ʃ	ɕ	l	ɹ	l	zero

Table 2. Nasal and non-nasal reflexes of Middle Chinese ny- (the ‘rì 日 initial’) in 930 modern Sinitic varieties. Source: *Linguistic Atlas of Chinese dialects* (Cao et al., 2008), phonetics volume, plates 73 and 74.

As Table 2 shows, there is significant overlap between the individual Chinese and Formosan reflexes of the old palatal nasal: /n/, /dz/, /g/, /z/, /l/ and zero occur on both sides. It would be unwarranted to claim that the mechanisms producing each of the shared reflexes are identical in Formosan and in Sinitic: yet the phonetic range they cover is interestingly similar: nasals, voiced stops/affricates, voiced fricatives, rhotics, laterals, zero. As in Austronesian, [ɲz] lost its nasality for lack of a prenasalized series in which it could be integrated. Thus in the evolution to Modern Standard Chinese, [ɲz] denasalized to [z] after original [z] (the *chuán* 船 initial) had merged with [dz] (the *shàn* 禪 initial) and devoiced. Later on, all palatal obstruents became retroflex: consequently the Modern Standard Chinese reflex is [z]. Note that like [dz] in Formosan, Chinese [z] was poorly integrated: even today it is the only voiced fricative in Modern Standard Chinese.

In Sinitic varieties where the modern reflex is an affricate or a stop, it is necessary to suppose that MC /ny/ underwent fortition to [ɲdz], similarly to Formosan, before denasalization occurred: [ndz],

[ndʒ], [ŋg] reflexes are still found in a small number of Sinitic languages (Table 2).

However, emending PAN \*j to \*nʷ results in a clash with another proposed palatal nasal phoneme: Dempwolff's \*ń, Tsuchida's and Blust's \*ñ. The argument in the next section owes much to Dahl (1981) and differs from that in Wolff (1993).

### 5. Dempwolff's \*ń, Tsuchida's and Blust's \*ñ.

The situation with Tsuchida's and Blust's PAN phoneme \*ñ is not healthy, with published sound correspondences matching published cognate sets in no more half of the relevant PAN reconstructions. It will serve us to briefly review the history of research regarding this proposed PAN phoneme.

Dempwolff (1934-1938) reconstructed a palatal nasal \*ń in initial and medial positions in his UIN (equivalent to our PMP). It differed from his \*n in that some languages: Javanese, Malay, Ngadju Dayak, showed a palatal nasal /ń/ instead of plain /n/. Dempwolff's \*ń occurred word-initially and word-medially but not word-finally. He reconstructed these forms: \*ńala 'flame', \*ńamuk 'mosquito', \*ńańi 'to sing', \*ńata 'clear', \*ńa[t]uh 'name of a tree', \*ńava 'soul', \*ńi[l]u 'winnowing tray', \*ńu[l]ńu[l] 'to become mash'; and word-medially \*ńam 'to weave', \*ńud ~ \*ńańud 'to float', \*ńańu 'corrosive liquid, lye', \*ńuńi 'communication, reputation', \*ńańi 'to sing', \*ńańil 'greasy', \*ńańak ~ \*ńińak 'oil', pańəŋət 'wasp', \*ńeńu 'sea turtle'.

Six of these words have cognates in Formosan languages: \*ńala 'flame', \*ńava 'soul', \*ńeńu 'turtle', \*(h)ńańud 'to float', \*ńa[t]uh 'name of a tree' and \*ńamuR 'dew'. In his study of Tsouic, Tsuchida (1976:229) noticed that the Kanakanabu reflex of Dempwolff's \*ń is /ŋ/ in two words: *ńáala* 'flame' and *ńisáa* 'breath' (for Dempwolff's \*ńava). A third form with Kanakanabu /ŋ/ possibly matched Dempwolff's \*ń: *ńańici* 'leather'. Dempwolff had not reconstructed that word but Tsuchida took the palatal nasal from Blust's reconstruction \*(q)añiC (Blust 1970), for which the MP languages Land Dayak and Bidayuh give ñ.<sup>2</sup> There was one apparent irregularity: Dempwolff's \*(h)ńańud 'to float' is Kanakanabu *ńacúnu*, with /n/ instead of expected /ŋ/. Tsuchida ascribed this to the influence of /c/, and took /ŋ/ to be the Kanakanabu reflex of PMP \*ń. There was another detail

2 Blust now views the palatal nasal in these languages as "a product of secondary assimilation" and reconstructs PAN \*qañiC (Blust & Trussell, ongoing, accessed 3 July 2015). Kanakanabu *ńańici* 'leather', neither listed nor discussed, cannot reflect \*-N- under Blust's sound correspondences, however.

which he could not explain: if the vowel just after /ŋ/ is stressed, it is geminated: *ŋáala* ‘flame’, *ʔaŋíci* ‘leather’. Vowel gemination is not normally a consequence of stress in Kanakanabu. About *ʔaŋíci*, Tsuchida notes (fn. 32 p; 258) ‘the doubling of the second vowel is inexplicable’. In *ŋisáa* ‘breath’, *təvəŋə* ‘distribute the game’, *maká-caŋi* ‘soon’, *tanáviŋi* ‘eaves’, the vowel after /ŋ/ did not geminate as stress falls elsewhere in the word.<sup>3</sup> Correctly interpreted, these two points could have led to a different understanding but they seemed minor enough at the time.

In order to determine the reflexes of Dempwolff’s \*ń in the other Formosan languages, Tsuchida relied on two extensively represented cognate sets: \*qañiC ‘leather’ and \*qañu[zZ] ‘adrift’. He found that outside of Tsouic, these two words contain essentially the same reflexes as PAN \*N, a lateral sound. Had he relied on the Formosan cognates of \*ńala ‘flame’, \*ńava ‘soul’, \*peńu ‘turtle’ and \*ńa[t]uh ‘name of a tree’ instead, he might have been led to a different conclusion: the Formosan forms for these items have the reflexes expected of PAN \*n, not \*N. Despite this, Tsuchida’s view that the reflexes of \*ń are very close to those of \*N is now prevailing in published correspondence tables.

Blust accepts Tsuchida’s conclusions for Kanakanabu and considers Dempwolff’s UIN \*ń to be a PAN phoneme on that basis. Like Tsuchida he labels it \*ń. He has broadened the basis for reconstructing \*ń by finding distinctive reflexes in more MP languages, assigning more \*ń-words to PMP, and ‘raising’ those with one or more Formosan cognates to PAN. In doing so he has made the problem of Formosan correspondences more acute: like in Tsuchida’s reconstructions, but even more clearly, PAN \*ń-words in Blust and Trussell (ongoing; accessed July 3, 2015) fall neatly into two mutually exclusive sets:<sup>4</sup> one in which putative \*ń behaves like PAN \*N and another in which it behaves like PAN \*n. All the PAN reconstructions with \*ń in Blust and Trussell (ongoing) are listed below. Except for Kanakanabu, forms from languages which merge PAN \*N and \*n are omitted.

**Set (1): PAN reconstructions in Blust and Trussell (ongoing; accessed July 3, 2015) in which \*ń behaves as PAN \*N:**

PAN \*ńamuR ‘dew’: Saisiyat *lamoL*

3 In *u-ŋúpu* ‘dust’, stress does fall on the vowel following /ŋ/, without gemination, but as Tsuchida notes, the form is metathesized: in the non-metathesized precursor form, stressed /ú/ was located before /ŋ/.

4 Setting aside the /ŋ/ reflex in Kanakanabu.

PAN \*qañud ‘drift on a current’: Seediq *qəhul-iʔ*, Saisiyat *ʔaelor*, Saaroa *m-u-alhusu*, Tsou *ŋ-ohcu*, Rukai (Budai) *mu-á[ʉ]Du*, Paiwan *qalʔudj*, *se-qalʔudj*, Puyuma (Tamalakaw) *m-u-a-laHud* (with metathesis)

PAN \*ñamñam ‘tasty, delicious’: Thao *zamzam*

PAN \*tañam ‘try, taste’: Atayal *talam*, Pazeh *mu-talam*, Thao *tazam* (Amis *tanam* is perhaps a loan from Bunun).

To these, add the word for ‘leather’:

\*qaNiC: Saaroa *alhici*, Tsou *hici*, Paiwan *qalʔits*, Amis *adit*, Kanakanabu *ʔañiici*.

Despite being reconstructed as \*qaNiC by Blust (B&T, accessed July 3, 2015) this word has the telling /ŋ/ reflex in Kanakanabu (see above and fn. 2).

**(Set 2): PAN reconstructions in Blust and Trussell (ongoing; accessed July 3, 2015) in which \*ñ behaves as PAN \*n:**

PAN \*peñu ‘sea turtle’: Puyuma *penu*

PAN \*teñeb ‘submerge’: Puyuma *tenep*

PAN \*ñaCuq<sup>5</sup> ‘kind of tall tree with useful wood’: Thao *nacuq*

PAN \*ñawñaw ‘rinse, wash’: Amis *mu-nanaw*

PAN \*bañaw, \*ma-bañaw ‘wash the body’: Proto-Rukai \*banaw ‘wash, bathe’, Amis *fanaw*, Paiwan *ma-vanaw*

PAN \*Siñaw ‘wash’: Seediq (Truku) *sinao*, Kanakanabu *m-ari-sináu*, Pazeh *si-sinaw*, Thao *sh<m>inaw*, Proto-Rukai \*sinaw

PAN \*Señaw ‘wash’, Rukai (Mantauran) *ʔəna-ʔənau*, Pazeh *mə-sənaaw*.

To these, add reconstructed forms from Tsuchida (1976:229):

PAN \*ñala ‘flame’: Kanakanabu *ñáala*, Thao *šú-ná:raʔ*

PAN \*ñiSawa ‘breath, soul’: Kanakanabu *ñisáa*, Saaroa *lu-rur-a-nia*, plus Siraya *xinawa* (with metathesis).<sup>6</sup>

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<sup>5</sup> From Blust (2003:634).

<sup>6</sup> Blust’s reconstruction \*NiSawa is puzzling, as \*N can neither explain the Formosan reflexes nor the MP palatalized nasals for which Dempwolff reconstructed \*ń.

Note the full agreement between all four PAN reconstructions containing root \*-ñaw ‘to wash’: altogether eleven modern words and one reconstructed word. The likelihood of all twelve forms independently showing an irregular /n/ reflex of \*ñ is low.

This situation is puzzling under the view that Dempwolff’s \*ń goes back to a single phoneme, PAN \*ñ. The explanation can be found in Dahl (1981:95). Dahl noted that Dempwolff’s \*ńV did not contrast with \*niV, so that \*ńV could be taken back to PMP \*n followed by \*-i- and immediately by another vowel, the -i- palatalizing the nasal and then disappearing. Thus Dempwolff’s disyllabic \*ńata, \*ńawa, \*peńu, \*ańud would have arisen out of trisyllables with a hiatus: \*niata, \*niawa, \*peniu, \*aniud, and there would be no need for a phoneme \*ń in PMP. If one accepts Dahl’s reasonable suggestion that MP words with Dempwolff’s \*ń had \*niV- around PMP times, it follows automatically that this \*niV- itself should have two distinct PAN sources, \*NiV- and \*niV-: as is well-known, PAN \*n and \*N merge as \*n in PMP. These two sources are our sets 1 and 2.

When and why did \*niV change to \*ñV ? there are in fact two ordered sub-changes: (1) palatalization: \*niV > \*ñiV and (2) loss of /i/: \*ñiV > \*ñV. There seem to be no exceptions to (1) in MP languages but (2) does have exceptions (below). Therefore only (1) was completed in PMP. On the other hand, (1) is fed by, and could therefore only occur after, the merger of PAN \*N and \*n: that last change took place before PMP and after the separation of PMP and Tai-Kadai.

The motivation of sub-change (2) was to eliminate sequences of vowels while at the same time reducing trisyllables to the favored disyllabic word canon—two birds with one stone. It is not surprising, then, that where elimination of a sequence of vowels would have resulted in a monosyllable, loss of /i/ occurred only sporadically: Malay *ñiur* ‘coconut’, presumably from PMP \*niuR, has palatalized the nasal but preserved the diphthong. Balinese has reduced the diphthong, to *ñuh*; Ngadju Dayak has also reduced the diphthong but recreates a disyllable by adding a dummy syllable at the word’s onset: *eñoh*.

Kanakanabu regularly merges PAN \*n and \*N as /n/, so presumably Kanakanabu also merged PAN \*niV and \*NiV as /niV/. Independently from PMP, early Kanakanabu has palatalized /niV/ to /ɲV/, then depalatalized /ɲV/ to /ŋV/. Kanakanabu and its southern Tsouic sister Saaroa have eliminated palatals, including PAN \*y, from their consonant system.

A few points receive a more satisfactory explanation in light of Dahl's hypothesis. First and most importantly, Dempwolff's \*ń never occurs in word-final position evidently because it could not arise without palatalizing material to its right. Second, the palatal vowel in Kanakanabu *ɲisáa* 'breath' < \*niiSawa is not there in Dempwolff's PMP \*ñava. Why has it disappeared? there is no reason why the change of \*S to MP \*h, then loss of \*h, should have caused /i/ to fall. Under Dempwolff's MP reconstruction one should have \*ñiava. Rather, the vowel's loss is evidence that sub-change (2) occurred. Third, PAN \*qaNiud (Tsuchida's \*qañu[zZ]) 'to float' shows -n- (above) instead of expected -ɲ- in Kanakanabu \*ʔacúnu because metathesis applied to the last two consonants without affecting the vowels, moving \*n to the right of -iu-: consequently the nasal could not palatalize. There is no need to suppose an effect of /c/. These points show that two ingredients must be simultaneously present in order to give rise to Dempwolff's \*ń or Kanakanabu /ɲ/: \*n and, immediately following it, a palatalizing context consisting of /i/ and a second vowel.<sup>7</sup> Illustration 3 summarizes the proposed analysis.

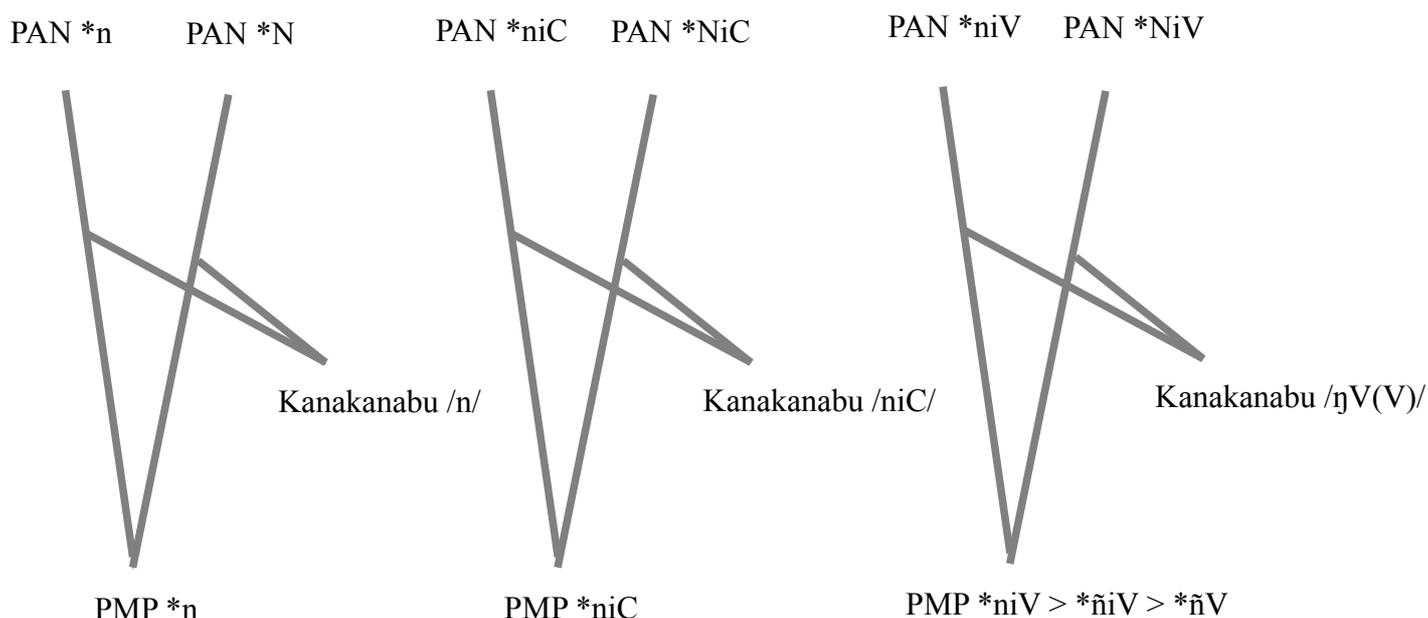


Illustration 3: The evolution of PAN \*n and \*N to PMP. Left: general case; middle: preceding -i- and a consonant; right: preceding -i- and another vowel.

We may now dispense with \*ñ at PAN level. No phoneme competed with \*nʲ for the palatal nasal slot in the PAN consonant system.

<sup>7</sup> Tsuchida gives several examples showing that the string \*NiC goes to Kanakanabu *ni*, without palatalization.

## 5. Conclusion: the Malayo-Polynesian custodianship over PAN.

The foregoing illustrates an influential tendency in current PAN reconstruction practice which deserves to be called ‘the MP custodianship over PAN’: it consists of reconstructing PAN by ‘validating’ Dempwolff’s phonological or lexical reconstructions when ‘support’ can be found for them in at least one Formosan language. However PMP evolved out of PAN, rather than the reverse. The ‘validation’ procedure makes the *a priori* assumption that when one Formosan language agrees with PMP, all the other Formosan reflexes must be derived. That assumption is unwarranted. There is no reason why PMP and some Formosan language(s) could not share innovative material and other Formosan languages preserve truly PAN material. The status granted Malayo-Polynesian gives it excessive rights in the reconstruction of PAN. The methodologically sounder alternative is to reconstruct PAN directly on the basis of Formosan, and then to examine how PMP can have evolved.

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