John Lynch, ed. 2003. *Issues in Austronesian Historical Phonology.* PL 550. Canberra: Pacific Linguistics. vii + 227 pp. ISBN 0- 85883-503-7. Aus$54.00, paper.

This book contains ten articles originally presented at the Ninth International Conference on Austronesian Linguistics and the Fifth International Conference on Oceanic Linguistics held at Australian National University in Canberra during January 2002. It has as its theme Austronesian historical phonology. There is an overview of the PAn phoneme system (Wolff), a *Sprachbund* involving final /a/ mutation (Tadmor), a mixed tree- and wave-theoretical account (McGinn), sound changes through its macro-groups (McGinn, Bukar-Sadong Land Dayak and Rejang; Mead, Celebic; van den Berg, Tukang Besi and Muna-Buton) and micro-groups (Mead, Saluan-Banggai), unusual sound changes (Schmidt, Rotuman; Lynch, Proto-Loyalties), and reflexes in specific languages (Blust, Selau; Wolff, Fijian).

John Wolff forms the alpha and omega of this work, presenting the first article on The sounds of Proto-Austronesian, and the tenth and final one on Fijian reflexes of PAn phonemes (see below). His is a continuing and cogent review of PAn reconstructions,[1] and a legitimate attempt to limit the PAn phoneme inventory to that of a real language. The consonant inventory of Austronesian languages rarely exceeds the 23 found in Paiwan.[2] Malay, Indonesian, and Fijian have 19;[3] most Philippine languages have from 19 (Western Bukidnon Manobo) to 14 (Kayapa Kallahan [Reid 1971]); and Hawaiian boasts the second smallest inventory in the world with only 8.[4] Why then would or should the reconstructed system have 27 or more?

Although the purpose of his paper is to deduce "what the PAn phonemes sounded like" (5), he first discusses the system and the reflexes. The first chart presents Wolff's revised inventory of 18 PAn consonants. I have combined it with his chart 1a to show the typographic symbols traditionally used, with which readers may be more familiar:

VOICED CONSONANTS	*b = *b	*d = *D	*j = *Z	*g = *g- -j- -j	*ɣ = *R	WOLFF TRADITIONAL
VOICELESS STOPS	*p = *p	*t = *C, *t	*c = *s	*k = *k	*q = *q	WOLFF TRADITIONAL
NASALS	*m = *m	*n = *n	*ñ = *ñ, *N, *L	*ŋ = *ŋ		WOLFF TRADITIONAL
LIQUIDS	*w = *w	*l = *l	*y = *y			WOLFF TRADITIONAL
SIBILANT		s = *S				WOLFF TRADITIONAL

1. Continuing Wolff 1974 (*r, *d), 1982 (*c, *z, *g, *T), 1988 (PAn consonant system), 1991 (*t vs. *C), 1993 (*ñ, * N), and 1997 (*d, *j).
2. Most Austronesian languages have between 16 and 22 consonants and 4 or 5 vowels. Exceptionally large consonant inventories are found in the languages of the Loyalty Islands in southern Melanesia, and exceptionally small consonant inventories in the Polynesian languages. (http://www.britannica.com/eb/article-75222)
3. Malay and Indonesian have just 18 in native words.
4. The eight Hawaiian consonant phonemes are /p, k, ʔ, h, m, n, l, w/. (http://www.answers.com/topic/hawaiian-phonology)

Also included is phonemic or contrastive stress, which may well account for the split of *t into *t and *C, and of *ñ into *N and *L. Gone are: PAN *c, *d, *g (noninitial), *L, *N, *r, *T, *z. Unmentioned but gone by default are: *ʔ, *H, *W, *X.

This goal and its economy are admirable. In doing so, he makes two default assumptions:

1. "Phonemic contrasts [that] cannot be documented did not exist" (3);
2. "Although the protolanguage surely had variation … , unless there is evidence to the contrary, only one of two or more variant forms in the protolanguage can be assumed to have come down to modern times."

The latter is an evidentiary requirement under which doublets have to be held suspect. He accepts *tiduɣ and *tuduɣ 'sleep,' because there can be no phonological, geographic, subgrouping, or contact explanations that would explain them away.

He also makes two more assumptions about the processes of change:

3. Changes "have to be phonologically motivated" (3); and
4. "Sound change proceeds on a word-by-word basis, and is not completed until all forms with the phoneme in a given environment have been replaced by the innovation" (4), that is, LEXICAL DIFFUSION.

He exemplifies the latter with the merger of PAN *d and *g (*j) into Javanese /r/ as well as /*dh*/. Borrowing does not provide a satisfactory hypothesis for the split, so the conclusion must be that the change was incomplete (5). Here doublets (such as Old Javanese *dhengö* and *rengö*) are allowed. We can also add that the same would apply to the merger of PAN *ɣ (*R) and *g (*g-, *-j-, *-j), which is found split into Ilokano /r/ and /g/.

Wolff usually accounts for semantic discrepancies by offering alternative glosses. However, in chart II under "heavy" he cites Paiwan *v'qatj,* which either is the root of a verb *v/n/eqats* 'create; make up (lies)' or a noun *na-v/n/eqats* 'ancestors' (Ferrell 1982:346). Attractive as the correspondences may be, I can see no compelling semantic connection. The Paiwan word for 'heavy', *sadjelung*, is not cognate with any form I could find; nor is the verb cited at that meaning 'carry heavy load' *ki-pa-qadił* (422). None of the gamut of Formosan languages presented in Ferrell (1969:351) has a cognate of what he reconstructs as trisyllabic **beɣəqat*, which I reconstruct as disyllabic with a glottal cluster **beRʔat* (the phonotactic justification of which can be found in **beRsay* 'paddle' and **beRŋi* 'night').

This article (and the book as a whole) are remarkably bereft of typographical errors. There is one instance in chart III where he reconstructs **beɣas* [sic] instead of his **beɣac* (5), underscoring the dangers of using preexisting symbols with newly assigned values.[5] Throughout he consistently represents orthographic Malay "r" as [ɣ], but inadvertently refers to it in chart III as /r/ in *sinar* 'ray of light' (7).

His phonetic characterizations of the PAN inventory he reconstructs are reasonably straightforward (see chart I and Ia on page 505). There is some "fudging" in that voiceless STOPS are contrasted with voiced CONSONANTS, especially in the case of *ɣ. Keeping it out of a FRICATIVE row allows the treatment of a single SIBILANT. I have often

5. There are several such incomplete carryovers from the Dyen-Blust typographic system to the Wolff phonological system in his final article.

wondered if his *s (*S) was [ʃ], leaving his *c (*s) as [s], and *q as [x]. Adding the laryngeal [h] would yield a fairly rich VOICELESS FRICATIVE row, but an impoverished voiced one. Wolff's system and chart are about as elegant as anyone can hope to achieve.

One can be readily excused for failing to consult, refer, or react to studies that appear in far-flung and hard-to-obtain journals, such as my essentially supportive articles on accent (Zorc 1983) and on apicals (Zorc 1987). However, less so when an author participates in the same volume, such as the Dyen festschrift (Nothofer 1996), where an enormously thorough analysis of PAN *d and *D by Mahdi (1996) appears immediately before Wolff's (1996) article on passive verbs with pronominal prefix, and my tour-de-force on the reconstruction of *ʔ occurs just after (Zorc 1996). I should stress that Prof. Wolff and I have since been in email correspondence on the status or presence of laryngeal articulations in PAN (*ʔ and *h [or *H]), and we have agreed to disagree.

He excludes any laryngeal from his revised PAN system (1988 and since). Because he has not dealt with them with such thoroughness as he has accorded PAN *c, *z, and so on (1982) or *d and *r (1974), one can only assume that his article on Malay loanwords in Tagalog (1976) represents a kind of manifesto that final glottal stop is virtually and exclusively a loan marker, and his reconstruction of my PAN *CeRʔáb 'belch' as his *teɣab "reflect[s] contamination from words having similar meanings" (Wolff 1991:540, especially fn. 18). Therefore, if one cannot establish PAN *q, the appearance of any glottal stop in the Philippines would be considered secondary.

In my conclusions (Zorc 1996: 63–64), I offered five plausible explanations of why PAN *ʔ should be reconstructed.

1. PHONOTACTIC EVIDENCE: a glottal stop was at least phonetically available in PAN.[6] It did not develop *ex nihilo*. "In a number of widely separated Austronesian languages, the reflex of a Proto-Austronesian or Proto–Malayo-Polynesian final vowel is followed by a fully predictable glottal stop. Languages that show such a presumably secondary segment include Atayal, Seediq, and many of the 'Paiwanic' languages of Taiwan, Ivatan, and Kalamian Tagbanwa in the Philippines, and Sundanese in west Java" (Blust 1990:242).
2. GRAMMATICAL EVIDENCE: a glottal stop was one feature of separating vowel-initial suffixes from vowel-final stems, as in *pa-susu/ʔ/-an 'breastfeed', leading to the distinction of noun-verb pairs by this feature (as in some Iban doublets). Furthermore, it was one means of vocative marking that had enough pressure for its retention so that it was re-analyzed in Malay as final /k/ and hence preserved as a true glottal articulation on some kin terms (e.g., *adik* = [adiʔ]). At least some unexplained doublets where Malay has a final /k/ and Central and Southern Philippine languages a final [ʔ] (e.g., *sipaʔ 'kick' or *bukaʔ 'open') could then be explained as having arisen analogically in Malay, as opposed to concluding that all such instances represent prima facie cases of borrowing in the Philippines.
3. IBAN EVIDENCE: Iban "fares exceptionally well in reflecting final *ʔ as opposed to *[Ø] in both basic and non-basic vocabulary. … In fact, if Iban has a FINAL zero

6. In the same way that a glottal stop is phonetically available in many dialects of English as an allophone of /t/, in Cockney forms such as [bʌʔr] 'butter' or Chicago English [sʔns] 'sentence.'

and Central Philippine languages have a glottal, this strongly supports Wolff's claim (1976) that they are indeed Malay loanwords in the Philippines" (64).

4. CENTRAL PHILIPPINE EVIDENCE: "The cognation of a Central Philippine [ʔ] as a reflex of PAN **q* in all positions (including clusters) cannot be questioned. So the appearance of a glottal on forms where the reconstruction of **q* cannot be justified requires explanation. While analogy and borrowing (loan-marking) may account for some final occurrences, they simply will not explain all such cases, especially when also found in consonant clusters and intervocalic position" (64).
5. "Finally, the reconstruction of **ʔ* ... changes its association from subgroup to subgroup, e.g., with **q* in Central Philippine languages, with **-k* in Malay, or with zero in Formosa. However, procedures and correspondence sets for its reconstruction in all but initial position have been established so that it can and should be considered part of the PAN phonemic inventory" (Zorc 1996:64).

Uri Tadmor has a compelling overview and analysis of the mutation of final /a/ as an areal feature in dialects of Javanese, Malay, Balinese, Lampung, and Sundanese. The care, thoroughness, and attention to detail he practices should make this article required reading in courses on phonology and historical phonology. His first insight is that there was a progression in this development: from *a* > ɐ > *ə* and only thence from schwa was it changed to *ɣ* (with neither rounding nor umlauting), fronted to *ɛ* or *e*, backed and rounded (but without umlauting) to *o* or ɔ, or raised to *i*. His second insight is that the motivation for this sound change was Indian influence, particularly that of Sanskrit, on Javanese and Balinese. Through the Javanese Madjapahit Empire it spread to other languages such as Malay, western Bornean, and even Malagasy, forming a *Sprachbund*. His care is commendable in ascribing the incomplete change in Pemalang Javanese to arrested lexical diffusion: [mata] 'eye' vs. [gəwə] 'bring.'

Furthermore, not everything that glitters is gold, such as the appearance in Gorontalo of final [o] in words of Austronesian origin such as [mato] 'eye' and [limo] 'five,' but of [a] in those of Sanskrit origin borrowed via Malay or Indonesian such as [nyata] 'obvious' and [yuta] 'million.' The geographic and historical position of Gorontalo exclude it from this phenomenon. Similarly, the change of /a/ to /ə/ in Madurese is phonologically motivated: either after the loss of final *-h, as in [*jilə*] 'tongue' < *jilah, [*bəbə*] 'under' < *babah, or after the voiced oral consonants /b, d, g, j/, as in [rajəh] 'big' < *raya, [*dədəh*] 'chest' < *dada. The latter "was, in fact, related to breathy phonation of syllables commencing in voiced consonants, and had nothing to do with final /a/ mutation" (28).

Lest one hope or assume that accent played any role whatsoever in the overall shift, after reviewing other possible causes, he concludes that "final /a/ mutation and presence of word accent … appear to be mutually exclusive" (30).

Finally, he likens final /a/ mutation, which started in the Majapahit court in the late thirteenth century, to the spread of uvular /r/ in Europe as emulation of the seventeenth century French court. Five factors come into play:

- both processes lack phonetic motivation;
- both started with a very limited and well-defined social and geographical distribution;
- both spread due [to] their high prestige;

- both operated in a contiguous geographical area, rather than a genetic subgroup;
- both applied to only certain dialects of the affected languages and not others.

Belatedly, most of Tadmor's methods and insights could be applied to my discussion of certain sound shifts among Bisayan dialects (Zorc 1977:219–21, table 56), especially *ə > [u] and *-r- (< *-d-) > [-l-] Hiligaynon, Cebuano, [-y-] Banton, Sibale, Romblon, Odiongan, Surigao, Jaun, [-ɣ-] Aklanon, or [-ø-] Cebuano, Bohol, Leyte, Butuan. The conservative dialects with both [ə] and [-r-] (Kinaray-a, Kuyonon, Samar-Leyte, and Waray) are on the eastern and western outskirts of the Bisayas, while those affected by the changes are in or radiate out from the center. It was probably the prestige concomitant with the rise of Cebuano and Hiligaynon as trade languages that triggered such changes, but the five factors listed by Tadmor all apply.

The third article, by Richard McGinn treats the raising of PMP **a* in Bukar-Sadong Land Dayak and Rejang. Rejang reflexes of the four PMP vowels went through a complex array of 27 mergers and 21 splits (Blust 1984). PMP **a* itself went through nine mergers according to Blust, but twelve outcomes according to McGinn, if one considers mergers that occurred in more than one environment. There is some confusion in section 2.2, in that the title refers to *ten* changes, the introductory paragraph states *eleven* outcomes, but the outcomes discussed number *twelve*. This notwithstanding, his treatment of phenomena such as prepenultimate neutralization, vowel harmony, monosyllabicity, and the shift from paraoxytonality to oxytonality accounts well for the data presented.

He then proposes that there is sufficient evidence in Bukar-Sadong to find a Borneo homeland for Rejang based upon the neutralization of PMP word-final *a (with *e) (1) in open final syllables, (2) in final diphthongs, and (3) in closed final syllables (except before velars). Additional phonological evidence is the agreement of Rejang with seven widespread Bornean features, of which Malay only shares two (45). Given the time depth and the rapid shift of grammatical features, five of the seven items he presents (46) are reasonably convincing. The cognation of Rejang *ba* and Bukar-Sadong-Tibakang *boh* [imperative particle] is good, but difficult to connect with PMP **ba*, which purportedly served as an interrogative particle, not an imperative. I do not find either the lexical or the lexicostatical comparisons compelling, but his frank discussion of the problems (48) and "saving the hypothesis" by "mixed" tree- (common ancestry) and wave-theory (prolonged subsequent contact) assumptions (49) is indeed plausible.

His epilogue deals with the value of "shared retentions" in a much stronger fashion than taken up in Zorc 1986:153, where I concluded: "(a) they serve as a synchronic isogloss around the proposed group … , and (b) their retention amidst heavy pressure for innovation (as evidenced by replacement in the other groups) cannot be adequately explained but surely reflects some historically relevant phenomenon."

Finally there is an appendix with 237 Proto-Rejang (PR) and Proto–Bukar-Sadong (PBS) reconstructions; PMP forms are given where reconstuctable. It might have been easier on the reader to put the Rawas forms under PR and the Tibakang under PBS, but the presentation of these data adds enormously to the value of this paper.

David Mead, like Wolff, has two contributions. The fourth presents the Saluan-Banggai microgroup of eastern Sulawesi, and the sixth gives evidence for a Celebic supergroup. I will treat the principles behind these two together.

A dozen phonological innovations separate the Saluan-Banggai microgroup from PMP (83); however, six of these (C_1C_2 > *C_2 if C_1 is nasal; *h > Ø; *d > *r; *ay, *-ey > *e; *-aw, *ew > *-o; *j > *y, Ø) overlap in separating Proto-Celebic from PMP (135). Another three of the twelve (*e > *o; *-iq > *-eq; and *a_3 > *o) are later interpreted to define Proto–Eastern Celebic. Other sets distinguish lower nodes on the tree.

There is considerable danger in subgrouping on a phonological basis alone. A former colleague abandoned his dissertation on the subgrouping of Philippine languages based upon sound shifts and mergers, because he found so many changes occurred independently. Ironically, one of the most solid features was the shared retention of PAN *j, but as [g] in Northern Philippine languages (e.g., Ilocano, Cordilleran, Pangasinic, etc.). Two factors can lend credence to this method. The first relies on the quality of innovations, and the second on the weight of numbers. The reduction of consonant clusters and of diphthongs are more complex phenomena and therefore should carry more weight. An uncommon sound shift, such as *j > [y] (or *R > [y]) or an unusual one, such as *w > *h is more forceful than common ones, such as *d > [r], *h > Ø, *ñ > [n], which happen frequently and independently across many Austronesian language boundaries. When splits like *s > *s, *h or *b > *b, *w occur, one must investigate whether independent analogical change within a language or an areal feature has operated.

I do not mean to make short shrift of what is clearly the result of an enormous amount of time, research, and dedication on the part of the author, not to mention careful attention to detail. The need to work on micro- and macro-subgroups from all levels of linguistic analysis is critical. Mead has taken an important first, innovative, and detailed step in tackling the interrelationships of the languages of Sulawesi. These results can then be compared with and bolstered by those of morphological, syntactic, and lexical surveys. In fact, Mead reviews van den Berg's conclusions (124–25) (see below), and is not convinced that Southeastern Celebic breaks into two nodes (à la van den Berg): Bungku-Tolaki and Muna-Buton, the latter of which splits into Nuclear Muna-Buton and Tukang Besi; as opposed to three, à la Mead. This is an excellent and productive debate, and with additional infusions, will lead to a more accurate picture of the macro- and micro- groupings of Sulawesi.

The fifth, by René van den Berg, treats the place of Tukang Besi and the Muna-Buton languages. This is the kind of multipronged approach I just mentioned: PHONOLOGICAL EVIDENCE ("shared sound changes, irregular phonological developments"), GRAMMATICAL EVIDENCE ("the pronominal system, the demonstrative markers," *-*um*- forming subject relative clauses, derivational morphology and other shared conjugational affixes), and finally "a considerable number of LEXICAL INNOVATIONS" are presented and evaluated (110).

There can be little doubt that Tukang Besi is isolated, but does this render it on a lower or higher order branch of the family tree? Van den Berg's proposal that its many uniques, resulting in low cognate percentages, "are probably local innovations" has an analog in Ilongot as a member of South Cordilleran or Pangasinic, which scores very low with other members of its own subgroup because of numerous lexical replacements such as Ilongot *tambiaŋ* 'five' instead of *lima*, or *pandɨk* 'star' instead of *bituwin*. Note that even these innovations are based on Austronesian material: *sa-ŋ-

bilaŋ 'one count' and *pandek 'speck of light.' The conclusions putting Ilongot within South Cordilleran are grammatical (particularly the deictic system: *ta-n 'that' and *ma-n 'yon') and lexical (*tuʔu 'person' with assimilation exclusive to this group < *táu, *ta:wen 'sky' < *tawqen 'year,' *ʔabuŋ 'house' replacing *baláy or *Rumaq).

As to the innovations, the author is correct that some will find precedent, but the majority will stand the test of time. I suggest etymological prehistory for the following:

*bai 'friend, companion,' GCP *abay 'side by side,' Bis *aby-an* 'friend, companion';
*lagi 'temporal adverb,' Akl *eágih* 'right away,' Iban *lagiʔ* 'presently, later on';
*langu 'intoxicated, drunk' < PAn *langu 'dizzy, seasick, drunk' (Blust 1986:75, n. 257);
*pali 'turn around,' possible "shimmer" of PAn *balik 'return, reverse';
*saŋka 'complete,' connected to PIn *saŋkep, borrowed as *saŋkap* in Tag, Akl;
*sepa 'kick,' cf: PMP *sipak 'kick';
*taliku 'behind, back,' cf: PAn *talikúd 'turn one's back (on, to)';
*tara 'stay, endure,' cf: PHF *taRaH 'wait (for, in ambush)';
*tiɗo 'delouse s.o.,' cf: triplets PHN *tedés, *tidés, PMP *ti(n)dés 'crush (lice) with the fingernails';
*tula-tula 'story,' cf: PSP *tultul 'story, news, information'.

The seventh chapter is by Robert Blust on vowelless words in Selau. His succinct and ironclad conclusion is that, based on diachronic and synchronic evidence, Selau schwa is not phonemic, because it is subject to zero representation. First, the position of schwa is variable: POc *lima 'hand/arm' > Selau alternates [ləma] and [əlma] and POc *lisa 'nit' as [ləsa] and [əlsa]. Second, this schwa is lost in both simple and ambulatory imperatives [garsə] 'wash (hands)' > [gars-i] 'wash (your hands)!' and [na gars-ia] 'go and wash your hands!'. Other vowels /a, i, u/ do not so delete. Third, "the rules of diachronic correspondences become exceedingly complex and implausible in a number of etymologies," as in *nunu > [ənnə] 'earthquake,' *susu > [ssə] 'breast,' [ss-i] 'nurse it!' (crying baby) (151).

It seems to me that such an analysis is sustainable for some dialects of Sambal where a prefix causes the loss of penult schwa after a prefix [ma-sləd] 'will enter', or of ultimate schwa before a suffix [səld-an] 'be entered' yielding a consonant root of /sld/ 'enter' (with appropriate schwa-insertion rules) rather than its etymon *səlәd (with schwa-deletion rules). As in Selau, the vowels /a, i, u/ do not so delete.

As grist for the phonology mill, concerning the reference "that all known languages have at least two phonemic vowels" (143), I had the opportunity to do research on Aranda [arrərntə], a Central Australian aboriginal language spoken around Alice Springs, where one phonemic analysis posits two vowels /a/ and /ə/, while another more simple and elegant one posits only one with length distinctions: long and short /a/. While one can hear an array of phonetic vowels such as [a], [ə], [u], [o:], [i], [e:], the latter four are phonemically /aw/ [əw], /a:w/ [əwə], /ya/ [yə], and /a:y/ [əyə], respectively.

Uncharacteristic of the high standards of typographic accuracy throughout this book, Selau is misspelled "Seau" in the alternating recto header.

Editor John Lynch comes eighth with a treatment of the bilabials in Proto-Loyalties. He does an excellent job of making sense of a complex and chaotic system of

reflexes of POc *a, *u, and *o mapped onto a ten-vowel system in Iaai and seven in Drehu (Nengone mercifully has but five). POc *a > Drehu and Nengone *e* either by a form of vowel harmony (the following syllable contains a high vowel) or when immediately followed by *ŋ (and possibly also *g [ᵑg]) (155). There are, of course, exceptions with either *a* for expected *e* or *e* for expected *a*. But the raising and fronting of POc *a to *e* also occurs when preceded by a *simple* bilabial, but does not occur after the POc labiovelars *bʷ or *mʷ, nor after PLOY *pʰ (156). Put simply and in "the vernacular," the situation in Iaai is a mess, with POc *a > *a, ə, e, o, ɔ, ɛ* (156–57). However, after a simple bilabial, the Iaai reflex is generally *æ*, yet it remains *a* after labiovelars, absolutely parallel with Drehu and Nengone (158). It is therefore probable that PLOY simple bilabials were palatalized [bʸ, mʸ, pʸ] and led to fronting of the following vowel.

After presenting the multiple reflexes of POc *u (159–61) and *o (161–62), he discusses the labial-to-apical shift in Nengone (163–66) and a comparable shift in Santo and Malakula in Vanuatu (166–68). He also reviews the appearance of front or "light" and back or "heavy" consonant sets in Micronesian (168–69). This results in the shift of POc *p > *y* before *a and *i, but > *w* before back rounded *o and *u in Marshallese. Lastly, he brings up a contrast between palatalized bilabials and regular bilabials in the Teták dialects of Czech (169).

He is reluctant to draw any conclusions "of a close historical connection or of contact between the Loyalties and Micronesian languages" (171). The shared phenomena he mentions are indeed tantalizing: "loss of POc *p before round vowels, unconditioned loss of *y and (ungeminated) *q, ... consonant gemination, a plethora of possessive classifiers, and some other common features" (171). Like Blust (1990, 1996), he concludes that these are yet another example of "unusual phonological changes [that] occur sporadically within the Austronesian family in languages or subgroups [that] have no specifically close genetic connection" (171).

Austronesianists must respect the fact that Micronesianists and New Caledonianists stand very, very tall in our field. Philippinologists in particular have a walk in the park when facing problems in Austronesian reconstruction. Dealing with cognates such as Drehu *weŋ* 'canoe' < *waŋka, *ñə* 'tooth' < *lipen, *enienin* 'scale' < *quSaNap-i, Iaai *dɔ* 'needle' < *ZaRum, *hai* 'smoke' < *qasu, *un* 'skin' < *kulit, *xibi* 'grow' < *tubuq, Nengone *hnija* 'vomit' < *mutaq, *mma* 'house' < *Rumaq, *gʷdin* 'pigeon' < *punay, *eoc* 'net' < *puket, *eno* 'steal' < *panakaw, or Marshallese *yijiw* 'star' < *bituqen, *yaney* 'land' < *banua, *hayɛr* 'shoulder' < *qabaRah is not part of our nightmares!

Hans Schmidt presents the ninth article on "temathesis" in Rotuman. It looks as if the joke is on us. Unlike the typo in the recto header of Blust's article (an editor's mistake), this metathesis of the word "metathesis" underscores the fascinating and curious case of the swapping of final CV to VC. This process yields doublets for virtually the entire lexicon (contentives, excepting functors and indeclinables). So Schmidt's neologism, while undefined in his article (the term METATHESIS is used throughout, except for the title), yields a new technical term referring to STEM REDUCTION AS A GRAMMATICAL PROCESS. After reviewing eight previous explanations, he presents a tour-de-force devising and ordering the six main rules yielding these ubiquitous doublets. The reasons his conclusions are ineluctable is the treatment of loanwords, many of which are incorporated as

short forms, from which long forms are created, for example, [hɔs] 'horse' > /hasu/, or [næs] 'nurse' > /nasi/. He then adds another four rules (yielding a total of ten) that explain ablaut (e.g., partial regressive assimilation, backing, doubleting of *a*- and *e*-forms). He analyzes the role of word accent, how accent-influencing suffixes modify the semantics or the word class of given roots, and how suffixed forms were borrowed in toto from Tongan and only later analyzed morphologically.

His dating of this phenomenon makes complete sense. Although Rotuman can be dated to about 1,700 years ago (204), "creating short forms ... became a fashion before the first intensive contact with Polynesians around the thirteenth century" (205).

This article should be obligatory reading for lexicographers. The phenomenon of "other" vocabulary systems, such as men vs. women's speech in Atayal (Li), speech levels in Javanese (Poedjosoedarmo), or of angry speech in Bikol (Lobel) pales in comparison with doublets throughout the entire lexicon of Rotuman.

The tenth and final article is by John Wolff on Fijian reflexes of the Proto-Austronesian phonemes. He makes an excellent case that sound shifts ebbed and flowed across the chain of 30+ Fijian dialects, using as a backdrop the lexical diffusion hypothesis, whereby not all changes were complete. He reviews consonant gradation, the tendency towards disyllabicity, the various outcomes of polysyllabic roots, metathesis, the treatment of consonant clusters, the development of labiovelars, and the sequence of vowels. There follows an exceptionally thorough treatment of the reflexes of each of the PAN vowels and diphthongs. For consonants, he treats the mergers of *p and *b, *mp and *mb, of *c [*s], *j [*Z], and *g [*j], of *k and *g, and the plain and nasal reflexes of *t and of *d, the loss of *ɣ [*R], *q, and *s [*S > *h], the sporadic accretion of initial Fijian [c] < *y-, the faithful retention of the nasals *m, *n, *ŋ (with minimal retention of *ñ), the problematic retention vs. loss of *l, the loss of *w (in the sequences *ua, *uwa), and of the reflexes of *y > Fijian *-c-* vs. *-Ø-*, nasal substitution of *m-* for *b and *p, and *n-* for *t. Lastly, he shows how stops in final position can be retained by metathesis (*tuɾu* 'knee' < *tusuj [*tuSud] or by suffixation (*likur-i* 'veer from' < *likud-i).[7]

There are some reconstructions with which one may take issue, none of which affect his conclusions: *deɣeqec 'move vigorously and rapidly' (211)—I reconstruct *deR**as**; the monosyllabic root of Fijian *ro*/*ro* is explained under either hypothesis. Phonotactically, however, Fijian cognates of trisyllabics usually result in disyllables or trisyllables, not monosyllables.

*qasulípan 'millipede' (211, 212)[8] —metathesis of *S and the vowels is extremely common in this form, but even Formosan languages put the *S near or at the end. Evidence suggests that the form was morphologically *qa<lu>*Sip-an* 'centipede,' with which Fijian *aliva* closely corresponds, that is, *aluipa > *aluɣva* > *aliva*.

*tan 'set a trap' (211)—evidence consistently points to a disyllablic *taqen, which reduced to a monosyllable independently in far-flung languages that lose *q.

*iqeɣuŋ 'nose' (214, 215)—*qiguŋ [*qijuŋ], doublets *quguŋ [*qujuŋ]. I know of no evidence supporting a trisyllabic root nor of *ɣ over *g [*j].

7. Blust (1986:104, n.395) reconstructs PAN *tudu, presumably by metathesis of **tuSud*, a doublet dating back to PAN.

8. The citation on p. 211 has a typographical error, *qasulípa, without the final *n*. It is correct on p. 212.

*ma 'tongue' (216)—usually *sema [*Sema], with which the Fijian form corresponds, granting metathesis of the *e, including the reflex of [e] for *ə.
*weliq 'do again, go back' (217)—usually *uliq, with which the Fijian corresponds.
*beɣecay 'oar' (218)—I know of no evidence supporting a trisyllable, simply *beɣcay [*beRsay], with which the Fijian form corresponds.
*culuy 'shoot' (218)—usually *culiq [*suliq], with which the Fijian form corresponds.
*cuɣi 'bone' (220)—most evidence supports *juɣi [*ZuRi].
*guɣita 'octopus' (221)—most evidence supports *kuɣita [*kuRita].
*basequ 'smell' (223)—I know of no evidence supporting a trisyllable, simply *basuq [no clearcut evidence for *q, so I reconstruct *bahuʔ].
*ɣugaŋ 'load cargo' (223)—usually *lugan [*lújan].

My questioning of some of the reconstructions should in no way detract from the excellence and thoroughness of this article. It is a tour-de-force of how we must judge the reality of a protosystem against the reflexes and cognates of a daughter language or descendant dialect chain. His conclusions that mergers "here resulted in morphophonemes, not phonemes" (219) and his appeal to lexical diffusion are truly masterful.

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