AUSTRONESIAN APICALS (*dDzZ) AND THE PHILIPPINE NON-EVIDENCE

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0. INTRODUCTION

I am very pleased to have this opportunity to dedicate an article to Professor Wurm who has inspired a great deal of innovative and enduring Austronesian research over the past decades. This article summarises a small part of one such area, and suggests that order may yet be brought to the chaos of Austronesian reconstruction. Limitations of both space and time require me to refer to several publications without the benefit of summary.

There are almost as many PAN apical phonemes as there are publications on the issue. Not only do conventions differ (e.g. *d vs *D, or $*d_1$, $*d_2$, $*d_3$), but also the PAN correspondence set(s) to which each language, each symbol, or even each piece of evidence relates. The numerous disparate conventions already established in the literature put a tremendous strain on Austronesianists to "control" both data and reconstructions. Some examples include:

UAN *bukid Dempwolff (1938:33)
PMP *bukid Blust (1972a:20), Dyen-McFarland (1970)
PMJ *BukiL (= *Bukij) Nothofer (1975:103,127)
PAN *bukiZ Wolff (1976:96) *mound, heap of earth, hill*

UAN *[dḍ]aɣah Dempwolff (1938:41)
PAN *[dḍ]aɣaq Dahl (1976:30)
PAN $*d_1$aɣaq Dahl (1982:96), Ferrell (1980:245)
PAN $*daRaQ_2$ Tsuchida (1976:181)
PMJ *DaRah Nothofer (1975:147)
PAN $*[dḍ]aR_1aQ_2ə$ Nothofer (1975:147)
PAN $*[dD]aR_1aQ_2ə$ Dyen-McFarland (1970)
PAN *daRaq/daRəq Blust (1981:33) *blood*

UAN *laud Dempwolff (1938:93)
PMP *laud Dyen (1953:14, 1971:39)
PAN $*laH_1ud_3$ Dahl (1982:41)
PAN $*laH_1ud$ Tsuchida (1976:136,181)
PAN *lawuZ Wolff (1974:96)
PMJ *lauL (= *lauj) Nothofer (1976:103) *sea(wards)*

Wolff (1974) has argued that *r and *d can be dropped from the PAN phonemic inventory. Many of his points reflect a careful analysis of fresh data and most of his reassignments (especially to *R and *D) are well-founded. One may take

issue with his *-Z for Dempwolff's and Dyen's *-d (95ff). However, he has noted that "Tagalog offers no evidence for *D- as opposed to *d-" (fn 29). At the same time, Charles (1974) indicated the need for only two voiced apicals (*d, *j) in the reconstruction of PPH; furthermore, most Philippine and North Borneo languages "have merged PMP *z and *Z with *d, *D, and *j" (ibid: fn 2). Therefore, *these languages cannot be used as evidence for phonemic distinctions that disappeared by or before PPH times.*

In the reconstruction of Proto-Bisayan, I argued against the need for a distinction amongst voiced apicals (1977:211-216), giving seven explanations of how a spurious contrast arose:

(1)   morpheme boundary [see data in sets #22, 25, 39 below]
(2)   analogical levelling [#06, 13, 14, 15, 22, 24, 38, 39]
(3)   metathesis [#14, 22]
(4)   doublet [#25, 44, 45, 50]
(5)   cluster reduction [#01, 04]
(6a)   direct/intimate borrowing from another Ph language [#01, 03, 05, 07, 08, 10, 13, 14, 15]
(6b)   indirect borrowing (e.g. via Tag < Ml) [#16-19]

Since then, I have also observed (Zorc 1982:124f) that *the relative time-period of a sound shift* is important in explaining irregularities. For example, Central Philippine languages have the correspondence *d > d-r-d, but in the *earlier history* of some (Tag, Akl, Ceb), the intervocalic -r- became -l-, whereas words that *more recently* have come to have a -d- [by metathesis, analogy, or borrowing] reflect -r-. Witness Tag talim *sharp* < *taZəm (inherited), but ta:rl? *cockspur* < *tazl? (recent Ml loan). Hence, to the above list can be added:

(7)   recent sound shift [#01, 02]

And, based on a different area of research (Zorc 1983:13f,20), the quantity or quality of consonants which otherwise appear to be irregular reflexes may have been affected by short vowels. Hence:

(8)   strengthened consonant after short vowel [#02, 11]

These explanations still serve to account for a wider range of problematic correspondences than just Bisayan. There are irregularities in Tagalog, Manobo, Ilokano and most other Ph data that might otherwise lead to either the cataloguing (*d_1 ... *d_{25}) or the reconstruction of differences (*d, *D).

1.   TRIANGULATION ON THE REFLEXES OF *j

The reconstruction of PAN or PPH *j in intervocalic and final position is unassailable. So long as test or criterion languages are available, there is no dispute over etyma. Nevertheless, irregularities do arise which illustrate that language-specific explanations (when we are in a position to ascertain them) prove better than some assignment to a proto-language or proto-phoneme.

In the following data sets, problems are discussed in brackets after the reconstruction; the numbers in parentheses refer to one of eight explanations outlined above. Most illustrations of well-established reconstructions are limited to Philippines languages.

(01) PAN *qal(ə)jaw *day* > Akl, Ceb ʔadlaw, Bik ʔadlaw, Kal kaldaw, Isg ʔalgaw, Bon ʔalgəw, Ifg ʔalgo [Tag ʔa:raw (5-loss of *l with compensatory vowel lengthening and 7-the recent shift of *d > r); Ilk ʔaldaw (6a); Tbl kədaw (5)]

(02) PAN *Sajə́k *sniff; kiss* > Tag halik, Kin harək, Mas, S-L haruk, Hil, Ceb haluk, WBM hazək, K-C hadək, Sar ʔadək, Ivt may-arək, Bol mang-arək, Sbl ʔaluk, Ilk ʔagək, Mong ayok [Akl haroʔ (7 < WBs *hadəʔ, a recent reshaping of the PAN form); Bik haduk (8)]

(03) PNP *ajamáng > Tag, Kpm ʔalamang, Png ʔagamang [*shrimp - tiny*] [Ilk ʔaramang (6-expected **ʔagamang)]

(04) PPH *qaʔjung *nose* > Bot ʔaʔrung, Kpm ʔa:rung, Ilk ʔagung *nose* [Kal kadung *pointed nose* (5); SPl *ʔədung *nose* (4/8)]

(05) PMP *bu:kij *mound, hill* > Tag bu:kid *farm*, Akl, Ceb, Hil, Kin, S-L bu:kid *mountain*, Han bu:kid *mountain people*, Png bukig *eastern part of town (towards the mountains)*, Kly bukkig *west*, OJv wukir, NJv wuker, Ml bukit *hill*, Sm puʔe *heap* [Cas buked, Itw bukid (6-may be loans from SLz languages); however Palau bukl *hill, mound of earth* is unexplained for expected **buks if < *bukij or **bukt < *bukid]

(06) PPH *nga:jan < PAN *n-a:jan *name* > Tag pang-a:lan, Akl nga:ɬan, Odg, Rom, Sur nga:yan, Hil, Ceb, Sbl nga:lan, But, Tsg, Ceb nga:n, Kin, Mas, S-L, Bik, Han, Bol nga:ran, Soc ngalan, Mar, Abr, Btk, Ivt, Itb ngaran, WBM ngazan, Tig, Bkd, Ata, Dbw, K-C, Tas ngadan, Cas ngahen, Atta, Yog, Ibg nga:gan [Ilk na:gan (2-dissimilation of initial *ng-); Itg nga:lan, Kla, Ifg, Bon, Knk nga:dan, Ilt ngadə:n, Png ngaran (2-dissimilation from **nga:gan, or 6a-influenced by SLz/SPh languages)]

(07) PHF *pa:jəy *rice plant, unhusked rice* > Tag, Hil pa:lay, Akl pa:ɬay, Kin, Bik, Han pa:ray, Tsg pa:y, Abr, Btk, Kal paray, Tbl halay, BlSar faɬi, Cas pahay, Ilk pa:gay, Kla pa:goy, Ifg pa:ge, Bon, Knk pa:gəy, Png pagəy, Ilt pagi, Ach pade, Ib, Ml padi, Pai paday [WBM parəy (6a < Iln) or like K-C faɬay (6b < Bilic/Bisayan)]

(08) PHN *pa:laj *palm (of hand)* > Tag, Kpm, Hil, Kin, S-L, Bik pa:lad, Akl pa:ɬad, Abr, Btk pala-palad, Gor paladu, Tbl holol, BlK faɬəl, Bot pa:lal, Sml paad, TB palak, Mlg fəlatana [Tir furor (2-assimilation); Png pa:lar *lines on palm* (6a-the length indicates loan status); Cas, Yog palad, Ilk, Mlw, Itg, Ifg, Bon, Knk pa:lad may indicate a doublet *pa:lad, but are probably loans from SPh, since other evidence indicates that PHF *dalu:kap is the inherited word amongst NPh languages]

(09) PAN *pijáH *how many?* > Akl, Ceb, Hil, Tsg pilah, Bik, Kin, Mas, S-L pirah-, Abr, Btk, Kal, Mar pira, Tbl hiluh, BlS, BlK fiɬə, Tir firo-y, Ibg, Isg, Png piga, Itw piha, Itb pirah [WBM, Iln pira, Bkd, Tig, Dbw, Ata pila, Tas, K-C fila (6a or 6b < Mar)]

(10) PPH *su:jud *fine tooth comb* > Akl su:ɬud, Rom, Sur su:yud, Hil su:lud, Bik, Mas, S-L su:rud, Ceb, Tsg su:d, Mar sorod, Abr, Pal, Tir surud, Tbl sulud, Kal tulud, Ibg tugud, Ifg hu:gud, Ilk su:gud [Tag su:yod, Iry, Kuy suyud (6a < Bs), WBM surud (6b < Mar)]

(11) PHF *Sa-pəjíq *pain(ful), smart(ing)* > Tag, Akl hapdi?, Ml pədeh, NJv pəreh, Snd pŧrih *smart, ache*, Tsg hapdi? *hunger*, Ibg na-fəggi *stinging pain, spicy*, Mer fəri *injury*, Pai sapədiq *painful (feet)* [Tir fəde?, Mong pom-pori?, Soc om-podi? *pain* (8)]

(12) PMP *ha-pəjə́s *pain(ful), spicy hot* > Akl, Ceb, Tsg hapdus, Kin hapdəs, Kdz opodos, Ilk ?apgəs *painful*, WBM ma-pəzəs *sour; smarting*, Itw na-pəggət, Ml pədas *sharp, burning (taste)* [Note: OJv pəDəs (2 or 6)]

(13) PPH *la:ja *weave (mat), braid* > Tag, Kpm, Bot la:la, Akl ɬaɬah, Ceb, Hil la:la, S-L la:ra, Bon, Knk, Isg, Ilk, Mlw la:ga, Png laga [Kin, Bik ra:ra (2-assimilation), Bkd lala, WBM rara (6 < Mar rara), Cas ladey (6-an early loan from SLz or CPh)]

(14) PPH *lu:jan *ride; load a vehicle* > Tag, Sbl lu:lan, Akl ɬu:ɬan, Isg lu:xan, Knk, Ilk lu:gan [Bik lu:nad (3), Tir ruran (2), WBM ruran, Bkd, K-C lulan (6 < Mar roran)]

(15) PHN *lu:luj *shin; knee* > Tag lulod, Akl ɬu:ɬud, NgD lulor *shin*, Tbl lulul, Ifg lu:lug *knee* [Ilk lu:lud *calf* (6), Png lulor (6), NgD ruror *shin* (2-assimilation)]

2.   THE REFLEXES OF *Z AND *z

The reconstruction of *Z as opposed to *z was first proposed by Dyen (1951) thus: for *Z, Malay has j and Javanese has the same reflexes as for *d while Tagalic for *D or *j; for *z both Malay and Javanese have j, while Tagalic has the same reflexes as for *d. Some Philippine languages were seen as *criterial* for a contrast that we now know had disappeared long before PCP. Discrepant forms [with y (early shift) or r (more recent development) instead of **l in Tag, Akl, Ceb, Hil or d instead of *r in Bik, Kin, Mas, Sor, S-L] illustrate that what we are dealing with are loans from Malay, such as:

(16) Persian bazu *shoulder* > Ml, Ib baju *coat, shirt* [Tag, Rom ba:ro?, Hil ba:yu?, Tsg baju?, Bik ba:do?, Ilk ba:do *shirt* (6b)]

(17) WI ˣa:zar *instruct(ion)* > Ml, TB, NgD ajar [Tag ?a:ral, Btk, Mgd adal, Mas, Sor, Bik, Han ?a:dal, Odg ?a:ray *study* (6b)]

(18) PWI *Zadi *become, happen* > Ml, Ib, TB, NgD jadi, NJv dadi, Mlg zari [Tag, Bik, Han mang-ya:ri, Tsg man-jari *happen*, Kin yadi? *useful*, Ceb ya:ri? *finish off* (6b)]

(19) PWI *kazang *loosely woven (mat)* > KB hajang, NJv, Ml, NgD kajang [Tag kayang, ka:rang *nipa awning*, Hil kayang-ka:yang *shed, hut, tent* (6b)]

Therefore, Philippine languages do not support any distinction for a higher-level contrast (i.e. other than a PPH *d):

(20) PHN *azá? [Neg-imperative] *Don't!* > Odg, Sib ?aya?, Kdz ada, OJv aja, Mad ajjha?, əjjha?, Mlg aza, Bug aja?, Mdr da?

(21) PAN *quZáN *rain* > Tag, Hil, Ceb, Tsg ʔulan, Akl ʔuɬan, Kin, Mas, S-L, Bik, Han, Kpm, Bot, Ibl, Png ʔuran, Kal kuran, Abr, Mar uran, WBM ʔuzan, Ata, Bkd, K-C, Isg, Kla, Ifg, Knk ʔudan, Ml hujan, To ʔuha, Kan ʔucanəʔ, Pai qudjaL, Puy Hudal, Ami qulaL, Bun xudan

(22) PHN *zaqət *bad, evil* > Bkd daʔət *dirty*, Itb ma-raət, Ml jahat *bad, evil* [Tag la:ʔit *blaspheme*, Akl ma-ɬa:ʔut, S-L ma-ra:ʔut, Sur ma-yaʔut, Bik ma-raʔut, WBM mə-zaʔat (1), Mar ma-rataʔ (3), Ceb ma:ʔut (2-loss of -d-), Ivt ma-rahət (2-intrusive h)]

(23) PMP *za:qit *sew, patch up* > Tag daʔit *contiguous, touching*, Akl hi-da:ʔit *peace, togetherness*, da:ʔit *weave buri fibres*, Ilk, Png daʔit, Itg, Kla, Bon, Knk da:ʔit, Ml, Bjr jahit, Ib jait *sew*, To haʔi *bind*, fe-haʔit-aki *knot*

(24) PAN *Za:lan *road, path, trail* > Akl da:ɬan, Ceb, Bon, Ilk da:lan, Ml jalan, Pai djalan, To hala [Tag daʔan (loss of *l)]

(25) PAN *-zaNí *near* > Ata, Tig ma-dani, Cas ʔa-de:neʔ, Bol, Itg, Kla ʔa-dani, San dani *near*, Ilk dan-dani *nearly, almost*, Kan ará-cani, Sar ma-saLi, RukMg me-d-dálix, Sed dalix *near* [S-L ha-ra:ni, Bik ha-rani, Soc mo-lani, Sbl ma-rani (1), Sai ʔal-ʔalih-an, Paz ʔalih (4, or unexplained loss of initial consonant, if cognate)]

(26) PHN *zazáh *carry around (e.g. items for sale)* > Tag dala, Akl daɬah *carry*, Hil dalah, Kin, S-L, Bik darah, Tsg da:h, Mam dadh-ən *carry*, Itb rarah *load*, Ib jajaʔ, Ml jaja *peddle*

(27) PMP *ZuRúq *sap, syrup* > Tag dugoʔ, Akl, Bik, Ceb duguʔ, Abr, Mong, Pal, Soc, Tsg duguʔ, Gia duluʔ, Gor duhu *blood*; Ml juruh *syrup*, NJv du-doh *sap*, To hu-huʔ-a *liquid*

See also reflexes of PHF *ZaRa:miH *rice-stalk, straw* and *za:wah *millet, Setaria italica* (Zorc 1982:122) and of PHN *Zu:Ru *corner* (ibid:131).

3. THE REFLEXES OF *D AND *d

Having illustrated the disparity to be found amongst Ph languages with regard to the phonemes discussed above, we can turn to the assumed distinctions between *d and *D. Dyen (1947) was correct in assigning certain instances of Tagalog initial l to a voiced apical due to analogy (with a morphophonemic variation), but such a change has occurred within the recent history of Tag, and does not attest to any distinction earlier than PCP (pre-Tagalic) times. Similar variations can be found throughout the archipelago.

It is generally conceded that FINAL -d as found in most Philippine languages gives no evidence for either a PPH or PAN distinction:

(28) PHF *qa:lad *fence* > Tag, Ceb, S-L, Bon, Ifg, Ilk ʔa:lad, Msk, Abr, WBM ʔalad, Tsg ʔa:d, Itb ʔaxad, Mar, Kel alad, Puy Haraz

(29) PAN *qa:ñud *drift with current* > Tag, Akl, Bon ʔa:nod, Bik, Ceb, Han, Ilk, Itg, Knk ʔa:nud, Sbl ʔa:nul, Kpm ʔanyud, Tbl konul, Ml hanyut, Pai qaLudj

(30) PHF *Sa(n)téD *convey* > Tag hatid, Akl, Hil, Ceb, Bik hatud, Tsg hatud *bring*, Cas ʔatəd, Isi mang-atod, Ilk, Itg, Knk ʔi-təd, Png ʔi-tər *give*, WBM hatəd *deliver*, Ml hantar, NJv atər *conduct*, Pai satjəz *return*

(31) PHN *ba:yaD *pay* > Tag, Akl, Ceb, Hil, Han, S-L, Bon, Ilk, Itg, Ifg, Sbl ba:yad, Tsg, Abr, Btk, Kal, WBM, Tir bayad, Ml bayar

In INITIAL POSITION the regular reflex is also d-, irrespective of the PAN source:

(32) PAN *daqíS *forehead* > Akl, Blk, Kin dahiʔ, Ml dahi, Bjr dahiʔ, To laʔe, Pai djaqis, Bun daxis [Note: OJv rahi, NJv Dai]

(33) PMP *Da:hun *leaf* > Tag da:hon, Akl, Bik, Hil, Ceb, Kin, S-L da:hun, Soc daon, Mar raʔon, Tsg, WBM dahun, Han da:wun, Kal daun, Tbl doʔun, Ibg, Mlw don, Ml, Ib daun, OJv rwan, NJv rOn-DOn, To, Sm lau

(34) PAN *DaNúm *drinking water* > Bon danom, Abr, Btk, Han, Ilk, Ibg, Ifg, Png, Kpm danum, Bol, Itb ranum, Sbl lanum, Sar saLumuʔ, Tso chumu, Pai zaLum, Sai ralum, Paz dalum; To lanu *rinse in fresh water*

(35) PMP *DapDap *[tree] Erythrina indica* > Tag, Bik, Akl, Ceb, Hil, S-L, Kpm, Ilk, Png dapdap, Mong dodap, TB dapdap, NJv DaDap, Ml, NgD dadap, Fj, Saa rara; Sm lala [name of a growth]

(36) PMP *DapúR *hearth, kitchen* > Tag dapog, Akl, Bik, Hil, Ceb, Mlw dapug, Ibg dafug, Man dapuL, Yog da-rafug-an, Ivt rapuy-an, OJv Dapur, Ml dapor, Sm mangaa-lafu [Tsg, Mgd dapul-an (6b < Ml)]

(37) PHF *dʒi:laq *lick* > Tag, Bik, Akl, Ceb, Hil, S-L, Han, Kpm, Sbl di:laʔ, Bon, Ilk, Knk di:la, Ib dilah, Ml lidah *tongue*; Sar s/um/a-silaə, Pai dj/m/ilaq *lick*

However, INITIAL d- in the history of *some* forms has come to be INTERVOCALIC due to prefixation (e.g. *ma-danaw *lake people*) or frequent positioning after a vowel-final marker (e.g. *sa danaw *by the lake*); by analogy, a doublet or new stem has been formed:

(38) PAN *da:naw *lake, pond* > Tag, Bik, Ilk da:naw, Akl, Hil, Msk danaw *lake*, TB danO *fish-pond*, Mlg ranu *water*, Ml, NgD danaw, NJv ranu, Fj ndrano, Puy danaw *pond*, Sm lano *lake*, Pai djanaw *lake without outlets* [Tag la:naw (4), Tir ranaw, Mar ranao, Tbl lanaw (2), WBM ranəw (6a < Mar)]

(39) PPH *da:wis *sharp, pointed* > Ilk da:wis *point (of land)*, na-da:wis *pointed*, Mar daois *sharp point* [Tag la:wis *sickle-like cutter*, Ceb lawis *point of low land; jut out (1/2)*, Ilk ra:wis *pointed* (4); PBS *ta-da:wis *pointed, sharp* (1-Zorc 1977:253)]

Regular INTERVOCALIC reflexes are illustrated by:

(40) PHN *Da-Da:Ra *maiden, young girl* > Tag, Hil, Ceb, Kpm, Sbl da-la:ga, Akl da-ła:ga, Kin, S-L, Bik, Han da-ra:ga, Kal da-ralaʔ, TB, Ml dara *maiden, virgin*, OJv rara:, Dara, NJv rO-rO, lO-rO *maid*

(41) PPH *ha:daw *remove* > Tag halaw *abstract; select(ed)*, S-L ha:raw *forage for food in the kitchen*, Ilk ?a:daw *take out*, Itb haraw-an *remove fuel from fire*

(42) PMP *ha-Di:Ri *housepost, beam* > Tag, Akl, Ceb hali:gi, Bik hari:gi, Kal arili, Ilk ?adi:gi, Saa lili; Ib diri *erect*

(43) PAN *quDáng *crustacean* > Tag, Ceb, Hil, Kpm ?ulang, Akl ?uɬang, Kin, Bik, Han, Png ?urang, Mar odang, Ilk, Itg ?udang, TB udang, OJv, Snd hurang, NJv uDang, urang *shrimp*, Ml hudang, Pai quzang *crustacean*, Fj ura *crab* [WBM ?uzazang (2-reduplication)]

Doubleting may be found in the following evidence:

(44) PCP *a:dam *wise, intelligent* > Tag ?a:lam, ?alam, Kin, S-L, Bik ?a:ram, Akl ?a:ɬam *wise*, kina-?adm-an *wisdom* [Han ?a:lam (6a)] *as opposed to* PSP *andam *wary, ready* > Tag, Akl, WBM ?andam

(45) PPH *ha-da:ləm *deep* > Tag ma-la:lim, Bik ha-ra:rum, Ceb lalum, WBM mə-zaləm, Kpm ma-la:lam, Bon, Ilk ?a-da:ləm, Itb ma-ha-raxəm (with regular intervocalic reflexes) *as opposed to* Akl ma-da:ɬum, Hil da:lum, Mas ha-dalum, Kal a-daləm (with *d irregularly preserved at the morpheme boundary) [cf. PAN *Daləm *inside*]

Such disparate shifts are not uncommon, contrast Tag ma-da:mi *many* (with *d preserved), ma-ru:nong *wise* (with *d > r), and ma-la:yu? *far* (with *d > l). Each of these probably descends from a different time-period in the development of modern Tagalog, the first being the most recent and the third the most remote. However, *none offers ineluctible evidence for a different pre-Tag or PAN phoneme.*

4. CONCLUSIONS

My concern here has been with the overall witness of Philippine languages, especially Tagalog which is used so extensively in the literature. If additionally we bear in mind Dahl's analysis of Javanese and Madurese (1976:66ff) supporting a hypothesis of phoneme split under Indic influence, much of the evidence for PAN distinctions from the Western Austronesian branch melts away. Unfortunately, Dahl did not challenge the Tagalog data and in fact went to great pains to explain it on occasion (ibid:65,80). In the evaluation of critical evidence, Dempwolff took Tagalog to be *Testsprache*, whereas Dyen (1947) did so for Javanese. Yet there are several instances where the Indonesian and the Formosan evidence are in conflict:

(46) PAN *DamaR *torch, light* > Tag damag *all night*, Iri da:mag *burn*, Kla ma-dama *afternoon*, To ama *to fish by torch light*, Ami lamal *fire*, Ml damar *resin, torch*, Fu lama; CONTRAST OJv, NJv damar (< *d) *[resin]* and Pai zama-n (< *D) *torch*

(47) PAN *da:Raq *blood* > Ach, Ml darah, Fj ndra: *blood, sap*, Kan cará?ə, Sar cara?ə, Puy daraH, Sed dala? *blood*; CONTRAST OJv ra:h, NJv rah (< *D) *blood* and Pai djaq (< *d) *menstrual flow*

(48) PAN *Dəlés *bowstring* > Tag diIis, Bik, S-L dulus *guitar string*, Png dələs, Isg dallat, Saa i-lolo, Kan cəə- *bowstring*, Ars roro-ʔi *string a bow*; CONTRAST OJv dələs (< *d) and Pai zələt (< *D)

(49) PAN *du:RiH *thorn* > Akl du:gih, Ib duriʔ, TB, Ml duri; CONTRAST Jv ri (< *D) and Pai djui (< *d)

(50) PAN *laHúD *sea(wards)* > Akl ɬawud *open sea*, Mad laOʔ *south*, Fj lau [name of Windward Islands], Kan ʔama-laúcu *downhill*, Tso mua-rovcu *blow downhill*, moh-rovcu *flow downstream*, RukTn aúDu, Thao mana-rawθ *downhill*, Sai hau-ähör *down-stream*, Paz rahut *west*; CONTRAST OJv lod *sea*, NJv iwaʔ iod-an *whale* (< *d), OJv lor, NJv lOr *north* (< *D) and Pai lauz, lauD (< *D) *seaward*

I would generally agree with Harvey (1982) that if there is any justification for a distinction amongst voiced apicals at the PAN level, it will come from Formosan languages - but only when we are in a position to evaluate the influ-ences of these languages on one another and the historical/analogical develop-ments within each language. I would also call on fellow Austronesianists for a critical and thorough reassessment of evidence supporting *d, *D, *dȝ, *z, and *Z from the Oceanic and Western Austronesian witnesses. Wolff (1974 and 1982) and Dahl (1982) have already made important contributions.

My overall conclusion is that, with regard to these apicals, Philippine lan-guages are neither *test* nor *criterion* languages, but only serve as *witnesses* (see Zorc 1982:fn 5 for definitions and examples of these terms).

ABBREVIATIONS

Abr	Aborlan Tagbanwa	Fu	Futuna
Ach	Acehnese	Gia	Giangan = Bagobo Bilic
Akl	Aklanon-Bisayan	Gor	Gorontalo
Ami	Ami = Amis	Han	Hanuno'o
Ars	Arosi	Hil	Hiligaynon-Bisayan
Ata	Ata-Manobo	Ib	Iban = Sea Dayak
Aty	Atayal	Ibg	Ibanag
Bik	Bikol (Naga dialect)	Ibl	Inibaloi
Bjr	Banjarese	Ifg	Ifugao dialects
Bkd	Binukid-Manobo	Ilk	Ilokano
Blk	Bulalakaw-Bisayan	Iln	Ilianen-Manobo
BlK	Koronadal-Bilaan	Ilt	Ilongot
BlS	Sarangani-Bilaan	Iri	Iriga-Bikol
Bol	Bolinao-Sambal	Isg	Isneg
Bon	Bontok	Isi	Isinai
Bot	Botolan-Sambal	Itb	Itbayaten
Btk	Palawan Batak	Itg	Itneg
Bug	Buginese	Itw	Itawis
Bun	Bunun	Ivt	Ivatan
But	Butuanon-Bisayan	Kal	Kalamian Tagbanwa
Cas	Casiguran-Dumagat	Kan	Kanakanabu
Ceb	Cebuano	KB	Karo Batak
CPh	Central Philippine	K-C	Kalamansig-Cotabato Manobo
Dbw	Dibabawon-Manobo	Kdz	Kadazan
Fj	Fijian	Kel	Bario Kelabit

Kin	Kinaray'a-Bisayan		Puy	Puyuma
Kla	Kalinga		PWI	Proto-West-Indonesian
Kly	Keley'i' Kallahan		Rom	Romblon-Bisayan
Knk	Kankanay		RukMg	Rukai-Maga dialect
Kpm	Kapampangan		RukTn	Rukai-Tona dialect
Mad	Madurese		Saa	Sa'a
Mam	Mamanwa		Sai	Saisiyat
Man	Manabo Itneg		San	Sangirese
Mar	Maranao		Sar	Saaroa
Mas	Masbate-Bisayan		Sbl	Sambal
Mdr	Mandar		Sed	Sedeq
Mer	Merina-Malagasy		Sib	Sibàle-Bisayan
Mgd	Magindanao		S-L	Samar-Leyte = Waray
Ml	Malay		SLz	Southern Luzon
Mlg	Malagasy		Sm	Samoan
Mlw	Malaweg		Sml	Sama = Samal
Mong	Bolaang Mongondow		Snd	Sundanese
Msk	Mansaka		Soc	Siocon-Subanon
NgD	Ngaju Dayak		Sor	Sorsogon-Bisayan
NJv	New Javanese		SPh	Southern Philippine
NPh	Northern Philippine		SPl	Southern Palawan
Odg	Odionganon-Bisayan		Sur	Surigaonon-Bisayan
OJv	Old Javanese		Tag	Tagalog
Pai	Paiwan		Tas	Tasaday-Manobo
Pal	Palawano		TB	Toba-Batak
PAN	Proto-Austronesian		Tba	Tagabawa-Manobo
Paz	Pazeh		Tbl	Tboli = Tagabili
PBS	Proto-Bisayan		Tig	Tigwa-Manobo
PCP	Proto-Central Philippine		Tir	Tiruray
Ph	Philippine		To	Tongan
PHF	Proto-Hesperonesian-Formosan		Tsg	Tausug
PHN	Proto-Hesperonesian		Tso	Tsou
PMJ	Proto-Malayo-Javanic		UAN	Uraustronesisch (Dempwolff)
PMP	Proto-Malayo-Polynesian		WBM	Western Bukidnon Manobo
Png	Pangasinan		WBs	West Bisayan
PNP	Proto-North Philippine		WI	West Indonesian
PPH	Proto-Philippine		Yog	Yogad

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