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The Oceanic languages (review)

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Book Reviews

John Lynch, Malcolm Ross, and Terry Crowley. 2002. *The Oceanic languages.* Curzon Language Family Series. Richmond, Surrey: Curzon Press. ISBN 0-7007-1128-7. xvii + 924 pp. £180.00.

According to the listing at the end of this book there are 466 Oceanic languages, making this the largest well-defined subgroup in the Austronesian (AN) language family short of Malayo-Polynesian. Well-known earlier surveys of the Oceanic branch of AN include Codrington (1885) and Ray (1926), both of which were restricted to central and southern Melanesia (Solomons, Santa Cruz, Vanuatu, New Caledonia and the Loyalties), and a few extraneous languages (Rotuman, Duke of York in Codrington). The present volume (TOL) is the first attempt to survey the entire Oceanic subgroup, including areas covered in earlier surveys together with western Melanesia, Micronesia, and Polynesia. It differs from Lynch (1998), for example, in aiming at massive documentation for areal specialists rather than an introduction for the general reader.

Following a preface and lists of abbreviations and illustrations, the volume is divided into five chapters: 1. The Oceanic languages, 2. Sociolinguistic background, 3. Typological overview, 4. Proto Oceanic, 5. Internal subgrouping. These are followed in turn by 43 language sketches that range from nine pages (Sakao) to 33 pages (Takia), a listing of all known Oceanic languages by subgroup, a list of references, and an index to chapters 1-5. While the authorship of the sketches is indicated, that of chapters 1–5 is not. Authorship of the sketches is as follows: written by Ross (Mussau, Takia, Bali-Vitu, Siar, Taiof, Sisiqa), adapted by Ross (Kele, Kairiru, Jabêm, ʻAlaʻala, Kaulong), adapted by Lynch and Ross (Banoni), by Joyce Sterner and Ross (Sobei), by Mike Anderson and Ross (Sudest), written by Crowley (Gela, Mwotlap, Vinmavis, Sye), adapted by Crowley (Sakao, Port Sandwich, SE Ambrym), abstracted by Crowley (Raga), written by Lynch (Anejom̃), abstracted by Lynch (Cèmuhî, Xârâcùù, Iaai, Ulithian, Puluwatese, Marquesan), adapted by Lynch and Rex Horoi (Arosi). Assuming equal contributions to chapters 1–5, Ross appears to have contributed approximately 280 pages, Lynch about 158, and Crowley about 148. Twelve other sketches were written or adapted by other contributors, making this volume partly coauthored and partly coedited.

TOL is no ordinary book. It clearly will take its place as the successor to Codrington and Ray, and in every respect it reflects the tremendous advances in factual knowledge and theory that have taken place in the more than three-quarters of a century since the last of these appeared. Chapter 1 (1–22) surveys the AN language family, the geography and demography of Oceania, language contact, the history of research on Oceanic languages, and language names. This is a useful introduction, marred only by a higher than expected number of typos in a volume that generally has been carefully proofed: p. 6, 'Mao 1.3' for 'Map 1.3', 'Polynesian Trangle' for 'Polynesian Triangle', and p. 19, Spanish *koopwure* 'corrugated iron', Trukese *cobre* 'copper', where the source and borrowing languages have been reversed.

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Chapter 2 (23–33) discusses some of the major social parameters of language use in Oceania. One idiosyncratic feature that appears here and later in the book derives from Crowley's (1998) preference for "copying" over the traditional term "borrowing." Given the embedding of the borrowing concept in such terms as "borrowing," "loanword," "loanblend," "loanshift," "loan translation," and "lending language," and the longstanding use of the term "borrowing" in cultural anthropology for cultural "copying," the insistence on terminological novelty in this instance probably will strike some readers as quirky. This chapter concludes with a curious observation: "those areas where Melanesian vernaculars appear to be under greatest threat are those [that] have non-Austronesian speaking populations." It is suggested that this difference is due to size of language community: non-AN speaking groups tend to be smaller, and smaller communities tend to lose their linguistic and cultural integrity more easily than larger communities. However, unless there is evidence that such small communities have remained roughly the same size for generations (and hence that size alone is not the crucial determinant in language survival) such a statement flirts with circularity: are non-AN speaking groups in the Pacific disappearing more rapidly because they are small, or are they small because they are disappearing more rapidly? Again, this chapter is marred by a carelessness in editing that generally is not apparent in the language sketches, including at least four discrepancies in the citation of references, and the omission of a word in "By and large, these nineteenth missionaries operated on the principle…" (p. 30, sect. 5).

Chapter 3 (34–53) sketches the typology of Oceanic languages, with sections on phonology, pronouns, nouns, articles and demonstratives, numerals and number-marking, adjectives and nominal modifiers, basic noun phrase structure, possession, relative clauses, verbal derivation and inflection, basic verb phrase structure, verb serialization, aspects of clause structure, and a few brief comments on imperative and interrogative sentences and complex sentences. In general this is a useful discussion of a very large topic. Because it essentially attempts to survey 466 languages in just 20 pages, some omissions should not be surprising, and in certain cases it is possible that these are deliberate. The discussion naturally focuses on phenomena that are reasonably well-understood, and consequently tends to avoid mentioning those that are not. As a result, some genuinely fascinating and puzzling features of these languages are not mentioned. On page 37, for example, it is stated that "nouns are either personal, local or common." Local nouns include institutionalized place names, and familiar terms such as 'home', '(own) village', '(own) garden', 'bush', 'beach', and the like. As noted in Blust (1989) there is a tendency for certain locative nouns to occur in their citation forms with an attached locative marker, as in Lindrou (Admiralty islands) *lokey* 'forest' < *lo-* 'LOC' + *key* 'wood, tree', Bwaidoga (SE New Guinea) *uame/uamia* 'in the forest' (no separate term known for 'forest'), Puluwatese (Micronesia) *leewal* 'in-the-forest' (only gloss given by Elbert 1972), Loniu (Admiralty islands) *lokoman* 'men's house' < *lo-* 'LOC' + *kaman* 'male', or Mokilese (Micronesia) *nehn loangge* 'Heaven' (= *nehn* 'in, on, inside' + *loang* 'sky'). Although this phenomenon is poorly understood, it is widespread in AN languages as a whole, and probably should be mentioned as a recurrent feature of the typology of locative nouns in Oceanic. A second area of typology deserving of more attention is imperatives, which are described in a single sentence (52): "An imperative verb phrase often has

no marking at all, or only a preverbal subject morpheme." While this is true of many Oceanic languages, it is noteworthy that the *-ia* imperatives of such widely separated languages as Wuvulu-Aua and Hawaiian are not mentioned at all: W-A *inu* 'drink' : *inu-mia* 'drink it!', *mdda* 'see' : *mdda-ia* 'look at it!', *wakei* 'count' : *wakei-nia* 'count it!'; Hawaiian *inu* 'drink' : *inu-mia* 'passive/imperative of *inu*', *'ike* 'see' : *'ike-a* 'passive/imperative of *'ike*', *kani* 'to sound, cry out' : *kani-hia* 'passive/imperative of *kani*'. While the imperative use of *-ia may be historically secondary, this has by no means been decided (note the parallel use of "passives" and imperatives marked by *-en in non-Oceanic AN languages), and some discussion seems called for.

Chapter 4 (54–91), which draws heavily on the work of Ross, is in many ways the most impressive and original part of TOL. In it the grammatical system of Proto-Oceanic is derived from that of Proto–Malayo-Polynesian through a series of proposed innovations that involve both the reduction of earlier morphological paradigms, and the functional reinterpretation of retained affixes. The major steps posited are: 1. PMP aspect/mood inflection was lost, leading to increased use of auxiliaries and of pronouns in front of the dependent verb; 2. pronouns were procliticized on dependent verbs even without auxiliaries, and the dependent verb was reanalyzed as the main verb; 3. because of other changes, both nominative and genitive pronouns came to be preverbal, the nominatives with actives and intransitives, and the genitives with passives; 4. at some point, the PMP direct passive dependent marked by *-a* apparently lost its suffix, creating homophony with the active, and the direct passive function was then taken over by the "local passive *-i." Following changes that affected the PMP benefactive/instrumental markers, the active voice disappeared, and with it the PMP voice system, leaving the unaffixed base to serve as the intransitive, and what is called "the erstwhile passive" *-i as the default transitive verb marker. As a result of this derivation, the novel conclusion is reached that POC probably was verb-initial rather than SVO as is commonly thought. This attempt to reconstruct syntax through explicit reference to grammatical morphemes and their functions is a welcome change from some earlier approaches that were based entirely on distributional patterns unanchored in cognate morphology. The transition from PMP to POC verb systems clearly involved a number of steps, and it is only to be expected that some aspects of the schema proposed in this chapter will be revised through future research. One that stands out as particularly questionable is the derivation of the POC "close transitive" suffix *-i (Pawley 1973) from the PAN/PMP imperative marker of similar shape rather than through "capture" of the generic locative marker *i as suggested in Starosta, Pawley, and Reid (1982).

While this chapter contains many original and carefully worked-out ideas, it also includes a number of statements that I find questionable or even seriously misleading. For example, there is reference (56) to a "Formosan Linkage (more than one subgroup?)" that essentially equates the subgrouping relationships of the Formosan languages with those of such diffuse groupings as the "Western Oceanic Linkage" or the "Southern Oceanic Linkage" in the Pacific. Although there clearly has been borrowing between various of the aboriginal languages of Taiwan—some of it traceable to specific modern sources, as with Bunun loans in Thao or Puyuma loans in Paiwan—the portrayal of this highly diverse collection of languages as a "linkage" (the historical

continuation of an ancient dialect chain) is not supported by any published evidence known to the writer, nor by a pattern of overlapping innovations in the modern languages. In the same subgrouping diagram the name "South Halmahera-West New Guinea" is replaced by "South Halmahera-Irian Jaya" on the grounds that "political changes in the region have resulted in the term 'West New Guinea' being completely replaced by 'Irian Jaya'." This emendation is ironic: "West New Guinea" was chosen as a neutral geographical term for the old "Nederlandsch Nieuw-Guinea" and its post-independence replacement "Irian Jaya" (Blust 1978). It consequently never had any political connotations, whereas "Irian Jaya" is now regarded by many Papuan peoples of the area as an Indonesian imposition, and has therefore been replaced even in the recent linguistic literature by "Papua" or "West Papua" (Donohue 2000). A few sentences later it is stated that "the Malayo-Polynesian subgroup was proposed by Dahl (1973)," but in fact Dahl (1973:128) states, "We may therefore reckon with three main subgroups: Formosan, Eastern Austronesian and Western Austronesian." Although he suggests in passing that "Formosan" separated from the other two while they were still united, he immediately qualifies this statement and then refers again to "the three main groups," implying that he was not fully committed to the Malayo-Polynesian hypothesis. Other errors or questionable interpretations that can be noted only briefly are: (1) it is stated (67) that "POc *e is derived exclusively from PMP word-final *-ay," but this ignores POc *qenop 'lie down', *keRa(nŋ)) 'hawksbill turtle', *kese 'keep to oneself, be different; alone', *keli 'to dig', and so forth, where POc *e clearly has other sources (Blust 1983/84); (2) the suggestion (72) "that the numerals 6–9 were dropping out of use among some early Oceanic speakers" is difficult to reconcile with reflexes of PMP forms for at least 2–10 in languages reaching from Mussau through the southeast Solomons to Micronesia and Polynesia. It is not likely to be accidental that the densest concentration of AN languages with quinary or imperfect decimal systems is found where contact with Papuan languages has been most intense (western Melanesia), a point that will be taken up in greater detail below; (3) the POc reconstruction *m^{w}aqane 'man' (74) fails to explain the form of Motu *maruane* 'man, male' and its agreement with PMP *maRuqanay; (4) the proposal (88) that Buli, Numfor *ba*, Wandamen *va* are cognate with POc *b^{w}ali 'negative marker (probably 'not be so')' is unconvincing in view of the need to recognize phonological irregularities in all three of these languages. Finally (5), the widespread use of reduplicated intransitive verbs in Oceanic languages is almost certainly a product of drift, but this hardly emerges clearly from statements like "The relationship represented by *toto(k)/*toki was inherited from PMP," because the POc forms were most likely *totok : *totok-i, with subsequent reduction of the suffixed form by haplology under canonical pressure exerted by the predominant disyllabism of PAN, PMP, and POc lexical bases (Blust 1977).

Chapter 5 (92–120) begins with a discussion of subgrouping models, and then proposes higher-level subgroups within Oceanic, an undertaking that is completed in the Listing of Oceanic Languages by Subgroup (877–90). The Oceanic group is divided into five coordinate branches: 1. The St. Matthias Family (Mussau and Tench/Tenis), 2. Yapese, 3. The Admiralties Family (about 30 languages of the Admiralty islands), 4. The Western Oceanic Linkage, and 5. The Central-Eastern Oceanic Grouping. The first three

of these are relatively noncontroversial, but 4 and 5, comprising the great majority of Oceanic languages, are more problematic. The Western Oceanic Linkage is, in the terms of Ross (1997), a group that is "innovation-linked" rather than "innovation-defined," meaning that it is not defined by a collection of uniquely shared innovations. Rather, these languages are linked by a network of overlapping innovations, suggesting that they evolved from an earlier dialect chain. Central-Eastern Oceanic (CEOc), based on a proposal first advanced by Lynch and Tryon (1985), is so problematic that even its status as a family or linkage is avoided through use of the neutral (and undefined) term "group." Space does not permit extended discussion of subgrouping issues here, but the highly distinctive merger of PMP *j, *s, and *z in all Oceanic languages outside the Admiralties Family does strongly suggest that the Oceanic languages divide into just two primary branches: 1. The Admiralties Family, and 2. the rest (Blust 1998).[1]

The claim that conservative languages tend to be found closest to the primary center of dispersal (94) has been made elsewhere (Blust 1991, Ross 1991), and is supported by an intriguing body of phonological evidence. To make a blanket claim of this kind covering phonology, morphology, lexicon, semantics, and syntax, however, is likely to be seriously misleading. This is particularly true in the Oceanic context, where contact with Papuan languages in western Melanesia probably has played a major part in depressing cognate densities, and in various types of structural change. Here, in the region where POc probably was spoken, radical innovations such as SOV word order, quinary numeral systems, and very low cognate densities are common, while Polynesian languages, which are spoken farthest from the likely POc homeland, are in some ways (although certainly not all) among the most conservative languages in the Oceanic group. Similarly, the claim (110) that Bugotu is "the most conservative language" in the Southeast Solomonic Family may be true of phonology, but not of lexicon, because Gela retains a considerably higher percentage of PMP basic vocabulary than Bugotu. The statement (99) that "POc *R … became Proto Admiralties *y before high vowels and was deleted elsewhere" is not supported by examples such as POc *na Rumaq > PAdm *na uma 'house', or POc *na raRaq > PAdm *na raya 'blood'. One of the most interesting claims made in this chapter (first advanced by Ross 1988:382–85) holds that the sharp linguistic boundary between languages of the western Solomons and those farther east is a product of secondary expansion (97–98). In this hypothesis, CEOc languages once occupied a larger territory, including New Britain, New Ireland, and the western end of the Solomons chain, but a major eastward movement of Western Oceanic speakers led to language replacement in this area. If this were true, we might expect to find double reflexes of some forms in these languages indicating a CEOc substrate, or even the occasional CEOc holdout. However, to my knowledge this has not been demonstrated. Rather, where clear CEOc loanwords are found in languages of the western Solomons, they indicate borrowing from languages of the Southeast Solomonic Family, and so derive from a later era of contact.

Space will not permit me to review all 43 language sketches, but a few samples should convey a general impression of them. Kele (123–47), which describes a lan-

1. There are some suggestive indications that Yapese and the Admiralties Family may have undergone a period of shared development after the breakup of POc, but these remain highly tentative (Ross 1996).

guage spoken in the hilly interior of Manus in the Admiralty islands, is adapted by Ross from an earlier unpublished sketch grammar written by the Australian physician and amateur linguist W. E. Smythe in the late 1950s. This sketch provides a thorough profile of the main features of Kele phonology and grammar in a very compact form, including a careful reexamination of Smythe's orthography, outlines of the pronoun system, nominal derivation, articles and demonstratives, an account of the system of numerals, which includes at least 36 numeral classifiers, basic noun phrase structure, possessive marking, relative clauses, a general account of verbs and verb phrases, clause structure, imperative and interrogative sentences, and complex sentences (a common descriptive template is used in all 43 sketches). At least to those not familiar with relativization in a wide sample of the world's languages, the structure of Kele relative clauses may seem odd. In general, as Ross says (135) "A relative clause follows its head noun with no special marking." However, "the anaphor /eti/ … may be used to replace a relativised personal noun in the relative clause, or a common noun if the latter is oblique." This results in sentences such as the following, in which a relative clause may be difficult to discern:

i	i-kuni	wa,	i-siŋen	purumata-n	i-to	eti
3SG	3SG-take	water	3SG-wash	face-3SG	3SG-stand	ANAPH

'He fetched water and washed his face with it.'

It would be hard to include more information in the space of 25 pages than Ross does in this sketch. Again, however, it is unfortunate that the text is marred by typographical errors. Though not common, these are sometimes distracting, as with [ᵐd] for intended [ⁿd] (125), and the recurrent substitution of β for 'I', producing sequences such as "β have no proper explanation for any of these…", and "β infer that both are compounds" (125), or 'β hit him then sickness overtook him' as the gloss to one Kele sentence (146). While the first type of error clearly results from an incomplete copy, paste, and modify operation on the computer, the source of the second error is more obscure.

Kokota (498–524), written by Bill Palmer, is a detailed sketch of a typologically unusual Oceanic language spoken in the central portion of Santa Isabel island in the Solomons. The phoneme inventory of this language includes six fricatives, far beyond the norm of two or three typical of most languages, as well as contrastively voiceless nasals and liquids. The numeral system, while basically decimal (1: *kaike,* 2: *palu,* 3: *tilo,* 4: *fnoto,* 5: *ɣaha,* 6: *nablo,* 7: *fitu,* 8: *hana,* 9: *nheva,* 10: *naboto*), contains only one clear reflex of the POc numerals (*fitu* < POc *pitu). Most strikingly, the higher numerals from 20 to 60 have been constructed on the basis of alternating decimal and vigesimal principles, the former occurring with odd multiples of ten and the latter with even multiples, though this has been obscured by historical change: *varedake* '20', *tulufulu* '30' (< POc *tolupuluq = 3 × 10), *palu-tutu* '40' (= 2 × *tutu*, a morpheme that does not occur earlier in the numeral system, but with the implied value '20'), *limafulu* (< POc *limapuluq = 5 × 10), *tilo-tutu* '60' (= 3 × *tutu*). The numerals 70–90 are decimal-based multiples of *salai*, a morpheme with the implied value '10' that does not occur earlier: *fitu-salai* '70', *hana-salai* '80', *nheva-salai* '90'. There are separate morphemes for '100' (*ɣobi*) and '1000' (*toga*). This must surely rank as one of the most bizarre

numeral systems attested for an Oceanic language, and naturally raises questions about possible past contact influences.

Mwotlap (587–98), written by Terry Crowley, is a brief sketch of a language spoken in the Banks islands of northern Vanuatu. Like its better-known neighbor Mota, Mwotlap has two suction stops *ᵏpʷ* and *ᵑmʷ* "beginning with a distinct velar onset and ending with a rounded labial release." However, Crowley's claim (587) that the release for the stop is imploded is questionable, given the rarity of voiceless implosives (Maddieson 1984:115). Mwotlap syncopates a vowel between consonants that are themselves flanked by vowels (/VC__CV) if the consonants are different (*n*V-*hinaɣ* > *ni-hnaɣ* 'yam', *n*V-*tamʷan* > *na-tmʷan* 'man'), but not if they are identical (*n*V-*tutu* > *nu-tutu* 'chicken', *n*V-*momo* > *no-momo* 'fish'). While this is sure to gladden the hearts of those who might still believe in a purported language universal called "antigemination" (McCarthy 1986), there is ample evidence that the reverse of antigemination, namely syncope that operates *only* between identical consonants is far more widespread in AN languages, is motivated canonically, and fundamentally undermines the claim that avoidance of geminates through blocking syncope is somehow preferred (Blust n.d. a). The use of the term "lexically conditioned" to describe the unpredictable appearance of different affixal allomorphs (590) is misleading, and should be replaced with "unconditioned." The Mwotlap numerals 1–10 are: 1. *vitway,* 2. *voyo,* 3. *vetel,* 4. *vevɛt,* 5. *tevelem,* 6. *lɛvɛtɛ,* 7. *liviyo,* 8. *lɛvɛtel,* 9. *lɛvɛvɛt,* 10. *sɔŋwul*. Despite some variation in shape, it is clear that 6–9 contain the same historical morpheme, which must have meant 'five', but 1–4 cannot easily be analyzed in this way, and so constitute a "run" of successive numerals with the same segmental onset in the sense used by Matisoff (1997). Such runs are rare in AN languages, and where they occur hardly ever exceed three forms.[2] Finally, like many Oceanic languages, Mwotlap makes use of possessive classifiers, and Crowley lists four of these: *naɣa-* 'food', *nama-* 'drink', *namu-* 'something planted, weapons, things used for writing or drawing, unimportant things', *(no)no-* 'general'. While the first two of these reflect POC *ka- and *ma- (with fused article), the relationship of the second two is perplexing. A "general" category might be expected to be a catch-all for anything that is not semantically coherent, but this is already the case for *namu-*, and the reader is left wishing for more information.

This observation brings up an issue that is recurrent in TOL. Crowley bases his sketch on an interview with one speaker of Mwotlap, and although he mentions a 12-page sketch in Codrington (1885) as "the main published source on Mwotlap," he cites no other source, nor does he indicate that he sought assistance from any scholar working on the language. This is surprising, because the year before TOL went to press François (2001) defended a doctoral dissertation of over 1,000 pages on Mwotlap at the Sorbonne. Given the time necessary to write a dissertation of this length and to col-

2. Some apparent exceptions such as Vinmavis 1. *sefax*, 2. *iru*, 3. *itl*, 4. *ifah*, 5. *ilim*, 6. *nsouh*, 7. *nsuru*, 8. *nsutl*, 9. *nsafah*, 10. *naŋafil* probably contain prefixes *i-* 'numeral marker' and *nsV-* 'five' or 'add', which are fossilized or semifossilized. By far the most striking example of this phenomenon in an AN language appears in Buma (Teanu), spoken on Vanikoro island in the Santa Cruz archipelago, where a run of eight is found: 1. *iune*, 2. *tilu*, 3. *tete*, 4. *teva*, 5. *tili*, 6. *tuo*, 7. *tibi*, 8. *tua*, 9. *tidi*, 10. *saŋaulu/uluko*. As noted by Lincoln (1978:936), the *t*-initial numerals in this language appear to contain a fossilized (possibly borrowed) article *te or *ti: *tilu* < *te lua, *tete* < *te-tolu, *teva* < *te-fati, *tili* < *te lima, etc.

lect the data before the writing could even begin, it is obvious that François had been actively involved in the study of this language at the time Crowley wrote his sketch. Why he was not invited to write the sketch, or apparently even consulted is puzzling. Although François has (so far) remained politely silent about this matter, Walsh (2005) has protested that the sketch of Raga in TOL contains a number of errors that could have been avoided had he been consulted prior to publication. As indicated earlier, twelve of the language sketches in this volume were written solely by contributors other than the editors, and several others were coauthored in conjunction with one of the three editors. This profile suggests that an attempt was made to contact individuals who were actively working on one or more Oceanic languages. However, the number of well-known Oceanic linguists who are not represented in TOL is almost as great as the number included, and one must wonder about the basis for selection.

Although chapters 3 and 4 are intended to extract a number of theoretical and historical generalizations from the data in the sketches (as well as from languages not represented in TOL), some issues of both types were clearly overlooked. It is widely assumed, for example, that the process of reduplication is formally restricted in certain ways. One of the best known of these restrictions holds that the reduplicant must be an "authentic unit of prosody" (McCarthy and Prince 1995). There are many known counterexamples to this claim, although for various reasons few of these have been published (Blust n.d. b). Evidently in an effort to draw attention to this discrepancy between what is known and what has been published, Blevins (2003) reiterated the point that reduplicants generally are prosodic units, but sometimes are not. In illustration, she drew attention to a pattern of reduplication shared by Bugotu and Cheke Holo of Santa Isabel island in the central Solomons, where CVCV or CVCCV bases are reduplicated by copying only the initial consonant and the vowels, as in the Cheke Holo examples *la.pi* : *lai.la.pi* 'lick or lap with the tongue', *de.plu* : *deu.de.plu* 'flame up', or *ce.ke* : *cee.ce.ke* 'to talk; wording'. Data from at least two of the sketches in TOL show a somewhat different reduplication pattern that eliminates the second consonant of an initial cluster to produce a prosodically defective reduplicant: Kaulong *kaum* 'feast : *ka-kaum*, *nuhum* 'big' : *nu-nuhum*, but *slok* 'loosen' : *so-slok* (389), Kokota *ríso* 'write (TR)' : *rí-riso* 'write (NTR)', *tógla* 'chase (TR)' : *to-tógla* 'chase (NTR)', but *krísu* 'scoop (TR)' : *ki- krísu* 'scoop (NTR)'. Because Kaulong of New Britain and Kokota of the central Solomons are neither in contact nor closely related (their immediate common ancestor being the loosely defined Western Oceanic Linkage), their agreement in this pattern of reduplication presumably represents a tendency that is likely to surface in languages that belong to other families.

Undoubtedly the greatest missed opportunity in TOL is the failure to consider in greater depth the mismatch between linguistic typology and genetic relationship in areas where Papuan languages are not present, and the implications this misalignment has for Pacific prehistory. In some ways this takes us back to issues discussed by writers such as Ray (1926) and Capell (1943), who stated them in terms that were unacceptable to most comparativists, with the result that they have been ignored by subsequent researchers for decades. Essentially, Ray and Capell concluded, based on the evidence of divergent language structures, reduced cognate densities, physical anthropology, and cultural differ-

ences, that the AN languages of Melanesia had originated as pidgins when AN speakers from various parts of insular Southeast Asia established trading colonies among linguistically unrelated groups in Melanesia. While this hypothesis is easily falsified on the grounds that all AN languages of the Pacific except Palauan and Chamorro are Oceanic, it is generally agreed that contact between immigrant AN speakers and long-established Papuan speakers was commonplace, with significant linguistic consequences in some instances (Ross 1987). What has gone almost completely unappreciated in this history of changing scientific paradigms is the typological evidence from language, which suggests that Papuan languages were much more widely distributed in the Pacific during the early phases of AN contact than they are today.

Table 1 summarizes the distribution of two structural features found in the 43 language sketches of TOL: quinary numeral systems, and serial verb constructions. Both features are common in Papuan languages (Laycock 1975:224, Foley 1986:113ff) and rare in AN languages outside Melanesia. In general terms, the distribution of these features is thus comparable to, say, the retroflex consonants of Indo-Aryan languages, which are almost universal in the Dravidian languages but absent in Indo-European languages outside India. In all such cases, where a feature is widespread in Group A and restricted to one subpart of Group B that is in contact with Group A, the suspicion must be that the feature in Group B is a product of contact.

POC had a decimal system of counting that included at least the numerals *rua '2', *tolu '3', *pat(i) '4', *lima '5', *onom '6', *pitu '7', *walu '8', *siwa '9', and *sa-ŋa-puluq '10'. Most forms in this system are retained by all languages in column D, the principle exceptions being Kele (which, like other Admiralty languages, has subtractive forms for 7–9), and Tobati, which has an innovative system that is difficult to classify. However, either pure quinary systems (1, 2, 3, 4, 5, 5+1, 5+2, 5+3, 5+4, 2×5 or 5+5) or modified quinary systems, sometimes called "imperfect decimal systems" (1, 2, 3, 4, 5, 5+1, 5+2, 5+3, 5+4, 10) are extremely common in New Guinea, Vanuatu, and southern Melanesia, but are absent from Micronesia and Polynesia (and, with only a handful of exceptions, from insular Southeast Asia). At least a few languages in New Guinea (Sudest in the present sample), and in Vanuatu (Tamabo and Raga, as well as the Polynesian Outlier Ifira-Mele) nonetheless preserve most of the POC forms for 2–10. This shows that quinary counting systems must have developed independently in the AN languages of New Guinea, Vanuatu, and southern Melanesia, a conclusion that is further supported by the varied form of such systems, including some that are pure quinary, some that are mixed quinary, and a few quinary systems that make use of multiplicative numerals, as with 'Ala'ala (1, 2, 3, 4, 5, 2×3, 2×3+1, 2×4, 2×4+1, 10). The distribution of languages with serial verb constructions is similarly skewed, this feature being widespread in Papuan languages and the AN languages of Melanesia, but virtually absent everywhere else in the AN language family.

The conclusion that quinary counting systems have developed independently in the AN languages of New Guinea and areas further east has important implications for Oceanic prehistory. No one hesitates to ascribe the prevalence of quinary counting systems in the AN languages of New Guinea to contact influence, but this explanation is not available in Vanuatu or southern Melanesia, where no Papuan languages are spoken. Given

current assumptions about Pacific prehistory, the only choice left is to assume that quinary systems beyond the reach of Papuan contact have developed from earlier decimal systems without external stimulus. But if this is true it must be asked (1) why this innovation mimics what are clearly contact-induced changes to numeral systems in the AN languages of New Guinea, and (2) why an unfavorable innovation that is rare in the AN language family generally would be so common in Vanuatu and southern Melanesia. To make matters worse, in Iaai the numeral '20' is *xaca at* 'one man', a feature of numeration that is prototypically Papuan, but is shared with a number of other languages in New Caledonia and the Loyalty islands (Xârâcùù, Paicî, Nyelâyu, Canala, Nengone, etc.), and with some of the languages of Vanuatu such as Paamese (Crowley 1982:98).

TABLE 1. DISTRIBUTION OF NUMERAL SYSTEMS AND SERIAL VERBS IN THE 43 SKETCHES OF "THE OCEANIC LANGUAGES" †

	D	Q	O	SV
BISMARCKS				
Kele	x			y
Mussau	x			n < y
Bali-Vitu		(x)		y
Kaulong		x		y
Siar	x			y
NEW GUINEA				
Sobei		(x)		y
Tobati	x?			lim
Kairiru		(x)		y
Takia		x		y
Arop-Lokep		(x)		y
Jabêm		x		y
Gapapaiwa		x		y
Sudest	x			n?
'Ala'ala		(x)		n < y
SOLOMONS				
Taiof	x			y
Banoni			x	y
Sisiqa	x			y
Roviana	x			y
Kokota	x			y
Gela	x			y
Longgu	x			y
Arosi	x			y
SANTA CRUZ				
Buma	x			y
VANUATU				
Mwotlap		(x)		y
Sakao		(x)		lim
Tamabo	x			y
Raga	x			lim
Vinmavis		(x)		y?
Port Sandwich		(x)		y?
SE Ambrym		(x)		lim
Lamen		x		y
Ifira-Mele	x			lim
Sye		(x)		n
Anejom̃		x		lim
NEW CALEDONIA / LOYALTIES				
Cèmuhî		(x)		y
Xârâcùù		(x)		lim
Iaai		x		lim
MICRONESIA				
Ulithian	x			n
Puluwatese	x			n
CENTRAL PACIFIC				
Rotuman	x			n
Nadrog	x			n
Niuafo'ou	x			n
Marquesan	x			n

† D = decimal base, Q = quinary, Q with (x) = 'imperfect decimal' (1 through 5, 5+1 through 5+4, 10), O = other; SV = serial verbs present (y), absent (n), occurred in the past but since reanalyzed (n < y), limited (lim).

Currently accepted views of Pacific prehistory leave the distribution of quinary number systems and serial verbs in Oc languages unexplained. Papuan languages that might have served as sources of these structural features are spoken in New Guinea, the Bismarck Archipelago, and the Solomons chain (Bougainville, Vella Lavella, and the Russell islands), but nowhere east or south of Santa Cruz island. Moreover, the Papuan languages of Santa Cruz themselves raise questions that have never been satisfactorily answered: if the settlement of the Pacific islands beyond the Solomons chain required navigational skills that were introduced with the arrival of AN speakers, how did Papuan speakers reach Santa Cruz, which required an open sea crossing of more than 200 miles, with a small and unknown landfall? There are essentially three possibilities: (1) Papuan speakers reached Santa Cruz long before AN speakers reached the western Pacific, (2) Papuan speakers arrived in Santa Cruz first, but only after acquiring the necessary navigational skills from AN speakers in the Solomons or islands further west, (3) Papuan speakers arrived together with or after AN speakers. If either (2) or (3) is adopted, we would expect to find clear linguistic links between the Papuan languages of Santa Cruz and others further west, but this is not the case (Dunn, Reesink, and Terrill 2002:41). The simplest conclusion from this observation is that Papuan speakers preceded AN speakers in Santa Cruz by many millennia, long enough for all traces of their relationship to languages in western Melanesia to be eradicated by accumulated change. The problem with this conclusion is that the currently accepted archaeological baseline in Santa Cruz begins with the arrival of the Lapita pottery complex (hence speakers of AN languages) no earlier than 3,200 BP (Kirch 2000:94). In short, the archaeology and the linguistics do not add up to a consistent interpretation of the settlement history of this area.

This brings us back to Vanuatu and southern Melanesia, where Papuan languages are absent, but Papuan linguistic features such as those shown in table 1 are widespread. The linguistic indications of Papuan contact with AN languages of central and southern Melanesia can be supplemented by evidence of other kinds as well. Despite the wide phenotypic variation within Melanesia, the peoples throughout this region are almost invariably characterized by darker skins and frizzier hair than other AN speakers, and in this respect are largely indistinguishable from most Papuan speakers. In some parts of Melanesia beyond the reach of Papuan languages, as in the islands of Espiritu Santo and Malakula in Vanuatu, the prominent noses and full beards of many men are strikingly similar to features common among New Guinea highlanders. These physical traits agree with cultural traits that in some cases are highly distinctive in global perspective, as the insertion of decorative objects through the pierced septum and the use of penis sheaths in both northern Vanuatu and interior New Guinea.[3]

3. This is not to imply a special connection between highland New Guinea and the larger islands of Vanuatu, but rather to suggest that both areas may retain physical, cultural, and linguistic features that characterized early Papuan societies in the Pacific. Small rings are sometimes worn through the pierced septum in other parts of the world, but the use of larger nasal ornaments in this way is highly unusual outside Papuan speakers in New Guinea and AN speakers in some parts of island Melanesia. The use of penis sheaths is found in a few Ge-speaking tribes of the tropical forests in South America, but otherwise appears to be restricted to Papuan speakers of New Guinea, and AN speakers in the larger islands of Vanuatu.

It is assumed on distributional grounds that POc speakers were southern Mongoloids who used a decimal system of counting, spoke a language with few or no serial verb constructions, and lacked such cultural characteristics as piercing of the septum or the use of penis sheaths. How did all of these rather distinctively Papuan traits of phenotype, language, and culture reach areas where Papuan languages are not spoken? Again, there are basically three possibilities: (1) An speakers acquired them through contact in western Melanesia and carried them eastward into the uninhabited Pacific, (2) the preceding, but both "mixed" and "unmixed" An speakers moved out of western Melanesia together, (3) An speakers in central and southern Melanesia acquired them from Papuan speakers via contact *in situ*. It is clear that (1) cannot be correct in its unmodified form, because if (all) An speakers had acquired Papuan physical, cultural, and linguistic traits through contact in western Melanesia, these would have been part of the linguistic communities ancestral to those of Vanuatu, southern Melanesia, Micronesia, and Polynesia. But this is not true, because Papuan phenotypic, cultural, and linguistic traits are essentially absent in Micronesia and Polynesia.

Hypothesis (2) proposes a scenario in which An speakers expanding into the Pacific beyond Santa Cruz consisted of disparate groups, some showing strong evidence of physical, cultural, and linguistic contact with Papuans, but others retaining their southern Mongoloid phenotype, decimal counting systems, and so on. The problem with this interpretation is that it assumes improbably that speakers of the same language or very closely related languages formed part of a single migrating (Lapita) population that differed internally in physical and cultural type, and in the presence or absence of Papuan linguistic features. To make an implausible scenario even more implausible, only that part of the migrating population that was southern Mongoloid and that lacked Papuan cultural and linguistic traits was able to reach Micronesia and Polynesia.

This leaves only (3) as a plausible alternative: the Papuan features of language, culture, and physiognomy that are common to An speakers in Vanuatu and southern Melanesia must have been acquired by contact *in situ*. The adoption of this position, however, leads to a crisis of evidence, because there are no Papuan languages spoken south of Santa Cruz, and the archaeology of central and southern Melanesia has to date yielded no indication of a pre-Lapita population. There is only one obvious way out of this dilemma, and that is to abandon the prevailing orthodoxy, which holds that the first settlers of all parts of the Pacific east of the Solomons were the bearers of the Lapita pottery complex, hence speakers of An languages. Instead, it appears almost certain that Papuan languages were spoken in Vanuatu and southern Melanesia at the time of initial An contact, and that the Papuan features in the An languages of this region were acquired locally, rather than mysteriously imported from areas where Papuan languages are still spoken today. The relative sizes of the two populations may be roughly estimated by the physical and cultural types that have survived, and the degree of structural convergence in language. In the Southeast Solomons, where historical populations are relatively light-skinned, and Papuan linguistic and cultural features are moderate, the early An-speaking population presumably was relatively large in relation to the Papuan substrate, while in Espiritu Santo or Malakula in Vanuatu the reverse appears to be true. Whatever the details, Papuan languages eventually disappeared throughout Vanuatu and southern Melanesia, but left traces of their former presence in the form of typological skewing.

Why, then, is there no archaeological evidence of a pre-Lapita human presence east of Buka in the western Solomons? I suspect that this gap is due to the common human tendency to find what one is looking for: with no expectation of finding earlier sites in interior regions, most archaeology in Melanesia has concentrated on coastal locations. The result has been the collection of abundant evidence for the arrival of AN speakers in areas east of the western Solomons, but no evidence of an earlier population. A quarter of a century ago Bellwood (1979:250) drew attention to curious mounds on the Isle of Pines with cylindrical cores of what appeared to be a kind of lime concrete, and after considering several possible interpretations he speculated that "they may even have been built by some unknown pre-Lapita inhabitants of New Caledonia." This view has not been generally adopted, but over the past two decades archaeological discoveries have shown that the Bismarck archipelago and western Solomons were settled as early as 35,000 years ago, implying that Pleistocene voyaging capabilities were much more advanced than had previously been thought (Spriggs 1997:29, Kirch 2000:68–72). In view of all these observations, the time may now be right to carry out a more concentrated search for pre-Lapita remains in Santa Cruz, Vanuatu, and southern Melanesia.

The foregoing discussion may appear to represent a major digression in a review of a book that is basically about language, but the issue I have raised follows directly from the pervasive mismatch of typology and genetic relationship in Melanesia, a mismatch that both linguists and prehistorians have come to accept complacently as simply unexplained. Melanesia is, in effect, a "linguistic area" in the classic sense that the Balkans, India, or mainland Southeast Asia are linguistic areas, because distinctive structural features are shared across major genetic boundaries. The difference is that in other linguistic areas, languages of all the interacting genetic groupings are present: four branches of Indo-European in the Balkans, Indo-European and Dravidian languages in India, Austroasiatic, Tibeto-Burman, Austronesian, Tai-Kadai, and Hmong-Mien languages in mainland Southeast Asia. This condition is met in western Melanesia, where Papuan and AN languages are so closely associated that they may even be spoken in the same village (as Motu and Koita in Hanuabada). What is peculiar about Vanuatu and southern Melanesia is that they participate in this same linguistic area, but Papuan languages are curiously absent. Although it was surely unintended, one of the major contributions of this book is to show that this absence is almost certainly a product of widespread language extinction, a conclusion that will force a major rethinking of Pacific prehistory, and possibly provide yet another reminder of the importance of linguistics to the enterprise of archaeology.

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