

Historical linguistics and the ancient history of Papua New Guinea

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Note: The numbers below correspond to the numbers of the slides in the accompanying PDF.

1. When Olga first asked me if I would give a short plenary at this year's LSPNG conference, she suggested I might like to reflect a little on my experiences with PNG languages, so here goes. I am a historical linguist, so I thought I would talk about why I think historical linguistics is important to PNG and its Melanesian neighbours.

I spent nine years in PNG. I arrived with my family almost 50 years ago, in January 1973, and we left ten years later, with a year's sabbatical in the middle. My wife and I were teachers of English, and for the first two years we were based at the National High School at Keravat in East New Britain, then eight years at Goroka Teachers' College (now the University of Goroka).

Our students at Kerevat were preparing to enter UPNG or UniTech, and were in their late teens or early twenties. On Day 1 something happened that would later change my whole career direction. I was saying hello to a small group of students I encountered outside our house—we had all arrived a few days before the term began—and I wanted to know what was on the school curriculum. I asked them what they studied in their History classes.

'Indonesian history, because Indonesia is our western neighbour,' one of them replied, 'and Australian history, because Australia is our colonial boss and our southern neighbour.'

'But what about Papua New Guinea history?' I asked.

'Oh, we don't have any history,' they said.

Their response shocked me, and set me thinking. Every nation has and needs a history. The challenge is to discover that history.

2. My mind went back to a book I had read when I was about 11 years old. I had always been interested in languages, and one of the books I had borrowed from the local public library was Frederick Bodmer's *The loom of language*. I had learned from Bodmer about reconstructing the histories of languages, and this had fascinated me. Sitting in Kerevat I gradually formed the idea that I should try to reconstruct something of Papua New Guinea's linguistic prehistory. What happened after that is a long story (a bit more of it is on my website) (see <https://sites.google.com/view/malcolmrosshistoricallylinguist/>

linguistic-biography).

3. Cutting that long story short, in 1986 I finished a PhD thesis on the history of the Austronesian languages of PNG and the western Solomons. It was published in 1988. Sometime in the 1990s, on one of my visits back to PNG, I was delighted to discover that my findings had been incorporated into a Grade 10 Social Science unit. So the 1973 conversation at Kerevat bore fruit about 20 years later. Papua New Guinean high school students were learning something about their history.
4. It has been known for over a century that the languages of New Guinea can be divided into two categories: Austronesian and Papuan. 'Papuan' is just a convenient way of referring to languages in New Guinea that aren't Austronesian. This map shows Austronesian languages in yellow. Everything else is Papuan.
5. Papuan languages actually stretch from Timor in the west
6. all the way to tiny islands in the central Solomons in the east.
7. Unfortunately a number of Austronesian languages don't show up, especially along the north coast, because the area they occupy is very small.

I want to spend the rest of this time talking about what the historical study of Austronesian languages has taught us about the ancient history of Melanesia in general and PNG in particular. Even if time permitted me to talk about the history of Papuan languages, I would have less to report, as Papuan historical research is still in its early stages. All the same, at the end of this script I have compiled a list of mostly recent historical work on various groups within the putative Trans New Guinea family. Meanwhile, Austronesian historical linguistics provides a model for what can hopefully soon be done for some Papuan language families.

8. The huge Austronesian family stretches across the shaded areas on the map. Lands which are or were Austronesian-speaking are shown in red, and Papuan languages are in black. Of the roughly 1200 Austronesian languages, around 500 belong to the Oceanic subgroup, shaded in blue. There are 150 plus Austronesian languages in PNG, and they belong to the Oceanic subgroup.
9. When we say that the Austronesian languages are a family,
10. we are saying that all its languages are descended from a single ancestor language—we call it Proto Austronesian.
11. We saw just now that there is a huge subgroup within Austronesian that we call Oceanic.
12. What we are saying here is that its 500 or so members are all descended from one Austronesian language that we call Proto Oceanic.

13. Even across such a large language family as Austronesian, one can sometimes see at a glance that its languages are related, as with the words for six meanings here
14. The top row shows the Proto Austronesian forms that Robert Blust has reconstructed.
15. The next four rows show their reflexes in four Austronesian languages of Taiwan.
16. The lower six rows show the forms in six widely scattered languages.
17. This map shows how scattered they are. You might say that I have cheated somewhat, by taking forms from phonologically conservative languages,
18. but the resemblances over such an enormous area are striking.
19. Historical linguistics enables us to study a language family in three ways that allow us to find out something about the history of the speakers of its languages.
20. First, the historical linguist's comparative method allows us to reconstruct the phylogeny—the family tree—of the family.
21. Second, it enables us to identify evidence of contact with speakers of other languages.
22. And third, it allows us to reconstruct the lexicon of an ancestral language, giving us some access into how its speakers saw their world.
23. From a phylogeny we can read off something of the family's probably geographic history.
24. The full phylogeny of Austronesian is too complicated to talk about now, but it tells us that Proto Austronesian was spoken in Taiwan. Around 2200 BC Austronesian speakers moved into the Philippines. From there they spread into the other red bits of the map. Around 1350 BC, speaking an early version of Proto Oceanic, they arrived in the Bismarck Archipelago—New Britain, New Ireland and Manus.
We can see here that a well-rounded prehistory requires cooperation across disciplines. Historical linguistics reconstructs events, but isn't good at dating them. We rely on archaeologists for this.
25. A historical linguist can sometimes see from evidence in the language itself that its speakers have been in intense contact with speakers of some other language. The results of contact are obvious in many of PNG's Oceanic languages, like those around Madang, which have changed from earlier verb-object to object-verb order, and from prepositions to postpositions, but I'm not going to talk about this now.
26. Instead, I'd like to devote the rest of this talk to the third kind of linguistic evidence for

prehistory. This lies in reconstructing the lexicon—the vocabulary—of an earlier stage of the language. This reconstruction complements archaeology, especially when the reconstructed words involve more abstract concepts for which there is no direct archaeological evidence. So I'm going to talk about the reconstruction of the lexicon of Proto Oceanic, which three of us have been working on sporadically for the past thirty years.

27. So far we have produced five volumes of *The lexicon of Proto Oceanic*, and the sixth and final volume is almost complete. All are freely downloadable. An online lexicon of the contents of all six volumes is also being constructed at the moment.
28. As I said earlier, Proto Oceanic is the ancestor of all Oceanic Austronesian languages. It was spoken in the Bismarck archipelago around 1350 BC.
29. In a 1973 paper Pawley & Green introduced the terms 'Near Oceania' and 'Remote Oceania'. The boundary between them is the 350 km ocean gap between the main Solomons on one hand and the Santa Cruz Islands and Vanuatu on the other.

When the Oceanic speakers' immediate ancestors arrived in Near Oceania, human beings had already been there for millennia. But Remote Oceania had never been settled before Oceanic speakers reached it sometime before 1100 BC.

30. You will have heard of *Lapita*, the culture that appeared in the Bismarcks at about 1350 BC. Its earliest archaeological sites are scattered across the Bismarcks.
31. Its best-known signature is its ceremonial pottery with its repeating dentate stamped patterns, some of them with what look like stylised human faces.
32. The Lapita settlement of Remote Oceania was amazingly quick. By 1100 BC bearers of Lapita were in Santa Cruz and Vanuatu, and maybe 50 years later in New Caledonia and Fiji. They reached Tonga by 900 BC, Samoa around 850 BC.
33. We know that people remained in contact over huge distances in the early years because
34. pottery styles remained similar across the region and because of the trade in obsidian (volcanic glass). Obsidian was used to make cutting or shaving tools. Any piece of obsidian has a chemical signature that reveals the volcano it comes from, and obsidian from the Bismarcks has been found in early settlement sites as far away as Fiji and New Caledonia.
35. So archaeology says that Remote Oceania's first *inhabitants* were Lapita people. Historical linguistics says that all Remote Oceania's *languages* are Oceanic. The conclusion from these facts is that the the people of the Lapita culture were the speakers of Proto-Oceanic. The map shows the extent of Lapita archaeological sites in red. Oceanic speakers continued to spread, occupying the area in blue.

The goal of the Oceanic lexicon project was to reconstruct as much of the vocabulary of Proto-Oceanic as we could, as a window into the Lapita culture and the minds of its people.

36. We organised our research by terminology. The idea was to work through the vocabulary by taking a broad subject area, then dividing it up on the basis of what we knew of present-day Oceanic languages. The broad subject areas were the subtitles of the volumes listed here. We then divided each subject area into potential chapters.
37. For example, the chapters of the first volume, material culture, eventually turned out to be those listed here. The chapters of each volume are listed on the Oceanic Lexicon website.
38. Each of these areas was to become a chapter in the volume, and for each chapter one of us searched for cognate sets, and reconstructed a Proto Oceanic word from each set (I'll come back to that in a moment), and finally wrote the chapter, showing how the words fitted into a terminology and incorporating the reconstructions and the supporting cognate sets.

The terminological approach was the brainchild of Andrew Pawley. It is quite distinct from the dictionary method of, say, Robert Blust's online *Austronesian comparative dictionary*, which lists reconstructed words in alphabetical order.

39. A nice example is the terminology for the parts of a canoe and the objects associated with its use. The Proto Oceanic term for a canoe was **waga* (the star in front indicates that it is a reconstruction). The parts common to all canoes are shown in the picture, and the first four terms on the left are parts of larger canoes. One term **patoto* has no English equivalent: it is the structure that connects the outrigger float to the outrigger boom.
40. Here's the Proto Oceanic term for 'canoe' again, this time with some supporting cognates (cognates are words in different languages that have the same ancestor word, in this case **waga* 'canoe').
41. The picture here, incidentally, illustrates the Gedaged definition of a large ocean-going canoe.

Can we be reasonably certain of our reconstructions? Yes, because sound changes that languages undergo are generally regular: that is, a sound change affects all words in the language with say, initial **w-* or with **-g-* between vowels, in the same way.

42. Notice that in Kiribatese and Marshallese, **g* is lost: this is a regular sound change that affects all instances of Proto Oceanic **g* in these languages.
43. In the case of **saman* 'outrigger float', the initial consonant has changed in different

ways in different languages, but these changes are still regular.

44. The Bauan Fijian and Tongan words have an additional meaning, ‘smaller hull of double canoe’. The question is, should this meaning be reconstructed for Proto Oceanic?
45. The answer is ‘no’, as terms for ‘double canoe’ are found only in *Eastern Oceanic* languages, so the term can only be reconstructed in Proto *Eastern Oceanic*.
46. Eastern Oceanic is a subgroup of Oceanic that excludes the languages circled in red, i.e. it does not include the Proto Oceanic homeland, and the double-canoe term cannot be reconstructed for Proto Oceanic. This allows us to date the invention of the double canoe to sometime after 1100 BC.
47. Sometimes, trying to reconstruct a term turns up puzzles. Here are the terms for the main root crops that I reconstructed.
48. We can clear up one question straightaway. There are no Proto Oceanic terms for the sweet potato and Chinese taro because they were both introduced from south America long after Proto Oceanic was being spoken.
49. There are *two* terms for ‘taro’. How come? **talo(s)* is inherited, as its ancestor in Proto Malayo-Polynesian can be reconstructed. (Malayo-Polynesian is the subgroup that includes all Austronesian languages outside Taiwan.) **m^wapo(q)* must have been borrowed from a Papuan language, as many Papuan languages have similar terms for taro.
50. Finally, I collected terms for various species of yam. The greater yam and the lesser yam, Tok Pisin *yam* and *mami*, are both widely grown in PNG, especially the *mami*, and I took it for granted that I could reconstruct Proto Oceanic terms for them both. I was wrong! I reconstructed a term for the greater yam, **qupi*, which was inherited from Proto Malayo-Polynesian, but I couldn’t find a decent set of cognate terms for **mami*. I found this quite frustrating.
51. All I could find were terms in Western Oceanic languages that appeared to be derived from the word for ‘sweet’. This suggested that the *mami* wasn’t domesticated until after Proto Oceanic speakers had dispersed across the Pacific, that is, later than 1100 BC. I consulted an agronomist colleague, Michael Bourke, about this, and he thought this was a reasonable conclusion.

Another term we might have expected to reconstruct but couldn’t was a term for ‘dog’. The linguistic evidence suggests strongly that Proto Oceanic speakers did not have dogs. They certainly had pigs, but not dogs.

52. Reconstruction takes us inside the minds of Proto Oceanic speakers in interesting ways. In an intriguing 2011 contribution to *The lexicon of Proto Oceanic*, entitled ‘Were turtles

fish in Proto Oceanic?’ Andrew Pawley answers his own question. Proto Oceanic speakers divided sea creatures into two categories, The first was **ikan*, usually glossed as ‘fish’, but Pawley shows that it must also have been used for a much larger category that included turtles. The second category was **sisiq*, edible snails and slugs, which included land snails as well as sea snails.

53. Similarly, among land creatures, **manuk* is usually glossed ‘bird’, but Pawley shows that it also included other flying creatures like bats and winged insects.
54. In similar research Bethwyn Evans was able to work out how Proto Oceanic speakers classified plants. These are the major categories, none of them too foreign to English speakers.
55. But notice in the full taxonomy that the ‘vine’ category includes yams, and that bamboos, pandanus, fan palms, cycads and, I take it, coconut palms (which aren’t shown) all formed their own major categories in Proto Oceanic and were not items in larger categories.

The reconstruction of taxonomies is interesting because it shows us something of how Lapita people viewed the world, and these are things that an archaeologist can’t dig up.

56. Human beings also place *each other* in taxonomies, and Proto Oceanic speakers were no exception. In English we categorise people in age cohorts as *baby, toddler, child, teenager, adult*. The Proto Oceanic categorisation was a little different. The main breakpoints between the categories were puberty, marriage, and elderly loss of vigour, as the definitions of the terms show.
57. Another human categorisation—one that occurs in almost all societies—is kinship. I think the fact that PNG kinship systems vary greatly from European systems is well known, and the Proto Oceanic system was no exception. The terms listed here are drawn from a chapter in the forthcoming vol. 6. They are just the tip of the iceberg of Proto Oceanic kinship. For one thing, they only include terms for blood relatives. Of course, there are also terms for one’s spouse and for in-laws. Further, the terms here are terms for *referring* to kin; terms for *addressing* them are in many cases different.
58. A number of the terms are recursive. For example, the full gloss for **tama-* ‘father’ also includes any male blood relative of the speaker’s father’s generation who is related to the speaker through the speaker’s father, as well as the husband of any *tina-* (mother).’ So if we extended the diagram laterally, there would still always be men in ego’s father’s generation labelled **tama-*.
59. I am aware that the examples of reconstructions that I have shown you are all nouns. The volumes themselves also include plenty of verbs denoting both states and actions.

I am also very aware of the fact that I have talked about the results of applying historical

linguistics to Oceanic languages, and have said almost nothing about how we obtain these results. If you are interested in this, there is a reasonably short account in a paper I published in 2017. And if you need an introduction to historical linguistics in general, I would recommend the textbook by Terry Crowley, who once taught at UPNG and at USP. After his untimely passing it was revised by Claire Bowerman.

Finally, I hope I have shown something of how historical linguistics can contribute to understanding PNG's history, and also that the ancient history of Papua New Guinea is central to the history of Pacific settlement, in the Lapita push into previously uninhabited Remote Oceania. The final volume of *The lexicon of Proto Oceanic* will be published by next year at the latest. After that I hope I can work further on the histories of Papuan languages of the Trans New Guinea family.

Thank you.

References for this talk

- Bodmer, Frederick, 1944. *The loom of language*. New York: W.W. Norton.
- Crowley, Terry & Claire Bowerman, 2010. *An introduction to historical linguistics*. 4th edition. Oxford: Oxford University Press.
- Evans, Bethwyn, 2008. Ethnobotanical classification. In Ross, Pawley & Osmond, eds, 2011:53–84.
- Pawley, Andrew, 2011. Were turtles fish in Proto Oceanic? Semantic reconstruction and change in some terms for animal categories in Oceanic languages. In Ross, Pawley & Osmond, eds, 2011: 421–452.
- Pawley, Andrew & Roger C. Green, 1973. Dating the dispersal of the Oceanic languages. *Oceanic Linguistics* 12:1–67.
- Ross, Malcolm, 1996. Contact-induced change and the comparative method: cases from Papua New Guinea. In Mark Durie & Malcolm Ross, eds, *The comparative method reviewed: regularity and irregularity in language change*, 180-217. New York: Oxford University Press.
- , 2008. A history of metatypy in the Bel languages. *Journal of Language Contact: Thema* 2:149–164.
- , 2017. Linguistic evidence for prehistory: Oceanic examples. In Hsiu-chuan Liao, ed., *Issues in Austronesian historical linguistics*, 67–101. Honolulu: University of Hawai'i Press. (JSEALS Special Publication 1)
- Ross, Malcolm, Andrew Pawley & Meredith Osmond, eds, 1998. *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, 1: Material culture*. Canberra: Pacific Linguistics. (Pacific Linguistics C-152)
- , 2003. *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, 2: The physical world*. Canberra: Pacific Linguistics. (Pacific Linguistics 545)
- , 2008. *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society, 3: Plants*. Canberra: Pacific Linguistics. (Pacific Linguistics 599)
- , 2016. *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic*

society, 5: *People: Body and mind*. Canberra: Pacific Linguistics. (Asia-Pacific Linguistics 28)

——, forthcoming. *The lexicon of Proto Oceanic: The culture and environment of ancestral Oceanic society*, 6: *Society*.

Ross, Malcolm & Meredith Osmond, 2016. People: gender, age cohorts and marital status. In Ross, Pawley & Meredith, eds, 2016:37–73.

Some references to Trans-New Guinea historical linguistics

Daniels, Don R., 2019. Grammatical Reconstruction: The Sogeram languages of New Guinea. Berlin: De Gruyter Mouton.

Dutton, Tom, 2010. Reconstructing Proto-Koiarian: The history of a Papuan language family. Canberra: Pacific Linguistics. (Studies in Language Change 7)

Healey, A., 1964, The Ok family in New Guinea. PhD dissertation, Australian National University.

Loughnane, Robyn & Sebastian Fedden, 2011. Is Oksapmin Ok? - A study of the genetic relationship between Oksapmin and the Ok languages. *Australian Journal of Linguistics* 31:1–42.

Pick, Andrew, 2020. A reconstruction of Proto-Northern Adelbert phonology and lexicon. PhD dissertation, University of Hawai‘i at Mānoa.

Ross, Malcolm, 2005. Pronouns as a preliminary diagnostic for grouping Papuan languages. In Andrew Pawley, Robert Attenborough, Jack Golson & Robin Hide, eds, *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples*, 15–66. Canberra: Pacific Linguistics. (Pacific Linguistics 572)

Smallhorn, Jacinta, 2011. *The Binanderean languages of Papua New Guinea: Reconstruction and subgrouping*. Canberra: Pacific Linguistics. (Studies in Language Change 9 [Pacific Linguistics 625])

Suter, Edgar, 2018. Comparative Morphology of the Huon Peninsula Languages (Papua New Guinea). Inaugural-Dissertation zur Erlangung des Doktorgrades, Universität zu Köln.

Suter, Edgar & Timothy Usher, 2017. The Kamula-Elevala language family. *Language & Linguistics in Melanesia* 35:106-131.

Usher, Timothy & Antoinette Schapper, 2011. The Greater West Bomberai Language Family. *Oceanic Linguistics* 61:469-527.

Usher, Timothy & Edgar Suter, 2015. The Anim languages of Southern New Guinea. *Oceanic Linguistics* 54:110-142.

Usher, Timothy & Edgar Suter, 2020. The Asmat-Muli Languages of Southwestern New Guinea. *Language & Linguistics in Melanesia* 38:148-175.

Voorhoeve, C. L., 2001. Proto Awyu-Dumut phonology II. In Andrew Pawley, Malcolm Ross & Darrell Tryon, eds, *The boy from Bundaberg: Studies in Melanesian linguistics in honour of Tom Dutton*, 361-381. Canberra: Pacific Linguistics. (Pacific Linguistics 514)

Web sites

My web site:

<https://sites.google.com/view/malcolmrosshistoricallylinguist/>

The Oceanic Lexicon Project website:

<https://sites.google.com/view/theoceaniclexiconproject/>

You may download PDFs of *The lexicon of Proto Oceanic* here:

<http://hdl.handle.net/1885/106908>

Robert Blust's *Austronesian comparative dictionary*:

<https://www.trussel2.com/ACD/> or <https://acd.clld.org/>

Timothy Usher's New Guinea historical linguistics site:

<https://sites.google.com/site/newguineaworld/about-newguineaworld/>