THE PATTERNS OF MUSICAL PRACTICE IN MELANESIA: CAN THIS BE TIED TO LINGUISTIC AFFILIATION?

[DRAFT CIRCULATED FOR COMMENT -NOT FOR CITATION WITHOUT REFERENCE TO THE AUTHOR

Prepared for the

Workshop on the Languages of Papua 3

20-24 January 2014

Manokwari, West Papua, Indonesia

Roger Blench
Kay Williamson Educational Foundation
8, Guest Road
Cambridge CB1 2AL
United Kingdom
Voice/ Ans (00-44)-(0)7847-495590
Mobile worldwide (00-44)-(0)7967-696804
E-mail rogerblench@yahoo.co.uk
http://www.rogerblench.info/RBOP.htm

This printout: August 27, 2013

TABLE OF CONTENTS

TABLES

PHOTOS

MAPS

ABSTRACT

The musical instruments in use in Melanesia are extremely restricted compared with island SE Asia. In particular in the Non-Austronesian area, they are few both in number and organological type. Typically these are large slit-gongs, hourglass drums, end-blown trumpets, flutes, ocarinas and jews' harps. It seems likely that the incoming Oceanic speakers brought new instrument types and that their distribution can be plotted against linguistic affiliation. However, there is some evidence the Austronesian also borrowed musical instruments and carried them onwards to remote Oceania. In addition, there appears to be a comparable pattern with respect to vocal music. Papuan music can sometimes be polyphonic, with two or more distinct vocal lines sung against one another. In the Austronesian world this is only known from Taiwan, Flores and Timor, and otherwise music tends to be monodic, despite the complex heterophony of Java and related cultures. However, there is a striking example of two-voice polypony on Manus, a key site where early Oceanic speakers interacted with speakers of NAN languages. It is suggested that this is the origin of the polyphjony characteristic of Malekula and Grande Ile in New Caledonia. The paper synthesises the distributional data on musical practice and language to suggest how the impact of Austronesian speakers on the culture of Papua can be detected.

ACRONYMS

*	regular reconstruction
BP	Before present
ISEA	Island SE Asia
NAN	Non-Austronesian
PAN	Proto-Austronesian
POc	Proto-Oceanic

1. Introduction

One of the great cultural dramas in human history is undoubtedly the encounter between the expanding Austronesians with the long-resident cultures of Melanesia. It is generally considered that prior to the Austronesian movement out of Taiwan some 4000 years ago, non-Austronesian (NAN) languages were spoken throughout Island SE Asia (ISEA). However, these have disappeared almost without trace. Only four Andamanese languages remain, as well as traces in substrate lexicon among the Orang Asli and the Philippines negritos (Reid 1994). However, the nature of the interactions that occurred when the Austronesians reached western Melanesia must have been very different from ISEA, because very large numbers of NAN languages survive, principally on the island of New Guinea, but also in the Solomons, on Timor and some other offshore islands. Genetically there must have been substantial mixing, as Austronesian speakers in New Guinea look physically similar to their NAN counterparts, a situation which was responsible for confusion among early attempts to classify these languages. Linguistically, some languages, such as the Reefs/Santa Cruz group, remain the subject of much controversy, so complex is the mixture of Austronesian and NAN features.

A key feature of the distribution of Austronesian languages is Melanesia is their coastal distribution. As a maritime people with a sophisticated sailing culture, they settled on islands and coasts and rarely penetrated far inland. As a consequence, NAN languages tend to be in the interior. These scenarios are not always simple; on Timor for example, there is one language, Bunaq, where appears to be a residue from the former NAN languages spoken on the island. However, the others, such as Fatuluku, are usually thought to have migrated there after Austronesian settlement. The relevance of this, is that many instruments have a coastal distribution, although these no longer correlate neatly with synchronic Austronesian languages.

Photo 1. Lapita fragment, Reef islands

The archaeology that underpins this scenario is now fairly well established. The Austronesians left Taiwan by around 4000 bp, and rapidly dispersed in every direction (Spriggs 2011). By 1350 BC, they had reached the Bismarcks, and a new dispersal began, marked by the highly characteristic Lapita pottery (Photo 1) but also by the Oceanic languages, a coherent subgroup of Austronesian marked by distinctive innovations. Green & Pawley (1998) have shown that we can correlate particular house-types with Oceanic languages and that these can be found in the archaeological record. A series of publications from RSPAS has reconstructed material culture, the natural environment, plants and animals which can be reconstructed to proto-Oceanic linguistically (Ross et al. 1998, 2007, 2008, 2011). Exploring these hypotheses in the material record, using both archaeology and ethnography, remains a task that has barely begun.

This paper looks at the distribution of major musical instruments in the Melanesian region and the extent to which they can be mapped against language phyla. It begins with the instruments we know to be old in Papua and explores those which might be Austronesian introductions. Three instruments, the slit-gong, panpipes and jews' harp have broad regional distributions and their history is evidently complex, since they typify both language phyla. This leads to a discussion of polyphony in vocal and instrumental music and its correlation with language affiliation. Some consideration of the linguistic data on musical instrument names is included, but the evidence remains rather weak in this area.

Given the vast number of distinct ethnolinguistic groups in the region, the data on musical instruments remains sparse. However, two ethnomusicologists in particular have been active in plotting out musical practice, Jaap Kunst (1967) and Mervyn McClean (1979, 1994). Collaer (1965) is invaluable for photographs of performance and also tables of distribution of instruments. Additional monographs on the music of the Solomons (Zemp 1971, 1972), New Caledonia (Amman 1997), and Polynesia (Fischer 1983)

represent important further sources. However, much information is also recorded on the sleeve notes accompanying CDs which are not formally published. I have tried to incorporate these where relevant.

Also important are museum collections. I have visited and photographed collections in Jakarta, Port Moresby, Port Vila, Honiara and Nouméa. Apart from in Jakarta, access was difficult and in one case I had to bribe my way in. So my thanks to the staff of these museums remains conditional. Museums in Germany in particular have well-displayed and documented collections from Oceania and photography is permitted, unlike the Tropenmuseum in Amsterdam. Many of the photographs in this paper are either from my own collection or from these museums, and lighting conditions were sometimes problematic. Most of the maps are based on McLean (1994) in the first instance, supplemented with my own reading of the literature and records of museum collections, and the addition of further Oceania, Vanuatu and New Caledonia. This is a vast area and I am well aware that there may be errors and further points of distribution of which I am unaware. I hope friendly readers will be able to point out these lacunae.

2. Comparative ethno-organology as a tool of prehistory

Musical instruments are generally the most concrete evidence we have about the music of the past. In general we can only speculate what type of music people played, but ethnographic evidence points to the instruments they used. As a consequence, a large part of musical reconstruction is devoted to tracing the evolution, development and change in morphology and distribution of musical instruments. This has a long intellectual history in ethnology; the German *Kulturkreislehere* school thought that musical instruments were associated with different cultural layers in human evolution. The apotheosis of this type of scholarship is Curt Sachs' (1928) magnificent *Geist und Werden der Musikinstrumente* which trawled the ethnological literature and museum collections of the world to produce a massive database of distributions of instrument types. Sach's interpretations would not make much sense in terms of modern understanding of the ethnohistory of Melanesia, but the compilation of data it represents remains unsurpassed.

Human beings are not very inventive when it comes to musical instruments, for reasons we do not fully understand. For example, the principle of the duct-flute appears to have been only invented once, since it is nowhere found in Africa, despite the wide variety of flutes. Similarly, the worldwide occurrences of the Jews' harp are all geographically linked, and they are absent in Africa, Australia and the New World. Arguments for independent invention are thus not very convincing. We also know that migration and music are strongly linked. Just as the massive migrations from Europe in the nineteenth century spread the piano round the world, movements of Muslim traders brought the lute to SE Asia, as earlier Indian interaction with SE Asia spread the arched harp. So it is reasonable to suppose the Austronesian migrations left a musical trail as well as a linguistic one.

One of the striking features of the organology of Melanesia is the small number of instrument types. There are more organological principles at work in a single African or Yunannese village than in the whole of Melanesia. Australia is even more restricted, with just three or four instruments found in the entire continent. This has advantages for the reconstruction of prehistory, since high levels of diversity creates difficulties in detecting which instruments are indigenous and which introduced.

There are, however, some instrument types which are not really very useful for this type of culture history, notably the rattles. Both Melanesia and ISEA have a wide variety of body and stick rattles, usually sounded during dances. Their morphological diversity and the weak descriptive literature means that their distribution cannot be mapped precisely enough to draw useful conclusions. Similarly, the bullroarer is widespread in New Guinea and Australia and is a global instrument probably associated with early human migrations, and so falls into the category of interesting but not necessarily informative.

3. Papuan instruments

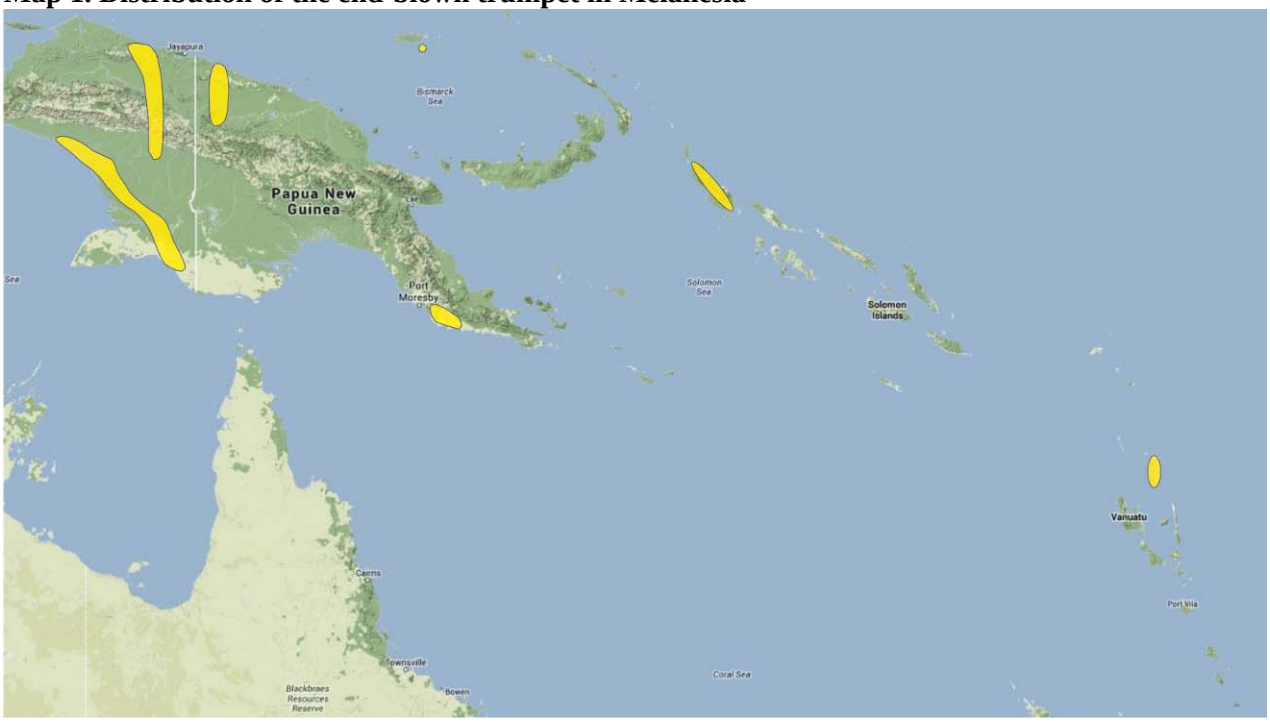
3.1 End-blown trumpets

A highly characteristic instrument of Melanesia is the wide-bore end-blown trumpet, usually made from a giant grass. These are frequently used in sacred ceremonies as the 'voice' of spirits (Haddon 1917). Some instruments have a series of tubes of different diameters inserted in one another, thus creating a type of conical bore. Photo 2 shows a typical example of such an instrument made by the Asmat people in Irian Jaya. Map 1 shows the distribution of end-blown trumpets, which are scattered in both coastal and interior New Guinea, as well as on Bougainville. This distribution, as well as their absence in the Austronesian speaking regions of ISEA points strongly to a Papuan instrument.

Photo 2. End-blown bamboo trumpet, Asmat, Irian Jaya

Source: Author's collection

Map 1. Distribution of the end-blown trumpet in Melanesia



Side-blown trumpets and horns are found in the Eastern Sepik, and these may be local copies of the transverse conch (Haddon 1917: 79).

3.2 Coiled-leaf shawm

The coiled-leaf shawm is a small double-reed instrument, made from a palm leaf wound into a cone. The double-reed, also made from palm-leaves, is inserted into the small end to act as the sounding device. Such

instruments are found in Western Melanesia and Bougainville (Map 2). Their distribution edges into the interior in several places, but as they are also found in parts of ISEA (Reis 1986), their origin is uncertain.

Map 2. Distribution of the coiled-leaf shawm in Melanesia

3.3 Overblowing transverse flutes

Flutes are 'edge instruments' where the sound is produced by the player blowing across a sharp edge. The major distinction in flute types is between open flutes and duct flutes. In a duct flute such as a recorder, the air is led through a channel and across the edge, which makes it easier to sound, but more difficult to produce expressive ornamentation. Open flutes are then subdivided by the way the instrument is held and the nature of the edge, which can be a plain circle or a notch. Flutes are usually blown with the mouth, but in SE Asia and the Pacific, blowing them with the nose is common. However, nose and mouth-blown flutes cannot be distinguished by the structure of the instrument. Transverse flutes, where the resonating tube is held transversely to the player, as in the European orchestral flute, are predominant in Melanesia, and are typically without fingerholes and produces melodies using the overblown harmonic series. Typically, they are known as 'sacred flutes' as they are often used in pairs or ensembles to create melodies which accompany initiations or other rites (Gourlay 1975; Spearritt 1980, 1982; Hays 1986). Photo 3 shows a relatively short sacred flute from the Sepik River area. Map 3 shows the distribution of transverse overblowing flutes in Melanesia as a whole. The distribution of these flutes in remote Oceania is still unclear and they may be more widespread than this map suggests.

Photo 3. Overblowing transverse flute, Sepik River

Source: Author photo, Dahlem Museum, Berlin

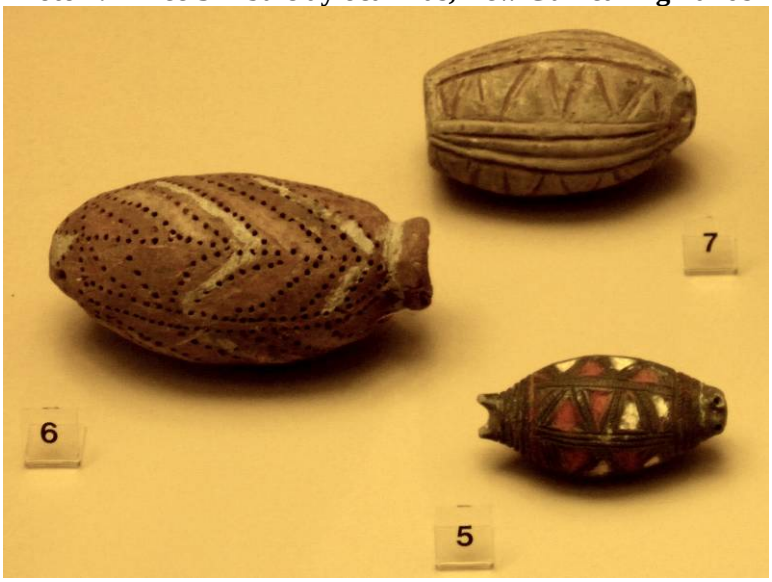
Transverse flutes are not typical of ISEA, and where they exist, they usually have six fingerholes and are probably local copies of sixteenth century Portuguese fifes, introduced by sailors (Collaer 1979).

Map 3. Distribution of transverse overblowing flutes in Melanesia

3.4 Ocarinas

The ocarina is a globular vessel-whistle, which usually has a single blowhole and one or more fingerholes. European and Asian ocarinas have a duct like a recorder and are thus structurally quite different from those in Melanesia. Interestingly, ocarinas in Africa are identical to those in Melanesia, which may suggest high antiquity. Most of the ocarinas in Melanesia are either made from a spherical fruit-shell or a dried, hollowed coconut (Photo 6). However, in parts of the Highlands, notably among the Simbu, ocarinas are made from clay and usually have elaborate polychrome decorations (Photo 4).

Photo 4. Three Simbu clay ocarinas, New Guinea Highlands



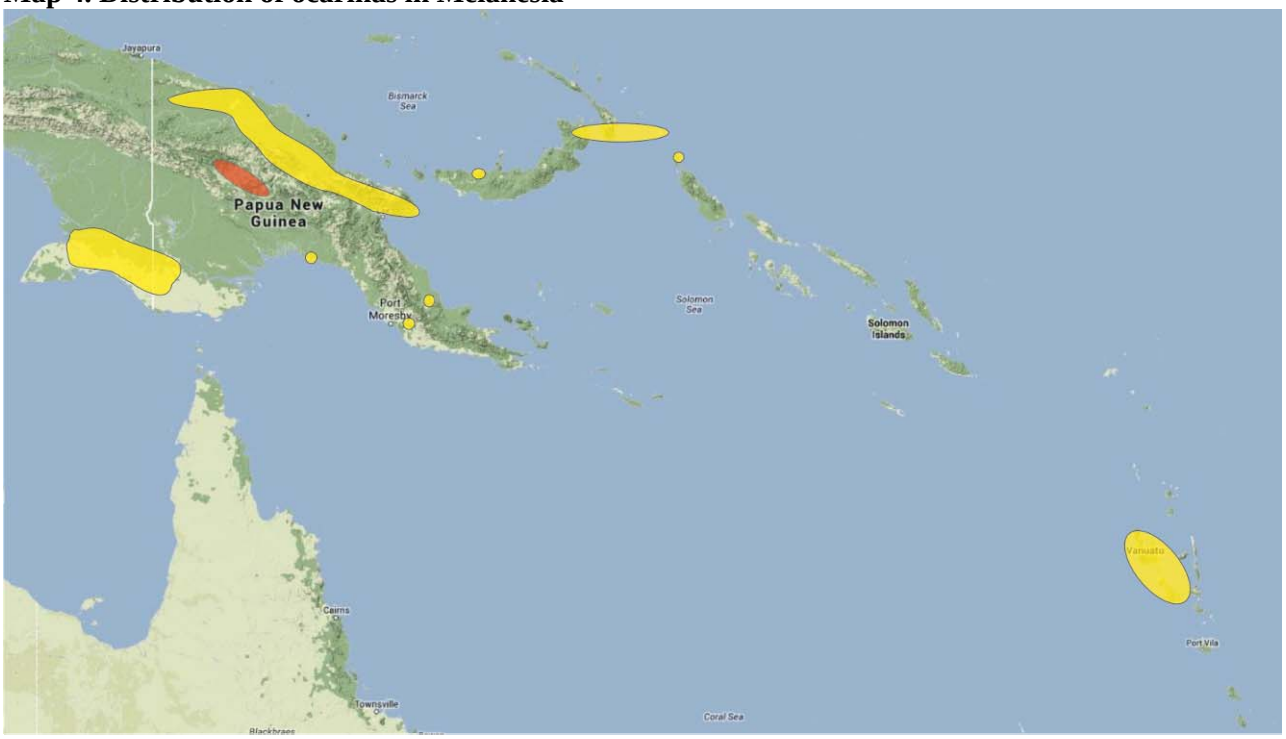
Source: Author photo, Dahlem Museum, Berlin

Photo 5. Vanuatu fruit shell ocarina

Source: Author photo, Vanuatu Cultural Centre

McClean (1994: 32-34) plots the distribution of the ocarina in Melanesia. Present information suggests a very disjunct distribution, with a small zone in southwest and northeast coastal New Guinea and adjacent Irian Jaya, scattered occurrences in New Britain and New Ireland and among the Simbu in the Highlands. Fruit-shell ocarinas also occur on Buka in the Solomons and in Vanuatu (Photo 5). The ocarina is generally absent in Micronesia and Polynesia. Map 4 shows the distribution of ocarinas in Melanesia, with the fruit-shell types shown in yellow and clay instruments in red.

Map 4. Distribution of ocarinas in Melanesia



3.5 Mouth-bows

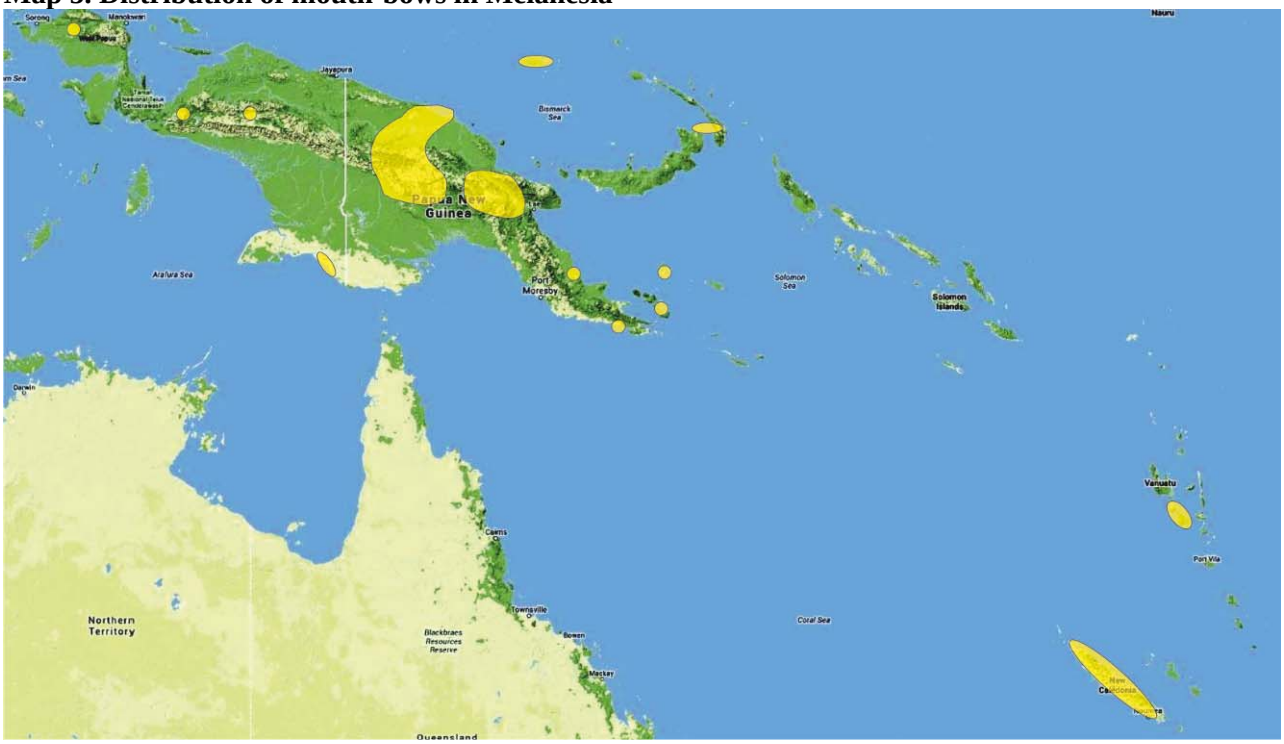
The musical bow is typical of many cultures around the world and was probably reinvented from the hunting bow numerous times. The musical bow consists of plucking a hunting bow while using the mouth as a resonant cavity to selectively emphasise different harmonics. Most commonly it is mouth-resonated, although calabash resonators can also be attached to the bow and held against the body to enlarge the sound. The Dumagat people in Luzon still use this type of mouth-bow, which is also found in Africa and the New World.

Map 5 shows the distribution of mouth-bows in Melanesia. The interior occurrences in New Guinea argue that this must be an old Papuan instrument. However, it also occurs in the Austronesian-speaking areas, notably in Vanuatu and New Caledonia. It must therefore have been picked up the migrating Austronesians, unless is a survival of the musical bows found in the Philippines.

Photo 6. Coconut ocarina, Port Moresby area

Source: Author's collection

Map 5. Distribution of mouth-bows in Melanesia



3.6 Glued hourglass drum

Drums are resonant chambers with one or two skins stretched across a head and beaten with hands or a stick. In practice, the main type of drum in Melanesia is the hourglass drum, where the resonator is a cylindrical sounding tube with a narrowed waist. It is open at the base, and the head, often made from a lizard-skin[1], is beaten with the hand. Melanesian examples very often have elaborate carved handles. However, their most distinctive feature is that the head is kept in place with glue, often made from reptile blood. Additional lacing is used to keep the skin in place, but adhesive is the main fixing mechanism. This system is highly characteristic of Melanesia and almost unknown in ISEA, so it seems likely this is an old Papuan practice. Frankly, it is not very efficient and the skin quickly goes slack unless maintained. Photo 7 shows three examples of hourglass drums from New Guinea, illustrating some of the variations in morphology.

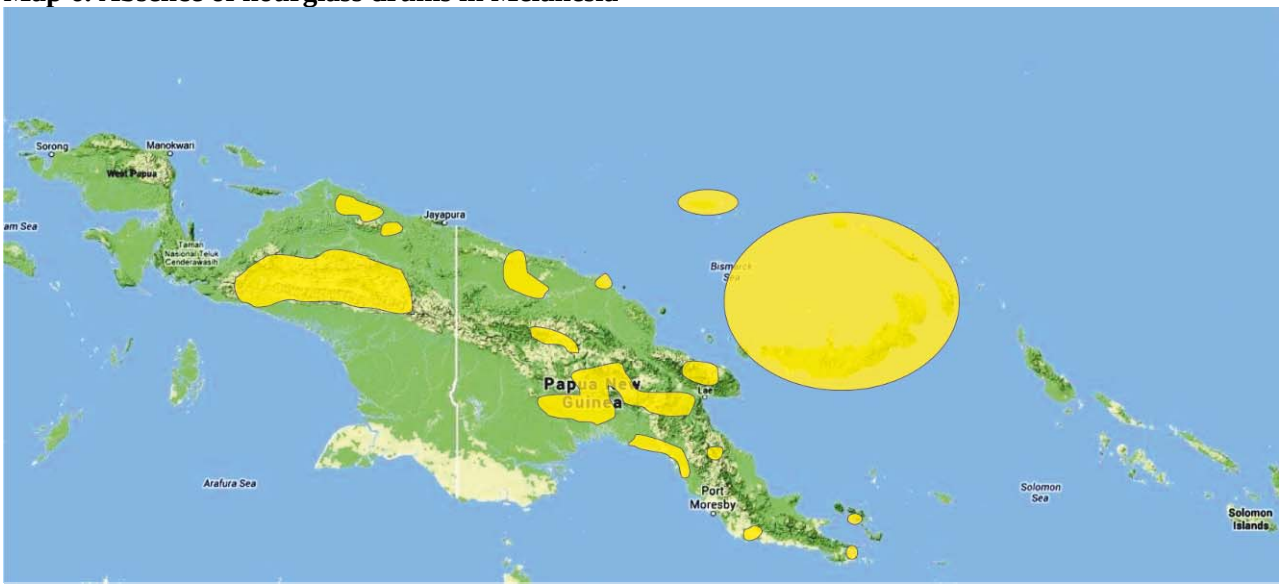
These drums are extremely widespread across the whole island, something which lead Ross et al. (1998) to conclude a word for these drums could be reconstructed to proto-Oceanic, for which they propose **kude*. This is almost certainly false, and where Austronesian groups play this drum they have almost certainly borrowed it. Map 6 shows a map of the regions where the hourglass drum is absent in Melanesia, which includes both the Admiralties and all of New Britain and New Ireland. It is also apparently absent from all of remote Oceania. Notably also it is found through much of the interior, and absent in many coastal regions. Hence it is likely that the related Austronesian terms are borrowed from Papuan and the hourglass drum cannot be reconstructed to proto-Oceanic.

[1] Chowning (1991: 59) notes that the word for ‘lizard’ and ‘drum’ are very similar in some languages of the north coast of New Guinea and west New Britain.

Photo 7. Three types of hourglass drum, New Guinea

Source: Author photo, Dahlem Museum, Berlin

Map 6. Absence of hourglass drums in Melanesia



4. Austronesian instruments

4.1 Transverse conch

Photo 8. Transverse conch, Goodenough Island, Milne Bay Province

Source: Author photo, Port Moresby Museum

The conch is a world instrument, found in most regions, including the New World and coastal Africa. The shell is cleaned of biological matter, and a hole drilled in one end. The conch is the shell of the sea snail, *Charonia tritonis*. Conches can be transverse or end-blown, but all the instruments in SE Asia and the Pacific are of the second type. The conch is technically a vessel-horn, but it can be tuned for ensembles by selecting shells of different sizes. Although this is practised in Tonga (Moyle 1975) it is unknown in Melanesia proper. However, a second shell, *Cassis* spp. is also used in Melanesia, which, because of its morphology, is always end-blown.

Map 7 show the distribution of transverse conches in Melanesia. Transverse conches were probably introduced by the Austronesians as their main distribution appears to be coastal (McClean 1994: Figures 26a,b). There are some examples of highland conches, but they were probably traded up from the coast. It could argued that since conches are by definition found on seashores, a coastal distribution is ecological. However, in mainland SE Asia, and India, conches are traded long distance inland because of their perceived spiritual properties, so this does not exclude an introduction by the Austronesians. Photo 8 shows a transverse conch from Goodenough Island in Milne Bay Province, New Guinea.

Map 7. Distribution of transverse conches in Melanesia

Osmond & Ross (1998: 106) propose a reconstruction for proto-Oceanic of *tapuRi(q) which in turn descends from PMP *tambuRi(q) and this is supported by a significant table of reflexes, including those in the Admiralties. Given the distribution of the conch, this seems reasonable.

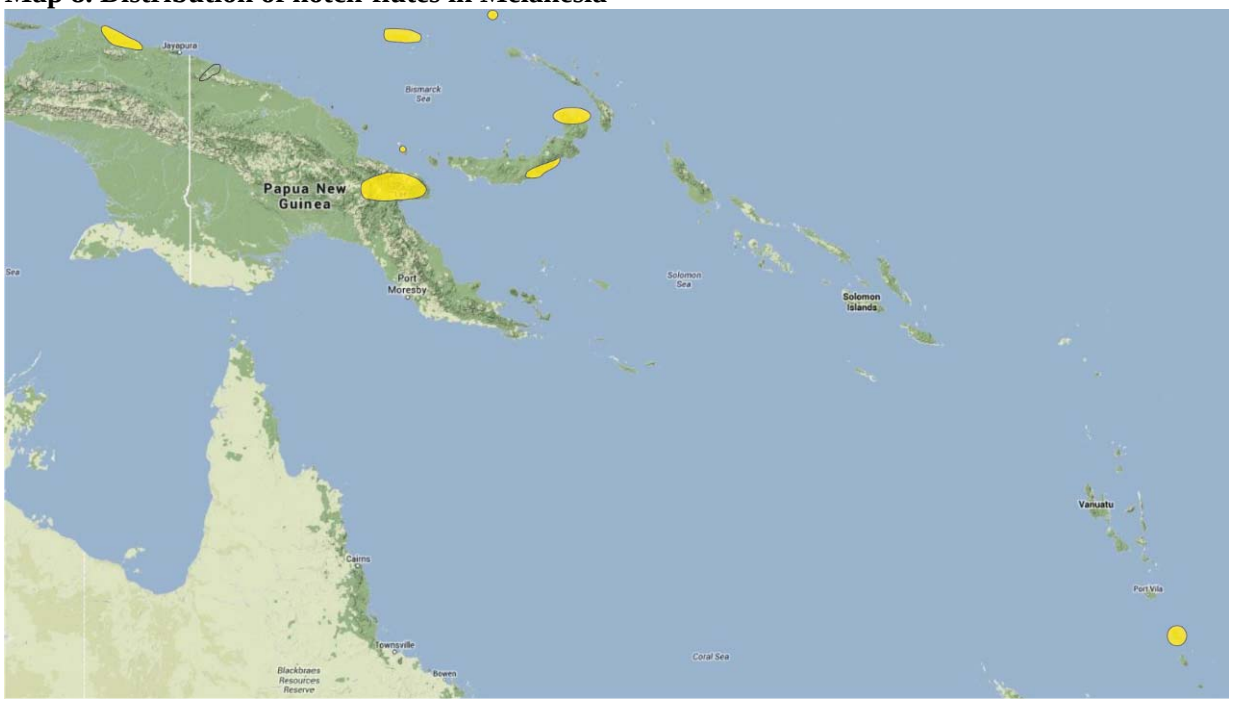
4.2 Notch-flute

The notch-flute is a hollow, cylindrical flute made from a reed with a V-shaped notch cut in the end which acts as an embouchure. Notch-flutes are most characteristic of the New World, but are also found in parts of Africa and Asia. They are rare in mainland SE Asia, but are known from China, Japan, throughout much of the Philippines and in parts of Indonesia. The notch-flute is one of the few instruments where a linguistic reconstruction in Austronesian is possible; from Isneg in Luzon to Mamanwa in Mindanao, the name is **p-l-n-d-g*, suggesting that the instrument was carried throughout the region (Maceda 1998: 178). The distribution of the notch-flute in Melanesia is almost entirely confined to islands and coasts, making it a strong candidate for Austronesian introduction. Notch-flutes are also recorded in Vanuatu (Photo 9) but not apparently in the Solomons.

Photo 9. Two notch-flutes, Tanna, Vanuatu

Source: Author's collection

Map 8. Distribution of notch-flutes in Melanesia



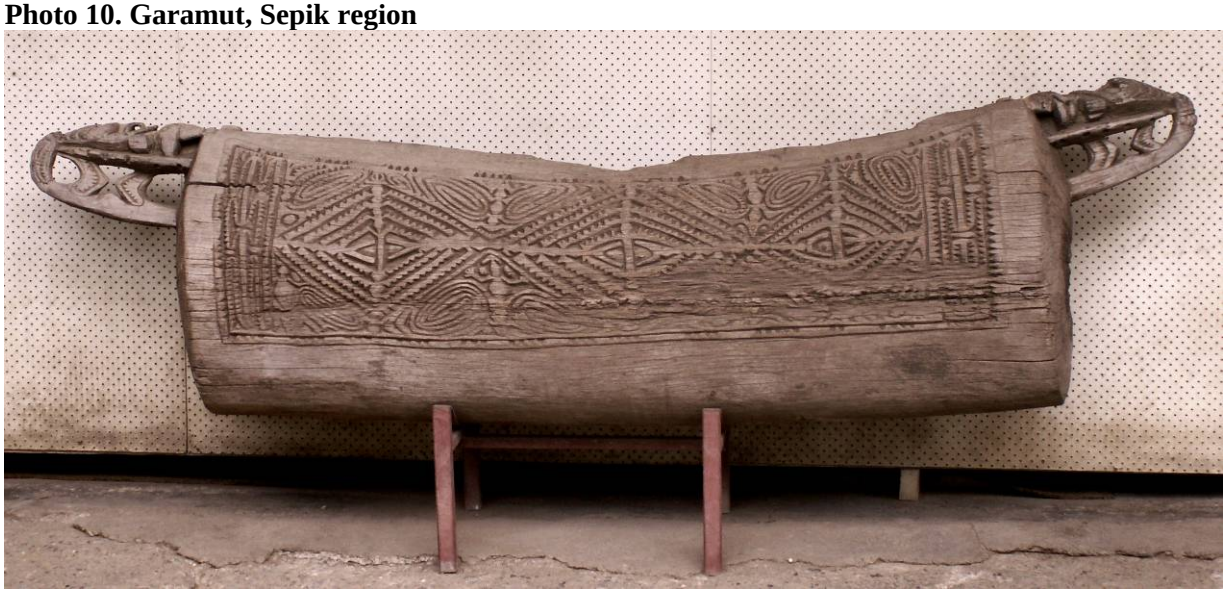
5. Three controversial instruments

5.1 Large slit-gong

The slit-gong is a hollowed log or giant grass such as bamboo, with one or more lengthways slits and usually sealed at each end, beaten with sticks. It is found across the world, especially in tropical regions, wherever dense vegetation and large trees stimulate the development of instruments that can communicate over large distances. There appear to be two distinct traditions in the SE Asian region, the use of very large slit-gongs, typical of Nagaland, parts of Yunnan and northern Myanmar, and New Guinea, as opposed to the smaller, portable slit-gongs used throughout much of island SE Asia. Only in New Guinea are there very large slit gongs, known as garamuts, similar to those in Nagaland. Photo 10 shows a typically garamut from the Sepik

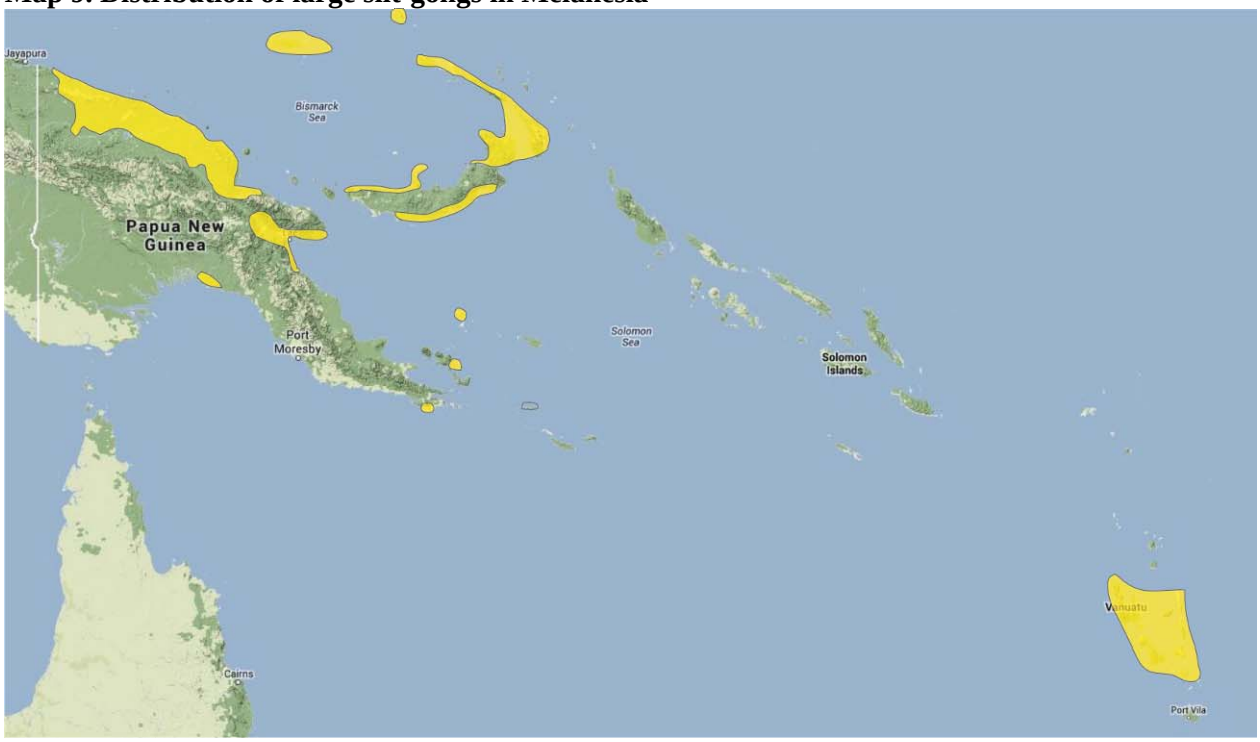
area, now in the Port Moresby Museum. Kunst (1967: map) shows the distribution of slit-gongs in New Guinea and they are confined to the Northeast coast and the adjacent offshore islands. McClean (1994) is a more complete map and slit-gongs do have some interior distribution (Map 9). Very large slit-gongs are not found in the Solomons, but do occur in Vanuatu, standing upright rather than laid horizontally on the ground. Sets of small slit-gongs occur on Malaita, and this may be source of the Vanuatu instruments.

Photo 10. Garamut, Sepik region



Source: Author photo, Port Moresby Museum

Map 9. Distribution of large slit-gongs in Melanesia



Osmond & Ross (1998: 109) consider the names for the slit-gong in Oceanic, but these are extremely various, as they apply to a wide variety of instruments, including the hollowed wooden blocks found in Fiji and Polynesia and the small bamboo instruments. Reflexes of POc **garamut* only occur on the northern coast and offshore islands such as the Admiralties. So it does look on the surface as if this instrument is an Austronesian innovation. But this does not explain the surprising similarities, which include playing technique, with the large slit-gongs on the SE Asian mainland. Such instruments are completely absent in

ISEA. It is possible this was always present on the New Guinea mainland and is part of a cultural pattern which formerly stretched from Melanesia to NE India (Blench in press). However, the culture would then have been picked up by the incoming Austronesians and further dispersed by them. Probably this issue cannot be resolved without a much more detailed mapping of the different morphological types of slit-gong.

5.2 Jews' harp

Photo 11. Jew's harp, New Guinea

Source: Author's collection

The Jews' harp consists of a vibrating tongue fixed to a frame. When the tongue is plucked, it passes between the two walls of the frame. The instrument is held in the mouth, so that the oral cavity is the resonator. The player can then manipulate the shape of the mouth to emphasise different overtones and thus construct a melody. The Jews' harp thus makes use of the harmonic series, like flutes without fingerholes and end-blown trumpets. Some instruments have more than one tongue, and by switching between tongues, a skilled player can produce a complete scale and thus play more wide-ranging melodies.

The Jews' harp has a curious worldwide distribution; unknown in Africa, the Middle East and the New World, it is found across Eurasia from Siberia to Britain, and throughout the Pacific only excluding Australia (Sachs 1917). It is characteristic of virtually the whole SE Asian region and is widespread in New Guinea. Papuan-speakers were probably already playing it when the expanding Austronesians encountered them (McClean 1994). The evocative sound has made for a strong association with mystical experience, and in Northeast Asia it is typically associated with shamanism.

The jews' harp is ubiquitous in Oceania, found throughout the island of New Guinea, with a few exceptions, such as the lower Sepik, everywhere in Polynesia, even as far as New Zealand, and in all parts of remote Oceania, including New Caledonia. Mapping it is therefore largely superfluous, but it must certainly have been present in Melanesia prior to the Austronesian incursions. However, given that it also occurs almost everywhere in ISEA, the Austronesians would certainly have had the instrument when they first encountered Papuan speakers. Unfortunately, the jews' harp typically attracts ideophonic names based on its distinctive sound, and typically has limited time-depth suitable for linguistic reconstruction, despite its ubiquity and presumed antiquity in the region. Osmond & Ross propose a PWOc reconstruction for jews' harp, **bogobogo*, based on just two attestations, both from the North Coast.

Photo 12. Malaita panpipes, Solomons

Source: Author's collection

5.3 Panpipes

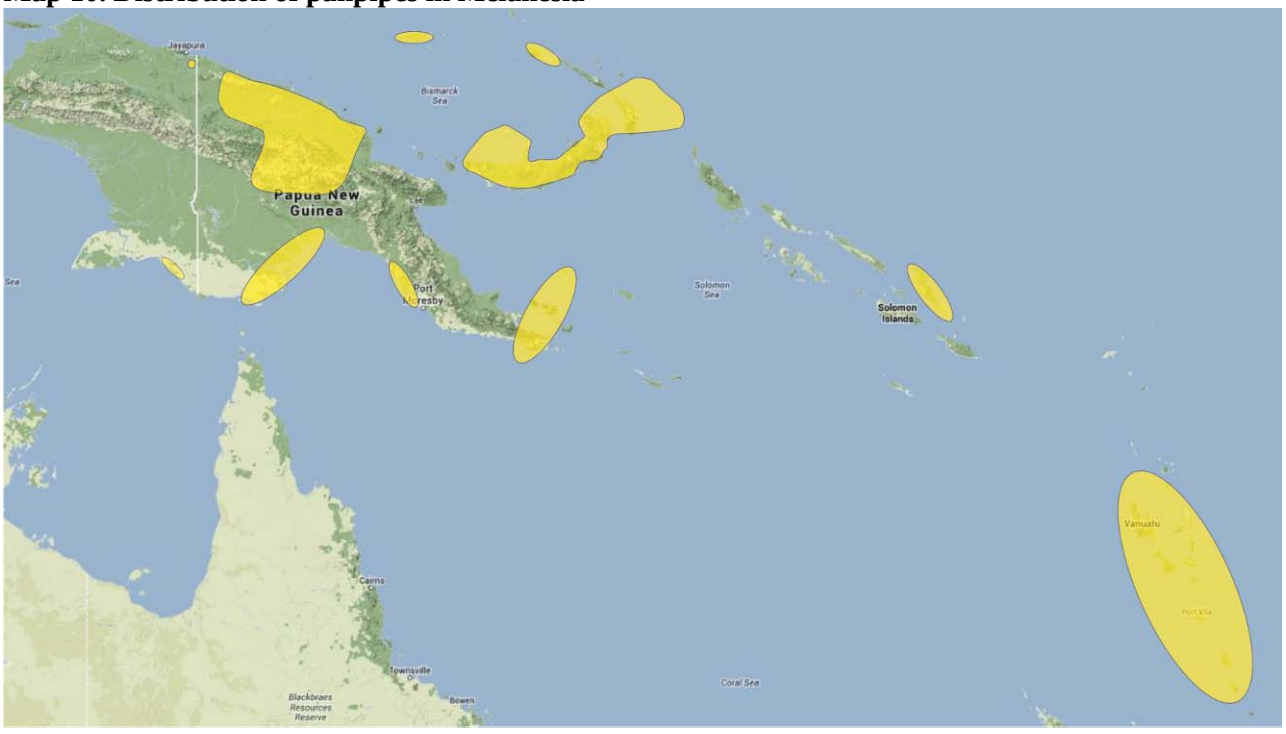
Panpipes are single-note tubes, closed at the base, bound together in sets. The player moves the mouth rapidly across the tubes making a melody from individual sounding pipes. Most panpipes have the tubes in a straight row graded in size, raft-panpipes, but there are the much rarer bundle panpipes, where the sounding tubes are in a cluster. Panpipes are found all over the world, and their common origin or otherwise has been much debated. Panpipes are found among many minorities in SE Asia, both on the mainland and the islands (Photo 13). Panpipes in Melanesia are extremely morphologically diverse and it is possible that there are two layers, an old Papuan layer and a more recent Austronesian layer. We know that panpipes were formerly played in Tonga and Samoa, but were then lost in the Polynesian instrumentarium (Fischer 1983). Similarly, although widely played in Vanuatu, they were unknown in New Caledonia. Panpipes have probably developed to their greatest extent in parts of Malaita (Photo 12), where they have been studied by Hugo Zemp (1971).

Photo 13. New Ireland panpipes

Source: Author photo, Dahlem Museum, Berlin

Map 10 shows the distribution of panpipes in Melanesia. The map clearly indicates a coastal and island distribution for some types. However, they are also widely played inland in the Eastern Highlands, and this probably points to an older pre-Austronesian layer.

Map 10. Distribution of panpipes in Melanesia

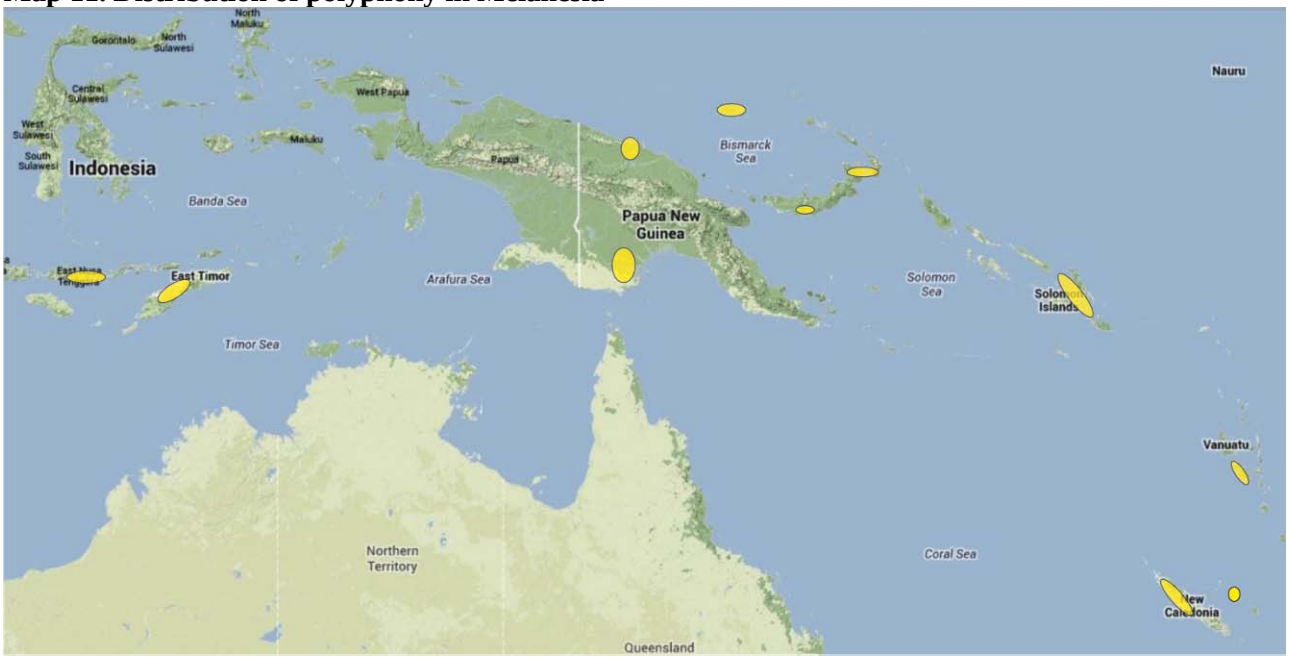


Osmond & Ross (1998: 107) do not find a common lexeme for ‘panpipe’ in Oceanic and indeed, many of the reflexes are verbs or related forms for ‘blow’. At present it seems credible that panpipes existed in Melanesia prior to the Austronesian incursions, but that the Austronesians also had some type of panpipes. More detailed work on panpipe morphology may enable us to disentangle these two threads.

6. Polyphony

True polyphony, the sounding of different melodies against one another is relatively rare in the world, but characterises much of African music, European folk and classical music from the late Middle Ages to the Baroque. It also has a striking area of distribution in South China and Taiwan and can therefore be reconstructed as a musical practice of the early Austronesians. However, it than apparently disappears with the Austronesian dispersal out of Taiwan, for all the music of ISEA is monodic or heterophonic. Polyphony is found in a somewhat scattered form in parts of Melanesia and also in the islands west of New Guinea, Timor and Flores, where other 'Papuan' practices apparently survive. Strikingly, the Admiralties, the likely home of POc has rather dramatic polyphony (Hüber 1935; Messner 1981). The Solomons, Malaita in particular, is known for its complex panpipe ensembles, and vocal versions of panpipe polyphony (Zemp 1971, 1972). Vocal polyphony in its rather simpler forms, using only drones, is recorded from Vanuatu, the Loyalties and Grande Ile.

Map 11. Distribution of polyphony in Melanesia



The distribution of polyphony there does seem to have an Austronesian element, although it was probably also practised by the pre-AN populations of Melanesia. Given that the Austronesian dispersal is now considered to have happened very rapidly following their departure from Taiwan, it may be that the polyphony in the Admiralties is indeed a direct descendant of Taiwanese polyphony and that it disappeared in the remainder of ISEA. Polyphony in Flores and Timor may thus also be descended from these traditions. To explore the nuances of this topic, it is likely we will need to know more about the musical details of the polyphonic structures.

7. Conclusions

The impact of the Austronesian dispersal on the indigenous populations of Melanesia was both linguistic and cultural. Mapping the distribution of musical instruments and musical practice makes it possible to begin to understand aspects of that cultural impact. Apart from instruments brought by the Austronesians, they also seem to have picked up Papuan instruments and further dispersed them into remote Oceania. This is much less obvious in Polynesia, where a completely different set of instruments was adopted. Melanesia also has a small but interesting set of instruments which are quite distinctive, such as the New Ireland rubbing block, not found anywhere else in the world. At present there are several instruments whose cultural history is not easy to decide because their ambiguous distribution, but this may be because we have not described their morphology in sufficient detail.

Table 1 summarises my hypotheses concerning the origins of musical instruments of the Melanesian area;

Table 1. Origins of musical instruments of the Melanesian area

Category	Examples
Instruments indigenous to the Melanesian area	End-blown trumpets, Coiled-leaf shawm, Overblowing transverse flutes, Ocarinas, Mouth-bows, Glued hourglass drum
Instruments introduced by the Austronesians	Transverse conch, Notch-flute
Not easily decided	Large slit-gong, Jews' harp, Panpipes, Polyphony

In many cases the story is quite complex, as it looks like there has been earlier transmission of instruments across ISEA prior to the Austronesian dispersal, as has been demonstrated to be the case with vegetative crops such as the banana. Moreover, musical instruments are just one part of material culture; no doubt similar exercises can be conducted for other types of artefact.

References

Amman, R. 1997. *Kanak music and dance*. Nouméa/ London: ADCK/ Kegan Paul International.

Basile, C. & Hoskins, J. 1998. Nusa Tenggara Timur. In: *Southeast Asia. The Garland Encyclopaedia of Popular Music*. T.E. Miller & S. Williams eds. 786-803. New York and London: Garland Publishing.

Blench, R.M. in press. Was there once an arc of vegeculture linking Melanesia with Northeast India? In: *Selected papers from the 2011 Lapita Pacific Archaeology Conference: 'Pacific Archaeology: documenting the past 50,000 years to the present'*. Glenn Summerhayes, David Addison eds. Auckland University Press.

Chowning, A. 1991. Proto-Oceanic culture: the evidence from Melanesia. In: *Currents in Pacific linguistics: papers on Austronesian languages and ethnolinguistics in honour of George W. Grace*. R.A. Blust ed. 43-75. Canberra: Pacific Linguistics.

Collaer, Paul 1965. *Ozeanien. (Musikethnologie)*. Musikgeschichte in Bildern. Bd. 1. Lfg. 1. Leipzig: VEB.

Collaer, Paul 1979. *Südostasien*. Musikgeschichte in Bildern, i/3. Leipzig: VEB.

Fischer, Hans 1958. *Schallgeräte in Ozeanien. Bau und Spieltechnik –Verbreitung und Funktion*. Strasbourg/Badenbaden: Heitz.

Fodermayr, Franz 1971. *Zur gesanglichen Stimmgebung in der aussereuropaiischen Musik*. (Acta ethnologica et linguistica 24/1.) Wien.

Gourlay, K.A. 1974. *A Bibliography of Traditional Music in Papua New Guinea*. Port Moresby: Institute of Papua New Guinea Studies.

Haddon, A.C. 1917. 56. Notes on Wooden Trumpets in New Guinea. *Man*, 17:77-79.

Hays, T.E. 1986. Sacred Flutes, Fertility, and Growth in the Papua New Guinea Highlands. *Anthropos*, 435-453.

Hornbostel, E.M. von 1909. Uber die Mehrstimmigkeit in der aussereuropaischen Musik. *3rd Kongress der Internationalen Musikgesellschaft (Bericht)*. 298-303. Wien:

Hornbostel, E.M. von 1912. Die Musik auf den nordwestlichen Salomo-Inseln (aus dem Phongramm-Archiv des Psychol. Instituts der Universitat Berlin). Appendix to: R. Thurnwald *Forschungen auf den Salomo-Inseln und dem Bismarck-Archipel*. Vol. 1. 461 ff. Berlin.

Hüber, H. 1935. Studien zur Musik im Bismarck-Archipel. *Anthropos*, 30:669-79.

Jackson, J.W. 1916. Shell-trumpets and their Distribution in the Old and New World. *Memoirs of the Manchester Literary Society*, 60: 1-22.

Kunst, Jaap 1967. *Music in New Guinea*. 'S-Gravenhage: Martinus Nijhoff.

Kunst, Jaap 1968. [2nd ed.] *Hindu-Javanese musical instruments*. The Hague: Martinus Nijhoff.

Kunst, Jaap 1973. [3rd ed.] *Music in Java: its history, its theory and its technique*. The Hague: Martinus Nijhoff.

Maceda, José 1998. *Gongs and bamboo: a panorama of Philippine musical instruments.* Manila: University of the Philippines Press.

McLean, M.E. 1979. Towards the Differentiation of Music Areas in Oceania. *Anthropos*, 74:717-36.

McLean, M.E. 1994. *Diffusion of musical instruments and their relation to language migrations in New Guinea* (Vol. 1). Cultural Studies Division, National Research Institute.

Mead, Margaret 1934. Tamberans and tumbuans in New Guinea. *Natural History*, 34(3): 234-46.

Messner, Gerald Florian 1980. *Die Schwebungsdiaphonie in Bistrica, Untersuchungen der mehrstimmigen Lied-formen eines mittelwestbulgarischen Dorfes*. Tutzing. Wiener Veroffentlichungen zur Musikwissenschaft 12.

Messner, Gerald Florian 1981. The Two-Part Vocal Style on Baluan Island Manus Province, Papua New Guinea. *Ethnomusicology*, 25(3):433-446.

Moyle, Richard M. 1975. Conch Ensembles: Tonga's Unique Contribution to Polynesian Organology. *The Galpin Society Journal*, 28: 98-106.

Pawley, Andrew 2008. Where and when was Proto Oceanic spoken? Linguistic and archaeological evidence. In: Yury A. Lander & Alexander K. Ogoblin eds. *Language and text in the Austronesian world: Studies in honour of Ülo Sirk*, 47-71. (*Studies in Austronesian Linguistics* 06). Munich: Lincom Europa.

Rawcliffe, Bishop Derek and P.R. Crowe 1980. Melanesia: New Hebrides. In: *The New Grove Dictionary of Music and Musicians*. Stanley Sadie, ed. 12:86-88. London: Macmillan.

Reid, Lawrence A. 1994. Possible non-Austronesian lexical elements in Philippine Negrito languages. *Oceanic Linguistics* 33:37–72.

Reis, Flora 1986. Spiralled-leaf reedpipes and shawms of the Indian Ocean Littoral: Two Related Regional Traditions. *Musicology Australia*, 9:39-52.

Ross, M. Pawley, A. & M. Osmond eds. 2008. *The lexicon of proto-Oceanic: the culture and society of ancestral Oceanic society. 3: Plants*. Pacific Linguistics 599. Canberra: ANU.

Ross, M. Pawley, A. & M. Osmond eds. 2011. *The lexicon of proto-Oceanic: the culture and society of ancestral Oceanic society. 4: Animals*. Pacific Linguistics. Canberra: ANU.

Ross, M., Pawley, A., & Osmond, M. 1998. *The Lexicon of Proto Oceanic: The Culture and Environment of Ancestral Oceanic Society: Material Culture (Vol. 1)*. Canberra: ANU.

Ross, M., Pawley, A., & Osmond, M. 2007. *The Lexicon of Proto Oceanic: The Culture and Environment of Ancestral Oceanic Society: The Physical Environment* (Vol. 2). Canberra: ANU.

Sachs, Curt 1917. Die Maultrommel: eine typologische Vorstudie. *Zeitschrift für Ethnologie*, 4-6: 185-200.

Sachs, Curt 1928. *Geist und Werden der Musikinstrumente*. Berlin: Reimer.

Spearritt, Gordon D. 1980. *The music of the Iatmul people of the Middle Sepik River (Papua New Guinea) : with special reference to instrumental music at Kandangai and Aibom* PhD Thesis, School of Music, The University of Queensland.

Spearritt, Gordon D. 1982. The pairing of musicians and instruments in Iatmul society. *Yearbook for Traditional Music*, 14: 106-125.

Spriggs, Matthew T.J. 2011. Archaeology and the Austronesian expansion: where are we now? *Antiquity*, 85: 10–528.

Wirz, P. 1952. *A description of musical instruments from Central North-Eastern New Guinea: On some hitherto unknown objects from the highlands of Central North-Eastern New Guinea*. Amsterdam: Uitgave Koninklijk instituut voor de Tropen.

Zemp, Hugo 1971. Instruments de musique de Malaita (I). *Journal de la Société des Océanistes*, 30:31-53.

Zemp, Hugo 1972. Instruments de musique de Malaita (II). *Journal de la Société des Océanistes*, 34:7-48.