Splitting up proto-Malayopolynesian; new models of dispersals from Taiwan

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The goal of historical linguistics is the reconstruction of proto-forms, i.e. words supposedly spoken when a proto-languages begins to diversify.

In the classical model of linguistic palaeontology, the reconstructed forms are matched against historical and archaeological evidence.

Thus if ‘dog’ is claimed as a proto-form, we should expect to find dogs in the archaeological record.

This also then allows us to calibrate accurately the splitting-up of proto-families.

This makes sense; but…

Suppose there is a major error in the process of reconstructing proto-languages?
Taiwan and the Proto-Malayopolynesian bottleneck

- The current model of proto-Malayo-Polynesian (PMP) holds that a unitary language was spoken around the Luzon Straits roughly four thousand years ago.
- It diversified into all the extra-Formosan languages and was responsible for the Neolithic settlement of Island Southeast Asia (ISEA) and Oceania.
- The evidence for this is in lexical and phonological innovations in PMP compared with Formosan.
- But it is unclear that this model is supported by either linguistics, archaeology nor the distribution of material culture.
- Archaeology of ISEA after 4000 BP points to near simultaneous settlement in a wide variety of sites.
- Analysis of individual lexical items points to geographically skewed distributions, suggesting they were selectively carried to different regions.
Taiwan and the Proto-Malayopolynesian bottleneck II

- Distributions of material culture items associated exclusively with Austronesian culture show strong geographical biases.
- Recent phenotypic results from skeletal material in Remote Oceania suggests a more direct connection with some populations of Taiwan and Northern Luzon.
- This is contrary to previous models of complex mixing at intermediate stages, calling into question elaborate nested models of Austronesian phylogeny.
- This points to a rather different model of time and place, here called the ‘boiling pot’, which assumes the Luzon Strait was an centre of innovative maritime technology and the starting point for voyages in canoes with multi-ethnic crews.
- This would then see PMP as a network of related subgroups, which can never fully reconstitute a unitary PMP, because no such entity existed.
Taiwan and the Proto-Malayopolynesian bottleneck III

- We do know that the populations who left Taiwan passed through a bottleneck, a severe cultural constriction.
- Many features of Taiwanese culture are *not* reflected outside Taiwan, whereas many innovations characteristic of much of the rest of the Austronesian world are not found in Taiwan.
- One suggestion is that the core populations which constituted PMP were partly fisher-foragers and thus dropped a number of cultural features typical of settled cereal-growers.
- But it is also true that the reflections of Taiwanese culture outside Taiwan are diverse, materially and geographically.
- Many of these are yet to be identified.
The Malayopolynesian boiling pot

- This is turn suggests that the area of the Taiwan straits was culturally diverse four thousand years ago; different populations retained varied traits from Taiwanese indigenous peoples, and thus spread them in different patterns as they moved on.

- They would have spoken differentiated but related variants of PMP.

- As they split up, these cultural differences were reflected in the material culture of the places they reached both archaeologically and in synchronic material culture (and in artistic and social practice).

- The challenge is then to identify these different strands of early dispersal and to tie them up with our understanding of the dating.
Primary subgroups of Proto-Malayo-Polynesian

- Philippines
  - North Sarawak
  - Barito
  - Malayo-Chamic
    - Celebic
    - Daic
      - Hlaic
      - Kra-Dai
    - Palauan
  - Marianas
  - Central Eastern
The relationship between Austronesian and Daic (Tai-Kadai) has long been noticed. However, Ostapirat (2005, 2013) supports a genetic affiliation with regular sound-correspondences. Norquest (2007:413) points out that the Hlai branch of Daic shares some striking lexical items with proto-Austronesian which do not occur in the other branches. There is no clear evidence from ceramics, but Hsiao-chun Hung (p.c.) reports red-slipped pottery from Hainan, typologically very similar to the Northern Philippines. I argued in 2012 that beyond the linguistic argument there are significant cultural similarities, including dental evulsion, tooth-blackening, jews’ harps.
### The Austronesian Hlaic connection

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Pre-Hl</th>
<th>Proto-Hlai</th>
<th>PAn</th>
</tr>
</thead>
<tbody>
<tr>
<td>slap</td>
<td>*pi:k</td>
<td>*phi:k</td>
<td>*pik</td>
</tr>
<tr>
<td>weave</td>
<td>*bən</td>
<td>*pʰən</td>
<td>*bəl+bał</td>
</tr>
<tr>
<td>pinch</td>
<td>*ti:p</td>
<td>*tʰi:p</td>
<td>*a-tip (PMP)</td>
</tr>
<tr>
<td>seven</td>
<td>*tu:?</td>
<td>*tʰu:</td>
<td>*pitu</td>
</tr>
<tr>
<td>three</td>
<td>*tə:m</td>
<td>*təʰə:m</td>
<td>*təru</td>
</tr>
<tr>
<td>sharp</td>
<td>*ma:</td>
<td>*hma:</td>
<td>*təʉm</td>
</tr>
<tr>
<td>five</td>
<td>*nəm</td>
<td>*hnəm</td>
<td>*rima</td>
</tr>
<tr>
<td>six</td>
<td></td>
<td>*hnəm</td>
<td>*ʔənəm</td>
</tr>
</tbody>
</table>
Pathways of Daic expansion
Skewed distributions

- In ideal world, PMP reconstructions would be supported by evidence from across Austronesia.
- *If* there was a unified PMP which dispersed in different directions then reflexes of proto-forms would be evenly distributed.
- But when we look at the evidence for individual words, they turn out to have highly skewed distributions, geographically, suggesting rather they are the modern evidence for individual early voyages.
- So PMP may have been a chain of overlapping lects only some of which reflected the forms attributed to *PMP.
- The graphic contrasts an idealised PMP of linguists with the more credible realworld version.
A graphic version
Linguistic case studies

- The paper plots out some of these skewed distributions for a variety of terms in respect of words connected with the sea
- Just a couple of examples here
The story of the pangolin

• A curious piece of direct evidence from zoogeography supports a direct link between Taiwan and Borneo. Blust (1995) puzzled over the name for the pangolin;

• ‘Perhaps the best illustration of such a case is *qaRem "pangolin", reflected in Taiwan and in Borneo (where it applies to another species of the same genus, Manis javanicus), but with no evidence that the animal was ever found in any part of the Philippines except Palawan and the adjacent Kalamian and Cuyo Islands, which, like Borneo, rest on the now submerged Sunda Shelf.’
### Austronesian names for pangolin

<table>
<thead>
<tr>
<th>Branch</th>
<th>Language</th>
<th>Form</th>
<th>Gloss</th>
<th>Scientific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formosan</td>
<td>Seediq</td>
<td>?aruŋ</td>
<td>pangolin, anteater</td>
<td><em>Manis pentadactyla</em></td>
</tr>
<tr>
<td></td>
<td>Thao</td>
<td>qalhum</td>
<td>pangolin, scaly</td>
<td><em>Manis pentadactyla</em></td>
</tr>
<tr>
<td></td>
<td>Amis</td>
<td>?alem</td>
<td>anteater with long</td>
<td><em>Manis pentadactyla</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>tongue</td>
<td></td>
</tr>
<tr>
<td>Borneo</td>
<td>Kiput</td>
<td>arem</td>
<td>pangolin, anteater</td>
<td><em>Manis javanica</em></td>
</tr>
<tr>
<td></td>
<td>Katingan</td>
<td>ahem</td>
<td>pangolin, anteater</td>
<td><em>Manis javanica</em></td>
</tr>
<tr>
<td></td>
<td>Ma'anyan</td>
<td>ayem</td>
<td>pangolin, anteater’</td>
<td><em>Manis javanica</em></td>
</tr>
</tbody>
</table>
### Austronesian names for ‘jellyfish’

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Language</th>
<th>Form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAN</td>
<td>*bubu</td>
<td>jellyfish</td>
<td></td>
</tr>
<tr>
<td>Formosan</td>
<td>Kavalan</td>
<td>bubur</td>
<td>jellyfish</td>
</tr>
<tr>
<td>Borneo</td>
<td>Miri</td>
<td>bubur</td>
<td>jellyfish</td>
</tr>
<tr>
<td></td>
<td>Bintulu</td>
<td>buvu</td>
<td>jellyfish</td>
</tr>
<tr>
<td></td>
<td>Iban</td>
<td>bubur</td>
<td>jellyfish, sea nettle, swimming bell, Medusa spp.</td>
</tr>
<tr>
<td></td>
<td>Bimanese</td>
<td>bubu</td>
<td>jellyfish</td>
</tr>
</tbody>
</table>
Archaeologists characteristically look at only a very limited range of material culture, principally ceramics and lithics and bypass things which are not recovered in excavations.

Although Austronesian material culture is wonderfully various and has been enriched by influences from every direction over five millennia.

Nonetheless, it is some ways highly conservative, with iconography and elements preserved from Luzon to New Zealand.

By plotting the distribution of material culture elements and observing their skewed distributions we can contribute to understanding the early dispersal of PMP.

This section presents some examples.
Rattan and coconut fibre armour

- The concept of using armour (and helmets) to protect individuals in warfare may seem obvious but is characteristically Eurasian and is unknown in Africa and Melanesia (except in Austronesian-influenced areas)
- In the Americas, only found in the Pacific Northwest
- Rattan armour was made in Taiwan and extremely similar armour is found in offshore Papua and also in Micronesia
- Sulawesi has coconut-plaque armour
- Metal armour in the Philippines may be a modernised version of vegetable fibre armour, as it does not resemble Chinese-type armour
Rattan and coconut fibre armour

Taiwan

Yami
Rattan and coconut fibre armour II

Yami

Kiribati

Front view of armour of woven rattan (¼).
Rattan and coconut fibre armour III

Toraja armour

Toraja helmet
Rattan and coconut fibre armour IV

NW Papua armour
Bamboo bird-scarers

- Across many regions of the Austronesian world a type of bamboo rattle is used to scare birds from the fields.
- It consists of a bamboo internode with a hole across at one end. The tube is split lengthways so that the two halves rattle against one another when it is shaken, either by the wind or by hand.
- Used in Taiwan today as a bird-scarer, it is also found in Sulawesi and Madagascar (at least).
- However, in the Northern Philippines it is used by Ifugao priests to ‘cleanse’ houses annually of residual evil spirits.
- Which may have been the original usage.
Bamboo rattles/bird-scarers

Puyuma
Bamboo rattles/bird-scarers

Ifugao
Bamboo ritual rattles

Ifugao priests cleansing house
Bamboo rattles/bird-scarers

Sulawesi
Leg-xylophone

- A distinctive musical instrument of Taiwan indigenous peoples is the leg-xylophone, three or four wooden bars placed across the legs and struck with sticks.
- Often played by women.
- It seems to have spread to many regions of the western Austronesian world reaching as far as New Britain.
- It reaches Mentawei but is unknown in Sumatra.
- And also Madagascar (probably from Sulawesi, not Barito).
- Unknown on the SE Asian mainland.
Leg-xylophone I

Amis

Itneg, Luzon

Mentawei

Sumatra
Leg-xylophone II

Bara, Madagascar

Tolai, New Britain
Incised circular shell discs

- The Philippines and the Solomons in particular are connected by a tradition of incised circular shell discs. All the peoples of the highlands of northern Luzon make bandoliers from shell discs with incised patterns.
- The shells are marine shells and therefore must be imported from the coast, which provides a hint to their original context.
- In Santa Cruz and some other islands in the Solomons, these type of incised shells are used as brow ornaments.
- The remarkable similarity of these two traditions (and an apparent absence of similar ornaments in the region between them) provides a neat illustration of the early rapid dispersal as far as Oceania.
Incised circular shell discs

Luzon

Santa Cruz
Rethinking the historical linguistics of Austronesian I

- This has important implications for the historical linguistics of Austronesian.

- The PMP hypothesis, analogous to PAN, assumes a unitary culture and language in the Luzon Strait, around 4000 years ago.

- Not only is this unlikely to be true on the basis of typically intercultural nature of sea-voyages, but it is not supported by the evidence from either the lexicon or the distribution of material culture.

- The paper suggests that if the distribution of roots in Austronesian is analysed, many PMP roots have a distinct geography, arguing that they reflect the opening up of sea routes by different groups.
Rethinking the historical linguistics of Austronesian II

- If so, this leads to the inevitable conclusion that there was never a unified culture in the Luzon Strait, to be identified with a reconstructed PMP language.

- Rather there was a ‘common PMP’ a fund of related lexemes and related lifestyles which reflect a zone of interaction between Taiwan, the Northern Philippines and unknown languages on the Chinese mainland.

- This ‘boiling pot’ in the Luzon Straits was the starting point for exploratory voyages carrying ‘words and things’ in all directions round ISEA, the mainland and Oceania.

- A flexible, nomadic seagoing culture with no necessary return to a starting point created a series of independent branches of a proto-language, characterised by a variety of contact phenomena.

- Hence the distribution of material culture with its regional biases, the odd distribution of faunal names noted by Blust and the difficulties in classifying WMP.
And Oceanic?

- Oceanic languages are reconstructed along much the same lines as PMP.
- ~3200 BP the manufacturers of Lapita ceramics start out from the Admiralties, having mixed with the NAN populations.
- They disperse very rapidly across the region hence the dispersal of the Oceanic languages.
- Except this cannot be true since we now know they did not immediately mix with local populations.
- And ‘aberrant’ languages such as Vanikoro and Utupuan do not reflect neatly back to proto-Oceanic.
- The ‘first wave’ of settlement probably retained a much more PMP-like language.
- The ‘second wave’ with a mixed phenotype brings new languages which mix and merge with the in situ speech.
- And then linguists manufacture ‘Oceanic’.
New mathematical methods applied to Austronesian

- A great deal of publicity has recently been given to ‘new mathematical methods’ for classifying languages and Austronesian has been in the front line
- Published in hard science journals they are definitely a triumph of style over substance and have succeed by simply not answering the objections of their opponents
- This approach is associated with the grandly-named Institute for the Science of History in Jena
- These methods produce trees based on a series of binary splits, and by their very nature cannot result in the sort of model proposed in this paper
- This is not an argument for the correctness of this model but if such a model of the past is plausible, then these methods exclude it structurally
- Which is anti-scientific in my book
And so?

- Four thousand years ago, the Luzon Strait was the focus of a thriving maritime culture
- But it was complex, multi-ethnic
- Improved maritime technology drove the dispersal of fisher-foragers widely across ISEA, back the mainland and into Near Oceania
- The clues to this are in both language and material culture if we choose to see them
- And helps us start to re-model the explosive dispersal and complex cultural mixing that characterised this period
- Here is a map which gives a very provisional representation of this pattern
Out of the Taiwan Strait
By using only archaeological assemblages, we restrict the potential to identify the patterns of dispersal of the Austronesians after they leave Taiwan.

To enrich the argument, we can use distinctive elements of material culture made from perishable materials which are not replicated elsewhere in the world (Africa, Americas)

We must learn not to trust idealised reconstructed forms. Sadly, just because a linguist says, for example, dogs or chickens are to be reconstructed to PMP, this is not credible unless the actual data matches the archaeology/genetics
THANKS

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To a wide variety of scholars for discussions over the years, especially Malcolm Ross, Peter Bellwood, Andy Pawley, Tsang Cheng Hwa, Sander Adelaar, Matthew Spriggs (even though they would not necessarily endorse my conclusions)