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Research priorities in historical-comparative linguistics

A view from Asia, Australia and the Pacific

Harold Koch[1], Robert Mailhammer[2], Robert Blust[3], Claire
Bowern[4], Don Daniels[5], Alexandre François[1,6], Simon Greenhill[1],
Brian Joseph[7], Lawrence Reid[3], Malcolm Ross[1] and Paul Sidwell[1]
Australian National University[1] / University of Western Sydney[2] / University
of Hawai'i at Mānoa[3] / Yale University[4] / University of California, Santa
Barbara[5] / CNRS LACITO[6] / Ohio State University[7]

1. Introduction

The first issue of *Diachronica* contained an evaluation of the comparative method as applied to "exotic" languages (Boretzky 1984). Thirty years later, it is worth taking stock of what our discipline has accomplished and identifying future priorities and pressing issues that have (re-)emerged.

The following represents the considered judgement of several practitioners in language families from a large region of the world that is underrepresented in international fora. The ideas were first presented during the 20th International Conference on Historical Linguistics (ICHL 20), Osaka, Japan, 2011.[1] Eight contributors were asked to give a five-minute pitch on what they considered to be research priorities in the comparative-historical study of languages of the Australo-Pacific region.[2] The families or areas included were: Australian, Papuan, Austronesian and Austroasiatic. A final summation was provided by Brian Joseph. This version represents a condensation of the contributions into a short report.

Why should historical linguists be interested in research in these areas? First, they encompass almost one third of the world's total languages (2170 of 7413 languages in Lewis et al. 2013), from eastern India through mainland and island

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1. This was part of a session "Etymology and reconstruction in the languages of Australia and the Pacific" organised by Robert Mailhammer and Harold Koch.

2. The ideas of François, Ross and Blust were reported via email — Blust's after the conference.

southeast Asia to the New Guinea islands, the Australian continent and most populated islands from Madagascar to Easter Island. This area includes some of the biggest language families in the world (Austronesian, Trans-New Guinea, Pama-Nyungan) and spans the regions of the highest biological and cultural diversity on the globe. Second, their systematic historical-comparative study is more recent than that of Indo-European, for example: this is especially the case for Papuan and Australian; for the longer history of historical-comparative Austronesian scholarship, see Blust (2013: ch. 8). The documentation and synchronic description of many of the languages has also been recent and is still on-going. Third, the research has had to proceed without the presumed advantages of available written historical documents and earlier classical languages (the main exceptions being Old Malay and Javanese, Khmer and Mon). Researchers have therefore needed to rely more on the comparative than the historical aspects of their methods.

2.   Summary of priorities

The goal of historical-comparative linguistics is to bring the evidence of language to bear on explaining the origins and development of human societies, in the absence of or in conjunction with the insights achieved from the range of disciplines concerned with society (Sidwell; cf. Bowern & Evans 2014). This goal is achieved through the classification of languages into families and subgroups, the reconstruction of proto-languages at different levels and the investigation of processes of linguistic change.

2.1 The need for synchronic data

2.1.1   *Documentation*
Historical-comparative research depends on the availability of descriptive data. The need is most pressing for the Papuan language area (Daniels). If the main research priority for historical linguists is reconstruction, the main obstacle to that goal is the lack of language descriptions. In the family that Daniels works on, the Madang branch of Trans New Guinea, fewer than one-fifth of the 106 extant languages have been described in any detail — and not even half of those descriptions have been published. In other parts of New Guinea, the documentation is even more meagre. It simply is not possible to do comparative reconstruction with such a dearth of data, and our understanding of Papuan historical linguistics suffers as a result. The need for documentary work is particularly acute in New Guinea, where language loss is taking place at alarming rates, and where local cultural dispositions often accelerate the rate of loss even further (Kulick 1992).

For Australia, Mailhammer flags as the core problem the fact that there are still many Non-Pama-Nyungan languages without sufficient documentation. Many descriptions are provisional or unpublished, and reliable dictionaries are not always available. Hence the real priority in Non-Pama-Nyungan research is writing reliable synchronic descriptions, both grammatical and lexical, from which proto-languages can be constructed.

Likewise, for Western Austronesian Reid emphasises the need for more high-quality documentation to underpin historical research. This is highly time-sensitive, with many languages being severely endangered, and in many cases data crucial to the investigation of these languages' history may never be available. The Philippines is easily the best-documented area in insular southeast Asia, but there are a few languages (including some highly endangered Negrito languages of Luzon) that require documentation (Blust). Reid adds that there are relatively few substantial dictionaries of the more than 150 Philippine languages. Of the languages of Taiwan — the homeland of the Austronesian language family — the most urgent need, according to Blust, is to do more work on Saaroa and Kanakanabu before they become extinct, and better dictionaries should be provided for some of the other languages. Descriptive gaps remain for Sulawesi (particularly in the Balantak area of the northeast), Sumatra (except for the northern end of the island), eastern Indonesia (e.g. Bimanese, a key language in the western Lesser Sundas) and the Moluccas, where many of the languages are small, poorly described and fading rapidly. The languages of Borneo are woefully under-documented — dictionaries exist for only six languages and grammars for even fewer of the circa 200 languages. Borneo should therefore be a high-priority region for any kind of linguistic research over the next 20 years.

For Oceanic languages François considers it essential to pursue and increase the work of description for little-known languages. This means not only writing full grammatical descriptions of undescribed languages but also enhancing insufficient documentation especially by producing typologically informed monographs on specific topics that are prominent in the relevant language (e.g. François 2003 on Tense-Aspect-Modality, and Cablitz 2006 on space).

Sidwell, while admitting that much of the work has been patchy and that poorly documented languages remain, reminds us that languages are ever-evolving systems, so it would be a fallacy to prioritize all efforts to achieving more complete documentation. Furthermore, descriptive work should not be done in isolation, without being informed by wider comparative and typological analyses.

2.1.2   *Availability of data*
In some cases synchronic data has been collected but is not sufficiently available for comparison and reconstruction because of collectors' reluctance to make it

public (according to Sidwell and Bowern), or constraints placed on the collections by archives of historical materials due to access and copyright concerns (Bowern).

The relevance of electronic accessibility is emphasised by several scholars. Bowern notes that regional reconstructions are greatly facilitated by the creation of lexical databases. Work in Austronesian (e.g. Greenhill & Clark 2011, Greenhill et al. 2008) has been aided by large online databases which allow easy searching and comparison across the family. The data compiled for the Pama-Nyungan tree in Bowern & Atkinson (2012) would not have been possible without the Pama-Nyungan lexical database compiled by Bowern. Sidwell highlights the pressing need to bring together linguistics and computer science so that we can best manage and analyse the huge amount of data at our fingertips. He proposes a strategy of providing large-scale digital infrastructure for comparative linguistics, including: digitization of all existing work in print and unpublished materials that can be sourced, aggregation of digital resources, interoperability of databases and data collections, the most thorough possible application of automated methods of data matching and analyses including integration with geographical information systems, bibliographic data and citation data.

Finally, the three Australianists plus François mention the relevance of 'philological methods' in making older materials usable for linguistic comparison. According to Koch, this is necessary to take advantage of the large amount of information (the only available material for many southeastern Pama-Nyungan languages) that is to be found in early wordlists and other linguistic data written by early linguistic amateurs, which employed imperfect spelling systems and were based on outdated grammatical models. By combining careful methods of analysing old written sources with the comparative evidence of related languages it should be possible to integrate more languages into the comparative Pama-Nyungan picture and to escape the bias that results from basing reconstructions primarily on northern and western languages.

2.2 Reconstruction

2.2.1 *More reconstructions*

Daniels complains that in spite of their importance for the reconstruction of Papuan proto-languages — the primary research priority for historical Papuanists — published descriptions of reconstructed Papuan proto-languages are all too rare. Although there has been a small resurgence in Papuan reconstruction in recent years (e.g., Daniels 2010, Dutton 2010, Smallhorn 2011, de Vries et al. 2012, Holton et al. 2012), the size of the task is such that a great number of similar projects on other language families will be needed for an adequate understanding of diachronic language developments in New Guinea. For the Non-Pama-Nyungan

languages of Australia Mailhammer argues that top priority has to be figuring out their linguistic subgrouping and classification. In order to achieve this, more proto-languages, both at the family and higher levels must be reconstructed. Reconstructed proto-languages are not available for all of the about 20 Non-Pama-Nyungan families: Iwaidjan is an example of an inadequately understood family (Evans 2000, Mailhammer forthcoming), while Green's (2003) Proto-Arnhem is a proposed higher-level proto-language requiring more evidence before it can be more firmly established.

2.2.2 *Better reconstructions*

For Australian languages in general Bowern argues that now is a perfect time to capitalise on the wealth of new, high-quality data both to revisit reconstructions which were previously grounded in less-than-ideal data, and to make progress in subgroups which have received less attention. Lexical reconstruction has lagged behind morphological reconstruction in Australia (Bowern & Koch 2004, Bowern & Atkinson 2012). For Pama-Nyungan, Koch argues that the main priority is to produce a greater number of explicit Proto-Pama-Nyungan (phonological, lexical and morphological) reconstructions in order to establish more firmly the genetic status of the family and its subgroups. Many widely accepted groupings have yet to be confirmed on the basis of common innovations (despite Bowern & Koch 2004). A fuller reconstruction is necessary to trace innovations, and to help decide if shared features result from borrowing or from common inheritance from Proto-Pama-Nyungan or an innovating intermediate proto-language (see also Koch 2014).

2.2.3 *More accessible reconstructions*

Bowern emphasises the priority of publishing reconstructions and associated data for Australian languages. For Austroasiatic, Sidwell says that conditions are ripe for the field to take stock, aggregate, consolidate and review what we have and what has been achieved. The most pressing tasks now include producing the generational canonical reference works that will inform the training of current students, and shape the programmatic perspective guiding our individual and collective efforts (see now Mathias & Sidwell forthcoming).

2.3 Classification

There are a number of specific unanswered problems of classification. For the Oceanic branch of Austronesian, François mentions two areas that need to be better understood in historical terms: (1) Temotu languages in the eastern Solomons and (2) New Caledonian languages, whose history is mostly accessible to French

readers. For Austroasiatic Sidwell asks how the dozen highest-level branches co-ordinate/subgroup into sub-families: Do they form deeply nested relations (e.g. Diffloth 2005) or did they radiate rapidly forming a flat tree (Sidwell 2010, Sidwell & Blench 2011)? In Australia, since there is still a question of whether the various Non-Pama-Nyungan families are actually related genetically, Mailhammer argues, historical investigation should focus on the reconstruction of proto-languages below Proto-Australian. Ultimately, the reconstructions of proto-languages will raise questions about the reality of Proto-Australian.

2.4 Explaining change

We need better descriptions and explanations of the processes of change. Examples come from specific linguistic domains (semantics, phonology) as well as typological shift and sociolinguistic mechanisms. François calls for the collection and mapping of trends in polysemy and semantic change, both universal and family-specific. Sidwell argues for more study of the emergence of tone and register systems among Austroasiatic languages — including the questions of how suprasegmental contrasts are related to phonation and laryngeal mechanisms. He also seeks answers to questions of typological change; e.g. how the Munda languages radically reversed their typological alignment (cf. Donegan 1993). The role of sociolinguistic patterns and cultural mechanisms in informing hypotheses about language change among these societies is crucial, according to Sidwell. Likewise for Oceanic languages, François would like to see detailed studies of the sociolinguistic processes behind innovation spreading and language change at both modern times and deeper historical levels. Ross expands on this theme: there is a crying need for historical linguists to look much more closely into variationist sociolinguistics, and to encourage sociolinguistic investigation of small-scale societies to discover how language change actually happens in such societies and how it happened in neolithic societies in the past. Ross is especially interested in the role of pre-adolescent and early adolescent speakers in propagating significant, non-lexical changes in contact situations (cf. Ross 2013).

Particular issues of language contact remain to be solved. The need to better understand how the Austronesian languages of New Guinea were shaped by contact with Papuan languages is emphasised by François. For Austroasiatic Sidwell asks whether the broad areal patterns we note are really just an emergent picture (illusion?) resulting from myriad local effects. With respect to Indonesia, Ross notes the complicating factor that Malay has been a lingua franca in various forms for a long time, and there have been cultural inroads from India and the Muslim world, so that the field needs more work along the lines of Adelaar (2004), combining the comparative method with a philologist's knowledge of Malay, Javanese,

Sanskrit and Arabic, and teasing apart the lexical layers and contact-induced changes that have occurred in the western part of Indonesia.

2.5 Methods

The comparative method is assumed by most contributors to be the main basis for reconstruction, and all advocate its careful application. For reconstruction of Australian languages both Mailhammer and Koch emphasise stricter use of the comparative method than practised hitherto — with close attention to regular sound correspondences. Koch also pleads for the greater use of "etymological methods" (see Koch 2003) in lexical and morphological reconstruction — making greater use of semantic and functional changes in identifying cognate material. François cites the need to promote a dialectological approach to the reconstruction of linguistic change, in order to overcome the limitations of over-reliance on the strict family tree model of linguistic diversification: Austronesian historical linguistics has often taken the form of subgrouping studies proposing competing family trees, often without discussing the underlying assumptions in the family-tree model. Crucially, the exploration of non-cladistic, wave-based or network-based approaches to subgrouping can — and should — be carried out within the framework of the comparative method (cf. François 2014).

Several participants (Bowern, Greenhill, Sidwell) emphasise the opportunity provided by new computational methods from phylogenetics. Greenhill outlined how a new range of quantitative Bayesian phylogenetic methods can provide a powerful set of tools for testing hypotheses about the past in a robust statistical inferential framework (Gray et al. 2009, Greenhill & Gray 2009). He argues that these tools can help solve three key problems that remain unresolved but have great implications for the human prehistory of the Pacific. These are: (1) the subgrouping of the subfamilies within Oceanic, (2) the sequence (in time and geographical space) of the breakup of Proto-Oceanic and (3) its pattern of diversification. He suggests that phylogeographic methods (cf. Bouckaert et al. 2012) could be used to make better inferences about the homeland of Proto-Oceanic and all the other subfamilies. Bowern advocates the application of such computational phylogenetic methods to the Australian scene, to test hypotheses about language contact, diversification and correlations between language change and social change.

2.6 Interdisciplinary collaboration

Sidwell mentions the need for interdisciplinary cooperation with experts in computer science, bioinformatics, archaeology, history, ethnography, genetics and botanical and other life sciences — to answer key questions on the role of

Austroasiatic speakers in the grand narrative of Mainland Southeast Asia. Bowern stresses for Australia the priority to revisit connections to archaeology and anthropology, building on earlier cross-disciplinary work, e.g. further applying approaches used in Hill (1996) and McConvell (2010).

3.   Conclusions

Joseph summarised the presentations from his perspective as an Indo-Europeanist focusing on Greek and its relations within Indo-European. This may seem like an entirely different world because, even though the comparative method has figured prominently in Indo-European historical linguistics, there is also a wealth of documentation over hundreds of years for every branch of the family. Written records for the Indo-European languages, with attestation dates ranging from the 14th century BCE for Mycenaean Greek and c. 1200 BCE for Vedic Sanskrit to 1462 and 1547 CE for the earliest texts in Albanian and Lithuanian respectively, far exceed the historical documentation available for just about every language from the regions discussed here. In the absence of historical records, reconstruction from essentially modern materials relies solely on the methods that have been honed on the Indo-European languages, as well as other language families known to western scholars in the 19th century, such as Finno-Ugric and Semitic.

A few recurring themes in the preceding reports bear repeating. (1) More documentation is needed, in many instances just basic information of key representatives of different branches of the family in question, but also what might be considered more nuanced, but still crucial data, e.g. on dialects, on synchronic variation and on diffusion of innovations. (2) The tried and true methods that have been the backbone of historical linguistic work — especially the comparative method, philological analysis, internal reconstruction, subgrouping, lexicostatistics, the recognition of the possible effects of contact, *Wörter und Sachen* analysis, linked archaeological and linguistic analysis and dialect geography — must continue to be applied assiduously to the various language groups. (3) We must nevertheless be open to the use of newer methods, especially computational phylogenetics and phylogeography. Since historical linguistics "can … be thought of as the art of making the best use of bad data" (Labov 1994:11) — or rather "imperfect" data (Janda & Joseph 2003:14) — any method that can allow for some progress, in a principled and scientific way, should be welcomed and tested for its utility. These methods drawn from the realm of evolutionary biology offer great promise when applied to the languages of the Pacific, as advocated especially by Bowern and Greenhill.

We close with two observations concerning methods. The soundness of the comparative method was demonstrated in the 19th century with the remarkable

findings that are the heart and soul of Indo-European linguistics to this day. An even greater breakthrough came in the 1920s, with the demonstration by Bloomfield that the principle of regularity of sound change, and the comparative method that is related to it, is not just valid for Indo-European but for languages without the historical and textual pedigree that Indo-European languages have. Bloomfield (1925) contains an immortal statement about the regularity of sound change (p. 130, n. 1):[3]

> … If there exists anywhere a language in which these processes do not occur (sound-change independent of meaning, analogic change, etc.), then they will not explain the history of Indo-European or of any other language. A principle such as the regularity of phonetic change is not part of the specific tradition handed on to each new speaker of a given language, but is either a universal trait of human speech or nothing at all, an error.

The success of traditional methods applied to Pacific languages is a further demonstration, if such were needed, of the validity of this methodology and the theoretical assumptions that underlie it.[4]

Second, computational methods, especially regarding phylogenetic relations, drawn from the realm of evolutionary biology, in many instances are calibrated and tested, as it were, against what is known from the results of Indo-European linguistics — results arrived at largely by the application of traditional methods like the comparative method, internal reconstruction, lexicostatistics and so on. That is, the results of applying traditional methods to Indo-European languages are a standard against which new methods can prove their usefulness, and sometimes even challenge the received wisdom about Indo-European (e.g. Gray & Atkinson 2003).

Joseph concluded with a thought experiment. What would the development of historical linguistics as a discipline have been like if, instead of largely emerging out of the study of Indo-European languages by western scholars, our science had come into being mainly on the basis of the study of language families of the greater Pacific region? If we believe Bloomfield, the same methods and notions would have been developed, and great progress would have been made towards understanding the historical development of these languages. Further, the "discovery" of Indo-European might have been heralded as the basis for demonstrating the value of the methods, and would have confirmed them, just as Algonquian did for Bloomfield in the 1920s.

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3. Cf. his follow-up piece, Bloomfield (1928), and discussion in Joseph (2003).

4. Classical methods have been applied more successfully to the Austronesian languages than in the Austroasiatic, Australian and Papuan domains; even within Austronesian there have been questions about the adequacy of strictly family tree models to account for all the historical relations (cf. the comments by François in §2.5 above).

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Corresponding author's address

Dr. Robert Mailhammer
School of Humanities and Communication Arts / The MARCS Institute
University of Western Sydney
Locked Bag 1797
Penrith NSW 2751
Australia

R.Mailhammer@uws.edu.au