Revisiting the Position of Philippine Languages in the Austronesian Family

Lawrence A. Reid

University of Hawai`i
National Museum of the Philippines

Abstract
With recent claims from non-linguists that there is no such thing as an Austronesian language family, and that Philippine languages could have a different origin from one that all comparative linguists claim, it is appropriate to revisit the claims that have been made over the last few hundred years. Each has been popular in its day, and each has been based on evidence that under scrutiny has been shown to have problems, leading to new claims. This presentation will examine the range of views from early Spanish ideas about the relationship of Philippine languages, to modern Bayesian phylogenetic views, outlining the data upon which the claims have been made and pointing out the problems that each has.

1. Introduction

Sometime in 1915 (or early 1916) (UP 1916), when Otto Scheerer was an assistant professor of German at the University of the Philippines, he gave a lecture to students in which he outlined three positions that had been held in the Philippines since the early 1600's about the internal and external relations of Philippine languages. He wrote the following:

1. As early as 1604, the principal Philippine languages were recognized as constituting a linguistic unit.
2. Since an equally early time the belief was sustained that these languages were born of the Malay language as spoken on the Peninsula of Malacca.
3. In 1801, Hervás published his opinion that the languages of the islands in the Pacific and in the southern Indian Ocean (Malagasy of Madagascar) were related with those of the Philippines and, hence, with Malay. (Scheerer 1918: 60)

He then asked the question, "What has science done since then to confirm, to modify or add to these views?" The purpose of this talk is to update Scheerer's claims. Much of this information will not be news to advanced students in linguistics, but for many in this audience this review will I hope be enlightening. In a nutshell, Scheerer believed that the first point was well-established, that all Philippine languages constituted a linguistic unit, more closely related to one another than to any other. As for the second point, he took issue with Malay being the parent language, and following Brandstetter, thought that Indonesia was the source of Philippine languages. Scheerer also confirmed his opinion that Philippine languages were part of an extensive language family, which included the languages of the Pacific, Melanesian languages, Indonesia and Malagasy, subsumed under the new title of Austronesian.

In updating Scheerer's claims, I will show that the idea that Philippine languages constituted a single linguistic group, was based on incomplete knowledge of the languages of the country and their relationships with languages outside the country, and that in fact there has never been substantial evidence for a single Philippine language family. As for the second claim, modern linguistic studies show clearly that Indonesian languages and the Malay language are subsequent developments in the history of the Austronesian language family, following movement south from the Philippines of Austronesian peoples. For the third claim, I will outline the latest views about the relationships of the whole family, in which Melanesian languages do not constitute a single linguistic group.

2. The unity of the Philippine languages

Otto Scheerer from early in his stay in the Philippines was aware of the diversity of Philippine languages and dialects and was interested in where they came from and what languages they were related to. Prior to the date of the lecture he had already done extensive study of many of these languages, and had published on Ivatan (Scheerer 1908), the title of which clearly showed belief that "Batán" was a "member of the Philippine group of languages." In Scheerer (1909), while Lieutenant-Governor of Batanes Province, he published notes he had taken on Gobgob, a Kalinga dialect, as well as the language of a small Negrito "horde" he met on an unscheduled stop in San Vicente Port, Cagayan Province, just south of Palaui Island. They called themselves Agta, and must be the first words recorded in the Dupaningan Agta language (Robinson 2011). In this work he says "the speech of the Agta of Pasigi is, like all other Negrito dialects that have so far become known, an idiom of Indonesian origin". In Scheerer (1911b), he lists much of the then current literature that was available on languages in the Philippines, noting that they form a distinct group, although suggesting the possibility that languages in geographically connected areas could also belong to the group:

> The vernaculars of the Philippines belong,—very probably all of them…—to the Indonesian division of the Austronesian family of languages… Within the Indonesian division they form the Philippine group of languages, to which have been reckoned also certain other dialects spoken on Borneo, Formosa, the Marianas, the Sangir and Talaut Islands, and in northern Celebes. (Scheerer 1911b: 98).

In his claim about the unity of Philippine languages, Scheerer (1918: 59-60) mentions the date 1604, which he says "is the earliest general statement known to me concerning the unity of the Philippine languages". He was referring to the work of Pedro Chirino who was a Jesuit priest and who wrote extensively about the history of the Jesuit mission to the Philippines. When we examine what Chirino (1604) said about Philippine languages, however, we find only statements about their similarity (except those of the Negritos which he believed were as different from the other languages of the Philippines as Basque is to Spanish). He didn't claim they belonged to a group distinct from other languages, although Scheerer apparently concluded that such similarity could only mean unity. In English translation, Chirino said:

> There is no single or general language of the Filipinas extending throughout the islands; but all of them, though there are many and different tongues, are so much alike that they may be learned and spoken in a short time. Consequently if one is learned, all are almost known. They are to each other like the … dialects of Italy, or the [dialects] … in Spain. Only the language of the Negrillos [Negritos] is very different from the rest, as, in Spain, is the Vizcayan [i.e., Basque]. There is not a different language for each of the islands, because some of them—as, for example, Manila [i.e., Luzon], and even Panay, which is more than four hundred leagues

smaller—contain several languages; and there are languages each of which prevails in several islands. In the island of Manila alone, there are six different tongues; in Panay, two; in some others, but one. The languages most used, and most widely spread, are the Tagal and the Bisayan; and in some regions of the Pintados [Visayas] another tongue is also prevalent, called Harayan [Kinaray-a]. The Tagal embraces the greater part of the coast and interior of the islands of Manila, Mindoro, Luban [Lubang], and some others. (Chirino 1604, English translation from Blair and Robertson).

The idea of the Philippine languages forming a distinct group apart from other languages has continued down to the present day, with the concept of a Proto-Philippines widely accepted and argued for. Scheerer was convinced that studies of different languages especially the so-called minor languages, served to confirm the claim of the unity of Philippine languages. Apart from the work of Jesuit and Dominican priests who had written grammars and dictionaries of various minor languages, he mentioned an "excellent" grammar of Bontok written by what he referred to as an American linguist (Seidenadel 1909), who although he was teaching at the University of Chicago and never came to the Philippines, was actually a German, like Otto Scheerer. Scheerer published a review of this work in 1911, as did Conant (1911a) and Reid (2011), one hundred years later. He also cited the phonological work of Conant (1911b, 1912, 1916) which discussed various sound changes in Philippine languages, and Blake (1906, 1907) that were focused on what he considered to be distinctive grammatical features of Philippine languages.

Blake (1906: 317) begins his work with the following statement, "The languages of the Philippine Islands, as far as they are known, form a closely related group of tongues belonging to the Malayo-Polynesian family…", then proceeds to outline various grammatical features that distinguish Philippine languages from one another. Scheerer was strongly convinced of the unity of Philippine languages, stating that none of the differences between the languages discussed by Blake are, "essential enough to disprove the fundamental unity of all" (Scheerer 1908: 61).

Blust (2013: 524) in discussing the work of Brandstetter (1911) noted that he proposed no subgrouping of Malayo-Polynesian languages, but divided his region of study into geographical areas that were regarded as corresponding in some degree with important linguistic breaks. He recognised 'seven great insular regions' and 'three border districts' as follows: 1) Philippines, 2) Celebes, 3) Borneo, 4) Java-Madura-Bali, 5) Sumatra, 6) the Malay Peninsula with the adjacent islands, 7) Madagascar, 8) northern border (Batanes Islands and Formosa), 9) eastern border district (the islands from Lombok towards New Guinea), 10) southwestern border district (the Barrier Islands west of Sumatra, including Simalur, Nias, and Mentawai). Subsequent work also took for granted the unity of Philippine languages, although different authors, noting typological similarities in related languages in neighboring countries included one or another external language in the group, as Scheerer also believed. Philippine languages didn't just mean languages of the geographical Philippines, but they constituted a unity with the languages in the geographical Philippines.

This idea of the fundamental unity of Philippine languages, assumes that it is possible to reconstruct a parent language from which the current group of languages descended, a language which is called Proto-Philippines, that is the parent of all Philippine languages. Over the last 100 years or so, there have been a large number of articles that have assumed the fundamental unity of Philippine languages and a number which have even included the term Proto-Philippines. We could begin by mentioning several of Conant's articles, each of which treated one of the "Laws" or sound correspondences (RGH and RLD laws) first proposed by van der Tuuk (1865, 1872) and the pepet Law first proposed by Brandes (1884) as they occurred in Philippine languages (Conant 1911b, 1912, 1916). Although none of the sound changes was

unique to Philippine languages, Conant felt it necessary to discuss them as though the Philippine languages constituted a unit.

In the middle of the 20th century lexicostatistics became popular. This was the name given to the idea that it was possible to determine the relationships between languages by counting cognate sets, and along with the idea that language lost core vocabulary items at a regular rate, called glottochronology, many linguists felt the need to compare Philippine languages for the purpose of subgrouping them and even dating when they became separate languages. Thomas & Healey (1962) was one of the early attempts at subgrouping Philippine languages using lexicostatistics. Dyen (1965), the most extensive lexicostatistical study of Austronesian languages, has Philippine languages forming a group or cluster under the North-West branch of the Hesperonesian sub-family. Walton (1979) used lexicostatistics to build a family tree of Philippine languages. But lexicostatistics had its problems, apart from using the results as a basis for glottochronology which has long since been discredited. The main problem with lexicostatistics was in misidentification of cognates. As long as a form had similar phonetics, and an argument could be made that the semantics of the forms were related, the forms were considered cognate. There was little attempt to eliminate forms that were borrowed from a related language nor explanations for irregular phonetic correspondences. Attempts to build tree diagrams, showing subgrouping of languages, ignored the influence of borrowings from unrelated languages.

Along with lexicostatistics, linguists were still using the techniques that had been developed more than a hundred years earlier, and which in Scheerer's time were already well-known in the Philippines. Scheerer talks about the "scientific study of language which relies for its results upon comparison" (Scheerer 1918: 59). He briefly introduces the Comparative Method, by which Indic languages, such as Sanskrit, were first related to European languages, giving us the Indo-European family. In 1975, Llamzon compared nine Philippine languages (using techniques supposedly developed by the Comparative Method. The languages were Tagalog, Cebuano, Hiligaynon, Waray, Bicol, Ilocano, Ibanag, Ifugao, and Kankanay. This was followed in 1976 by Llamzon and Martin which expanded the comparison to 100 Philippine languages. Both of these articles worked from the reconstructed phonemes proposed by Dempwolff (1934-1938), with modifications by Dyen, showing how the reconstructions proposed by Dempwolff were reflected in Philippine languages.

Llamzon (1975) and Llamzon and Martin (1976) both explain that they use a standard comparative technique for establishing subgrouping, that is they were looking for "exclusively shared innovations". This was the technique first proposed by Leskien (1876) and made popular by Brugmann (1884), and assumes that changes that occur in the language of a group that diverges from an earlier group will be inherited in each of the daughter languages of the divergent group. Ross (2005:6) summarizes the method as follows, "If a set of innovations is shared by the languages of a group, it is inferred that they are shared because they have been inherited from a single interstage language. This is far more probable than the alternative assumption—that the innovations have occurred independently in each language which reflects them."

By specifying the exclusively shared innovations, it is possible to identify a subgroup of languages that forms part of the larger family. However, it is clear that in Llamzon's (1975) reconstruction of Proto-Philippine phonology, he was not interested in specifying changes from the phonology and forms that were proposed by Dempwolff, that were uniquely shared by Philippine languages, but in listing retentions of those proto-phonemes. Llamzon (1975: 39), acknowledges that Dempwolff-Dyen's proto-phonemes are adequate to account for Proto-Philippine phonology, including the fact that some of them merged in Proto-Philippines, and none of them split, but in his concluding statements, he focuses entirely on the phonemes that are "attested", that is retained in Philippine languages. He notes only one, the palatal nasal, *ñ,

which he mistakenly assumes was not in Proto-Philippines. It is reflected in some forms, for example, in Kapampangan, a language which was not among the nine languages of his study.

Llamzon and Martin (1976) follow the same procedures as Llamzon (1975), but expand the findings from phonology to lexical items, attempting to find evidence for subgrouping, comparing, for example, numerals, pronouns, and certain grammatical forms as reconstructed by Dempwolff or Dyen and noting their reflexes in Philippine languages. While they note a wide range of different reflexes of reconstructed forms, they note none that are specific to the Philippines and shared only with Philippine languages. They suggest that the subgroups they find are defined by exclusively shared innovations, but in many cases the innovations are not exclusive, but are shared between subgroups, and some are found in non-Philippine languages. The result of their work, they claim, includes the following findings:

1. There is enough evidence for the genetic unity of the Philippine languages.
2. There are, apparently, three major subgroups within the Philippine subfamily, namely: Northern Philippine, Central Philippine, and Southern Philippine groups.
3. The positions of most of these languages seem to correlate highly with their geographic location in the archipelago.
4. The higher nodes in the family tree seem to have more ESI's (exclusively shared innovations) to support them, although there are exceptions to this. (Llamzon and Martin 1976: 164)

Another major work which supposedly used the Comparative Method to reconstruct Proto-Philippines, was Paz (1981). This work (originally a Ph.D. dissertation written under Ernesto Constantino), was a bottom-up reconstruction, with data collected from 29 languages: Tagalog, Kapampangan, Iba Zambal, Pangasinan, Ilocano, Itbayat, Itawis, Ibanag, Isinai, Kalingga, Bontok, Ilongot, Naga, Virac, Kamalignon, Waray, Sebuano, Aklanon, Buhid, Tagbanwa, Agutaynon, Maranaw, Tausug, Subanon, Yakan, Blaan, Bagobo, Bukidnon, and Manobo (Paz 1981: 5). The purpose of the work was stated by Paz (1981: 3), where she claimed her intention was to verify the basic fact that the languages found in the areas known as the Philippines can in fact be considered as belonging to a single group, through the reconstruction of a common ancestor. She also claimed:

To further verify or establish the fact that Philippine languages are related may seem superfluous, since there are quite a few earlier studies which categorically state that these languages are indeed related. But then, I have not come across any published work that established the relationship of the languages within the boundaries of the Philippines qualitatively, that is, by comparing the languages of a single period in time and inductively arriving at the proto-language. (Paz 1981: 3)

This work by Paz, given her summaries of all the relevant material written by linguists which included data about Philippine languages, is very valuable. Where the work fails however, is in assuming that comparing the phonologies and morphologies of Philippine languages and reconstructing proto-forms is evidence that the languages belong to a single sub-group. Paz was well aware that Philippine languages are related to Formosan languages and to languages in Indonesia and Malaysia, but made no attempt to show that her reconstructions contained any unique features which distinguished them from other languages of the family.

Whether this earlier language belonged to a stage which relates to languages grouped as Northern Indonesian (Capell 1962) or whether it belonged to a stage or two higher and therefore closer to Proto-Austronesian, is a problem better left to later

studies. At present, I am concerned with comparing contemporary Philippine languages which I have chosen based on certain criteria and to reconstruct forms of a dialect or a variety of a language, which I theorize as the direct ancestor of the languages which I compared. I call this direct ancestor Proto-Philippine (PP). (Paz 1981: 3)

Comparing the lists of so-called Proto-Philippine phonemes by Llamzon (1975) and Paz (1981) is revealing (see Tables 1 and 2). Both have the same sets of vowels. Llamzon has 22 consonant phonemes (excluding four variants of the *R phoneme), while Paz has 19 phonemes. Both have the same sets of vowels, although Paz adds a necessary reconstructed phoneme of stress (V:). Llamzon has four diphthongs, while Paz has five. Clearly Llamzon was working top down, using Dyen's reconstructed phonemic symbols based on Dempwolff, while Paz was working bottom-up, with her own set of symbols. Llamzon (1975) did not reconstruct word stress, simply because it was not reconstructed by Dempwolff nor by Dyen, although there is clear data to do so from the nine languages that he compared. Similarly, there is no evidence for a distinction between the apical series (*dDzZ), as shown by Zorc (1987), where *D is supposedly a retroflexed apical stop that Paz also reconstructs as *ḍ (even though there are no retroflexed apical stops in Philippine languages). Llamzon does reconstruct *R (but with four variants) and *j, both of which have distinct reflexes in Philippine languages. *R is reflected as /y/ in the Bashiic languages, in Central Luzon languages, and the northern group of Mindoro languages; /r/ in Ilokano and Arta; /l/ in the South-Central group of Northern Luzon languages, the Alta languages, Kalamian languages of Palawan and Bilic languages of southern Mindanao; and as /g/ in the Cagayan Valley languages and Eastern Luzon languages of northern Luzon, and all of the Greater Central Philippine languages. *j is reflected as /g/ in most of the North Luzon languages, but fell together with /d/ in all other languages of the Philippines. Paz (1981) has a phoneme *ɡ, which possibly matches *R, but does not have any matching phoneme for *j. She does have two different *l phonemes, which do not match anything in the Llamzon (1975) set. Both Llamzon and Paz have assumed that *q represents a glottal stop. But while most Philippine languages reflect *q as a glottal stop, both Kalamian and Tboli reflect it as /k/ in certain positions in the word, while glottal stop is lost.

Table 1. Proto-Philippine phonemes, according to Llamzon (1975: 39-40)

Consonants					
p	t			k	?
b	d	-D-	R_{1-4}	g	
		s, -z-, -Z-			h
		j			
m		n		ŋ	
		l			
		r			
w			y		

Vowels		
i		u
	ə	
	a	

Diphthongs			
ay	uy	aw	iw

Table 2. Proto-Philippine phonemes, according to Paz (1981: 32-33)

Consonants					
p	t			k	ʔ
b	d	ḍ	ɡ	g	
		s			h
m		n		ŋ	
		l ḷ			
		r			
w		y			

Vowels				Stress
i		u		V:
	ə			
	a			

Diphthongs				
ay	uy	əy	aw	iw

Apart from Filipino linguists, non-Filipino linguists likewise attempted to reconstruct Proto-Philippines, or discussed problems relating to it. In 1974, Charles explored problems in the reconstruction of Proto-Philippine phonology. Reid also published three papers that use the term Proto-Philippines. The first two, in 1978 and 1979, examined problems in reconstructing various construction markers for Proto-Philippines, and the third in 1982 discussed the notion of Proto-Philippines itself. Zorc (1971) prepared a finder list for Proto-Philippine morphemes, but noted that the depth of reconstruction was in many cases uncertain, and therefore labelled the work Proto-[Proto-(Proto)] Philippine Finder List. Other attempts at comparison of Philippine words, include Lopez (1974) which contains 2236 words which he found to have phonetic and semantic similarities between certain Philippine languages. He explicitly avoided reconstruction of the forms, noting that he had not prepared phonetic correspondence sets between the languages because so much uncertainty existed (Lopez 1974: 2).

3.   Was there a Proto-Philippines?

Since it has been clear since the time of Hervás (1801) that Philippine languages are part of a much larger family of languages, now called Austronesian, which will be covered in later sections of the paper, the question remains. How do we know that there was a Proto-Philippines,

a language from which all Philippine languages evolved. It is not sufficient to claim that they are similar in many ways. Such typological similarities are found in a wide range of languages that are not part of the Philippines. We can take, for example, the structure of various paradigmatic sets which have been listed for Proto-Philippines, such as pronouns, with inclusive and exclusive first person plural forms, and no distinction in gender in third person singular forms; also demonstratives with basically three degrees of distance, close to speaker (proximal), close to hearer (medial), and far from both (distal); three basic case-marked forms of pronouns and demonstratives, nominative, genitive, and oblique (or locative); voice marked affixation on the verb, actor voice, goal voice, locative voice, instrumental or conveyance voice; a syntactic difference between so-called actor voice forms, and non-actor voice forms; ergative case alignment. None of these features is unique to the Philippines, and many are widespread throughout the Austronesian family and are in fact reconstructed to very early stages of Austronesian.

In Reid (1981) the following claim was made:

> The discussion in the preceding section has proceeded on the assumption that all Philippine languages form part of a single genetic subgroup, descended from a parent language referred to as Proto-Philippines. No evidence has ever been produced to establish such a subgroup within Austronesian. Specialists in Philippine languages are becoming increasingly aware that the term Proto-Philippines is merely a convenient, fictional label for whatever proto-language was the closest immediate ancestor of the languages of the Philippines. (Reid 1981: 240)
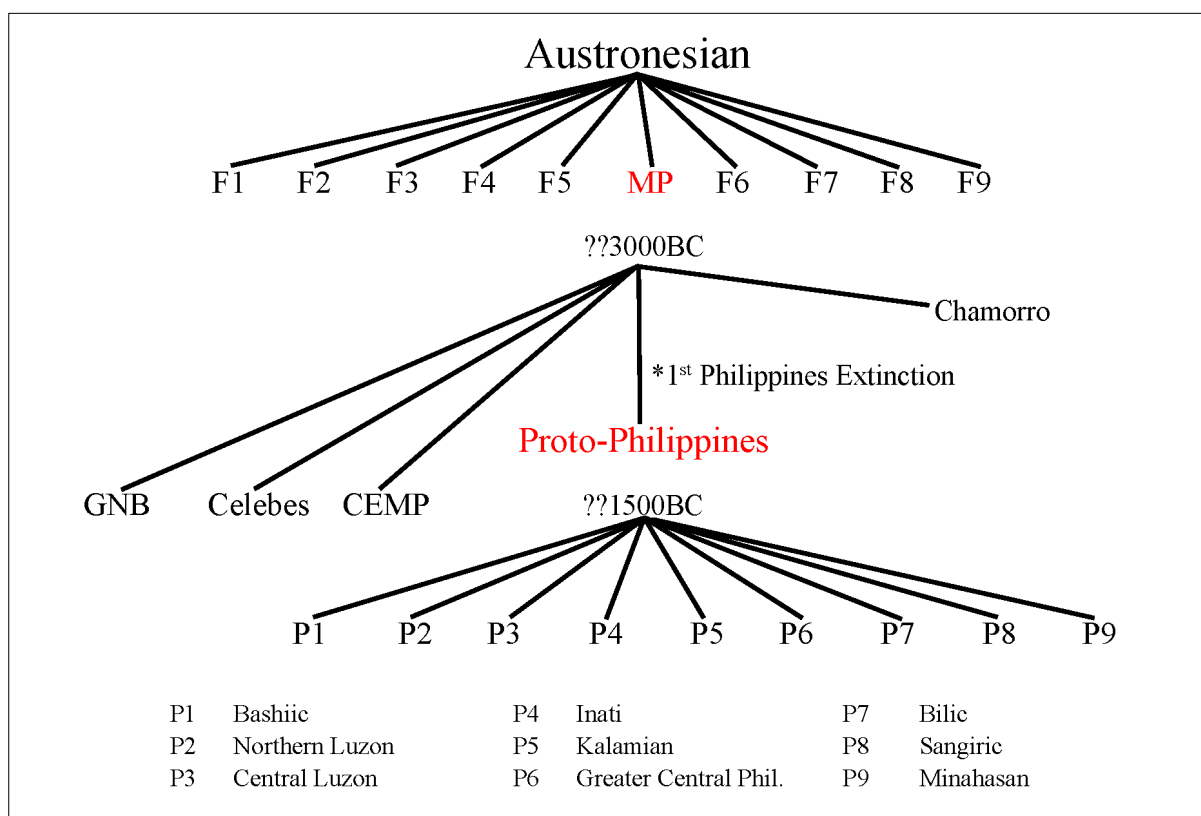
It is very clear that Philippine languages are typologically similar. But how do we decide on subgrouping. What kind of evidence is necessary to prove a subgrouping? As noted above, Llamzon (1975) and Llamzon and Martin (1976) both claimed to be looking for "exclusively shared innovations", the widely accepted method for establishing a subgrouping. Reid (1982) was the first to claim that there was no such language as Proto-Philippine. Zorc (1986) in response to the claim that Philippine languages did not have exclusively-shared innovations distinct from other Austronesian languages listed 98 proposed lexical innovations that he claimed were not found outside the Philippines. Blust (2005) added several hundred more lexical innovations with a couple of semantic shifts that are found in some Philippine languages. While for some, these provide adequate proof of a Proto-Philippines, others question the validity of lexical innovations as proof, as Blust (1999: 59) himself stated, "the demonstration that ESS [Exclusively Shared Similarities] are ESI [Exclusively Shared Innovations] is never sufficient in itself to establish a subgroup, since exclusively shared innovations can arise through borrowing, or independent parallel change (drift)." The questions are based on two types of counter-evidence. The first is archaeological evidence, the second phonological and morphosyntactic evidence, that is linguistic evidence.

The archaeological evidence (Spriggs 2003, 2007, 2011) provides clear evidence that the expansion of Proto-Malayo-Polynesian occurred rapidly through the Philippines into Indonesia and the western Pacific. Within the space of several hundred years, PMP-speaking migrants had occupied not only the Philippines but had spread south through Borneo, Sulawesi and Halmahera probably occupying accessible areas close to their ocean routes, creating a wide-spread dialect chain, that eventually split up into the various language groups that are found today. People who could travel south, could also travel back to visit their relatives who stayed put. This continued contact established trade routes and eventually a language network via which lexical items could spread. So the lexical items that are claimed to be evidence of a Proto-Philippines, could have either spread through thousands of years of trade, or be Proto-

Malayo-Polynesian or even Austronesian terms that have never been recorded in any word list or dictionary of the hundreds of languages for which insufficient lexical material is available.

   Blust (2005: 39-41) who is the current main proponent of a Proto-Philippines (since Zorc no longer believes in a Proto-Philippines as a historical entity)[1] claims that around a thousand years after speakers of Proto-Malayo-Polynesian first arrived in the Philippines, one linguistic group of farmers expanded across the island, seeking land to farm, and in the process "wiped clean" all the languages that had developed during the previous thousand years, a speculation for which there is no archaeological or other evidence, apart from the typological similarity of Philippine languages.

   Blust's view of the development of his Proto-Philippines can be diagrammed, as in Figure 1 (from Reid to appear b). The view of Philippine language subgroups that follows from archaeological and linguistic evidence of a dialect chain breaking up eventually into linked subgroups is shown in Figure 2 (from Reid to appear b), where the double lines represent an original dialect chain, and broken double lines represent subgroups defined by phonological, morphosyntactic and lexical innovations.

P1	Bashiic	P4	Inati	P7	Bilic
P2	Northern Luzon	P5	Kalamian	P8	Sangiric
P3	Central Luzon	P6	Greater Central Phil.	P9	Minahasan

---

[1] Zorc (pers. comm. Nov. 14, 2016) states, "Normally, innovations should be indicative of subgrouping. However, they can arise in an environment where different language communities develop close trade or societal ties. The word *bakál 'buy' replaces PAN *belih and *mayád 'good' replaces PMP *u-pia in an upper loop from the Western Bisayas, Ilonggo, Masbateño, Sorsogon, and then several Bikol dialect areas. This is theoretically important because we have innovations that do NOT define a subgroup, e.g., "North Bisayan," but rather a highly interactive area or axis…I am convinced that given Philippine (Austronesian?) culture, people interact when they are in geographical proximity and adapt to one another in terms of language, culture, cuisine, trade, etc. This could then account for so-called "innovations" that spread across genetic boundaries" (see Zorc unp.).

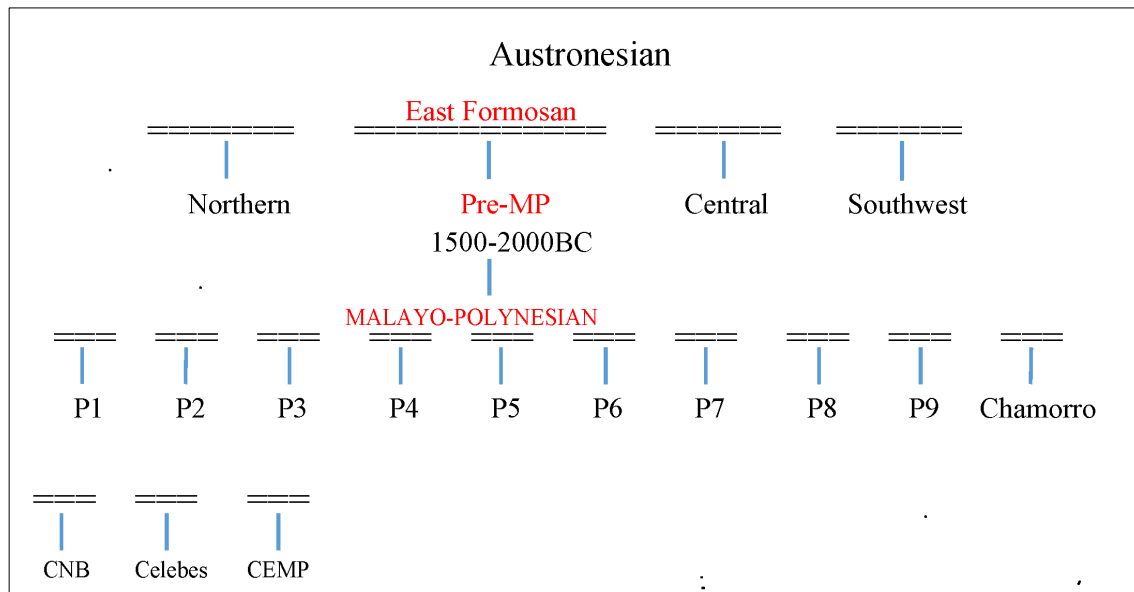Figure 1. Blust's movement of AN to the Philippines

Figure 2. Reid's movement of AN to the Philippines

The phonological and morphosyntactic counter-evidence is based on the fact that the subgroups of languages found in the Philippine archipelago do not constitute a single witness for PMP. Just as PMP phonology can be reconstructed based on what is found in the subgroups present in the Philippines (i.e., the phonology of Blust's 1999 "Proto-Philippines" is no different from the phonology of PMP), nothing can be reconstructed for PMP morphology or syntax from languages south of the Philippines for which evidence is not also found in the Philippines. It is also true that the absence of forms in languages found outside the geographical Philippines is not proof that they cannot be reconstructed to PMP (see also Reid 2016, and for critiques of the Proto-Philippine hypothesis, see Ross 2005, Pawley 1999, 2006).

The most recent studies of the relationship between Philippine languages and the rest of the Austronesian language family, are Bayesian phylogenetic studies (Gray et al. 2009), a computational technique that was originally developed for evolutionary biology. An explanation of the method is available in Greenhill & Gray (2009). The data that are input for each language consist of verified reflexes of reconstructed forms of some 210 items of basic vocabulary with items identified as loans not included. The main source of items is the Austronesian Basic Vocabulary Database at the University of Auckland, New Zealand (see Greenhill et al. 2008).

Figure 3 provides one view of a phylogenetic tree, showing a pause between Formosan and Philippine languages. The numbers are the level of confidence, formally the 'posterior probability'. In concrete terms, it is the proportion of the trees that were found that contain that grouping which is equivalent to the amount of support for it in the data. A posterior probability (p) of 1.0 is very strong support, and anything around 70% is moderately supported. Below about 50% should probably be ignored (Simon Greenhill pers. comm.)

A second view is given in Figure 4 which is a densitree plot, and essentially draws all the trees on top of each other. Where there is conflicting signal in the data there are multiple branches. Where the topology is strongly estimated the branching pattern will be tight and clean, where it is weaker then there are more 'cloudy' patches (Simon Greenhill pers. comm.).

A third view is provided in Figure 5 which is a neighborhood net view. The length of the lines is proportional to the amount of difference between languages, longer is more. Bigger boxes mean more conflicting signal; smaller boxes mean less conflicting signal (Simon Greenhill pers. comm.).

What do these figures tell us about the relationship of Philippine languages? They mostly confirm the subgrouping that has been claimed on the basis of application of the historical-method, although some problems remain that are probably the result of unrecognized borrowing. While Figure 3 shows most Philippine languages strongly grouped together (p. = .96), the Sangiric and Northern Sulawesi languages are shown as a separate branch predating other Philippine languages, however the posterior probability is very low (p. = .03), and should therefore be ignored. The densitree plot (Figure 4), shows solid lines for most Philippine subgroups, likewise confirming the subgrouping based on application of the historical-method, but the lines that connect all Philippine languages are cloudy, and suggest that there is no strong confirmation of a Proto-Philippines subgroup of Philippine languages. Similarly, the Bilic (or Southern Mindanao) languages are grouped in Figure 3 with the Danao languages, Iranun, Maranao and Maguindanao. But again, the posterior probability is low (p. = .3) and should be ignored. There has been much borrowing between these groups of languages and speech strata are inconclusive (Blust 1992).
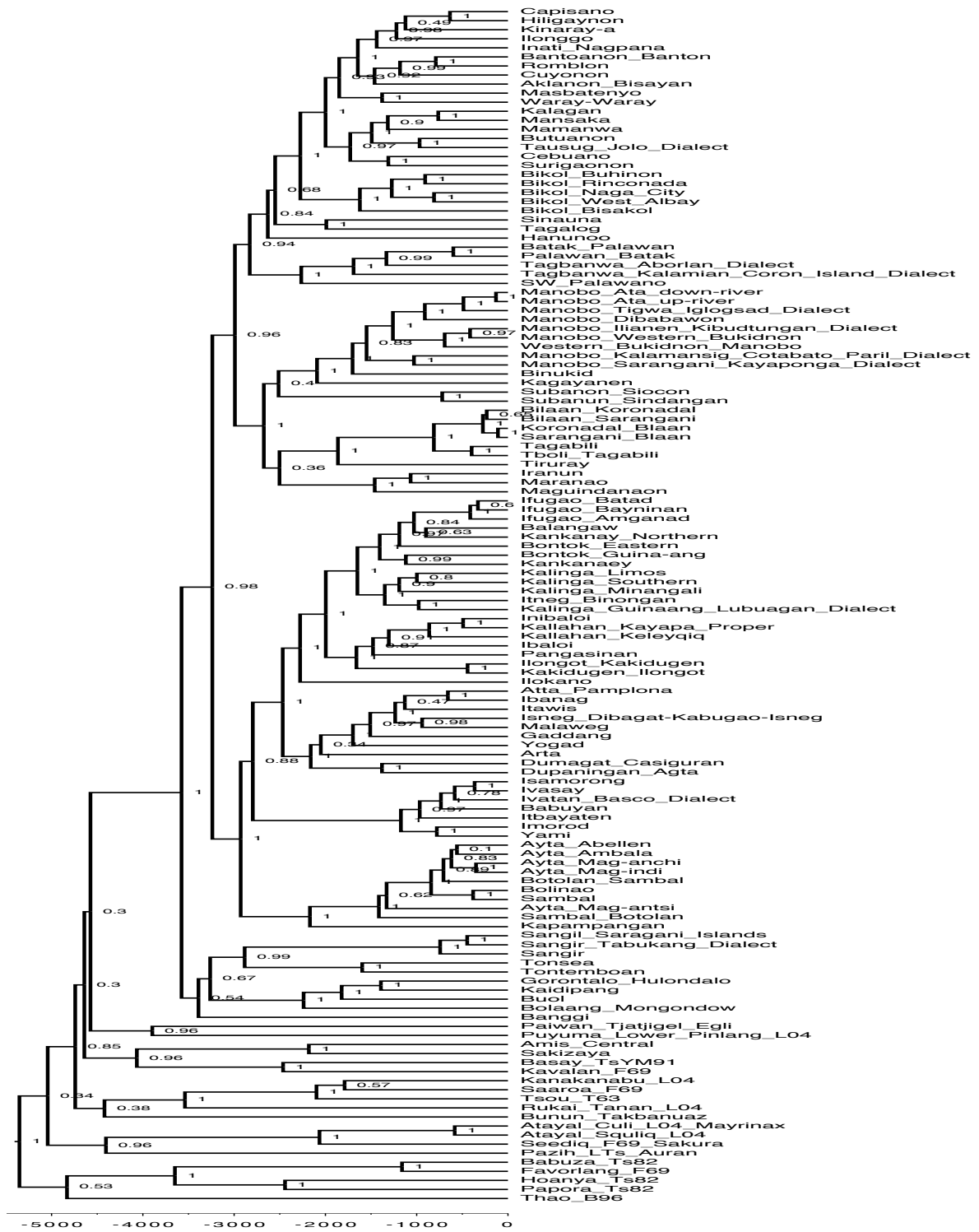
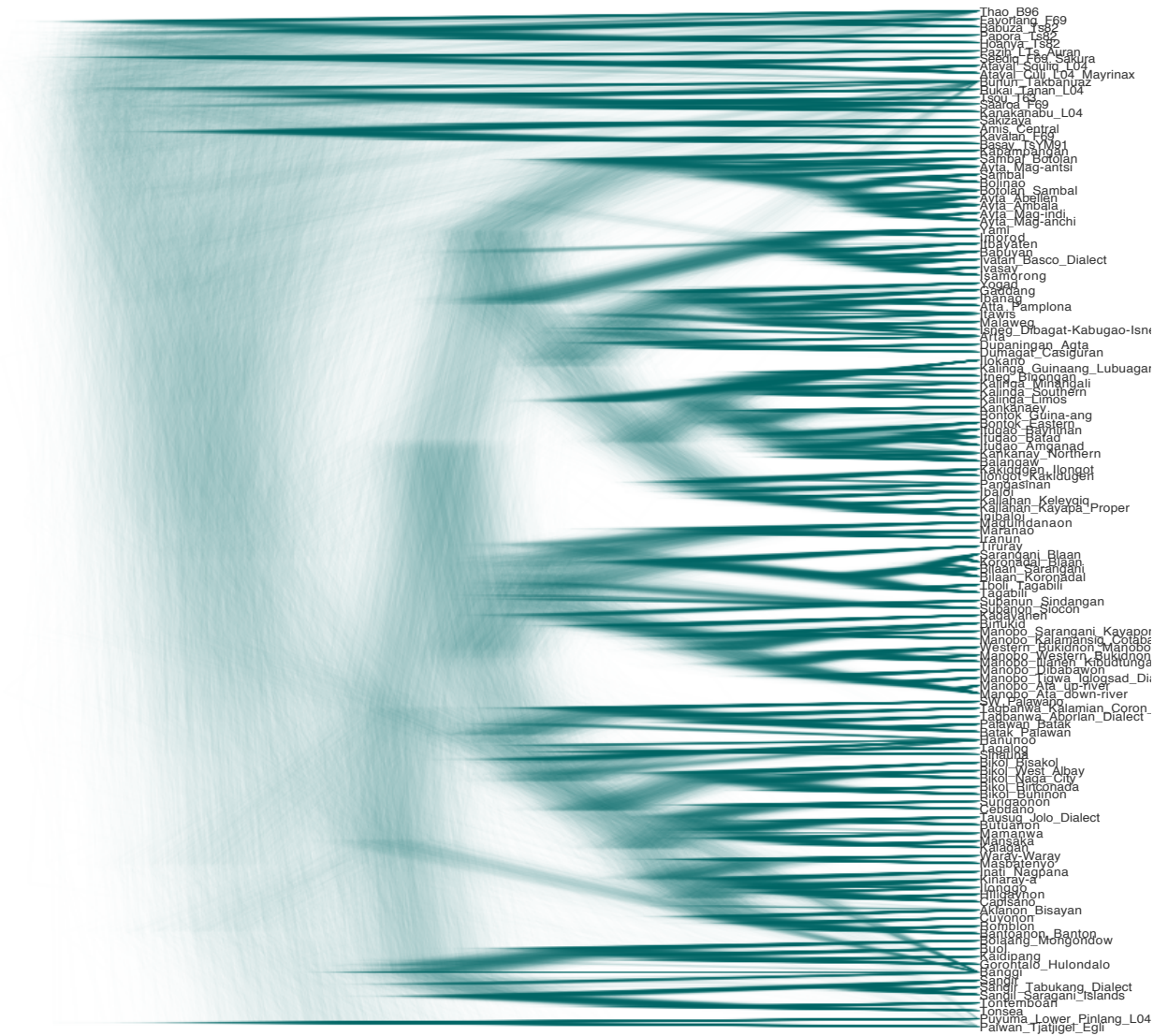Figure 3. Bayesian phylogenetic tree of Formosan and Philippine languages

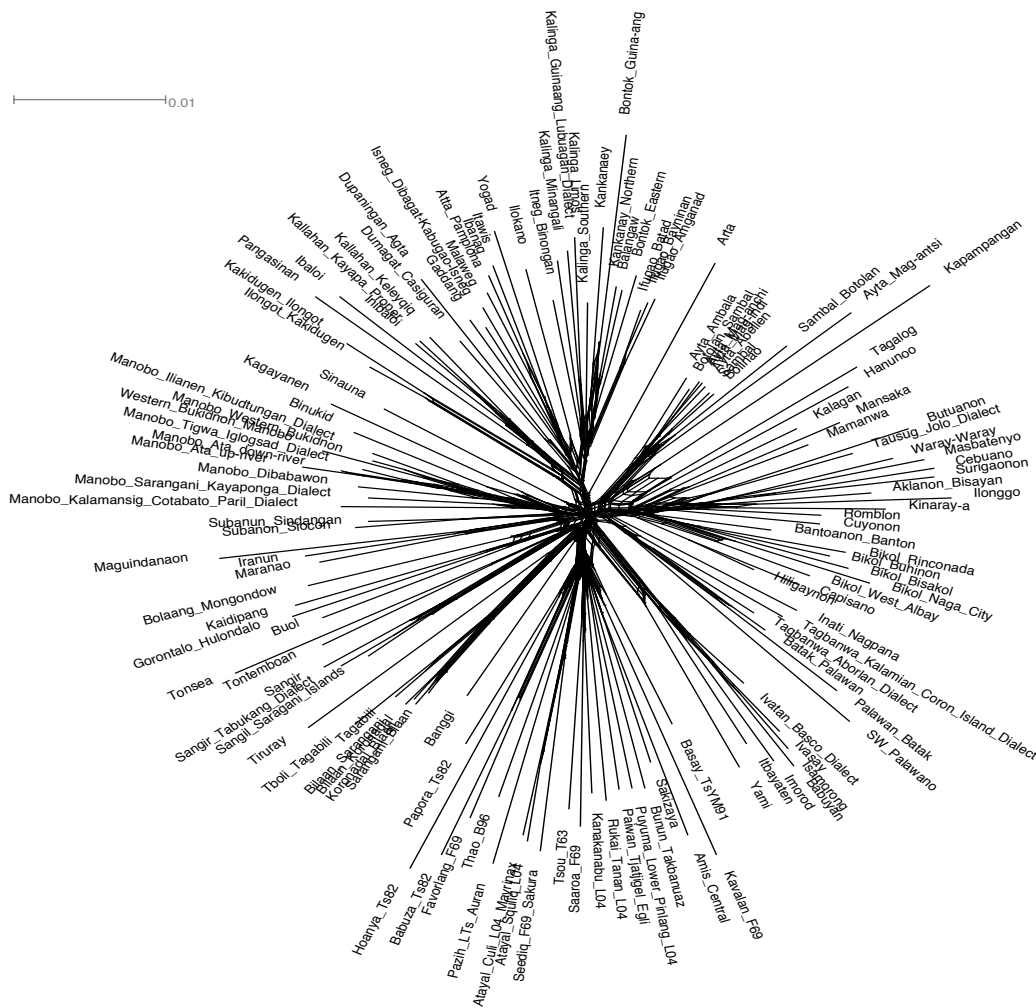Figure 4. A densitree plot of Philippine and Formosan languages.

Figure 5. A neighborhood net view of Philippine and Formosan languages

4. The origin of the Philippine languages

The second theme that Scheerer (1918: 61) discussed was the belief that the Philippine languages are descended from Malay. Scheerer noted that this belief arose during the "pre-scientific" period, that is prior to what he called the "Comparative Science of Language" which developed in Europe with studies of the relationship between Sanskrit and European languages that gave rise to what is now referred to as the Indo-European family of languages. As an example of the early view that Malay was the source of Philippine languages, Scheerer cited Hervás (1801), who quoted the following from Colín (1663):

> Three kinds or sorts of people were found by the conquerors when they arrived to these islands and conquered Manila. The ones that were ruling, and were living by the sea and riverbanks, and the best spots, that were Malay Moors, coming (according to themselves) from Borneo, which is also an island, bigger than any of the Philippines and close to the land of Malacca, where there is a region called Malay, which is the origin of all Malays, who have spread through the best of these archipelagos. From

this Malay nation was born the Tagalogs, who are natives from Manila and region, as demonstrated by their language Tagalog.[2]

But even Blake (1906) maintained the old view that Philippine languages arose from a "birthplace" in the vicinity of the Malay Peninsula.

> … it seems most likely that the cradle of the race was on some of the numerous islands it now inhabits, possible some of the large islands in the vicinity of the Malay peninsula. From this birthplace the ancient Malayo-Polynesians, forced doubtless by the increase in population, must have spread out in a series of waves or swarms… The Philippine languages, then, may be more accurately defined as a subdivision of the Malay branch of the Malayo-Polynesian languages. (Blake 1906: 18).

Scheerer (1918) devotes considerable space to discussion of von Humboldt (1836-1839), particularly the points where von Humboldt noted that Malay, because its "grammatical decay" could not have been the source of Philippine languages. Humboldt would have preferred to name the whole family after Tagalog rather than after Malay in that he considered Tagalog to be the "prototype of all others on account of its representing in the clearest and most perfect manner the structure peculiar to these languages" (Scheerer 1918: 63). But Scheerer proceeds to discuss the reasons why people no longer use the term "Malayan languages", despite the term "Malayo-Polynesian", and use instead the term "Indonesian languages". As he says, "the employment of the geographical name of the home of these languages, which is Indonesia, avoids all the misunderstandings that must arise thru the use of the word 'Malay' which is but the name of one single and by no means representative member of that numerous family of kindred peoples that form the prevailing population of Indonesia" (ibid). For a fuller presentation of the role of Humboldt (and subsequent European scholars) in our understanding of the relationship between Philippine and other Austronesian languages, see Blust (2009 [2013]).

It is clear then, that Scheerer when he presented his lecture still believed that Indonesia was the home of Philippine languages, and that the Philippines was populated by a northwards movement of people.

While even today there are academics (non-linguists) who claim that there is no clear evidence for any point of origin of Austronesian languages, the linguistic evidence is clear, and can only be interpreted directionally. All comparative linguists believe the evidence is ineluctable that Malayo-Polynesian (sometimes referred to as Extra-Formosan) — the subgroup of Austronesian consisting of all the Austronesian daughter languages spoken outside mainland Taiwan — developed after a movement south into the Philippines. The evidence for this (first adduced by Blust) consists of a set of phonological, pronominal and morphosyntactic innovations, most of which are highly directional. As Ross (2005) says, "If a set of innovations is shared by the languages of a group, it is inferred that they are shared because they have been

---

[2] *Tres diversídades o suertes de gentes hallaron los primeros conquistadores y pobladores en estas islas cuando llegaron a ellas y sugetaron esta de Manila. Los que mandaban en ella, y habitaban los lugares marítimos y riberas de los rios, y todo lo mejor de la comarca, eran moros malayos, venidos (segun ellos decían) de Borneo que también es isla, ymayor que ninguna de Filipinas y mas cercana a la tierra firme de Malaca, donde está una comarca llamada Malayo que es el origen de todos los Malayos que estan derramados por lo mas y mejor de estos archipiélagos. De esta nación de los malayos nace la de los tagalos, que son los naturales de Maníla y su comarca, como lo demuestra su lengua tagala. (Scheerer 1918: 60)*

inherited from a single interstage language. This is far more probable than the alternative assumption—that the innovations have occurred independently in each language which reflects them." Ross (2005:6).

What are the innovations which characterize the interstage language, Proto-Malayo-Polynesian? Phonological mergers are prime evidence of directionality. There are two of them.

    a.   PAn *t and *C merged as PMP *t, as in the following examples (Blust 1999: 82-87):
PAN *Cau > PMP *tau 'person'
PAN *kuCu > PMP *kutu 'head louse'
PAN *batu > PMP *batu 'stone'
PAN *telu > PMP *telu 'three'

    b.   PAn *L and *n merged as PMP *n, as in the following set of data:

PAN *bulaL > PMP *bulan 'moon'
PAN *tiaL > PMP *tian 'belly'
PAN *zalan > PMP *zalan 'road'
PAN *nipen > PMP *nipen 'tooth'

The shift of PAn *S to PMP *h is prime evidence for directionality, because the change from a sibilant to /h/ is an instance of a natural sound change widely represented in languages around the world, whereas the opposite is not, as in the following examples:

PAN *Sajek > PMP *hajek 'smell'
PAN *Suab > PMP *huab 'yawn'
PAN *taSiq > PMP *tahiq 'sew'
PAN *SulaR > PMP *hulaR 'snake'

The pronominal evidence is also highly directional. PAN *=mu 'GEN.2PL' became PMP *=mu 'GEN.2SG'. In Formosan languages, the pronoun is always a genitive second person plural pronoun. In the Austronesian languages outside of Taiwan proper, it is always a second person singular pronoun. The change is labelled a "politeness shift" (Blust 1977), similar to the way French *vous* replaces *tu*, or English *you* replaced *thou*. While a shift from second person plural to second person singular is not unusual in other languages, the reverse is rare, and therefore is strongly directional.

Other morphological innovations characterize PMP. Many Western Malayo-Polynesian languages, such as those in the Philippines, distinguish a first person dual pronoun (i.e., 'we two'), from a first person inclusive plural pronoun (i.e., 'we all') (Reid 2016). For example:

Ilokano
Mapan=ta   idiay   bantay.
go=1DU.IN   LOC   mountain
'Let's go to the mountain (the two of us).'

Mapan=tayo idiay   bantay.
go=1PL.IN   LOC   mountain
'Let's all go to the mountain.'

Other morphological evidence is also found that distinguishes Malayo-Polynesian languages from their forebears in Formosa, for example the verbal prefix *maN- does not occur

in Formosan languages, but reflexes occur widely in MP languages (Ross 2005:10). A number of other morphological and syntactic differences are found between Formosan and MP languages, including the "recent perfective" construction (Liao 2011a, b).

5. Philippine languages as part of the Austronesian family

The third issue that Scheerer wanted to determine what science has done to confirm, modify or add to, was the general position of Philippine languages as part of the Austronesian family of languages. As Scheerer (1918: 60) noted, "In 1802, Hervás published his opinion that the languages of the islands in the Pacific and in the southern Indian Ocean (Malagasy of Madagascar) were related with those of the Philippines and, hence, with Malay." Much has changed since Hervás wrote those words, but the general facts that he stated, that Philippine languages, Malagasy, Malay and other Indonesian languages, are related to (most of) the languages of the Pacific, has, of course, been confirmed. The details of the relationships between these languages have been the topic of literally hundreds of scientific papers since Scheerer's time, and are beyond the scope of this paper. It is sufficient to provide a general picture of current views about the expansion of Austronesian languages into the Pacific, and the types of data that have been used to support them (see Map 1).
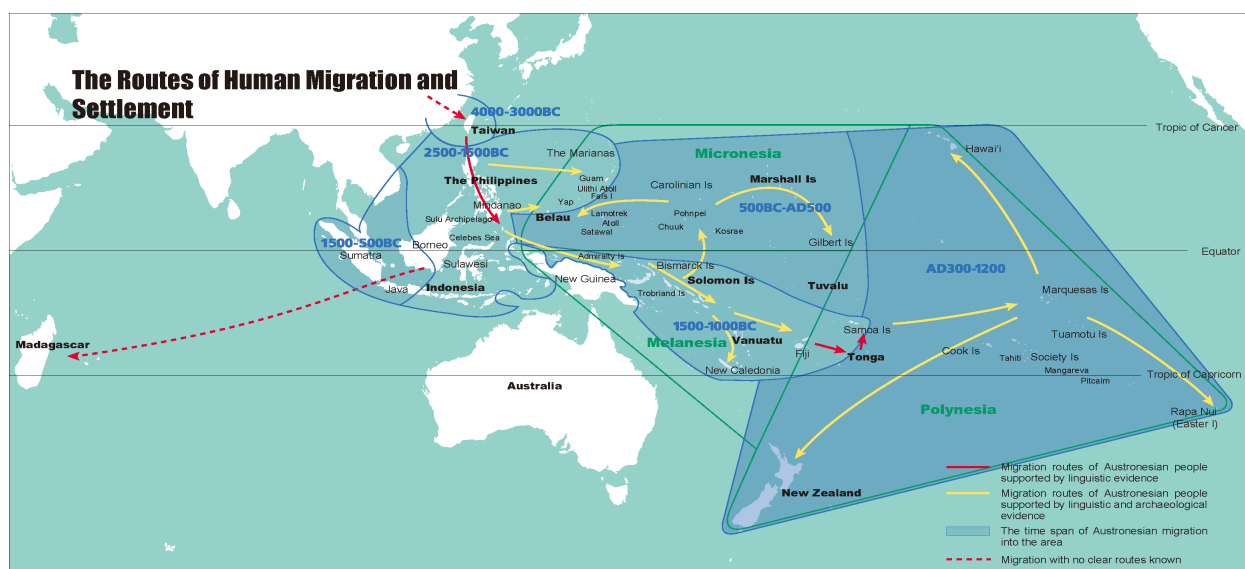
Map 1. Austronesian expansion in the Pacific. Translated and cited from *Oceania: Expansions of the Great Seafarers* (Osaka: National Museum of Ethnology, Japan, 2007)

6. Conclusion

This paper has been an attempt to update Otto J. Scheerer's views expressed in his 1918 paper almost 100 years ago. There are two major claims that needed to be discussed. The first was the assumed genetic unity of Philippine languages, viz., all Philippine languages are daughters of a Proto-Philippines. This is a claim that has been prominent throughout the decades since Scheerer first discussed it, but it is the result of assuming that typological similarity is the same as genetic unity. However genetic unity can only be substantiated on the basis of exclusively shared innovations, that is changes that are made in the sound system or other aspects of the grammar of a language that have been inherited from a former stage, and are then shared by each of the descendants of the language in which the changes took place.

While Philippine languages have been shown to share many unique lexical items that have not been found in other languages outside the Philippines, there have not been any innovations in the sound system or grammatical patterns of Philippine languages that are unique to Philippine languages. The shared unique lexical items are probably the result, not of changes in a Proto-Philippines, but of forms that have been shared as the result of the thousands of years of trading that have characterized the Philippines.

The claim that there was no Proto-Philippines is supported by archaeological evidence, that suggests that after the arrival of Malayo-Polynesian people into the Philippines around 4000 years ago, there was a rapid spread of people moving south through Sulawesi and Borneo into regions beyond and eventually into the western regions of the Pacific within the space of a few hundred years. This spread would have resulted in a dialect chain, where people interacted with their former friends and relatives, eventually splitting up into separate languages and language groups. These groups also interacted with each other, creating a network of languages that spread ways of speaking from one group into another.

The other major claim that has been addressed above, is that the Philippines was populated by movements of people from areas to the south, specifically Malayic peoples, or other groups from the large Indonesian islands. While some non-linguists still think that this is a possibility, the linguistic evidence is that Proto-Austronesian was spoken in what is now called Taiwan, and that all the languages south of Taiwan proper belong to the Malayo-Polynesian group. The evidence for this is extensive, and consists of a wide range of exclusively shared innovations that characterize these languages. This implies that the Philippines was occupied first, agreeing with the archaeological evidence, and that areas to the south were settled later. This does not, of course, mean that there was no back-migration of people from the south into the Philippines. There is much evidence for this, including the spread of Islam and Indic writing systems from Indonesia into the southern Philippines, and north into Luzon (see Reid To appear a).

The third claim that Scheerer discussed was the connection of Philippine and other Austronesian languages with languages in the Pacific, but this is a topic beyond the bounds of this paper and was not addressed.

References

Blake, Frank R. 1906. Contributions to Philippine grammar. *Journal of the American Oriental Society* 27: 317-396.

Blake, Frank R. 1907. Contributions to Philippine grammar, II. *Journal of the American Oriental Society* 28: 199-253.

Blust, Robert. 1991. The Greater Central Philippines hypothesis. *Oceanic Linguistics* 30: 73-129.

Blust, Robert. 1992. On speech strata in Tiruray. In *Papers in Austronesian Linguistics 2*, ed. by Malcolm D. Ross, 1-52. Canberra: Research School of Pacific and Asian Studies, Australian National University.

Blust, Robert. 1977. The Proto-Austronesian pronouns and Austronesian subgrouping: A preliminary report. *University of Hawai'i Working Papers in Linguistics* 9.2: 1–15.

Blust, Robert. 1999. Subgrouping, circularity and extinction: some issues in Austronesian comparative linguistics. In *Selected Papers from the Eighth International Conference on Austronesian Linguistics*, ed. by Elizabeth Zeitoun & Paul Jen-kuei Li. (Symposium Series of the Institute of Linguistics, Academia Sinica, No. 1), 31-94. Taipei: Academia Sinica.

Blust, Robert. 2005. The linguistic macrohistory of the Philippines: Some speculations. In *Current Issues in Philippine Linguistics and Anthropology: Parangal kay Lawrence A. Reid,*

ed. by Hsiu-chuan Liao & Carl R. Galvez Rubino, 31-68. Manila: Linguistic Society of the Philippines and SIL Philippines.

Blust, Robert A. 2009 [2013]. *Austronesian Languages*. Canberra: Pacific Linguistics. [2013 revised edition on-line at: http://pacling.anu.edu.au/materials/Blust2013Austronesian.pdf]

Brandes, J. L. A. 1884. *Bijdrage tot de vergelijkende klankleer der westerse afdeeling van de Maleisch-Polynesische taalfamilie*. Utrecht: P.W. van de Weijer.

Brugmann, K. 1884. Zur Frage nach den Verwandtschaftsverhältnissen der Indogermanischen Sprachen [On the question of the genetic relationships of the Indo-Germanic languages]. *Internationale Zeitschrift fur allgemeine Sprachwissenschaft* 1: 226-256.

Charles, M. 1974. Problems in the reconstruction of Proto-Philippine phonology and the subgrouping of the Philippine languages. *Oceanic Linguistics* 13: 457-509.

Chirino, Pedro. 1604. *Relacion de las Islas Filipinas.* Roma. (Translation available online at http://www.gutenberg.org/cache/epub/15022/pg15022-images.html. The Project Gutenberg EBook of *The Philippine Islands, 1493-1898*, ed. by Emma H. Blair and James A. Robertson, Vol. 12 &13, accessed Sep. 8, 2016).

Colín, Francisco. 1663 (1904). Labor evangélica. 2nd edition: Barcelona, Impr. y litografía de Henrich y compañía. (Translation available online at http://www.gutenberg.org/files/ 30253/30253.txt. The Project Gutenberg EBook of *The Philippine Islands, 1493-1898*, ed. by Emma H. Blair and James A. Robertson, Vol. 40, accessed Sep. 8, 2016).

Conant, Carlos E. 1911a. Review of *The first grammar of the language spoken by the Bontoc Igorot with vocabulary and texts, mythology, folklore, historical episodes, songs,* by Carl Wilhelm Seidenadel. *Classical Philology* 6 (3): 365-367.

Conant, Carlos E. 1911b. The RGH law in Philippine languages. *Journal of the American Oriental Society* 31 (1): 70-85.

Conant, Carlos E. 1912. The Pepet Law in Philippine languages. *Anthropos* 7: 920-1956.

Conant, Carlos E. 1916. Indonesian L in Philippine languages. *Journal of the American Oriental Society* 36: 181-196.

Dempwolff, Otto. 1934-1938. *Vergleichende Lautlehre des austronesischen Wortschatzes*. 3 vols. Berlin: Reimer.

Dyen, Isidore. 1965. *A lexicostatistical classification of the Austronesian languages*. Indiana University Publications in Anthropology and Linguistics, and Memoir 19 of the International Journal of American Linguistics. Baltimore: The Waverly Press.

Gray, Russell D., Alexei J. Drummond, & Simon J. Greenhill. 2009. Language phylogenies reveal expansion pulses and pauses in Pacific settlement. *Science* 323 (5913): 479-482; DOI: 10.1126/science.1166858.

Greenhill, Simon J., Robert Blust, & Russell D. Gray. 2008. The Austronesian Basic Vocabulary Database: From Bioinformatics to Lexomics. *Evol Bioinform Online* 4: 271–283, PMCID: PMC2614200.

Greenhill, Simon J. & Russell D. Gray. 2009. Austronesian language phylogenies: Myths and misconceptions about Bayesian computational methods. In *Austronesian historical linguistics and culture history: A festschrift for Robert Blust,* ed. by Alexander Adelaar & Andrew Pawley, (Pacific Linguistics 601) 1-23. Canberra: Australian National University.

Hervás y Panduro, Lorenzo. 1801. *Catálogo de las lenguas de las naciones conocidas, y numeracion, divions, y clases de estas según la diversidad de sus idiomas y dialectos. Vol. 2: Lenguas y naciones de las islas de los mares del Pacífico y Indiano Austsral y Oriental, y el continente de Asia.* Madrid: Imprenta de la Administración del Real Arbitrio de Beneficencia.

Leskien, August. 1876. *Die Declination im Slawisch-Litauischen und Germanischen.* Leipzig: Hitzel.

Liao, Hsiu-chuan. 2006. Philippine linguistics: The state of the art, 1981-2005. Lecture given to the Andrew Gonzalez, FSC, Distinguished Professorial Chair in Linguistics and Language Education. Linguistic Society of Manila.

Liao, Hsiu-Chuan. 2011a. On the development of comitative verbs in Philippine languages. *Language and Linguistics* 12(1):205-237.

Liao, Hsiu-Chuan. 2011b. Some morphosyntactic differences between Formosan and Philippine languages. *Language and Linguistics* 12(4):845-876.

Llamzon, Teodoro A. 1975. Proto-Philippine Phonology. *Archipel* 9 (1): 29-42.

Llamzon, Teodoro A., and Ma. Teresita Martin. 1976. A subgrouping of 100 Philippine languages. In *South-East Asian linguistic studies, Vol.* 2, ed. by Nguyen Dang Liem, 141-172. Canberra: Dept. of Linguistics, Research School of Pacific Studies, Australian National University.

Lopez, Cecilio. 1974. *A comparative Philippine word-list*, ed. by Ernesto Constantino. [Special monograph issue #1]. The Archive.

Pawley, Andrew. 1999. Chasing Rainbows: Implications for the rapid dispersal of Austronesian languages for subgrouping and reconstruction. *Selected Papers from the Eighth International Conference on Austronesian Linguistics* ed. by Elizabeth Zeitoun & Paul Jen-kuei Li, 95–138. Academia Sinica: Taipei, Taiwan.

Pawley, Andrew. 2006. Origins of the Filipinos: Linguistic and archaeological evidence. Paper presented at the 9th Philippine Linguistics Congress (9 PLC), January 25-27, 2006, Diliman, Quezon City, University of the Philippines.

Paz, Consuelo J. 1981. *A reconstruction of Proto-Philippine phonemes and morphemes.* Diliman, Quezon City: Cecilio Lopez Archives and Philippine Linguistic Circle. pp. 229.

Reid, Lawrence A. 1978. Problems in the reconstruction of Proto-Philippine construction markers. In *Second International Conference on Austronesian Linguistics: Proceedings, Fascicle I -- Western* Austronesian, ed. by S. A. Wurm and Lois Carrington, 33-66. (Pacific Linguistics C-61). Canberra: Australian National University.

Reid, Lawrence A. 1979. Evidence for Proto-Philippine nominative marking. *Philippine Journal of Linguistics* 10:1-20.

Reid, Lawrence A. 1981. Philippine linguistics: The state of the art: 1970–1980. In *Philippine studies: Political science, economics, and linguistics*, ed. by Donn V. Hart, 212-273. (Occasional Paper No. 8.) DeKalb: Center for Southeast Asian Studies, Northern Illinois University.

Reid, Lawrence A. 1982. The demise of Proto-Philippines. In *Papers from the Third International Conference on Austronesian Linguistics, Vol. 2: Tracking the travellers*, ed. by Amran Halim, Lois Carrington, and Stephen Wurm, 201-216. (Pacific Linguistics C-75). Canberra: Australian National University.

Reid, Lawrence A. 2011. Seidenadel's grammar of Bontoc Igorot: One hundred years on. In *Micronesian and Philippine Linguistics before the Advent of Structuralism*, ed. by Emilio Ridruejo, Lawrence Reid and Thomas Stolz, 151-161. Berlin: Academie Verlag.

Reid, Lawrence A. 2016. Accounting for variability in Malayo-Polynesian pronouns: Paradigmatic instability or drift? *Journal of Historical Linguistics* 6(2): 130-164.

Reid, Lawrence A. To appear a. Re-evaluating the position of Iraya among Philippine languages. [Paper presented to the *International Conference on Austronesian Linguistics 13*, Academia Sinica, Taiwan, July 18-23, 2015]. To appear in *Journal of Southeast Asian Linguistics.*

Reid, Lawrence A. To appear b. Modelling the linguistic situation in the Philippines. In *Talking about Trees: Tackling Problems in Representing Phylogenetic Relationships among Languages*, ed. by Ritsuko Kikusawa and Lawrence A. Reid. (Senri Ethnological Studies). Osaka: National Museum of Ethnology.

Robinson, Laura C. 2011. *Dupaningan Agta: Grammar, vocabulary and texts.* (Pacific Linguistics #635). Canberra: Australian National University.

Ross, Malcolm. 2005. The Batanic languages in relation to the early history of the Malayo-Polynesian subgroup of Austronesian. *Journal of Austronesian Studies* 1 (2): 1-24.

Scheerer, Otto J. 1908. *The Batán dialect as a member of the Philippine group of languages.* (Bureau of Science Division of Ethnology Publications, Vol. 5, Part 1). Manila: Bureau of Printing.

Scheerer, Otto J. 1909. Linguistic travelling notes from the Cagayan. *Anthropos* 4 (3&4): 801-804.

Scheerer, Otto J. 1911a. Review of C.W. Seidenadel's 'The first grammar of the language spoken by the Bontok Igorot.' *Philippine Journal of Science* 6 (D): 271-281.

Scheerer, Otto J. 1911b. The languages of the Philippines. In *The Cablenews-American Yearly Review Number, 1911*. p. 98 et seq.

Scheerer, Otto J. 1918. Outlines of the history of exploration of the Philippine languages and their relatives in East and West. In *The Philippine Review*, ed. by Gregorio Nieva. Vol. 3, No. 1, 59-67. (Available online at http://quod.lib.umich.edu/p/philamer/acp0898.0003.001, accessed Aug. 15, 2016.)

Seidenadel, Carl W. 1909. *The first grammar of the language spoken by the Bontoc Igorot with vocabulary and texts, mythology, folklore, historical episodes, songs.* Chicago: Open Court Publishing Co. 592 pp.

Spriggs, Matthew. 2003. Chronology of the Neolithic transition in Island Southeast Asia and the western Pacific. *The Review of Anthropology* 24: 57–80.

Spriggs, Matthew. 2007. The Neolithic and Austronesian expansion within Island Southeast Asia and into the Pacific. In *From Southeast Asia to the Pacific. Archaeological Perspectives on the Austronesian Expansion and the Lapita Cultural Complex*, ed. by S. Chiu and C. Sand, 104-140. Taipei: Academia Sinica.

Spriggs, Matthew. 2011. Archaeology and Austronesian expansion: Where are we now? *Antiquity* 85:328.510–528. Retrieved from http://faculty.washington.edu/plape/pacificarchaut12/Spriggs%202011.pdf.

Thomas, David & Alan Healey. 1962. Some Philippine language subgroupings: A lexicostatistical study. *Anthropological Linguistics* 4: 21-33.

UP. 1916. *Fifth annual report of the President of the University of the Philippines*. Manila: Bureau of Printing.

van der Tuuk, H.N. 1865. Note on the relation of the Kawi to the Javanese. *Journal of the Royal Asiatic Society* 1: 419-442.

van der Tuuk, H.N. 1872. 't Lampongsch en zijne tongvallen. *Tijdschrift voor Indische Taal-, Land-, en Volkenkunde* 18: 118-156.

von Humboldt, W. 1836-1839. Über die Kawi-Sprache auf der Insel Java, nebst einer Einleitung über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwicklung des Menschengeschlechts. Abhandlungen der Königlichen Akademie der Wissenschaften zu Berlin, part 2. Berlin: Königlichen Akademie der Wissenschaften.

Walton, Charles. 1979. A Philippine language tree. *Anthropological Linguistics* 21:70-98.

Zorc, R. David. 1971. *Proto-[Proto-(Proto)] Philippine Finder List*. (Typescript 265pp) [Incorporated in: S. A. Wurm and B. Wilson. 1975. *English Finderlist of Reconstructions in Austronesian Languages (Post-Brandstetter)*. (Pacific Linguistics C-33). Canberra: Department of Linguistics, Research School of Pacific Studies, The Australian National University.]

Zorc, R. David. 1978. Proto-Philippine word accent: innovation or Proto-Hesperonesian retention? In *Second International Conference on Austronesian Linguistics: Proceedings, Fascicle I -- Western* Austronesian, ed. by S. A. Wurm and Lois Carrington, 67-119. (Pacific Linguistics C-61). Canberra: Australian National University.

Zorc, R. David. 1986. The genetic relationships of Philippine languages. In *FOCAL II: Papers from the Fourth International Conference on Austronesian Linguistics*, ed. by Paul Geraghty, Lois Carrington, and S. A. Wurm, 147-173. (Pacific Linguistics C-94). Canberra: Department of Linguistics, Research School of Pacific Studies, The Australian National University.

Zorc, R. David. 1987. Austronesian apicals (*dDzZ) and the Philippine non-evidence. In A World of Language: Papers Presented to Prof. S. A. Wurm on His 65th Birthday, ed. by Donald Laycock and Werner Winter, 751-761. (Pacific Linguistics C-100). Canberra: Department of Linguistics, Research School of Pacific Studies, The Australian National University.

Zorc, R. David. unp. North Bisayan innovations: An axis, not a subgroup. Unpublished paper, available at http://zorc.net/publications/.