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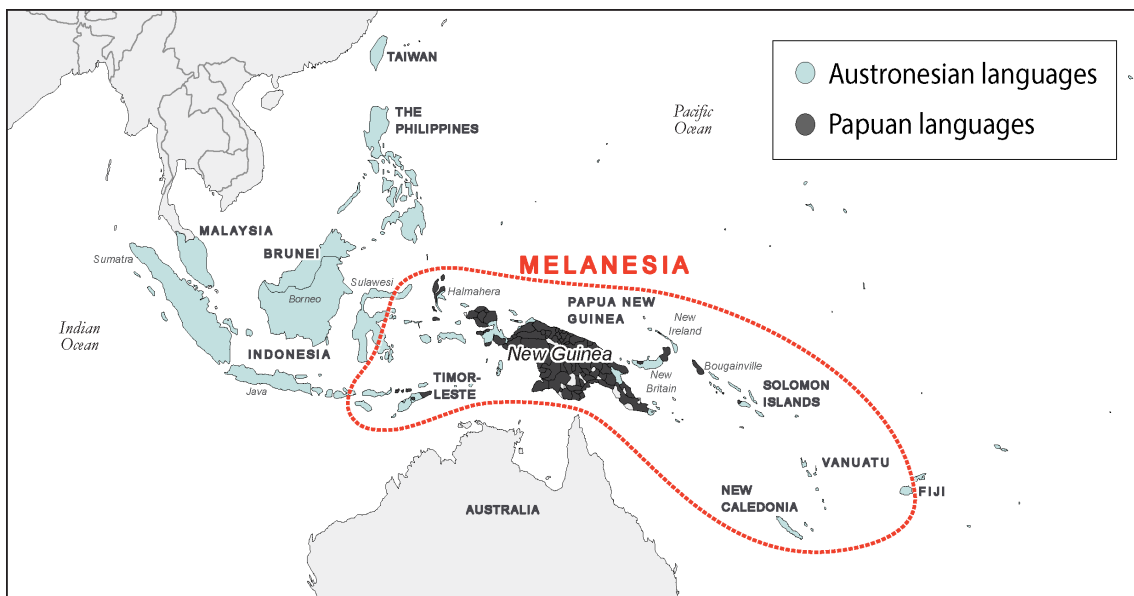
# Linguistic Melanesia

*Antoinette Schapper (Lacito-CNRS)*

## 1. Introduction/definitions

Linguistic Melanesia is a world hotspot of linguistic diversity and is home to around 1500 languages belonging to between 20 to 40 language families. Located to the north of the Australian continent, the area is centred on the island of New Guinea, extending eastward from the island of Sulawesi in Indonesia to the western fringe of Polynesia and stopping just east of the islands of Fiji, Vanuatu and New Caledonia. At its core Linguistic Melanesia is dominated by Papuan languages, but also takes in a large number of Austronesian languages (Map 1). While Austronesian languages form a genealogical unit, Papuan languages do not. A language is said to be Papuan, if it is spoken on or near New Guinea, and is not Austronesian or Australian. The term “Papuan” thus covers languages of numerous families. The alternative label “non-Austronesian” is sometimes used, but presents its own difficulties in that Austronesian languages are in geographic contact with several language families, such as Austro-Asiatic or Sinitic, which are non-Austronesian but not Papuan. Throughout this chapter, I will use the term “Papuan”.

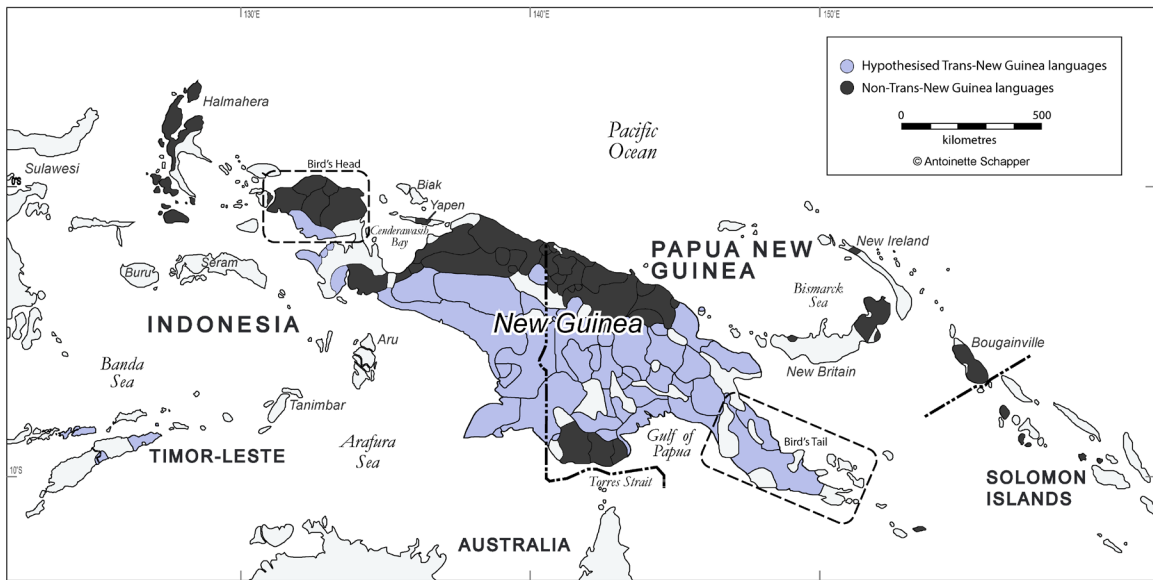
Map 1: Approximate location of Linguistic Melanesia



The antecedents of modern-day Papuan languages, along with the Australian languages, have been traced back to the earliest waves of migration out of Africa between 40,000-60,000BP (O’Connell 2012, Tumonggor et al. 2013, Macaulay et al. 2005). While the vast majority of Papuan languages are located on New Guinea, there are around 60 so-called Papuan “outliers” scattered around New Guinea. Due to the limited documentation available for many Papuan

languages, their classification into families remains controversial and largely a matter of conjecture. Trans-New Guinea (TNG) is a hypothesized macro-family of around 500 languages whose members are spread across the mountainous cordillera along the length of New Guinea and into many lowland regions, particularly on the south coast of New Guinea, as well as to the island of Timor and its satellites several hundred kilometres to the west of New Guinea. There is little agreement on the precise membership or higher subgroupings of the Trans-New Guinea family. The remaining Papuan languages, collectively labelled non-Trans-New Guinea, are classified as belonging to several dozen other language families that are not related to one another, although the exact number and constituency of these is not agreed upon. Map 2 presents a relatively “lumping” statement of Papuan families, that is, it represents proposed larger family groupings even where they are not definitively proven.

Map 2: Distribution of Papuan languages on and around New Guinea†



† The island of New Guinea is often conceived of as a bird and languages are frequently referred to by their location on this metaphorical bird. The so-called “Bird’s Head” and “Bird’s Tail” are marked on the above map for reference.

The spread of the Austronesian languages is associated with an out-of-Taiwan migration of Asians in the period between 8,000BP-4,000BP (Bellwood 2017, Hill et al. 2007, Tabbada et al. 2010). This transformative period, called the “Southeast Asian Neolithic”, saw many pre-existing populations in the path of the expanding Austronesians overwhelmed and assimilated to become Austronesian-speaking. Groups of Austronesian speakers also moved out into the Pacific Ocean to be the first settlers of Fiji, Vanuatu, New Caledonia as well as the far-flung islands of Micronesia and Polynesia. On and around New Guinea, early speakers of Austronesian languages met with more resistance from the already present Papuan-language speaking populations (Bellwood 1998). Austronesian languages are found in only small, coastal enclaves on the New Guinea mainland, while numerous, albeit isolated, Papuan language families are scattered amongst the Austronesian languages in the insular areas around New Guinea.

Austronesian languages show a progressive convergence on the linguistic norms of Papuan languages the closer they are to New Guinea. This attenuation of Austronesian features to Papuan ones results in concentric circles of linguistic features clustering around New Guinea. On New

Guinea, contact between Papuan languages has also led to smaller convergence areas in which linguistic features can be seen to have diffused between languages. This macro-area in which Papuan languages have converged with each other and Austronesian languages with Papuan languages is referred to here as “Linguistic Melanesia” (or “Melanesian Linguistic Area”).

Whilst the label “Linguistic Melanesia” as used here is not one that is yet well established in the literature, the concept of a sphere of Papuan linguistic influence around New Guinea will be familiar to all linguists working in the area. In its original use by Dumont d’Urville (1832) and as continued by many others, “Melanesia” was a geographic term that was intended to denote a region of islands inhabited by dark-skinned peoples taking in all of New Guinea and the islands to its east (excluding Polynesia and Micronesia), but not those to its west (see Green 1991 on the term Melanesia). In the earliest linguistic works in the region, “Melanesian” languages are a subset of Austronesian languages, contrasting with the structurally different, but still related “Indonesian” and “Polynesian” types of Austronesian languages (see, e.g., von der Gabelentz 1860, Codrington 1885, Ray 1907 for this obsolete usage; see Blust 2009 for an up-to-date terminology for the Austronesian family). Neither the original geographic designation nor the early linguistic use of “Melanesia” has much diachronic traction. Papuan languages and “Melanesian” phenotypes are found in the region to the west of New Guinea (known as “Wallacea”, Schapper 2015), indicating that insular Papuan contact has also here played a formative role as to the east of New Guinea. The use of “Linguistic Melanesia” here to define the whole sphere of Papuan languages and their inferred influences is thus intended to delimit a linguistic area in a principled and consistent way.

## **2. Historical overview**

What is Linguistic Melanesia? In this section I present a synthesis of some key areal features of Linguistic Melanesia that have been identified in the literature. There are numerous overviews of typological characteristics of Melanesian languages (e.g., Foley 2000, Aikhenvald and Stebbins 2007), but the sheer number of languages in the area means these treatments are often skewed towards a small number (of subsets) of languages. Where broader linguistic features have been identified, they have typically been treated individually in disparate specialist publications on the region and have seldom been brought together to define an area of “Linguistic Melanesia”. The approach taken here is to map the synchronic distribution of a range of morphosyntactic, phonological and lexico-semantic features which can be used to demarcate Linguistic Melanesia or significant portions thereof as a convergence zone. Critical in defining the area and the numerous sub-areas of Linguistic Melanesia is the opposition between a feature found inside Linguistic Melanesia and its (non-)appearance in the geographically adjoining areas. As a result, each feature will be plotted in relation to the full spread of Austronesian languages both in and outside the Linguistic Melanesia. Occasional reference will also be made to the typological behaviour of Australian languages.

### **2.1. Phonological features**

Cross-linguistic patterns in phonology have been relatively little explored for Linguistic Melanesia. Donohue and Whiting (2011) represents one of the few in-depth studies and is particularly valuable for its highlighting of the complexities of detecting areality for non-binary

features in a linguistically diverse area like Melanesia. Nonetheless, there are several features of Melanesian phonology that are well-known from the literature.

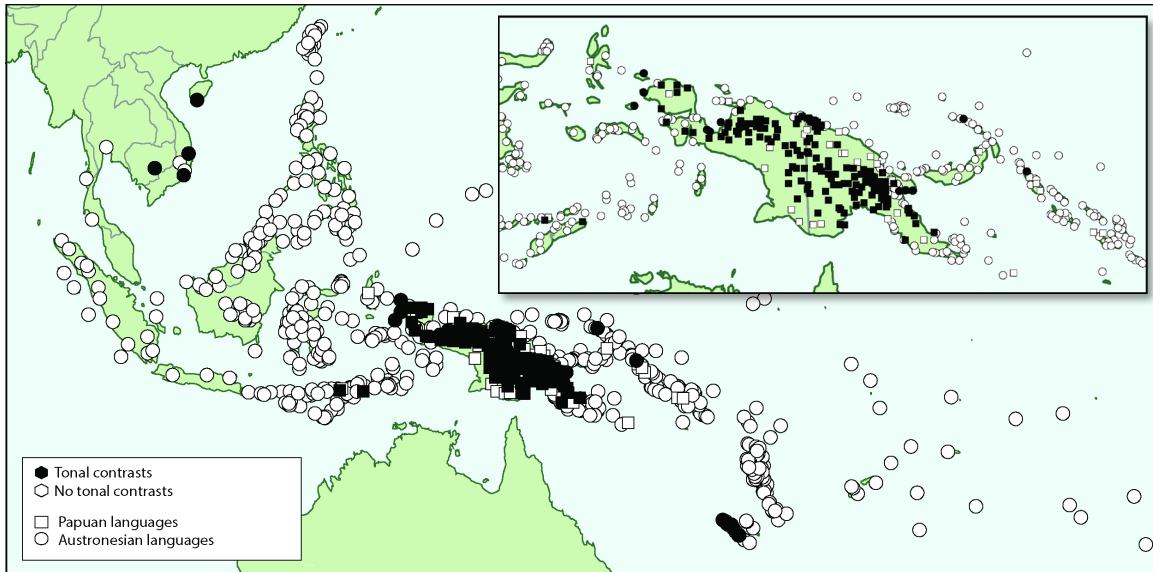
One of the most salient phonological features of Linguistic Melanesia is phonemic tone (Map 3). Tonal systems in Melanesia show a wide variety of types, from syllable tone through word tone to pitch accent (Donohue 1997); due to insufficient descriptive materials for many, the variable we will consider here is merely the presence versus absence of tonal contrasts and not the types of contrasts made. More than 84% of Papuan languages in our sample have tonal contrasts, with the feature strongly concentrated on New Guinea. Tone is only found in less than 1% of Austronesian languages in our sample. Of these tonal languages, more than 80% are found inside Linguistic Melanesia and the vast majority are on found on New Guinea.

Tonal contrasts are overwhelmingly found in languages of cordillera of New Guinea and appear to have spread readily to languages which are in contact with them (Donohue 2005a). At the same time, tone is notably absent across families in several subareas of Linguistic Melanesia. Tone is vanishingly rare in Papuan languages off-shore from New Guinea where Austronesian languages dominate; of the 60 Papuan outlier languages, only one, Abui, has been confirmed to have tonal contrasts, and even then, only in a small number of lexical items (Delpada 2016), while one other language, Fataluku, possibly has a pitch accent system. On New Guinea, tone tends to be absent in distinct areas that are away from the central cordillera. In Map 3, we see that exceptions to tonality in Papuan languages are concentrated in three sub-areas at the edges of New Guinea: (i) southwest New Guinea and Bird's belly area spanning Trans-New Guinea languages such as coastal varieties of Asmat and Marind as well as lowland Awyu-Dumut languages, and the various families of the Morehead and Fly river regions; (ii) northeast New Guinea spanning a number of families ranging from many Madang languages of TNG family through middle Sepik region languages such as Yimas, Alambak, Yessan-Mayo and languages of the Ndu group to languages of the border region such as Imonda, Dla and Momu, and; (iii) the Bird's Tail area of New Guinea where toneless languages from several hypothesised Trans-New Guinea subgroups are concentrated. The geographical skewing and cross-familial character of both tone and toneless languages points strongly to diffusion as being an important part of the explanation of the distribution of tonality in Papuan languages.

Tonal contrasts are rare in the Austronesian language family, and their appearance is strikingly skewed to two areas. In the far west of the Austronesian area, a few Chamic languages have developed tonal contrasts in contact with tonal languages of Mainland Southeast Asia (Kirby and Brunelle 2017). All others cases of tonal Austronesian languages in our sample are within Linguistic Melanesia. Tonal Austronesian languages are found in several pockets of Linguistic Melanesia, notably in Raja Ampat, in southern Cenderawasih Bay, in the Huon Gulf, and in New Caledonia, as well as in two isolated places of Island Melanesia, namely, Kara (New Ireland, Oceanic) and Tinputz (Bougainville, Oceanic). Tonogenesis in some of these groups has been seen to be the result of regular processes of historical change (e.g., out of voicing status and harmony of consonants within morphemes, Ross 1993; out of geminates and aspirated consonants, Haudricourt 1968). In various groups the development of tone has been argued to be the result of independent parallel innovations (Rivierre 1993, Kamholz 2017, Arnold 2018). Whatever the specific historical sources of tone in the different groups, the repeated emergence of

tone in Austronesian languages in Linguistic Melanesia suggests that areal pressure from Papuan languages has resulted in tonal contrasts erratically diffusing into Austronesian languages.

Map 3: Presence of tonal contrasts in Linguistic Melanesia



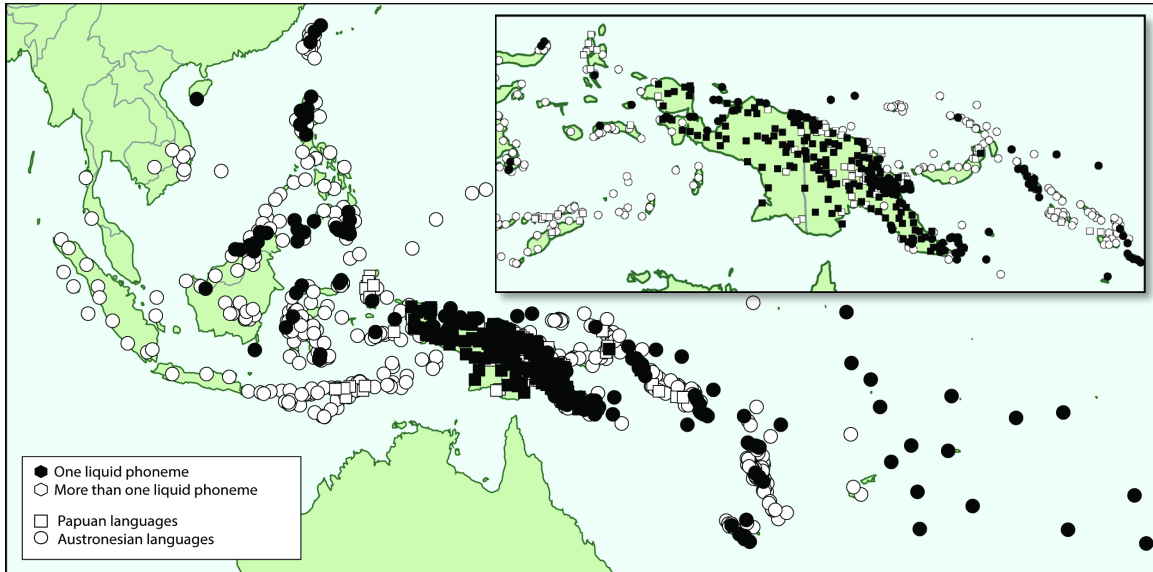
Legend: This map presents 861 language varieties (languages and language dialects), 666 Austronesian and 195 Papuan. Of these, 22 Austronesian and 164 Papuan languages have tonal contrasts. The map is adapted from Donohue et al. (2013) and Maddieson (2013), supplemented with data from Arnold (2018), Kamholz (2017) and Donohue (1997, 2005b).

The lack of a contrast between a lateral and a rhotic phoneme is frequently observed as a particular feature of Papuan languages (e.g., Foley 1986: 55-56). Having a single liquid phoneme is indeed characteristic of much of the core Melanesian Linguistic Area (Map 4). In our sample 71% of Papuan languages have a single liquid phoneme, while just 26% of Austronesian languages have a single liquid phoneme. The overwhelming absence of liquid contrasts in Papuan languages is particularly striking given the large number of liquid distinctions typically made in Australian languages.

In Austronesian languages, the correlation of a single liquid contrast with a location inside Linguistic Melanesia is only weak, with 57% of single liquid Austronesian languages in our sample occurring within Linguistic Melanesia. This indicates that the lack of a liquid contrast in Austronesian languages is not easily attributable to convergence with the norms of Papuan languages. By contrast, however, multiple liquid contrasts in Papuan languages does, with one exception, correlate with areas in which Austronesian influences are known. As seen also for the lack of tonal contrasts, Papuan languages with more than one liquid phoneme are concentrated in the maritime and coastal regions of New Guinea; it is again the multi-family subareas of southwestern New Guinea and of the north-central coast of New Guinea as well as all the Papuan “outliers” that do not display the majority Papuan pattern for liquids. A further exceptional area is the eastern highlands where languages from different TNG families meet. Here we find unusual arrays of liquid phonemes that are not found elsewhere. For example, Huli has a trill /r/ and a retroflex lateral approximant /ɭ/; Enga contrasts a retroflex flap /ɽ/ and a palatal lateral /ɕ/; Kobon distinguishes an alveolar lateral /l/, a palatal lateral /ɕ/, a subapical retroflex lateral flap /ɭ/, and a fricative trill /r/. The small region where languages with these unusual lateral contrasts are found

constitutes its own subarea distinct from the coastal and maritime Melanesian pattern where the typical contrast is between /l/ and /r/ [r ~r].

Map 4: Presence of one liquid phoneme in Linguistic Melanesia



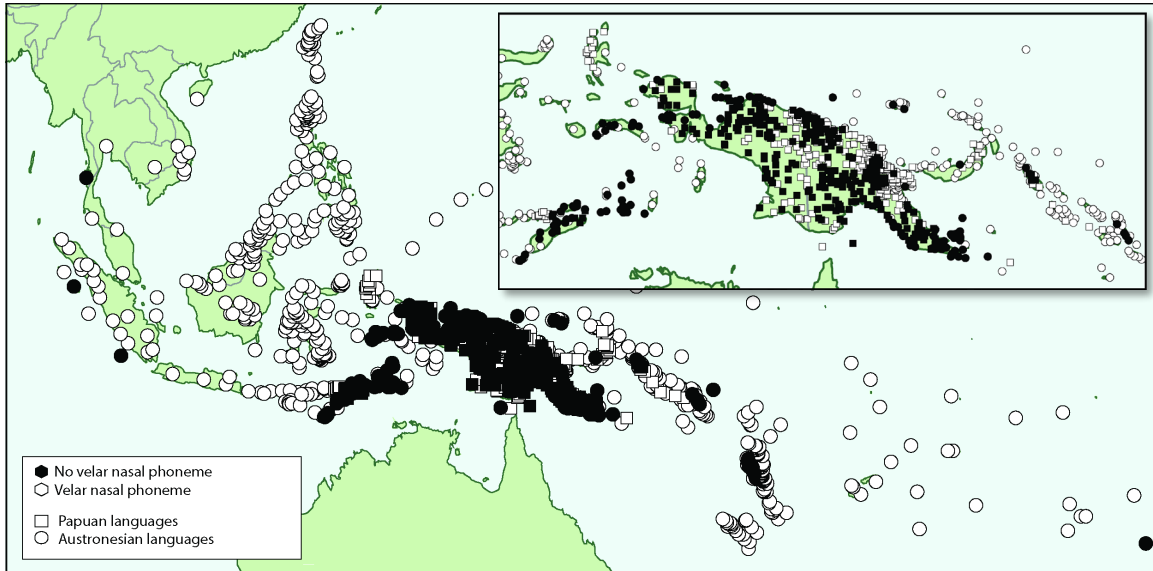
Legend: This map presents 870 language varieties (languages and language dialects), 623 Austronesian and 247 Papuan. Of these, 166 Austronesian and 177 Papuan languages have one liquid phoneme. The map is adapted from Donohue et al. (2013).

The Melanesian Linguistic Area also stands out for its lack of a velar nasal phoneme (Map 5). The vast majority of Austronesian languages have the velar nasal in their consonant phoneme inventories, amounting to more than 82% of the sample. Around New Guinea there is a clear concentration of Austronesian languages lacking the velar nasal. The lack of the velar nasal in Austronesian languages begins in Timor, moves through South-west Maluku, Central Maluku and the languages of Bomberai Peninsula and Cenderawasih Bay. On the north coast of New Guinea roughly half the Austronesian languages lack the velar nasal, while once on the Bird's Tail of New Guinea almost all Austronesian languages lack it. A smattering of Austronesian languages without velar nasals are then found in the Bismark archipelago and Northern Vanuatu. Beyond this, we find only two Austronesian outliers to the West (Nias and Enggano) in the Barrier Islands off the West coast of Sumatra and five outliers in remote Polynesia.

Papuan languages are divided roughly in half in terms of the velar nasal: a velar nasal phoneme is present in 221 Papuan languages, and absent in 293 (57%). Viewed in isolation then the lack of the velar nasal in Melanesia doesn't seem remarkable; however, taking a larger areal perspective encompassing Mainland Southeast Asia and Australia where the velar nasal is near-universally present, the absence of /ŋ/ becomes a highly marked feature of the Melanesian area (Anderson 2013). What is more, velar nasal-lacking Papuan languages are concentrated in the maritime and coastal regions to the West of New Guinea and from the central northern region down off the Bird's Back and into the Bird's Tail region, precisely the regions where velar nasal-lacking Austronesian languages are most found.



Map 5: Absence of velar nasal phonemes in Linguistic Melanesia



Legend: This map presents 1339 language varieties (languages and language dialects), 825 Austronesian and 514 Papuan. Of these, 142 Austronesian and 293 Papuan languages lack the velar nasal. The map is adapted from Donohue et al. (2013).

## 2.2. Word order features

Word order features are the most thoroughly studied and well-understood typological variable in Linguistic Melanesia. Differences in the positions of adpositions and clause joiners, and in the order of noun and demonstrative, of noun and adjective, of verb and negator and of verb and aspectual marker are among those that have been discussed for Linguistic Melanesia (Bradshaw 1982, Donohue 2007, Reesink 2002, Klamer et al. 2008). Three features of Melanesian word order will be discussed here to illustrate general patterns of word order convergence over the area.

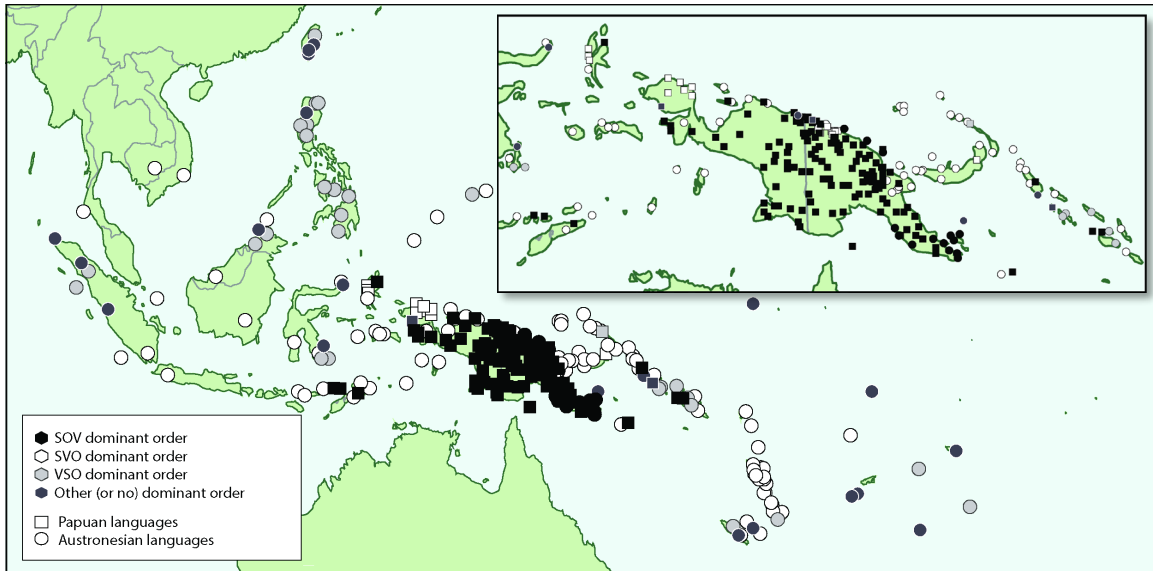
Linguistic Melanesia shows a high degree of consistency at its core in terms of the ordering of subject, object and verb. Papuan languages of almost all families are overwhelmingly SOV (Map 6): nearly 85% of sampled Papuan languages have a dominant SOV word order. SOV is rare in Austronesian languages, but all instances of it are found in Austronesian languages spoken on the coast of New Guinea in regions contiguous with Papuan SOV languages. The Austronesian languages on New Guinea that lack SOV are typically found in regions where Papuan languages do not have a strong presence. Although absent in Austronesian languages outside New Guinea, Papuan outliers frequently display SOV: to the west of New Guinea, all Timor-Alor-Pantar languages, Kalamang off Bomberai peninsula, Yawa on Yapen, and Tobelo on Halmahera have SOV; to the east of New Guinea SOV, the Papuan languages of the Solomon Islands and Yele are almost entirely SOV. In short, SOV is the modal order for Linguistic Melanesia, even if Austronesian languages do not frequently exhibit it.

Exceptions to SOV word order in Papuan languages are concentrated in (i) languages of Bird's Head and the outliers of the North Halmahera family, (ii) languages of the Torricelli family on the north central coast of New Guinea, and (iii) Papuan languages of the Bismark archipelago (New Ireland, New Britain and Bougainville islands). With the exception of VSO Kuot (New Ireland) and Bilua (Solomons) with no dominant order, these Papuan languages display SVO order.



Austronesian influence has been assumed to be responsible for this word order by many authors (e.g., Voorhoeve 2004, Reesink 2005). However, because SVO is itself an innovation in Austronesian languages replacing the conservative VSO Austronesian order, Donohue (2005b, 2007) suggests that SVO characterises an ancient subarea that extended over the top of New Guinea and through much of today’s Indonesia (see also Gil 2015).

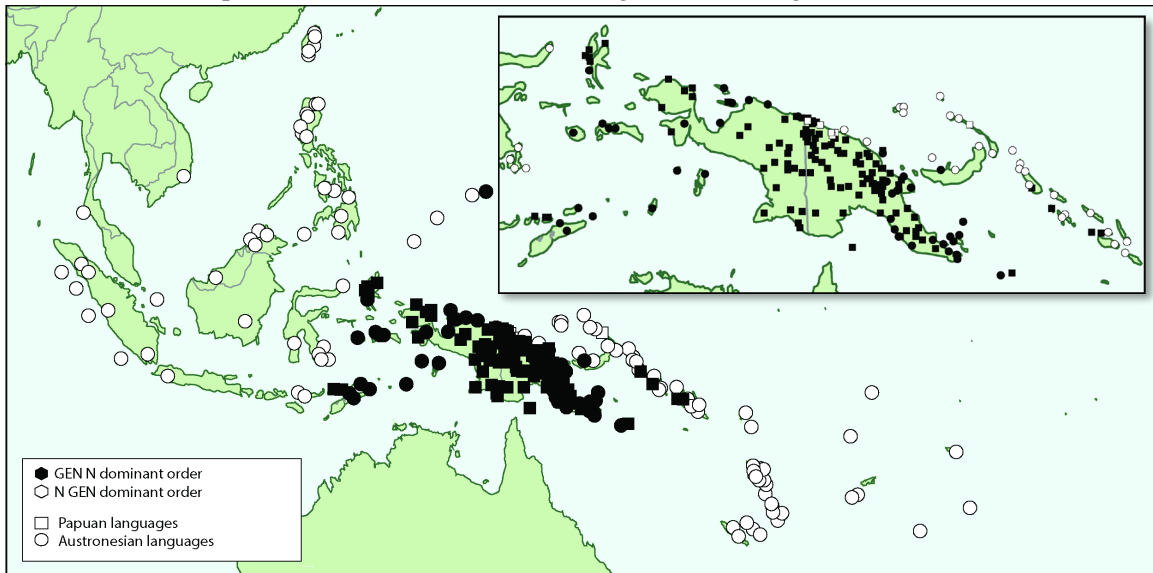
Map 6: Dominant order of subject, verb and object in Linguistic Melanesia



Legend: This map presents 325 languages, 171 Austronesian and 154 Papuan. Of these, 14 Austronesian and 130 Papuan languages have SOV in main clauses. The map is adapted from Dryer (2013a) and follows the argumentation of Donohue (2007).

The order of the noun and its possessor (or so-called “genitive”) is another feature which can be used to define Linguistic Melanesia. As is clear from Map 7, almost all Papuan languages (95% in the sample) have the genitive preceding the noun. An areally very restricted pocket of Papuan languages with noun-genitive order on the north-central coast as well as Kuot on New Ireland are the only exceptions to genitive-noun order in Papuan languages. The typical Austronesian pattern outside of Melanesia has the genitive following the noun. By contrast, within Linguistic Melanesia, Austronesian languages have the order of the genitive “reversed”, that is, typically preceding the noun. Austronesian languages with the reversed genitive are heavily concentrated in Melanesia (two languages in Micronesia, Ulithian and Puluwat, are the only outliers). The feature is dispersed throughout eastern Indonesia and into New Guinea where it is consistently present in Austronesian languages, but not beyond into the Bismarck Archipelago or further afield into the Pacific.

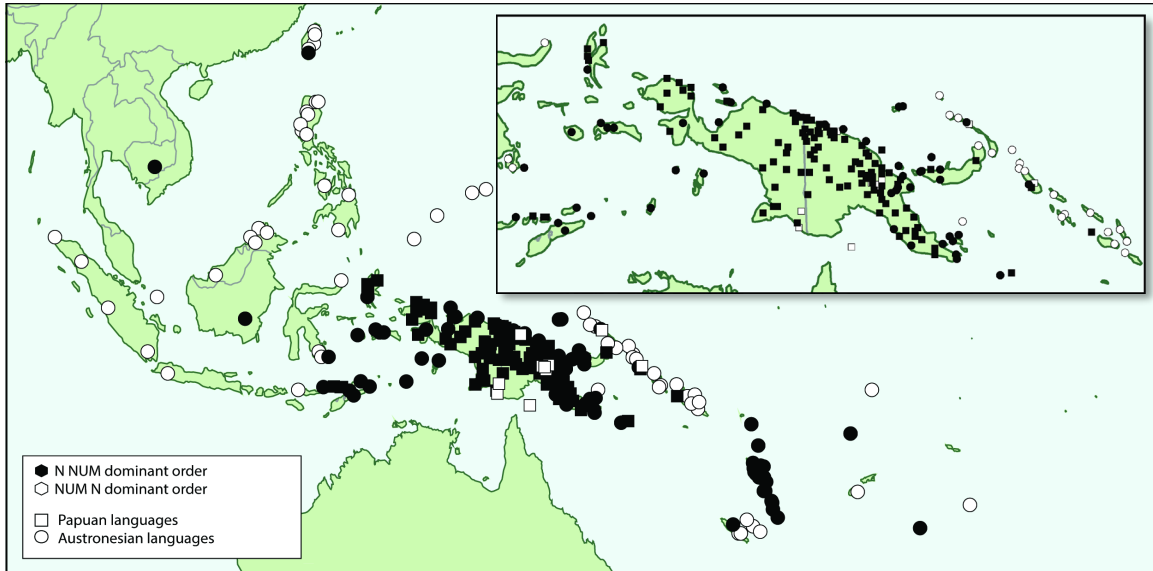
Map 7: Dominant order of noun and genitive in Linguistic Melanesia



Legend: This map presents 277 languages, 155 Austronesian and 122 Papuan. Of these, 43 Austronesian and 116 Papuan languages have the genitive preceding the noun. The map is adapted from Dryer (2013b) and follows the argumentation of Donohue (2007).

The order of the numeral and the noun it enumerates also changes in Austronesian languages with proximity to New Guinea (Map 8). In most Austronesian languages outside of Linguistic Melanesia, the numeral typically precedes the noun. By contrast, in Austronesian languages within the area the numeral follows the noun. The vast majority of Papuan languages (over 90% in the sample) have the numeral following the noun. Accordingly, we again see a clear skewing of noun-numeral order in Austronesian languages towards Melanesia. With the exception of three outliers west of Melanesia, the feature extends unbrokenly from Timor to New Guinea, and is almost invariably present in Austronesian languages of the New Guinea mainland and further into Vanuatu. The Austronesian languages of the Bismarck Archipelago, New Caledonia, Micronesia and Polynesia are in their majority numeral-noun order languages, but each region has a few exponents of the Melanesian noun-numeral order.

Map 8: Dominant order of noun and numeral in Linguistic Melanesia



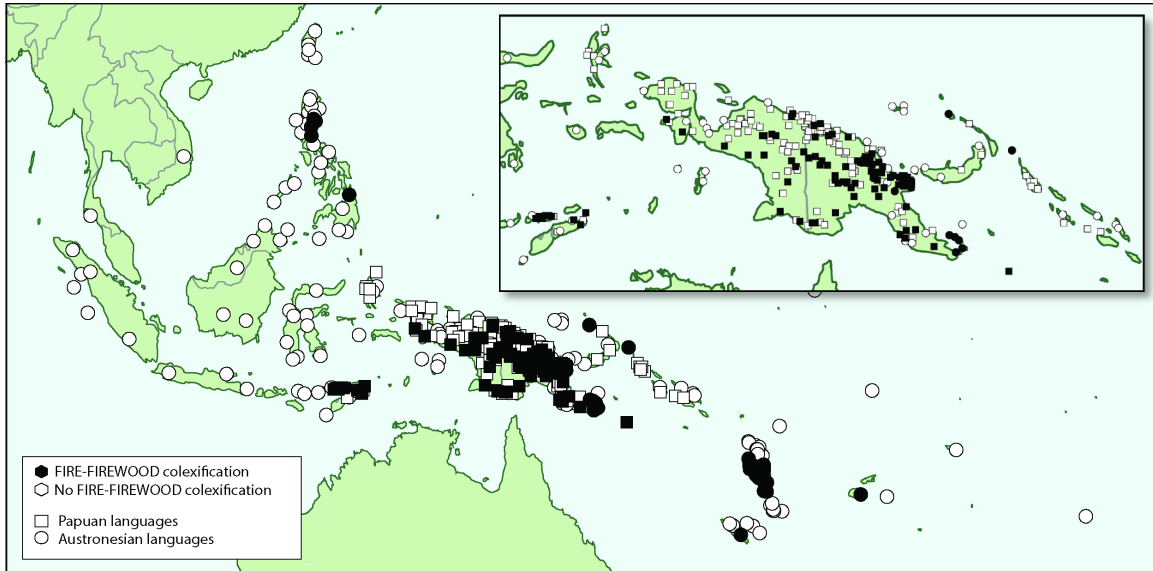
Legend: This map presents 266 languages, 145 Austronesian and 121 Papuan. Of these, 78 Austronesian and 111 Papuan languages have the numeral following the noun. The map uses the data from Dryer (2013c) and follows the argumentation of Donohue (2007).

### 2.3. Lexical and semantic features

Lexical and semantic features cover a vast domain of linguistic structure, covering anything from the sense ranges of individual lexemes, through the structure of word compounds, lexical collocations and constructions, to the organisation of entire semantic domains and even whole lexicons. Convergence in lexico-semantics results in ready inter-translatability between languages and can be observed to have occurred in many domains in Linguistic Melanesia. Areal lexico-semantic features that have been described for (parts of) Linguistic Melanesia include evidential categories (San Roque and Loughnane 2012a, 2012b), patterns of suppletion in kin terms (Baerman 2014) and lexicalised alienability distinctions in possessive constructions (Klamer et al. 2008, Schapper 2015).

An example of convergence in lexical senses in Linguistic Melanesia is the frequent colexification of ‘fire’ and ‘firewood’, a polysemy pattern in which a language uses one and the same lexeme to refer to both fire and firewood. Map 9 sets out the conspicuous areal skewing of fire/firewood colexification to Linguistic Melanesia. Whilst only 47% of sampled Papuan languages display the pattern, the appearance of fire/firewood colexification in Australian languages and the languages of other genetically Austro-Melanesian peoples of Southeast Asia indicates that the pattern represents an ancient feature that was once modal in Papuan languages (Schapper 2017, Schapper et al. 2016). The distribution of fire/firewood colexification in Austronesian confirms the Melanesian status of the pattern: over 90% of Austronesian languages with fire/firewood colexification were found within Linguistic Melanesia. The inherited Austronesian pattern involves distinct lexemes for the two senses (Proto-Malayo-Polynesian \*hapuy ‘fire’ and \*aliten ‘firewood’). Examination of the etyma for ‘fire’ and ‘firewood’ in the sampled Austronesian languages indicates that fire/firewood colexification was innovated dozens of times independently, indicating erratic diffusion by either contact with or shift from Papuan languages (Schapper 2017).

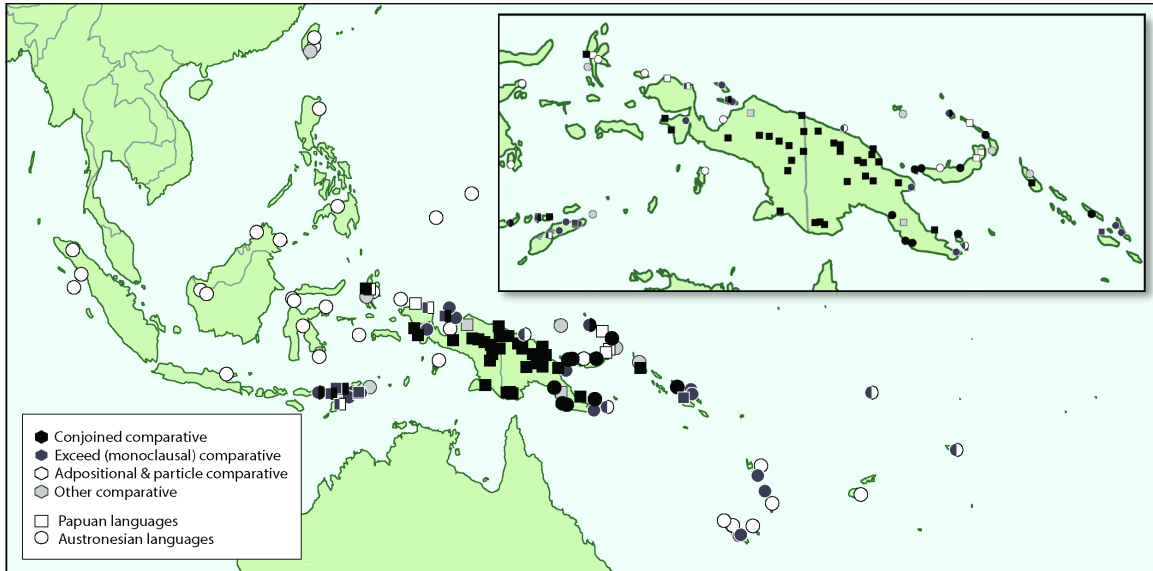
Map 9: Colexification of ‘fire’ and ‘firewood’ in Linguistic Melanesia



Legend: This map presents 412 languages, 197 Austronesian and 215 Papuan. Of these, 51 Austronesian languages and 96 Papuan languages have fire/firewood colexification. The map uses the data from Schapper et al. (2016) and Schapper (2017).

A second example of lexico-semantic convergence can be seen in the lexical constructions involved in expressing comparison of inequality (as in an English clause such as *Hildegard is nicer than Ludwig*). The types for this feature also define concentric circles of convergence around the island of New Guinea (Map 10). The core of Linguistic Melanesia is characterised by the exclusive use of the conjoined comparative, a construction in which the standard of comparison and the comparee appear in separate clauses (as in *Hildegard is nice, Ludwig is mean* or *Hildegard is nice, Ludwig is not*). Of the Papuan languages sampled, 68% have conjoined comparatives and on the mainland of New Guinea, only three Papuan languages had no conjoined comparative. The conjoined comparative is found as the exclusive comparative strategy only in Austronesian languages within Melanesia. Outside of Melanesia, only three of the sampled Austronesian languages have conjoined comparatives, and this is always secondary to another non-conjoined strategy. In maritime Melanesia, the coastal and island belt around New Guinea, we find a construction shared between Papuan and Austronesian languages in which a verb with the meaning ‘exceed’ (or similar) is used to introduce the standard of comparison (as in, *Hildegard is nice exceeding Ludwig*). Although a common comparative strategy world-wide, that the exceed comparative is exclusively found in languages of Maritime Melanesia suggests an areal feature. Beyond Linguistic Melanesia, other comparative constructions dominate, with Austronesian languages typically possessing locative and particle comparatives.

Map 10: Comparative constructions in Linguistic Melanesia



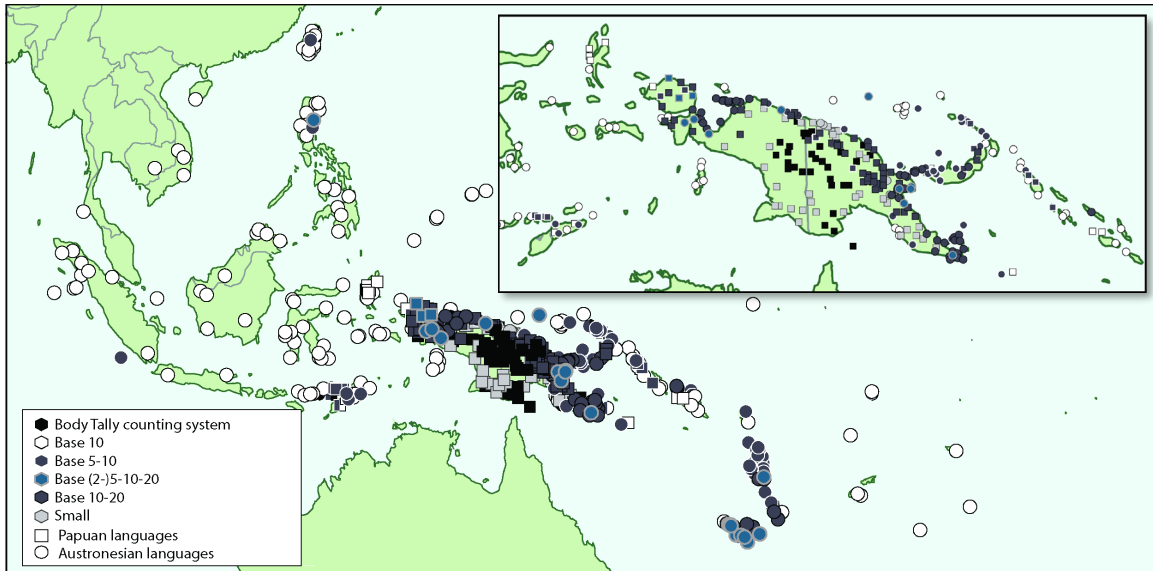
Legend: This map presents 116 languages, 68 Austronesian and 48 Papuan. Of these, 16 Austronesian languages and 33 Papuan languages have conjoined comparatives. The map is adapted from Schapper and de Vries (2018).

A more complex instance of layers of lexico-semantic convergence around New Guinea is found in the structure of numeral and counting systems (Map 11). The chief variable here is the base that a language's numeral system uses, that is, the value upon which higher numeral expressions are constructed. A language may have more than one base, for instance, using 5 as the base to form numerals 6-9, and 10 for higher numerals. A language can lack a numeral system where it has no recursive base for the formation of higher numerals, meaning counting occurs only to an upper limit. The Melanesian Linguistic Area stands out for its lack of pure decimal (base 10) numeral systems. Proto-Austronesian (PAN) and its major daughters, Proto-Malayo-Polynesian and Proto-Oceanic, have reconstructed decimal systems. This pattern is maintained in the vast majority of Austronesian languages outside Linguistic Melanesia; only four Austronesian outliers in the west have bases other than 10 (Enggano, Ilongot and Pazih use base 5-10, and Arta uses base 10-20). In Papuan languages, a pure decimal system is exceedingly rare with less than 8% of sampled Papuan languages evincing such systems. All 12 Papuan languages of this type are spoken off the New Guinea mainland and typically display significant Austronesian elements in their lexicons.

Papuan languages exhibit a large variety of counting systems with strong areal patterning across Linguistic Melanesia (Lean 1992). The centre of New Guinea is dominated by body-tally systems in which counting is done on defined points on the body, extending up one side of the body and then down the other (Hammarström 2010). Around this central core of body-tally languages we find languages with small counting systems in which there is no base and counting rarely goes higher than 10. Beyond these small systems, whilst there are a few marginal base types including small pockets of the typologically unusual base-4 and base-6 systems on the north and south coasts of New Guinea respectively, languages of the coastal and insular ring around New Guinea display different configurations of numeral systems involving base-5 and base-20. These are so

common that over half of the Papuan languages in our sample have either base-5 and/or base 20 in their numeral systems. Although both these bases have good physiological motivations and can therefore be reasonably expected to emerge spontaneously, the concentration of Austronesian languages with base 5/20 in Maritime Melanesia indicates that significant areal pressure has given rise to them. This picture of convergence is reinforced by the observation that base 5 and base 20 have developed independently in even closely related Austronesian languages; over 50 distinct innovations of these bases have been documented for Austronesian languages of the Melanesian area (Blust 2008, Dunn et al. 2008, Schapper and Hammarström 2013).

Map 11: Numeral bases and counting systems in Linguistic Melanesia



Legend: This map presents 466 languages, 308 Austronesian and 158 Papuan. Of these, the exclusive use of a decimal base is found in 121 Austronesian and 11 Papuan languages. The data underlying this map is found in the numeral database at <https://mpi-lingweb.shh.mpg.de/numeral/>.

## 2.4. Summary of Linguistic Melanesia

In this chapter we have looked at a small, but indicative set of features from phonology, word order, and (lexico-)semantics across which the diverse languages of Linguistic Melanesia display commonalities in language structure. We have seen that the Melanesian Linguistic Area is a complex one, and as befits its linguistic diversity, it cannot be defined by simple bundles of isoglosses or by straightforwardly contrasting types. Rather Linguistic Melanesia is characterised by concentric circles of isoglosses clustering around New Guinea and into its interior. On the highest level, these circles represent changes in broad typological profiles and define large regions in which Austronesian languages incrementally converge on the linguistic norms of Papuan languages the closer they are to New Guinea. At the same time, Papuan languages in extensive contact with Austronesian languages often lack linguistic features typical of Papuan languages that are not in contact with Austronesian languages. We also find features shared between Papuan and Austronesian languages that are not typical of either group, but nonetheless define a convergence area, such as is the case with the “maritime” Melanesian area, a coastal and insular ring around New Guinea. In numerous other parts of New Guinea, such as the Bird’s



Head, central Highlands or southern New Guinea, we also find smaller areas of typological similarity between languages arising out of more localised processes of convergence.

The fact that Melanesian languages do not consistently show the same clusters of linguistic properties led Ross (2017: 806) recently to assert that the New Guinea area “is neither a geographic nor a typological area”. It is true that there is no single “Melanesian linguistic type”; the cluster analyses of linguistic features by Reesink et al. (2009) and Nichols (1997) illustrate the kinds of divisions that can be made between Melanesian languages on the basis of statistical groupings of typological features. Yet, the absence of a coherent Melanesian type does not, in my view, negate the existence of a Melanesian Linguistic Area. Rather than the absolute adherence to a set of linguistic features, it is the contrast between the skewed presence of shared features in the Melanesian languages and the (near-)absence of those same features in the languages immediately outside the area which is important for defining Linguistic Melanesia. Convergence is dynamic and in such a large geographical region with so many small, unrelated or only distantly related language groups, low-level processes of language change will continuously act on the degree of similarity or dissimilarity between languages. In this context, it would be unexpected to have perfect isomorphism between any two given languages, let alone a large number. Evans (forthcoming) points out for the Morehead region of southern New Guinea that whilst there are certainly features shared amongst the unrelated languages of the region, a surprising amount of phonological and grammaticality diversity exists between languages. In short, Linguistic Melanesia is a complex area forged by competing forces of convergence and divergence.

### 3. Critical issues

How did Linguistic Melanesia come into being? This is a key issue for understanding the nature of language contact in the New Guinea area. If linguistic areas are, as commonly held, the outcome of diffusion of linguistic patterns across languages, contact between languages is a necessary pre-condition for the emergence of a linguistic area. A vast convergence area taking in hundreds of languages like that of Linguistic Melanesia therefore must arise substantially from bi- or multilingualism between speakers of chains of contiguous languages. This “chained” language contact enables the diffusion of linguistic features across geographical space. Against this background, it becomes crucial to understand the nature of language contact in Linguistic Melanesia to appreciate how the area came into existence. In this section, I outline the interplay of convergent and divergent forces which have been described for the Melanesian Linguistic Area.

Linguistic Melanesia is thought to be an area over much of which people have in the past combined language loyalty with multilingualism. Sankoff (1976:10) outlines how these two were coupled together in traditional Melanesian society: ‘each group was ethnocentric about its own variety, but since groups were all very small, since people knew that other people thought their own was the best, and since within a region there was no consensus that a particular variety was the best, the situation was certainly an egalitarian one’. ‘Egalitarian multilingualism’, as it has come to be called, is a language ecology in which small speech communities maintain multilingual repertoires which include their own language alongside the languages of their neighbours in a stable way (Haudricourt 1961, François 2012). It is important to mention that



egalitarian multilingualism does not necessarily mean that the status of all languages in a region is equal, but simply that language shift does not typically occur despite extensive multilingualism; diglossia and language loyalty are documented in numerous Melanesian settings (e.g., Thurston 1992, Clifton 1994). The fact that knowledge of other languages has been noted as a means of gaining prestige in Melanesia (Salisbury 1962; Sankoff 1977) would contribute to preventing shift in diglossic situations. Although significantly disrupted in much of Melanesia today (cf. Kulik 1992), egalitarian multilingualism is assumed to have once been widely present across the area and provides a social mechanism for understanding Melanesia's diverse linguistic situation: language loyalty would have presented an obstacle to shifting to another language, while entrenched multilingualism provided the mechanism for convergence of linguistic structures.

Melanesian egalitarian multilingualism has been seen to drive diversification in languages, i.e., the proliferation of language numbers. Laycock (1982) observes the inverse correlation between group size and language diversity in Melanesia: 'It would seem *a priori* plausible to attribute the linguistic diversity of Melanesia to a combination of the factors of isolation, terrain, and time – a result of the languages of small communities being cut off from their neighbours for thousands of years. But such a simple explanation does not account for the fact that the largest languages – of the Papuan groups at least– are found in the most isolated areas [...], whereas the greatest diversity is found in areas of easy mobility and extensive trading contacts.' This distribution is argued to be the result of small speech communities in frequent contact with one another co-opting linguistic differences to mark their identity as distinct from their neighbours. Laycock (1982) describes how Uisai, a dialect of the Buin language of Bougainville Island, has flipped gender assignment of its nouns such that it is the reverse of that in other dialects — what is masculine in other dialects is feminine and vice versa. Laycock (1982: 35) writes 'the only plausible hypothesis would appear to be that [at] some stage in the past an influential Uisai speaker innovated a linguistic change to differentiate his linguistic community from the rest of the Buins'. Thurston (1987, 1994) argued that on the island of New Britain, off the New Guinea coast complex language structures, such as difficult grammatical rules or irregular word formations, had been built up for the purpose of group-differentiation in small 'esoterogenic' language groups. While it is impossible to tell how Laycock's and Thurston's explanations correspond to prehistorical reality, we do have modern-day reports of Melanesian groups purposefully changing their language to foster a distinct identity. Kulick (1992: 2-3), for example, describes how people of Indu village met and decided to distinguish themselves from other Selepet-speaking villages by adopting a new word for 'no', which they have used ever since. This is only one small tweak to a language (but perhaps more significant than would appear at first glance given that words for 'no' are frequently used as ethnonyms in New Guinea), yet over time the accumulation of such changes might plausibly give rise to the proliferation of languages we see in Melanesia today.

Melanesia has been characterised as an area in which there is convergence in structural features of language but divergence in lexicon. Laycock (1982), for example, writes that because many adjacent languages in Melanesia have very similar morphosyntactic structures, learning another language is largely a matter of learning new lexicon– "that is, the two languages involved are very close to being the same language with a different set of labels". This situation itself almost certainly arises out of language contact: long-term multilingualism between speech groups over time leads to similar structural features being used in both languages, while the emblematic

function of words, as the most salient markers of identity for speech groups, acts as a brake on adoption of foreign word-forms and even prompts lexical replacement through spontaneous innovation of distinctive word-forms (see also Brooks 2019). The best-known study showing such a situation in Melanesia is Ross' (1996, 2001) description of structural convergence between two languages, Takia (Austronesian) and Waskia (Papuan). Called 'metatypy' by Ross, the process involves strictly re-mapping of the meaning and distribution of inherited material, but with no transfer of word-forms or morphemes (see also François 2009).

It is uncertain whether a prohibition on borrowing lexemes, which Ross argues to be central to this specific convergence behaviour, is applicable to the wider convergence area of Melanesia. Bradshaw (1978) appears to show that Numbani has both significant quantities of structural calquing and lexical borrowing from Yabem. What is clear is that lexical borrowing is by no means widely prohibited in Melanesia. Comrie (1989, 2000) documents a case of rapid lexical shift in the Haruai language, showing that recent contact with the only distantly related Kobon language of the Madang family has led to a massive influx of Kobon lexical items. The result of this extensive lexical borrowing is the masking of the original genealogical affiliation of Haruai. Only similarities in the morphology and pronoun systems reveal Haruai's actual relationship to its other neighbour, Aramo of the Piawi family. A deeper-time case of lexical convergence is that of Apali, whose two dialects, Aki and Aci, have regular sound correspondences between apparently cognate vocabulary, but little to no cognates or correspondences in morphology or grammatical items. Wade (1993) observes grammatical correspondences of Aki and Aci with neighbouring languages and argues that the dialects, in fact, started out as separate languages and through rampant lexical borrowing have converged so much as to have obscured their genealogy almost entirely. "Unnatural" levels of vocabulary replacement have widely reported in Melanesia, with a combination of lax attitudes in relation to the norms of language use and systems of word-tabooing thought to underpin this kind of convergence (e.g., Simons 1982, Holzknecht 1988).

The case studies outlined here have focussed on the different forces of, often radical, convergence processes that are likely to have been at play in forming Linguistic Melanesia. There is evidence for language contact with almost every kind of outcome in Linguistic Melanesia (Foley 2010). So, for example, whilst language loyalty has seen to be an important feature of the Melanesian Linguistic Area, numerous instances of language shift are also documented. Our picture of contact in Melanesia is still limited to a small number of case studies relative to the very large number of languages in the area, but these provide important context for understanding how the complex isoglosses defining zones of structural similarity may have come into being in Linguistic Melanesia.

#### **4. Current and future directions of research**

Given the huge number of languages spoken within Linguistic Melanesia, much of the effort of linguists in the area has been focussed on the documentation and description of individual languages or small groups of languages. Great strides have been made in the last two decades, and following on from these there is the potential for advances to be made in understanding Linguistic Melanesia and the prehistorical events that underpinned its formation.

The genealogical affiliations of the Papuan languages are one of the unsolved issues of present-day linguistics. A lack of reliable descriptive materials for the many languages of the region plus frequent scepticism on the part of linguists working in New Guinea about the possibility of establishing language families, at least large ones, has resulted in relatively few attempts to apply historical linguistic methods to Papuan language data to-date. The cases of lexical divergence and rapid lexical replacement in Linguistic Melanesia discussed in the previous section, in particular, gave rise to a trope in the literature that the area is one of parts of the world which present potentially serious problems for the comparative method (Thomason 1999). Recent successes in demonstrating smaller Papuan language groupings (e.g., Timor-Alor-Pantar family, Schapper et al. 2014; Anim family, Usher and Suter 2015) and in reconstructing the in-depth history of others (e.g., Awyu-Dumut family, Wester 2014; Binandere family, Smallhorn 2011; Sogeram family, Daniels 2015) show, however, that the discovery of relationships between Papuan languages is far from intractable, where sufficient material is collated and carefully analysed (Greenhill 2015).

Advances in our understanding of the prehistory of Melanesia using linguistic data require careful sorting of descent from diffusion. Early comparative-historical work (see the papers in Wurm 1975) particularly suffered from the conflation of typological features and lexical resemblances in defining Papuan language families (cf. Pawley's 2005 review of these methods). Typological features such as body-tally systems for counting and switch reference marking on medial verbs are still used alongside lexical and pronominal lookalikes as diagnostic of membership of the Trans-New Guinea macro-family (e.g., Pawley and Hammarström 2017). The increasing availability of high-quality data on languages in the region has revealed neither body-tally systems nor switch reference is limited to presumed TNG languages; in fact, both features appear in languages north and south of the central cordillera of New Guinea where TNG languages dominant, and neither system appears to be reconstructable across TNG families. Overall very little is known about the different historical states of Papuan language families, and, as a result, it is difficult to ascertain with any level of confidence where language convergence has occurred between Papuan languages. In order to formulate better hypotheses about the contact that underlies the formation of Linguistic Melanesia, we must have a clearer picture of which linguistic features reconstruct to which families.

A puzzle that is increasingly being addressed through interdisciplinary scholarship in Melanesia is that presented by the different distributions and higher-level affiliations of Papuan languages spoken offshore to the west and the east of New Guinea respectively. Papuan languages to the east of New Guinea occupy small isolated pockets over numerous far-flung islands and are from around a dozen families each with a handful of languages (Stebbins, Evans and Terrill 2017). This contrasts with the west where there are only two Papuan families; these are considerably larger in size (25 languages in the Timor-Alor-Pantar family and 15 languages in the North Halmahera family) and are each contained within relatively compact regions. In addition, the Papuan families to the west of New Guinea both have credible proposals positing that they originate on the New Guinea mainland and have relatives there today: the Timor-Alor-Pantar family is thought to be related to the Papuan languages of West Bomberai (Hull 2004) and thus part of the wider TNG macro-family (Ross 2005), while the North Halmahera family has been linked to the West Bird's Head languages (Voorhoeve 1988) and a possible West Papuan macro-family (Donohue 2008). To the east of New Guinea no such relationships between the Papuan

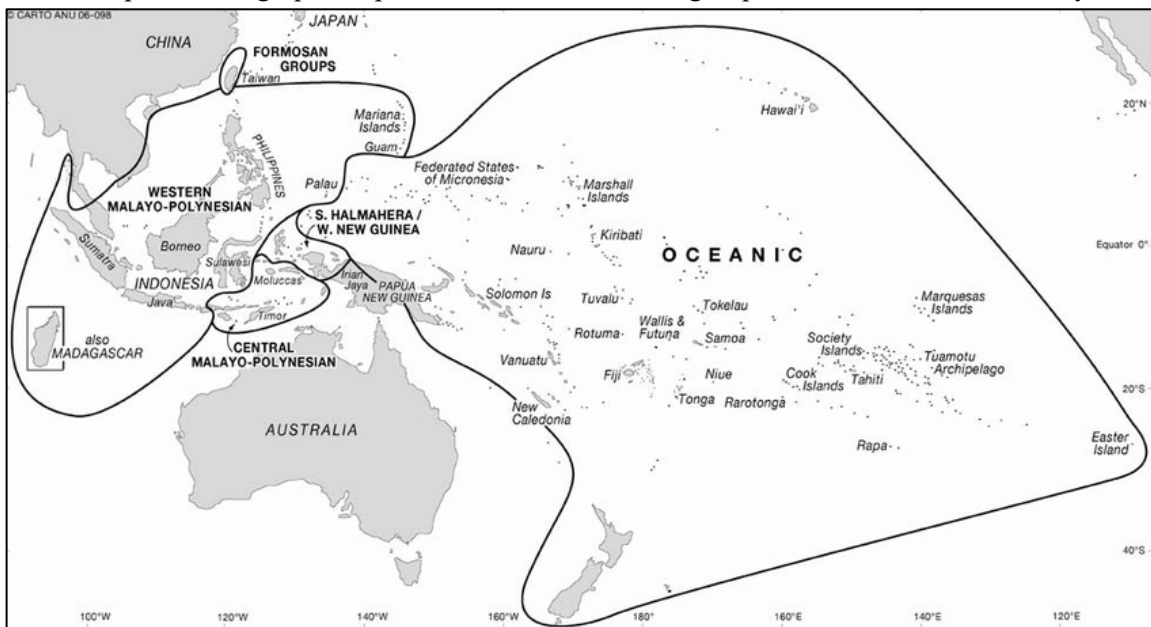
languages of the islands and those of the New Guinea mainland have been suggested. These asymmetries point to significant differences in the prehistories of the western and eastern maritime halves of Linguistic Melanesia that are still in need of unravelling. The pre-Austronesian period to the east of New Guinea in Island Melanesia appears to have been characterised by relative stasis, with economically simple people continuing a broadly similar subsistence lifestyle of hunting and foraging for many thousands of years (Spriggs 1997: 43ff). To the west of New Guinea there is evidence of a dynamic, maritime culture with extensive inter-island trade networks established before the Austronesian arrival (Schapper 2015, Shipton et al forthcoming). It seems probable that these networks could have facilitated the spread of Papuan languages from coastal areas of New Guinea to the islands, thus giving us the two Papuan families linked to the mainland that we have today. However, it is crucial that the claims of historical relatedness between the outlier Papuan families of western Melanesia and those on the mainland be demonstrated by means of rigorous historical linguistic methodologies.

Another problem in asymmetry has been to explain the unequal extent of Linguistic Melanesia either side of New Guinea: whilst in the west Linguistic Melanesia correlates roughly with the extent of Papuan languages, in the east the “effects” of Melanesian influence extend far beyond extant Papuan languages, reaching into Vanuatu, New Caledonia, and on occasion also Fiji, well beyond the Solomon Islands where the eastern-most Papuan languages are found. We noted some of these Melanesian features appearing in this area in section 2. In Vanuatu, linguists combined the observation of Melanesian linguistic features with the fact that the people of Vanuatu have Melanesian phenotypes to infer that, although originally settled by Austronesian speakers of Asian descent, Papuans speakers who had adopted Austronesian seafaring culture arrived in Vanuatu shortly after the initial settlement. These new arrivals were then inferred to have shifted to speaking the Austronesian languages of their predecessors, but brought over many features of their original Papuan languages (Blust 2005, 2008, Donohue and Denham 2008). This prehistorical scenario has recently been borne out by studies in ancient DNA which have found precisely this genetic layering in dated human remains from Vanuatu (Posth et al. 2018, Lipson et al. 2018). Similar scenarios are likely to account for the appearance of Melanesian linguistic features in New Caledonia and Fiji, but more work to pinpoint the Papuan features is needed in these places, as in Vanuatu, to clarify the varied nature of the Papuan substrates in the languages.

In the previous section, the reader will have noticed that most studies of contact in Linguistic Melanesia focus on Austronesian languages, either in contact with one another or in contact with particular Papuan languages. This is because we have a reasonable picture of the structural states of the Austronesian family at several points in its history, including outside of Linguistic Melanesia. Significantly, however, there is a major gap in our understanding of Austronesian family when it enters the westernmost part of Linguistic Melanesia. The time between Proto-Malayo-Polynesian and Proto-Oceanic, the two clearest and most well-understood major nodes of the Austronesian family tree outside of the Formosan homeland, speakers of pre-existing, presumably Papuan languages were encountered and their influence is thought to be responsible, at least in part, for the significant differences in these two reconstructed languages (Blust 1993, Kamholz 2014). Blust (1993) proposes that the Austronesian languages of Linguistic Melanesia all belong to a single subgroup, Central Eastern Malayo-Polynesian (CEMP), which takes in the Central Malayo-Polynesian (CMP), South Halmahera-West New Guinea (SHWNG) and Oceanic

subgroups, the latter grouping together into a proposed Eastern Malayo-Polynesian subgroup (cf. Map 12). The lack of in-depth historical reconstruction of PCEMP and its daughters, apart from POc, means that it is difficult to make reliable inferences about prehistorical Papuan-Austronesian contact situations. A case in point is the appearance of bound person-number markers in CEMP languages. Blust (1993:258–259) tentatively reconstructs a paradigm of bound person number markers for PCEMP, but Donohue and Grimes (2008:131–132) cast doubt on whether the different forms can convincingly be treated as a single innovation such as would characterise a single ancestral protolanguage. Without a reconstruction of PCEMP, if indeed such a language existed, and its constituent subgroups, we do not know whether there was a single event in which a substrate/contact language introduced the person-number markers to PCEMP, or whether they were innovated on numerous separate occasions independently, potentially on the basis of distinct substrate/contact events. Understanding the subgroups of western Linguistic Melanesia in the future will illuminate what was likely one of the first points of contact between speakers of Austronesian and Papuan languages, when Austronesian speakers moved southwards out of the Philippines and into the area of the Bird’s Head around 3000BP (Bellwood 2017).

Map 12: Cartographic representation of Blust’s subgroups of the Austronesian family



## 5. Further Reading

Palmer, Bill (ed.). 2017. *The Languages and Linguistics of the New Guinea Area*. Berlin: Mouton de Gruyter.

*This edited volume presents an up-to-date picture of our knowledge on the Papuan languages of Linguistic Melanesia. The main focus of chapters is the synchronic description of the chief structural characteristics of different regions.*

Foley, W. A. 2010. Language Contact in the New Guinea Region. In Raymond Hickey (ed.), *The Handbook of Language Contact*, 795-813. Wiley-Blackwell.

*This chapter provides the reader with an overview of described cases of contact in Linguistic Melanesia. It makes clear that examples of diffusion of essentially all aspects of linguistic structure can be found in the area.*

Ross Malcolm 1996. Contact-induced change and the comparative method: Cases from Papua New Guinea. In Mark Durie and Malcolm Ross (eds.), *The Comparative Method Revisited: Irregularity and Regularity in Language Change*. New York: Oxford University Press, 180–217.

*This chapter establishes the term ‘metatypy’ in the contact linguistics literature for situations in which radical restructuring of syntax and lexical semantics takes place in one language on the model of another.*

Ross, Malcolm. 2017. Languages of the New Guinea region. In Raymond Hickey (ed.), *The Cambridge handbook of areal linguistics*, 758–820. Cambridge: Cambridge University Press.

*This chapter offers a detailed look at the distribution of some grammatical features not covered in the present contribution over a portion of Linguistic Melanesia and presents a different view on what constitutes areality.*

## 6. Related topics

*historical linguistics, linguistic prehistory, Papuan languages, Austronesian languages*

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