13 Languages of New Guinea
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13.1. Linguistic situation in New Guinea area

The New Guinea region (as defined below) is one of the most linguistically diverse and complex areas in the world, with over 1,000 languages spoken in an area of about 900,000 square km. About three to four hundred languages spoken there belong to the Austronesian family. Other, non-Austronesian, languages are often referred to as “Papuan” (see Foley 1986: 1–3, 8; 1997a; Dixon 1991: 245). The term “Papuan” is a rough denomination subsuming over sixty language families, which are not demonstrably related, and a fair number of isolates in the area. This term is used for convenience (similarly, perhaps, to terms like “Paleo-Siberian” (§ 20.1, this volume) or “Amazonian” (§ 10.1, this volume)).

The island of New Guinea includes the state of Papua New Guinea and the Indonesian province of Papua (formerly known as Irian Jaya). The language area centred on New Guinea stretches from the Halmahera and Timor islands in the west to the Solomon Islands in the east. Due to the limitations of space, we will be able to mention only a fraction of languages in the area, and a small portion of the varieties of genetic groupings that have been put

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Abbreviations: A–subject of transitive verb; AN–Austronesian; DS–different subject; du–dual; O–object; sg–singular.
forward. Figure 13.1 indicates the approximate locations of some of the major Papuan families which are referred to in this chapter. For an overview of Austronesian languages spoken in the area, see Chapter 14 by Sakiyama (this volume), and discussion in Lynch et al. (2002).

The state of Papua New Guinea (independent since 1975) features over 830 languages (Grimes 2000; Nekitel 1998; Ford n.d.; Landweer 2000; Whitehead 1994 gives a figure of 870), with the number of Papuan languages exceeding 600 (see Foley 1986: 1–3; Dixon 1991: 245). Only about 20 per cent of the population speak Austronesian languages.

The approximate numbers of languages and their speakers are given in Table 13.1 (based on Ford n.d., Nekitel 1998: 90–116, and Grimes 2000). The only language spoken by over 100,000 people is Enga (Engan family, EHP),

Table 13.1. The languages of Papua New Guinea and approximate numbers of speakers

<table>
<thead>
<tr>
<th>Number of speakers</th>
<th>Austronesian</th>
<th>Non-Austronesian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 10,000–100,000</td>
<td>about 12</td>
<td>about 60</td>
</tr>
<tr>
<td>1,000–10,000</td>
<td>about 100</td>
<td>about 230</td>
</tr>
<tr>
<td>Over 500–under 1,000</td>
<td>about 30</td>
<td>about 105</td>
</tr>
<tr>
<td>Between 100 and 500</td>
<td>under 50</td>
<td>about 170</td>
</tr>
<tr>
<td>Fewer than 100</td>
<td>about 10</td>
<td>about 50</td>
</tr>
</tbody>
</table>
whose speakers number between 164,750 (Grimes 2000: 755) and 200,000 (Foley 2000b: 359).

Indigenous languages traditionally used as lingua francas include the Austronesian languages Suau (Milne Bay), spoken over the south-west end of Papua New Guinea (now with only about 6,795 L1 users and about 14,000 L2 users), and Dobu (Milne Bay), spoken off the islands of Eastern Papua (now with 8,000 L1 and 100,000 L2 speakers). Kuanua (or Tolai), an Austronesian language with about 100,000 speakers, is still used as a lingua franca in East New Britain (Fry 1977). (See Wurm 1977a and Foley 1986 on missionary lingua francas.)

Three post-contact lingua francas dominate the linguistic scene in contemporary Papua New Guinea. Tok Pisin (Melanesian Pidgin) is currently the most important language spoken in most provinces (especially in the northern parts of New Guinea: see Ch. 7, this volume). The estimated numbers are 50,000 first language speakers, and over 2,000,000 second language users (Grimes 2000). (The total population of the country is 4,600,000 people.)

English was the official language of the colonial administration in the southern half of the country (formerly known as Papua) from 1875 and of the northern half (formerly called New Guinea) from 1919. It is now rapidly gaining ground as a means of schooling and communication, especially in East Sepik province, Western province, and a number of other coastal provinces (see Sankoff 1980: 126–70).

Hiri Motu is a Creole based on the Austronesian language Motu (still spoken by about 14,000 people in Central province). It developed around 1900 as a contact language for speakers from different language backgrounds in the Motu-speaking environment around Port Moresby (Dutton 1997), especially members of the indigenous police (hence its alternative name Police Motu). Hiri Motu is still widely used in the southern part of country (roughly corresponding to the old administrative division of Papua, covering Central, Oro, Gulf provinces, and parts of Milne Bay, as well as of Western province), but appears to be receding under the pressure from Tok Pisin. It has hardly any mother tongue speakers. The number of second language learners reported for Hiri Motu varies from 120,000 (Grimes 2000: 276) to 200,000 (Foley 1986: 31).

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1 The origin of Hiri Motu remains uncertain (Dutton 1997). Until recently, it was assumed that Hiri Motu was a continuation of a trade language used by the Motu on annual trading voyages, or hiri, to the Gulf of Papua, where they traded with other linguistic groups. However, present-day Hiri Motu most likely developed from a special variety of simplified “foreigner talk” the Motu used with those who came to visit or trade in their own area.
The 1975 constitution of Papua New Guinea gives recognition to all languages, specifying that every citizen has the right to literacy in English, Tok Pisin, Hiri Motu, or a vernacular (Whitehead 1994). Traditional multilingualism, however, tends to be replaced by new diglossic and triglossic patterns with Tok Pisin and English. This, typically unstable, relationship often results in the dominance of the two lingua francas and the loss of the vernacular. According to materials in Sankoff (1980: 129–30), in 1971 the percentage of Papua New Guineans aged 10 and over who were unable to speak any of the official languages ranged from 5.7 per cent in New Ireland to 82.9 per cent in the Southern Highlands. Now the number of people with no knowledge of at least one official language is negligible. We return to the problems of language endangerment in Papua New Guinea in § 13.4.

The Indonesian province of Papua has about 260 languages (Grimes 2000: 469; Wurm 2001), many of them non-Austronesian. Over 50 Papuan languages are also spoken in Northern Halmahera, Alor and Pantar, west of Timor, and the coastal areas and mountainous interior of eastern Timor. According to Wurm (2001: 394), at least forty-three languages in Papua are highly endangered or already extinct, and over seventy have fewer than 400 speakers. Languages in the Bird’s Head Peninsula spoken by over 10,000 people include Maybrat (Dol 1999), Hatam, and Meyah (Reesink 2002a, 2002b). The largest language in Papua is Western Dani in the Central Highlands area, with 180,000 speakers.

Due to the current political situation in the Indonesian-controlled province of Papua and the compulsory spread of Indonesian and other languages (resulting from a settlement policy known as “transmigration”: Dixon 1991: 242–3), all minority languages in the area are endangered. According to Wurm (2001: 393–4), “the slide from a healthy state of a language to endangerment and extinction tends to be more rapid in Irian Jaya than is usual in Papua New Guinea” (despite the state’s obligation to support the maintenance of “regional languages” proclaimed in the constitution: Jones 1994). The main causes for language endangerment in Papua include migration to the centres and the impact of Indonesian-language electronic media and, especially, of compulsory Indonesian-language education (the latter contributing towards negative attitudes to the minority languages). The activities of the Summer Institute of Linguistics in the domains of language documentation, literacy, and education in local languages are nowadays restricted, to the detriment of language maintenance (Wiem Burung, p.c.).
When the Solomon Islands became independent in 1978, English was proclaimed its official national language. The main lingua franca in the country is Solomons Islands Pidgin (or Pijin) (French 1994). Of sixty-nine living languages in the state of Solomon Islands, seven are non-Austronesian. These are: Bilua, on Vella LaVella Island, with 8,000 to 9,000 speakers; Lavukaleve, on Russel Islands, with 2,000 speakers; Baniata, on South Rendova Island, with 1,480 speakers; Savosavo, on Savo Island, with 2,200 speakers; and Nanggu, with 450 speakers; Ayiwo, with 7,100, and Santa Cruz, with 5,000, on the Santa Cruz Islands.

Terrill (2003: 11–12) reports that, in spite of the current number of 2,000 speakers, Lavukaleve is seriously endangered: many children grow up learning just Pijin. The same fate appears to face Bilua (Obata 2003), in spite of a higher number of speakers. Santa Cruz languages have undergone drastic simplification and restructuring under the influence of Pijin, and are just as threatened as all the rest (see Wurm 1992). With the current political turmoil in the area the future for these languages appears grim.

The remainder of the chapter is organized as follows. In § 13.2, we consider the genetic make-up of the New Guinea languages and their major families. Some distinctive typological characteristics of Papuan languages are discussed in § 13.3. We briefly discuss the problems of language endangerment in Papua New Guinea in § 13.4.

13.2. Genetic Diversity in the New Guinea Area

With over sixty language families and dozens of isolates, the genetic diversity of the New Guinea area is without parallel. First, we briefly look at Austronesian languages in New Guinea (§ 13.2.1). Then, in § 13.2.2, we focus on Papuan (non-Austronesian) languages.

13.2.1. The Austronesian Languages in New Guinea

The largest family of languages spoken in New Guinea is the Austronesian family. It is also one of the largest well-established families in the world, with 1,000–1,200 member languages spread from Taiwan and South-East Asia to Hawaii and Madagascar. The migration of Austronesian peoples into New Guinea is considered to be fairly recent (going back to approximately 4,000–5,000 years ago: Foley 1994, 2000b).
The ancestors of Austronesian languages are believed to have arrived from the west, spreading through the Philippines and Indonesia to the north coast of the island of New Guinea. This hypothesis is corroborated by the distribution pattern of Austronesian languages: they are spoken along the northern and eastern coasts of the New Guinea island and neighbouring islands. Hardly any Austronesian languages are spoken inland, or along the south coast of New Guinea, from around 200 km west of Port Moresby to the western tip of the island.

The expansion of Austronesian languages in the islands close to New Guinea (including the Bismarck Archipelago, Bougainville, and Solomon Islands) resulted in the contraction and extinction of non-Austronesian languages spoken by earlier inhabitants. Nowadays, Kuot is the only non-Austronesian language spoken in New Ireland (Lindström 2002). Just two non-Austronesian languages are left in West New Britain: Anêm (Thurston 1987, 1992), on the north-west coast, and Wasi (Ata, Pele-Ata) in the Nakanai mountains. It is likely that many more non-Austronesian languages were originally spoken in these areas (see Thurston 1987, 1992: 125; Chowning 1996: 8–9); a number of non-Austronesian languages have become extinct during the past hundred years (for instance, Butam and Makolkol in East New Britain: Stebbins forthcoming). For possible effects of a non-Austronesian substratum in the Oceanic subgroup of Austronesian, see Lynch et al. (2002: 15–19).

The Austronesian languages of New Guinea belong to the Central-Eastern Malayo-Polynesian subgroup—see Fig. 13.2 (Foley 2000b; Lynch et al. 2002: 4).

Oceanic languages in New Guinea (over 250) are spoken to the east of Cenderawasih Bay in Papua. A few Austronesian languages in Papua belong to the South Halmahera-West New Guinea branch. A small group

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**Figure 13.2.** Austronesian languages and their subgroups in the New Guinea area
of languages in the Bomberai Peninsula in Papua are Central Malayo-
Polynesian.

Oceanic is one of the best-known subgroups of Austronesian, with fairly
detailed reconstructions of its proto-language (see Lynch 1998; Lynch et al.
2002; Pawley and Ross 1995). Considerably less is known about the two
other Austronesian groups in the New Guinea area (see Blust 1993; and a
summary in Foley 2000b: 362). A state-of-the-art description and study of
the subgrouping, and reconstruction of Oceanic languages, is in Lynch et al.
(2002).

The Oceanic languages spoken in New Guinea display unusual features,
due to their interaction with non-Austronesian languages (see Ross 1994,
on the influence of the non-Austronesian substratum on the phonologies
of Oceanic languages in New Ireland). Many Oceanic languages of New
Guinea have lost the typical Austronesian decimal counting system (Lynch
1998: 244, 245), replacing it with quinary systems common among Papuan
languages.

Prolonged contact between Austronesian and non-Austronesian lan-
guages often resulted in further structural changes. As an outcome of
the impact of the non-Austronesian language Waskia (Ross 2001), Takia
developed postpositions and verbal enclitics as clause-linking devices, and
the orders Noun-Adjective and Noun-Determiner. All Oceanic languages
of the Bel subfamily in Madang province—to which Takia belongs—have
adopted verb-final order and developed medial verb forms; one of these
languages, Dami, has also developed a same-subject/different-subject
switch reference system, typical for Papuan languages (Roberts 1997: 123,
192; Ross 1987).

In a comprehensive case study of a language contact situation in New
Guinea, Thurston (1982, 1987) presents ample evidence of lexical and
grammatical borrowing between Anêm, the only Papuan language of the
north-west of New Britain, and the coastal Austronesian languages Kabana,
Amara, Kove, and Lusi. In these languages, reciprocal is marked by a suffix
on the verb, rather than by a prefix, as is usual in Oceanic languages, just as
in Anêm (Thurston 1987: 79–80). Tense/aspect, negation, and modality are
marked at the end of the verb phrase rather than with prefixes or preverbal
particles, as would be the case in other Oceanic languages outside the con-
tact area with Anêm. Due to the influence of Anêm, or other, now extinct,
Papuan language(s), the four Oceanic languages have lost prenominal arti-
cles, another typically Oceanic feature, which survive only as part of a nomi-
nal stem. Anêm, in its turn, acquired a number of typically Oceanic features,
such as the inclusive-exclusive distinction in pronouns, and the division of nouns into inalienably possessed and two types of alienably possessed ("edible" and "neutral") (Thurston 1987: 91). Semantic convergence between Anêm and its Oceanic neighbours resulted in a large number of shared idioms and semantic patterns (e.g. “my ankle” is literally “neck of my foot”, “my toenail” is “claw of my foot”: Thurston 1987: 80–7).

Contacts with Papuan languages have contributed to the typological diversity of Oceanic languages, resulting in the development of unusual features. A striking example is the multiple classifier system in Kilivila (Senft 1996), somewhat reminiscent of multiple classifiers in Papuan languages elsewhere in New Guinea (see § 13.3.2).

13.2.2. The Papuan Languages in New Guinea

The extreme genetic diversity among the non-Austronesian languages in New Guinea, with numerous families interspersed with isolates, remains a puzzle for comparative linguists. We first discuss well-established genetic units, and then turn to proposals on a larger scale.

A. The Sepik river basin (which includes East Sepik and Sandaun provinces) is the most complex linguistic area within New Guinea. It has about 200 languages, a language density unparalleled anywhere else in the world. The Sepik river basin displays cultural as well as linguistic diversity and fragmentation, perhaps more so than other areas of New Guinea. Reasons for this include geographic diversity, inaccessible terrain, patterns of language contact, and language attitudes (see Foley 1986, 1988: 167–8; Aikhenvald 2004). The average size of language communities is significantly lower than in the Highlands.

Established families in the Sepik area include (see code labels on Figure 13.1):

The Lower Sepik-Ramu family. This consists of:

S1. The Lower Sepik family with six languages spoken by about 12,000 people, in the Lower Sepik and the adjoining riverine and coastal regions, and

S2. The Lower Ramu family with eight languages spoken by about 11,000 people in the lower reaches of the Ramu river.

The genetic relationship of S1 and S2 was demonstrated by Foley (2000a).

S3. The Ndu family with eight languages spoken by over 100,000 people along the course of the middle Sepik river and to its north (Laycock 1965; Aikhenvald 2004b, forthcoming);
S4. The Sepik Hill family with sixteen languages spoken by about 8,000 people in the foothills between the central range and the flood plain of the Sepik river, with the southernmost members extending across the central range in the Southern Highlands and the Enga Provinces (Bruce 1984: 296);

S5. The Ram family with three languages spoken by about 1,200 people in the southern foothills of the Torricelli Range in the Sandaun Province (Feldman 1986);

S6. The Tama family with four or five languages spoken by about 10,000 people in the Ambunti district of the East Sepik province and the Sandaun province, stretching into the lower foothills of the Torricelli mountains (see Foreman 1974).

An attempt has been made to establish genetic links between S3–S6, and a few other languages of the Sepik area, such as Wogamusin-Chenapian, Kwoma-Kwanga, and Abau (Foley 2000a, 2000b), grouping them into a larger Sepik family. Though some similarities in pronouns appear suggestive, much more comparative analysis is required, including low-level reconstructions for individual language families, before any definitive conclusion can be reached.

S7. The Skou family with eight quite closely related languages, spoken by about 6,000 people along the northern coast of New Guinea and the adjacent areas of Papua (Donohue 2002a, 2002b, forthcoming).

S8. The Torricelli family with about fifty languages spoken by over 80,000 people in the area of the Torricelli mountains, between the north coast and the Sepik river, spreading to the north into coastal areas of western Madang province.

The Torricelli languages share a number of highly unusual typological features, such as complex noun class systems with largely phonological assignment, irregular plurals for nouns, and complicated pronominal cross-referencing on the verb (see Fortune 1942; Nekitel 1985; Conrad and Wogiga 1991; Dobrin 1999; a brief comparative study of Arapesh languages is in Conrad 1978). Further comparative work is required to demonstrate convincingly that these languages form a family and not just an area (Foley 1986: 241–2).

B. The New Guinea Highlands are home to a dozen well-established genetic units, including:

H1. Angan family, with twelve languages spoken by over 60,000 people in the mountains in the Eastern Highlands, Morobe, and Gulf provinces, and in the lowland areas of the Gulf province;
H2. Binanderean family, with fourteen languages spoken by over 50,000 people in Oro province;
H3. Kalam-Kobon family, with three languages and about 15,000 speakers on the northern slopes of the central highlands in Madang and Western Highlands province;
H4. Huon family, with fifteen languages spoken by over 80,000 people on the Huon Peninsula;
H5. Engan family, with eight languages spoken by over 330,000 people in Enga province and the adjacent areas of East Sepik and Southern Highlands province;
H6. Gorokan family, with eight languages spoken by over 180,000 people in the Eastern Highland province around Goroka; and
H7. Kainantu family, with four languages spoken by about 40,000 people in the Eastern Highlands province.

The Gorokan and Kainantu family (Foley 1986: 245–63) appear to be genetically related.

C. Within the southern part of Indonesian Papua and adjacent Papua New Guinea areas, the well-established units include:

H8. Asmat-Kamoro-Sempt (or Asmat) family with four languages and about 50,000 speakers in southern parts of Papua;
H9. Marind family, with six languages with about 20,000 speakers, in southern Papua and the adjacent areas of Papua New Guinea in the Lake Murray area of the Western province; and
H10. Awyu (or Awyu-Dumut) family, with nine languages and about 20,000 speakers in the lowlands of Papua between the areas of the Asmat and Marind families.

An attempt has been made to group H1–H10 and numerous other language families in the New Guinea Highlands, from the Huon Peninsula across the island (covering the Fly river area and extending probably as far as the languages of Timor and Alor), into a large genetic unit called the “Trans New Guinea” phylum.2 These languages share a number of typological features (see § 13.3), and are mostly spoken by mountain dwellers. This macrogrouping, however suggestive, has not yet been provided with systematic justification following the established principles of comparative linguistics.

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2 This genetic and areal unit was first proposed by Wurm (1975a), who did not provide much linguistic evidence to justify it. The original hypothesis has been revised in the recent studies by Pawley (1995, 1998, 2000) and Ross (1995, 2000). The exact language membership and subgrouping within the putative phylum is still a matter of debate. For instance, Engan languages are treated as bona fide Trans New Guinea languages by Pawley (2000), but only as its “likely” members by Foley (2000b).
(covering lexicon, phonology, and all aspects of the grammar including paradigmatic correspondences).

The Trans-New Guinea features suggested so far include:

(a) some person markers, for instance a first person in *n and second person in *k (this may well be a coincidence, given the frequency of both n and k in personal pronouns);¹

(b) alternation of vowels showing number in independent pronouns with the initial consonant being the same, e.g. *a “singular”, *i “plural”, as in

<na “first person singular”, *ka “second person singular”, *ni “first person plural”, *ki “second person plural” (Ross 1995) (which may well be

an areally diffused typological feature); and

(c) a small set of lexical cognates (most of which are either monosyllabic, or

involve conjectural semantic and/or phonological correspondences).

The Madang area includes over a hundred distinct languages forming five or six large families, among them Southern and Northern Adalbert, Mabuso, and Rai coast. These have been provisionally grouped into a larger unit under the name of Madang (this also includes the Kalam-Kobon family, under H3 above). This hypothesis is currently under investigation (see Ingram in press).

Other established families within Papua (not suggested for incorporation into the Trans New Guinea phylum) include (see Foley 2000a):

P1. The Border family, with over twenty languages spoken by about 13,000 people in the Sandaun province and the border areas of Papua New Guinea and the province of Papua (Seiler 1985, for the Waris subfamily; see discussion by Gerstner-Link 2004);

P2. The Lakes Plain family, with twenty-four languages spoken by about 5,000 people, in the northern lowlands of Papua, in the basin of the Taritatu and Tariku tributaries of the Mamberamo river (Clouse 1997);

P3. The Wissel Lakes family, with four languages spoken by over 80,000 people in the central highlands of Indonesian Papua; and

P4. The Sentani family, with three languages spoken by about 10,000 people on the northern coast of Papua, to the west of Jayapura around Lake Sentani and to its west.

Reesink (1998, 2000) postulated a “West Papuan” linguistic area covering up to twenty-six non-Austronesian languages spoken in the area of Indonesian Papua, from Cenderawasih Bay westward to the islands of

¹ Along similar lines, Campbell (1997: 345) criticized the proposed diagnostic trait of n “first person” and m “second person” for the putative “Amerind” as a chance coincidence.
Timor, Alor, and Pantar, including the Bird’s Head Peninsula and the island of Halmahera. These languages (spoken by a total number of under 200,000 people) share a number of typological features (see under W(est) P(apua), on Figure 13.1).

The non-Austronesian languages of Bougainville, the Bismarck Archipelago, and the Solomons present a complex picture. The Bougainville family (B on Figure 13.1) consists of eight languages, four in the north and four in the south of the island of Bougainville (Onishi 1994), spoken by about 40,000 people.

The question of the genetic relationships between the four non-Austronesian languages in the Solomons remains open: they may well be isolates, or relics of now extinct language families. Kol and Sulka, in Central New Britain, and Kuot, in New Ireland, are also isolates. Ross’s (2000) hypothesis that Anêm and Ata in West New Britain are related requires further substantiation. The only well-established language family in East New Britain is the Baining family (TB on Figure 13.1), consisting of six languages (probably including the extinct Makolkol). There are over 10,000 speakers of Baining languages today. Structural and formal similarities between Taulil (and the extinct Butam) and the Baining family are equally suggestive of a distant genetic relationship and of contact.

In summary: in quite a few cases in New Guinea it is premature to go beyond establishing small families. Given the time depth of human occupation of the area (estimated as about 50,000 years: Bellwood 1998; Foley 2000a), the erstwhile genetic relationships tend to be obscured by borrowing and multilayered diffusion, “a major source of diversification in Papuan languages” (Foley 1986: 262). Much more comparative and descriptive work is required before genetically inherited features can be usefully distinguished from typological similarities or chance resemblances (see Foley 2000a).

13.3. Typological Diversity among Papuan Languages

In addition to their extreme genetic diversity, Papuan languages are typologically diverse. A few Pan-Papuan tendencies are typical for the New Guinea

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4 Typological similarities between these languages were investigated by Dunn et al. (2002), and Terrill (2002). For instance, in contrast to the neighbouring Austronesian languages, many have genders and multiple classifier systems. No linguistic justification has been provided for grouping them into an “East Papuan” phylum (as advocated by Wurm 1975b, 1982; see extensive criticism in Terrill 2003: 8–10).
Highlands languages within the putative Trans New Guinea areal grouping. Exceptions occur elsewhere.

13.3.1. Phonology

Phonological systems of Papuan languages are relatively simple, usually with three places of articulation for consonants (labial, dental/alveolar, and velar; some languages, such as Yimas, also add a palatal). Languages of the Sepik area have the same number of distinctions in place of articulation for stops and nasals, while the Highlands languages have fewer distinctions for nasals than for stops. Some Ndu (S3) languages have a series of labialized stops. In contrast to neighbouring Austronesian languages, many Papuan languages tend to have only a few fricatives and one liquid (r/l). Voiced stops tend to become prenasalized in the syllable-initial position.

Papuan languages tend to have a standard five vowel system /i, e, a, o, u/. Languages of the northern half of Papua New Guinea often have at least one non-low central vowel, for example Fore (Scott 1978) and Kewa (Franklin 1971). A “vertical” vowel system consisting of three central vowels i, ã, and a has been reported for latmul, a Ndu language (Staalsen 1966) (however, other Ndu languages have up to seven vowels: see Wendel 1993: 36; Wilson 1980; Aikhenvald forthcoming). The most complex vowel systems are found in Skou (S7) and some Waris (P1) languages. Both Skou and Dumo have seven vowels, two front, three central, and two back. In Skou, all except the high central vowel have a nasalized counterpart. In Dumo, all the vowels exist in long and short form, and all have a nasal counterpart except for the front mid-rounded vowel (Ingram 2005).

The Papuan languages of the Lower-Sepik Ramu (S1–2), Torricelli (S8), and numerous families in the Sepik–Ramu area have stress systems. No tonal languages have been found in the languages of the Bismarck Archipelago, Bougainville, and the Solomons. Tone is a prominent feature in numerous languages in the Trans New Guinea and West Papuan (WP) areas. In contrast, most Austronesian languages have stress (some Huon Gulf languages are an exception: Ross 1993).

Tone appears to be a family feature of Lakes Plain (P2) and Skou (S7) languages. In the Skou family, Skou has three tones (high, low, and rising: Mark Donohue, p.c.), while Dumo has high and non-high. The most complex tone system is found in Iau (Lake Plains family), which is said to have eight contrastive tones and up to two tones per syllable (Edmondson et al. 1992; Donohue 1997: 356). The development of these tones in Iau is most
probably due to loss of vocalic and consonantal segments. Other languages of this family have at least high and low tone; some are reported to have four (Clouse 1997: 152). An overview of tone in New Guinea is in Donohue (1997); see a summary in Foley (2000b).

13.3.2. Morphology

In their morphological type, Papuan languages vary. Mildly synthetic languages with little bound morphology include those in the West Papuan area (WP on Figure 13.1; see Reesink 1999, 2000), Lake Plains languages (P2; Clouse 1997: 151), and the Skou family (S7; Ingram forthcoming). Complex polysynthetic languages include Yimas, from the Lower Sepik subfamily (S1) of the Lower Sepik–Ramu family. Papuan languages often have complex patterns of pronominal cross-referencing. Marking transitive subject and object on the verb in Yimas is illustrated in (1) (Foley 1991: 291).

Yimas

(1) na-ŋa-tmi-kwalca-t
   3sgA-1sgO-say-rise-PERFECTIVE
   “She woke me up” (by verbal action)

In contrast, Watam, from the Lower-Ramu branch (S2) of the Lower Sepik–Ramu family, has no cross-referencing on the verb (Foley 1999). Most languages from the Trans New Guinea area employ a bound agreement prefix for object and a suffix for subject, for instance Fore (Scott 1978). So does Anamuxra, from Madang area. In Manambu, from the Ndu family (S3), suffixes cross-reference the subject and, optionally, another constituent, provided it is topical (this second suffix position is absent from its relatives Iatmul, Wosera, and Abelam). Skou languages encode the subject with partly predictable alternations of the first consonant of (a monosyllabic) verb root. The only other morphological mechanism is reduplication of the verb, to mark irrealis.

Various aspectual and modal meanings are often expressed using verb serialization, a mechanism found in most Papuan languages, including Skou (S7), Lower Sepik–Ramu (S1–2), Sepik Hill (S4), and languages of the Trans New Guinea area (see Ingram 2005, in press; Foley 1991; Pawley 1993; Bruce 1984). Many heavily serializing languages have a closed class of verbs, with fairly generic meanings. The verbal lexicon in Kalam (H3; Pawley 1993) has under 100 monomorphemic lexemes. New lexemes consist of a generic verb preceded by several verb stems (together forming one serial verb), or by one
or more nominal or adverbial complements. For instance, the generic verb \textit{ag} “make a sound, utter” enters into the following combinations: \textit{mmag-} (speech utter) “speak”, \textit{kmap ag-} (song utter) “sing”, \textit{swk ag-} (laughter utter) “laugh”, \textit{sb ag-} (bowel utter) “fart” (Pawley 1993: 98).

Serial verbs are absent from the languages of the south coast of New Guinea, Torricelli languages (S8; e.g. Arapesh), and most languages of the Bismarck Archipelago and Bougainville (B). Languages without extensive verb serialization tend to have complex verbal morphology (Stebbins forthcoming). There is typically no passive, but at least one causative.

\textit{Grammatical relations} are frequently expressed with verbal cross-referencing, as in Motuna, Anamuxra, Yimas, and numerous languages from the Trans New Guinea area. A few have core cases, e.g. Imonda (Waris: P1) and Ndu languages (S3). The marking of verbal arguments may be semantically rather than syntactically based. In Bauzi, from the Mamberamo river region of Papua (Briley 1997), a suffix marks an agentive argument with both transitive and intransitive verbs. Similar systems are attested in a few languages from the New Guinea Highlands (e.g. Ku Waru: Merlan and Rumsey 1991: 335; Folopa: Anderson and Wade 1988). In addition, Bauzi has a typologically unusual split marking of core participants conditioned by tense-aspect (the progressive/continuative aspect does not require the agentive suffix, while the completive aspect does), and by polarity (no agentive suffix is required in negative clauses).

Papuan languages exhibit the world’s most sophisticated systems of noun classification. The Lower Sepik (S1) and Torricelli languages (S8) have extremely complex systems of noun classification and plural marking (Foley 1986: 222–9, 1991, 2000a; on Arapesh languages, see Fortune 1942; Nekitel 1985; Dobrin 1999). Yimas has eleven noun classes, four of which are assigned to nouns by their semantics: I—human males; II—human females; III—animals; class IV—culturally important plants. Classes V–XI are motivated phonologically: the agreeing constituent repeats the last consonant of the nominal root.

Small gender systems are found in the West Papuan area (WP), Skou languages (S7) and numerous families in the Sepik basin, and in numerous language isolates, such as Burmeso, Sulka, Kuot, Bilua, and Lavukaleve of the Bismarck Archipelago. In Alamblak (S4) and Manambu (S3), from the Sepik area, feminine gender is associated with small size, and masculine gender with large size and long shape (Bruce 1984: 9; Aikhenvald 1998). In contrast, feminine gender assignment to inanimates is associated with large size, with masculine gender assignment being linked with slender elongated objects in
Yonggom (Ok, Western province: Christensen 1995: 9–10) and in Olo (S8: Torricelli: McGregor and McGregor 1982: 55). The Baining languages of East New Britain (TB) have two noun classification systems and a three-way number contrast (singular, dual, and plural). A simple masculine, feminine, and neuter (“everything else”) gender system is used for subject cross-referencing on the verb and in possessive constructions; a more complex, multi-term shape- and size-based system is realized through agreement within noun phrases of other types.

Complex classificatory systems in multiple environments are a feature of the languages of Bougainville (B). Nasioi (Hurd 1977) has over a hundred classifiers used in possessive constructions, with numerals, demonstratives, adjectives, and verbs. Motuna, from the same language family, has fifty-one classifiers used in the same environments as Nasioi (Onishi 1994), in addition to five noun classes (masculine, feminine, diminutive, local, and manner) realized through agreement with articles, demonstratives, and some adjectives in a noun phrase, and with a topical constituent on the verb. Anamuxra (Pomoikan, Madang province: Ingram 2003) has several dozen classifiers as suffixes on post-head modifiers (adjectives, numerals, demonstratives, articles, and the general question word), the possessive marker, the vocative, and most nouns. Unusual multiple classifier systems are attested in Awará and Wantoat (Davis n.d; Susan Quigley, p.c.), from the Finisterre family; Angan languages, and Santa Cruzan languages in the Solomons (Aikhenvald 2000: 218)

Classificatory verbs which combine reference to the orientation of the noun and to its inherent properties are widespread in the languages of the New Guinea Highlands, especially Engan (H5), Chimbu, and East New Guinea Highlands families (Foley 1986: 89 ff.), and also languages of the Border family (P1: Brown 1981; Aikhenvald 2000: 170–1). Enga (Lang 1975; Foley 1986: 89–91) has seven classificatory verbs. Men and other referents judged to be tall, large, strong, and powerful (such as houses and trees) are classified as “standing”, while women, possums, and referents judged to be small, squat, horizontal, and weak “sit”. Protruding objects “hang”, subterranean creatures and objects (such as worms or sweet potatoes, as well as internal organs, such as the heart) “lie inside”. Liquids and gases “come”; crawling or aquatic creatures, as well as orifices and locations, “lie”, and genitalia “carry”. Ku Waru (Merlan et al. 1997: 75) has a similar, albeit smaller, system of classificatory existential verbs.

Waris (Border family, P1: Brown 1981) has verbal classifiers which categorize the direct object in terms of its shape and size, in addition to “stance”
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classificatory verbs used to categorize the intransitive subject as to its orientation in space. Prefixed verbal classifiers in Waris derive historically from compounded verbs (as they do in the closely related Imonda: Seiler 1985).

A few languages have rather unusual evidentiality systems. Oksapmin, an isolate from Sandaun province (Lawrence 1987), distinguishes visual, nonvisual, and reported information sources. The systems in Foe and Fasu, from the Kutubuan family in the Southern Highlands, are among the most complex in the world, with at least six distinctions (Rule 1977: 71–4; May and Loeweke 1980: 71–4; Aikhenvald 2004a).

13.3.3. Syntax

Table 13.2 features a comparison of typical syntactic features of Austronesian languages contrasted with those found in most Papuan languages (Foley 1998: 513–16).

Clause chaining is a prominent syntactic property of the Papuan languages. It strongly correlates with their verb-final constituent order (atypical for Austronesian languages: see Foley 2000b: 385). A great number of languages distinguish between independent (“final”) and dependent (“medial”) verbs. Final verbs have a full range of inflectional possibilities, such as pronominal agreement, tense, aspect, and mood. Medial verbs typically occur before the final verbs, and have fewer inflectional possibilities. A medial verb carries a special morpheme indicating whether its subject is the same as that of the final verb, or different from it. This is known as switch reference. Medial verbs typically distinguish relative tense (sequential versus simultaneous forms).

<table>
<thead>
<tr>
<th>Syntactic feature</th>
<th>Austronesian</th>
<th>Papuan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constituent order</td>
<td>Verb medial</td>
<td>Predominantly verb final</td>
</tr>
<tr>
<td>Prepositions or postpositions</td>
<td>Prepositions</td>
<td>Postpositions</td>
</tr>
<tr>
<td>Determiners</td>
<td>Determiners precede</td>
<td>No determiners</td>
</tr>
<tr>
<td>noun within a noun phrase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position of modifiers</td>
<td>Follow the head noun</td>
<td>Either follow or precede the head noun</td>
</tr>
<tr>
<td>Clause linking</td>
<td>Coordinating or subordinating conjunctions</td>
<td>Clause chaining</td>
</tr>
</tbody>
</table>
Switch reference markers are typically suffixed to the verb (but in a few Angan languages in the Highlands some switch reference markers are suffixes, and others are prefixes). Switch reference is found throughout the Trans New Guinea area, in numerous languages of the Sepik area and of Madang, as well as in the languages of Bougainville (Onishi 1994). It is absent from Lakes Plain (P2), Skou (S7), Lower Sepik–Ramu (S1–2), and Torricelli languages (S8), as well as from most languages in the Bismarck Archipelago. And we have mentioned above that Austronesian languages from the Bel family, in Madang province, have developed the distinction between medial and final verbs, and even switch reference, under the impact of neighbouring Papuan languages. No other Austronesian languages have switch reference. For an up-to-date overview of switch reference in Papuan languages, see Roberts (1997).

This sample of the unusual features of Papuan languages illustrates, in a nutshell, their considerable typological diversity.

### 13.3.4. Documentation

The major centres for the description and analysis of languages of the New Guinea area are the Summer Institute of Linguistics (Ukarumpa, Papua New Guinea), the Research School of Pacific and Asian Studies in Canberra (Departments of Linguistics and of Anthropology), the Department of Linguistics at the University of Sydney, the University of Leiden (with major concentration on the languages of Indonesian Papua and the islands off the coast of New Guinea), and the Research Centre for Linguistic Typology at La Trobe University in Melbourne. Pacific Linguistics continues to be the major publisher for grammars, dictionaries, and other materials on New Guinea languages. In spite of the large amount of materials produced (see the bibliography in Carrington 1996), only a few score non-Austronesian languages have been well documented. Among these are Alamblak, Amele, Arapesh, Dani, Hua, Kewa, Kilmeri, Korafe, Marind, Usan, Yimas, and a few others. Several scholars are active in the area of Skou languages, and Papuan languages of the Solomons. But the majority of languages are still in urgent need of documentation.

### 13.4. Linguistic Diversity and Language Endangerment in Papua New Guinea

We will now briefly discuss problems of language endangerment in Papua New Guinea. There are few documented instances of the “sudden death”
of a language (when all the speakers are exterminated or die of a disease: Campbell and Muntzel 1989), or of “radical death” whereby a rapid language loss is associated with genocide or severe political repression. Sudden death of Mansim, due to disease and intertribal warfare, was discussed by Reesink (2002a).

Most instances of language obsolescence are those of “gradual death”, that is, the loss of a language due to a shift to the dominant language with an intermediary stage of bilingualism, and subsequent contraction in the sphere of usage of the erstwhile vernacular.

Numerous communities in the Sepik area with a small number of speakers have effectively undergone language shift. Children tend to acquire Tok Pisin rather than the vernacular as their first language, and full competence in the vernacular is only found among adults. A classic case of such shift is Taiap (an isolate spoken in Gapun village, ESP, by about 100 people) documented by Kulick (1992). Language socialization in Taiap involves the conceptualization of Tok Pisin as a symbol of modernity and sought-after prosperity, while the vernacular is associated with “backwardness”. A similar example is Yimas (Lower Sepik: Foley 1991: 4–6) spoken by about 250 people in two villages (and further examples in Loving 1980). Languages with fewer than fifty speakers have hardly any chance of survival (see Smith 1992, on the imminent extinction of Susuami, an Angan language from Morobe province). One of the reasons for the vitality of the Mehek language in Sandaun province (Bugenhagen 1980: 93) is that, with over 6,000 speakers, it is numerically the dominant language in the area. The political situation in the Indonesian province of Papua is hardly promising for the survival of the vernaculars.

Processes of rapid language shift have been observed for languages with seemingly large numbers of speakers. Murik (1,200, Lower Sepik) is not being learnt by children, and neither is Abu’ Arapesh, an ethnic group of over 5,000 (S8; Nekitel 1985). A similar situation has been described for Cemaun Arapesh (Lise Dobrin, p.c.) and Makopin Arapesh (Nidue 1990: 65–6) (see Aikhenvald 2004b, for further examples).

Language prestige is another factor. Smith (1992)—in his discussion of the apparently healthy situation of Musom, an Austronesian language of Morobe province—stresses the importance of pride in one’s language and identity, and “an ideology that newcomers must adapt to village norms of language and culture” (1992: 119). In contrast, speakers of Kuot, which is

5 Indications are that, before European contact, intertribal warfare did result in extinction of some tribes and languages. See Harrison (1993).
now endangered (Lindström 2002), do not attach any particular importance to their language.

Even if the language is acquired by children, its acquisition may be incomplete. For instance, the knowledge of a ritual “pandanus” language used by a number of peoples of the Southern Highlands province during the harvest of pandanus nuts has decreased during the past thirty–forty years, as Franklin and Stefaniw (1992) report for Kewa and Imbongu (Kewa has over 40,000 speakers, and Imbongu has 16,000; neither of these languages is in immediate danger of becoming extinct). Stylistic reduction often pre-dates language obsolescence. For instance, the oratorical style *sesade kwani*f associated with the ritual food exchange in Abu’ Arapesh was dying out in the 1960s, long before children stopped acquiring the language (Nekitel 1985: 182). Similar observations on Ilahita Arapesh can be found in Tuzin (1976). Also see Foley (1991, 1997b) on Yimas and Watam, Ingram (2003, 2006) for Dumo and Anamuxra, and Aikhenvald (2004b) for Manambu.

Balanced and stable di- or triglossia involves Tok Pisin and often also English as the languages of government, local council, missions, and schooling, with the vernacular used in day-to-day communication in other circumstances (including the domestic). The tendency towards a triglossic situation in Papua New Guinea was first identified by Sankoff (1980: 35). If the di- or triglossic situation is stable, the vernacular is not endangered, as appears to be the case with Kilmeri (Border family: Brown 1980 and Claudia Gerstner-Link, p.c.), and Kaki Ae (Eleman family, Gulf province: Clifton 1994). See further examples in Loving (1980).

In a situation where prestige and economic opportunities come to be associated with proficiency in Tok Pisin, diglossic relationships between languages often become unstable. Wom (Torricelli family: Moeckel and Moeckel 1980) had 2,500 speakers spread over five villages. Besides diglossic relationships with Tok Pisin, the Wom-speaking villages preserved traditional patterns of bilingualism in Urat (Southern Arapesh) and Bumbita Arapesh. But most speakers regard Tok Pisin and now often English as the language of economic opportunity. As a result, numerous parents preferred speaking Tok Pisin to their children—this is indicative of a tendency towards destabilization, at least in the long run. Destabilized diglossia is becoming the norm in many areas of Papua New Guinea, including the Sepik. This is conducive to increasing endangerment of the vernaculars.

What factors enhance the vitality of indigenous languages? A well-planned and well-executed teaching programme at the primary school level is extremely important for language maintenance (Nidue 1990 considers this
crucial for the survival of Makopin Arapesh). Watam (Lower Ramu: Foley 1997b), spoken by 700 people in three villages, is used by all generations. The fact that all speakers are bilingual in Tok Pisin does not appear to affect Watam’s vitality. Indeed, the Watam community school has been opened to the children of a neighbouring Kopar-speaking village (Kopar, from the Lower Sepik family, no longer has any real speakers under 50). These children are now bilingual in Watam. Watam is thus expanding at the expense of Kopar.

The Summer Institute of Linguistics is playing an important role in promoting literacy and enhancing the prestige of indigenous languages (see Cahill 1999), having produced literacy and other materials on over 100 languages. Dixon (1991: 246–7) reports how the Urat language (Torricelli family) in the East Sepik province underwent a strong revival as a result of the work of the SIL team, Robert and Dawn Barnes.

The vitality of some indigenous languages is enhanced by the maintenance of traditional patterns of subsistence agriculture. In such cases, there is no motivation to drop the vernacular and just speak Tok Pisin and/or English (see Bugenhagen 1980: 93, on Mehek and Siliput). In contrast, communities which are dependent on economic transactions involving Tok Pisin are in danger of losing their language (cf. Landweer 2000: 15).

Emblematicity of a language can enhance its chances for survival. Anêm is a case in point. This Papuan language, markedly different from Austronesian languages in the area, is a mark of ethnic distinctiveness, and is being maintained as such (Thurston 1992). Most Austronesian languages in the area are too similar to each other to serve as proper markers of ethnicity; as a result, people have a low degree of language loyalty, and the languages are in danger of disappearing.

There is additional cause for optimism in the decision of the Papua New Guinea government to support “tok ples” (lit. “language (of) village”) programmes, or “vernacular based pre-primary education” (Dixon 1991: 247; Nekitel 1998: 179–80). (These programmes allow children to acquire basic literacy skills in their first language before moving on to English language education in later primary school.) By the end of 1991, the number of provincial vernacular schools amounted to ninety-four, with programmes in twenty-one languages (Wurm 2001: 389), scattered across most provinces. Since then, more active vernacular teaching programs have been implemented. (The latest figures, for mid 2005, are of over 4,000 schools: Joan Kale, p.c.). Tok Ples Elementary programmes for children in the first three
years of school are now available in densely populated parts of East New Britain and across Sandaun and Madang provinces. As funding allows, this programme is being rolled out into other areas. Communities across the country have been enthusiastic in their support for this programme. Funding limitations are hampering its expansion into less developed areas. Additional complications arise in the areas where schools have to service a number of different language communities, and are compelled to choose one indigenous language over another (as in the case of Kopar and Watam mentioned above), or Tok Pisin. Establishing a comprehensive language education programme across Papua New Guinea requires a dramatic increase in the number of schools. These education programmes, together with urgent documentation of hitherto undocumented or poorly described languages, are the most compelling tasks for those who have the future of New Guinean languages at heart.

References


