INTERNAL AND EXTERNAL LINKAGES

Language

LANGUAGES AND MIGRATIONS

Papuan languages

S.A. WURM

Austronesian languages

D.T. TRYON
During the seminar on the Boundaries of Melanesia in this School seminar series, it was mentioned that the Papuan languages can be regarded as languages of Melanesia *par excellence*. These Papuan languages, sometimes also referred to as non-Austronesian languages, constitute one of the two types of languages located in Melanesia. The other type, the Austronesian languages, are members of the very far-flung Austronesian language group which extends from Formosa, i.e. the aboriginal languages spoken on Taiwan, across the Philippines, parts of mainland southeast Asia, Malaysia, Indonesia, the New Guinea area, island Melanesia and Micronesia to the northern and easternmost regions of Polynesia.

The Papuan languages are generally regarded as radically different from the Austronesian languages and for that matter from all other known language groups in the world. There may only be a remote possibility of some link existing between the languages spoken by the aboriginal population of the Andaman Islands, to the south of Burma, and some Papuan language groups in the extreme west of the New Guinea area (Wurm 1975a). Steps towards the closer investigation of this possibility are at present under way, with Dr Y.K. Yadav of the Department of South Asian and Buddhist Studies undertaking detailed studies of languages of the Andaman Islands. There seem to be also some parallels in the structure of some Papuan languages and some of those spoken by the Orang Asli of peninsular Malaysia (Laycock 1975a), though the languages spoken by those people are now generally regarded as Austro-Asiatic, though of course the speakers may have taken over Austro-Asiatic languages and lost their own languages, except perhaps for some remnant features. This problem will require a lot of additional study before anything more than vague suggestions can be made.

The Papuan languages themselves, especially those of several groups, show strong to sometimes very strong influence from Austronesian languages. It has in fact been suggested that in view of the apparent presence of Austronesian lexical and other elements in such Papuan languages, the possibility of an original relationship between Papuan languages and Austronesian languages could not be rejected out of hand (Lynch 1981). At the same time, the great majority of these apparently Austronesian elements in Papuan languages seem to reflect influence from Oceanic Austronesian rather than from the more archaic western Austronesian, or perhaps influence from some other relatively late, though perhaps pre-Oceanic, form of Austronesian. This seems to suggest language influence rather than original relationship - relational links between Papuan languages and
Austronesian languages would, if they were real, be expected to go back a very long way indeed and be manifested through very archaic Austronesian forms, in view of the quite obviously vast differences between Papuan and Austronesian languages in general. However this whole problem requires careful study and such studies have only just begun.

The bulk of the Papuan languages occupy the New Guinea mainland and some of the large islands adjacent to it, such as the northern part of Halmahera and the eastern part of Timor in the west, and parts of New Britain, New Ireland and Bougainville Island in the east. Scattered Papuan languages are located along the Solomon Island chain as far to the east as the Santa Cruz Archipelago (Wurm 1975b). The possibility of the existence of a few further Papuan languages to the west of Timor may still be present, and something which may well prove to be influence from Papuan languages, perhaps as a substratum element, appears to be present in Austronesian languages of those areas. The same may well apply to some languages of the New Hebrides in the east - here again further study is needed, and some of it is under way.

The number of Papuan languages is very great. To date 738 distinct Papuan languages have been identified (Wurm 1981a). This number is of course subject to changes, be it because of the possible discovery of a few hitherto unidentified languages, and also because of the change of status of some languages from language to dialect when further studies are carried out on them. It may therefore perhaps be more appropriate, for general purposes, to speak of the existence of between 700 and 750 Papuan languages.

Some areas of the New Guinea mainland and the New Guinea Islands are occupied, as I said before, by Austronesian languages, and taking into account their very considerable number, and the number of the Papuan languages just mentioned, it seems correct to say that the New Guinea area contains about 1,000 distinct languages which consist of a very much greater number of different dialects. In view of this, the New Guinea area in Melanesia, and as a result of this, Melanesia itself, constitutes the linguistically most diverse and multi-faceted area of comparable size anywhere in the world.

The Papuan languages were originally regarded as constituting a vast conglomerate of hundreds of mostly unrelated small languages. This was mainly the result of the fact that the first contacts of Europeans with Papuan languages took place in areas in which language diversity and multiplicity reaches quite extreme proportions even for New Guinea conditions, for instance in what today constitutes the Madang Province, the Huon Peninsula area and some other regions. The impression gained from these first contacts was then extended to the Papuan languages in general, though a number of small interrelated Papuan language groups were recognized quite early.

Since the mid-1950s, a tremendous amount of work has been carried out to survey closely the linguistic situation of the entire New Guinea area, identify the languages and dialects, recognize their distribution and attempt their at least preliminary classification in relation to each other. Most of this work was, until very recently, carried out under the auspices of the Department of Linguistics of the Research School of Pacific
LEGEND TO MAP OF PAPUAN PHYLIC GROUPS

A  Trans-New Guinea Phylum
B  West Papuan Phylum
C  Sepik-Ramu Phylum
D  Torricelli Phylum
E  East Papuan Phylum
F  Sko phylum-level Stock
G  Kwomtari phylum-level Stock
H  Arai (Left May) phylum-level Family
I  Amto-Musian phylum-level Stock
J  East Bird's Head phylum-level Stock
K  Geelvink Bay Phylum
L  Warenbori phylum-level Isolate
M  Taurap (Boromeso) phylum-level Isolate
N  Yuri phylum-level Isolate
O  Busa phylum-level Isolate
P  Nagatman phylum-level Isolate
Q  Wasembo (Gusap) phylum-level Isolate
R  Porome (Kibiri) phylum-level Isolate
S  Maisin (Austronesian-Papuan) 'mixed' language
PAPUAN LANGUAGES

Studies in the Australian National University, and by members of the Papua New Guinea and Irian Jaya Branches of the Summer Institute of Linguistics. Some work has been done in recent years in particular, by linguists attached to various missionary organizations in the New Guinea area, and by individual overseas scholars working in the New Guinea area for limited periods on a variety of projects.

As a result of this work, the Papuan linguistic picture gradually evolved through a great number of intermediate steps over a couple of decades to what it is believed to be today (Wurm 1975b, 1981a).

In the framework of this picture, it has been proposed that a far-flung group of over 500 probably, though in some instances only very tenuously, interrelated Papuan languages occupies about four-fifths of the New Guinea mainland and a portion of the island area to the west of it. This language group which has been named the Trans-New Guinea Phylum (McElhanon and Voorhoeve 1970), very probably contains a large number of languages which may have originally not been related to other languages of the phylum or to each other, but which in the course of thousands of years, have been subjected to such strong influence from original Trans-New Guinea Phylum languages that at our present state of knowledge it is not possible for us to be sure whether their links with Trans-New Guinea Phylum languages are the reflection of an original genetic relationship, or of a pervading influence on the vocabulary and structure of these languages (Wurm, Voorhoeve and McElhanon 1975; Wurm 1981a).

Many of the other known Papuan languages which are apparently unrelated to the Trans-New Guinea Phylum languages, though some of them show quite strong Trans-New Guinea influence in their vocabulary and structure, have been grouped together into another large group which contains close to 100 languages. From its geographical location in the Sepik and Ramu Rivers basins in the northern part of Papua New Guinea, this group has been named the Sepik-Ramu Phylum (Laycock and Z'graggen 1975). The structural diversity of the languages included in this phylum is greater than that encountered with languages included in the Trans-New Guinea Phylum, but there are a number of basic structural and other principles manifesting themselves in Sepik-Ramu Phylum languages which suggest that they belong to a single group which is supported by findings on the lexical level. The inclusion of some subgroups of languages into the Sepik-Ramu Phylum has been subject to some doubt, just as this has been the case with subgroups included in the Trans-New Guinea Phylum, but further study is expected to clarify these issues.

The remainder of the known Papuan languages has, with the exception of eight languages, been included in three largish and six small language groups which are apparently not related to each other or to the two major groups named before. The three largish groups have been named as follows:

The Torricelli Phylum, containing forty-eight languages and located in the northwestern part of Papua New Guinea, around the Torricelli Mountains area (Laycock 1975b). These languages which constitute three geographically separate groups, have a rather special structure and show some typological similarity to those of the West Papuan Phylum (see below), and appear to be generally quite closely interrelated within the three groups which seems to suggest that they split from common ancestors a much shorter
time ago than appears to be the case with languages belonging to the other phyla mentioned so far. However, Torricelli Phylum language elements are found as strong substrata in languages belonging to the Sepik-Ramu Phylum and located nearby, or also some distance away. It seems therefore possible that the area in which Torricelli Phylum languages were originally located, and the original diversity of Torricelli Phylum languages themselves, were much greater before these languages may have been heavily encroached upon by Sepik-Ramu Phylum languages, with many of the original Torricelli Phylum languages disappearing in the process, and only manifesting themselves as substrata in other languages. In the course of this process, the Torricelli Phylum languages appear to have been split up into three geographically non-contiguous groups. It may well be that most of the Torricelli Phylum languages found today are the descendants of a few surviving Torricelli Phylum languages of a very similar type. Only one Torricelli Phylum language is significantly different from the other Torricelli Phylum languages in its structure. Such phenomena are known from other language areas in the world, for instance from the Turkic languages in Asia which are all very similar to each other, except for one very aberrant language existing which seems to indicate a greater original diversity of the Turkic languages than is present today.

The East Papuan Phylum with twenty-seven languages is located in the island world to the east of the New Guinea mainland, from Rossel Island in the Louisiade Archipelago off the eastern end of the mainland to the Santa Cruz Archipelago in the east (Wurm 1975c). These languages show quite considerable structural diversity though a few very specific structural features are very widespread amongst them. Phonologically, many of these languages are very simple, whereas others are extremely complex - this has been put forward by some scholars, notably Austronesianists, as militating against the possibility of interrelationship existing between such phonetically diverse languages. However it must be remembered that the same phenomenon is encountered in the Austronesian linguistic field in which some Polynesian languages belong to the phonetically simplest languages on earth, whereas others such as Austronesian languages of New Caledonia, belong to the most complex. Most of the languages included in the East Papuan Phylum have been found to show strong to very strong Austronesian influence in their vocabularies and to a lesser extent in their structures. However, much of this influence does not appear to come from Austronesian languages located in the area where these East Papuan languages are found today. Some of the Austronesian influence appears to reflect Austronesian language elements found in the southeastern portion of the New Guinea mainland and the small islands adjacent to it. Other Austronesian elements in East Papuan Phylum languages appear to belong much further west and seem to antedate Oceanic Austronesian and immediately pre-Oceanic Austronesian. This is in contrast to the Austronesian influence apparently present in the Trans-New Guinea Phylum languages which generally reflects Oceanic or immediately pre-Oceanic Austronesian influence. The origin of some of the Austronesian influence in East Papuan Phylum languages is still not clear and a subject for further study. At the same time, structural elements of languages included in the East Papuan Phylum are encountered in a number of Austronesian languages located in the general area occupied by East Papuan Phylum languages.
The West Papuan Phylum, with twenty-four languages, occupies the greater part of the Bird's Head Peninsula in western Irian Jaya as well as the northern half of Halmahera (Voorhoeve 1975a, b; Wurm 1981a). Typologically, the languages of the West Papuan Phylum show some similarity to those of the Torricelli Phylum, but there is no similarity in detail and form between languages of the two phyla. It seems likely that the area occupied by West Papuan Phylum languages was originally much larger than it is at present, because elements of what appear to be West Papuan Phylum type languages are found as substrata over wide areas, predominantly in the western half of the New Guinea mainland, and also very strongly on Timor. Of all Papuan language groups, the languages of the West Papuan Phylum show most, though numerically still very few, possible links with the languages of the Andaman Islanders. An even smaller number of such possible links is present between languages of the East Papuan Phylum and the Andaman languages (Wurm 1975a, 1981a).

The six minor groups mentioned before comprise a total of only twenty-nine languages. The groups are as follows:

The Sko phylum-level Stock, with eight languages, occupies a narrow strip of coastal and hinterland country straddling the Irian Jaya-Papua New Guinea border (Laycock 1975c). These languages have a very unusual structure which is only vaguely reminiscent typologically of the Torricelli Phylum language type, and some of them are characterized by the fact that differences in syllable tones are not only used to distinguish words of otherwise identical shape, but also differences in grammatical functions. This small phylum consists of a single stock of languages—for an explanation of this term see below.

The Kwomtari phylum-level Stock, with five languages, occupies a stretch of country in the northwestern extremity of Papua New Guinea (Laycock 1975c). Structurally, the languages belonging to this small phylum are quite simple which is in contrast to the usually very high complexity of the structures of Papuan languages.

The Arai (Left May) phylum-level Family, with six languages, is found in the area of the left arm of the May River, a southern tributary of the Sepik River in western Papua New Guinea (Laycock 1975c; Conrad and Dye 1975). With the verbs in these languages, a large number of aspects is marked with the verb by prefixes, suffixes and particles, and it seems that some connection may exist between the languages of this small phylum and some languages located in the Upper Strickland River area to the south of the dividing ranges. The languages of that area have been included in the Trans-New Guinea Phylum, but they show a strong substratum, and the multiplicity of verbal aspects characteristic of the Arai phylum-level Family languages is also found in them, along with some lexical links between them and the Arai Family languages.

The Amto-Musian phylum-level Family, with two languages, is located to the south of the Kwomtari phylum-level Stock area (Conrad and Dye 1975). Both of the languages making up this small phylum-level family were believed to be unrelated to other languages until the relationship between them was discovered a few years ago.
The East Bird's Head phylum-level Stock, with three languages, is located in the eastern and northeastern parts of the Bird's Head Peninsula in western Irian Jaya (Voorhoeve 1975b, c). The languages included in this small phylum-level stock show some typological and some very few structural and lexical links with languages of the West Papuan Phylum, but they do not seem to be sufficient to include the languages belonging to it with the West Papuan Phylum.

The Geelvink Bay Phylum, with five languages, is located in the central portion of the island of Yapen of Geelvink Bay in western Irian Jaya, and occupies most of the eastern coast and hinterland areas of that bay (Voorhoeve 1975b, c). Structurally, the languages of this phylum show some similarity with Trans-New Guinea Phylum languages, and there are also some lexical links between the languages of the two phyla. It may be possible that the Geelvink Bay Phylum languages can eventually be included in the Trans-New Guinea Phylum.

As has already been mentioned, there are eight languages, seven of them definitely Papuan, which can at this stage of our knowledge, not be included in any of the established phylic groups. They have therefore to be regarded as isolates. The eighth language, Maisin, which is located in the tail-end of the New Guinea mainland, has been variously regarded as a Papuan-influenced Austronesian, or as an Austronesian-influenced Papuan language, though on balance, the former view may seem to have greater validity (Dutton 1971 and personal communication Lynch 1977). Of the seven definitely Papuan isolates, three are located in the northwestern part of Papua New Guinea, one in its central south, and the remaining three are found in the north of the non-peninsular part of Irian Jaya (Laycock 1975d; Voorhoeve 1975d; Franklin 1975; Wurm 1981a).

There are close to 3,000,000 speakers of Papuan Languages. Of this figure, nearly 2,310,000 speak languages included in the Trans-New Guinea Phylum, 194,000 languages of the Sepik-Ramu Phylum, 80,000 languages of the Torricelli Phylum, 69,000 languages of the East Papuan Phylum and 217,000 languages of the West Papuan Phylum. Only about 41,000 indigenes speak languages included in the minor phyla, i.e. Sko phylum-level Stock: 6,600; Kwomtari phylum-level Stock: 3,300; Arai phylum-level Family: 1,600; Amto-Musian phylum-level Family: 300; East Bird's Head phylum-level Stock: 17,000; and Geelvink Bay Phylum: 12,000. The total number of the speakers of the isolates is around 5,000 (Wurm 1981a).

Within each of the phylic groups mentioned above, closely related languages constitute families, with two or several families of languages which show more distant, but clearly recognizable relationship, included into language stocks. The phylic groups listed contain one, or several, language stocks which are distantly related to each other within each phylum. At the same time, the term subphylum has been introduced in Papuan linguistic classification to refer to language stocks which are aberrant when compared with non-subphylic stock in the same phylum, i.e. with the ordinary stocks in it (Wurm and McElhanon 1975). In the Trans-New Guinea Phylum, a number of the languages included in such subphylla may well represent originally unrelated languages which had been under the influence of Trans-New Guinea Phylum languages for thousands of years, as has been mentioned above.
In classifying Papuan languages, a range of lexical and structural criteria has been resorted to. One difficulty in Papuan language classification is the very widespread presence of various degrees of influences of languages upon each other on almost all levels, with not only the lexical composition but also the structures of languages apparently having undergone quite far-reaching modifications and changes under the influence of other sometimes unrelated, languages. The only relatively stable and persisting items and features in Papuan languages seem to be some verbs as lexical items, some structural characteristics of verbs and principles underlying them as well as principles underlying pronominal systems (but not to the same extent, the form of the pronouns themselves as lexical items) and also semantic traits of the grouping of lexical items (Wurm and McElhanon 1975; Wurm 1981a).

It may be mentioned that many Papuan languages show very considerable grammatical complexity, especially in their verb structure. This is particularly so with the great majority of the languages which have been included in the Trans—New Guinea Phylum, as well as with those of the Torricelli Phylum and the Sko phylum-level Stock, and also with those of some of the subgroups of the Sepik—Ramu and the East Papuan Phyla.

The intensive research work over the last twenty-five years or so has yielded many pieces of evidence making it possible to suggest the various steps leading to the probable development of the present Papuan linguistic picture through language migrations and language contacts in the past. These pieces of evidence are in part based on linguistic findings, but to a very important part also on that of corroborating findings of other disciplines such as prehistory, human genetics, cultural anthropology, biogeography, human geography, oceanography, zoology, botany, parasitology, epidemiology, etc. (Wurm, Laycock, Voorhoeve, Dutton 1975; Wurm 1981a, b).

As one piece of linguistic evidence, it may for instance be mentioned that a very major set of personal pronoun forms is very strongly present in languages of the Trans—New Guinea Phylum and in fact constitutes one of the characteristics of these languages. However, at least the second and third person singular forms of this pronoun set appear to be Austronesian loans, though the pronominal system of which they constitute elements shows decidedly non-Austronesian characteristics. At the same time, the form of the first person singular pronoun in this set is similar to the Oceanic Austronesian, not the western Austronesian, general pronoun form (Wurm 1981a, b). This seems to suggest a strong interaction between Austronesians and early Trans—New Guinea Phylum language speakers at some point of time in the past. Another interesting piece of linguistic evidence connected with personal pronouns is the presence of a widely scattered pronoun set which is strongly associated in its appearance with small phylic groups and isolates, and also with some aberrant parts and subgroups of the Trans—New Guinea Phylum and of the Sepik—Ramu Phylum (Wurm 1975d, 1981a, b). The various groups named appear to be unrelated to each other. However, the exclusive appearance of this particular small pronoun set in them seems to suggest that some remote link between these groups may be possible — these groups may perhaps constitute scattered remnants of an earlier language picture which has been largely overlaid and submerged by the spreading of other language groups.
Another interesting linguistic evidence is the appearance of far-reaching agreements in the form of subject and object markers in the verb (Wurm 1975e, 1981a, b) in a fairly narrow area which stretches westwards from the Huon Peninsula area into the Eastern Highlands and along the northern slopes of the highlands to the centre of the mainland, and further west through the highlands of Irian Jaya, with several side branches of this areal phenomenon extending into various directions from the centre of the mainland. This phenomenon gradually becomes weaker along its westward extension. It largely coincides with the area of the most conspicuous distribution of more recent Austronesian loanwords whose appearance gradually weakens westward whereas other Austronesian loanwords of a somewhat more archaic, immediately pre-Oceanic, type are found in the west. Their distribution extends eastwards, generally coinciding with the Trans-New Guinea Phylum language area.

On the basis of such linguistic and various forms of interdisciplinary evidence, it seems possible to suggest that the past language migration picture in the New Guinea area may have possibly been somehow as follows (Wurm, Laycock, Voorhoeve, Dutton 1975; Wurm 1981a, b).

The first immigrants into the New Guinea area were probably Australoids who came from the west and entered the northern section of what was then a single New Guinea-Australian continent, perhaps 60,000 or so years ago (Golson 1966a, b; Kirk 1980). They seem to have spread southwards into what is today Australia until approximately 10,000-8,000 years ago when New Guinea and Australia became permanently isolated from each other through Torres Strait coming into existence. The first Papuans, who presumably were speakers of old Papuan languages, appear to have entered the New Guinea area from the west at a time which was probably not very much earlier than that of the final formation of Torres Strait, i.e. perhaps maximally 15,000 years ago. It seems that this first Papuan migration spread right across New Guinea, and it seems possible that languages descended from ancestral language forms spoken by these first Papuan immigrants are still surviving today in the form of the isolates and members of at least some of the small phyllic groups mentioned before. Most of these are located in areas which are not in the paths of assumed later major Papuan migration routes. They may in fact constitute some remnants of an earlier large linguistic group which may have been geographically more coherent and perhaps more homogeneous than these remnants suggest today. There is a possibility that members of the East Papuan Phylum, or at least an element in them, may also be derived from languages of the first Papuan immigrants.

A few millennia later, a second Papuan migration appears to have entered the New Guinea area and spread through much of it with the languages carried by this migration overlaying the language picture brought in by the first migration. The languages assumed to have been brought in by this second Papuan migration which have very clearly identifiable structural features, seem to have in turn been overlaid in the greater part of the New Guinea area by the subsequent main Papuan language immigration which seems to have entered the area about 5,000 years ago. Surviving descendants of languages brought in by this assumed second Papuan migration are found in the far west of the New Guinea area, but traces of the presence of languages believed to have been introduced by this second
Papuan languages are encountered as substratum features in many parts of the New Guinea area today.

The languages of the Torricelli Phylum also seem to constitute archaic Papuan languages which were present in the Sepik-Ramu area before the spreading of the Sepik-Ramu Phylum languages through that area which may be estimated to have taken place at least 6,000 years ago if not earlier.

The main Papuan language migration seems to have been that which spread the Trans-New Guinea Phylum language through most of the New Guinea mainland. The present differences between Trans-New Guinea Phylum languages seem to suggest that these languages started splitting off from a common ancestor perhaps several thousand years earlier than the assumed date of the splitting up of Austronesian languages which is believed to be about 7,000 years ago (Foley 1980). It also seems that early speakers of Trans-New Guinea Phylum languages may have been living in areas situated to the west of the New Guinea mainland for several thousand years before the Austronesians arrived in that area which is believed to have happened about 5,500 years ago (Grace 1964; Pawley 1969; Wurm 1975f; Foley 1980). Subsequent contacts between these early Austronesians and early Trans-New Guinea Phylum speakers seem to have led to the adoption of a number of Austronesian loanwords by the latter. Subsequently, perhaps about 5,000 years ago or so, the early Trans-New Guinea Phylum speakers appear to have started migrating eastwards, into and through the New Guinea mainland, carrying these loanwords with them deep into the interior of the island (Wurm 1981a, b). This migration could be estimated to have taken approximately 1,000 years, and the Trans-New Guinea Phylum languages appeared to have overlaid earlier languages in much of the New Guinea mainland, with speakers of such earlier languages adopting Trans-New Guinea Phylum languages, preserving more or less apparent traces of their earlier languages in the form of substrata in the adopted languages. At the same time, the material culture and other cultural features, as well as racial characteristics, of such speakers of earlier languages seem to have remained largely unaffected in many instances. Interesting evidence for this is provided by archaeological findings showing that the builders and exploiters of the first gardens in the Kuk swamps, in the area which is today in the western part of the Western Highlands Province of Papua New Guinea, were present in that area 9,000 years ago (see J. Golson, this volume). Archaeological evidence also shows that the material culture of the area has remained stable, without displaying signs of a major disturbance a few thousand years after that date. At the same time, the language spoken in the area today belongs to one of the language families in the Trans-New Guinea Phylum, though the languages of this family show some unusual characteristics when compared with other languages of the highlands area of Papua New Guinea. The Trans-New Guinea Phylum languages are assumed to have penetrated into that area only 4,000-5,000 years ago, and it seems therefore that the original population of the Kuk swamps region adopted a Trans-New Guinea Phylum language, with some traces of its earlier language (or languages) which was presumably brought into the area as a result of the second or perhaps even the first, Papuan immigration, still present in the form of a substratum. A similar event seems to have taken place in the Kukukuku (or Angan) area, to the east and southeast of what is today the Eastern Highlands Province of Papua New Guinea. The Kukukuku people are culturally and racially different from the highlands people to the west of them, but their languages are clearly eastern
highlands-type Trans-New Guinea Phylum languages, though they also show a number of very pronounced non-highlands features which appear to represent a strong substratum in them. It seems that the Kukukuku people have taken over a Trans-New Guinea Phylum language of a comparatively recent highlands type, and lost their original language whose earlier presence is however betrayed through strong substratum features in the present-day languages of the Kukukuku people.

In the southeastern tail-end of the mainland, the Trans-New Guinea Phylum language migration appears to have displaced an earlier language group, possibly dating back to the first Papuan immigration, with this language group moving out into the Rossel Island area, but leaving behind a lexical and structural substratum in some Trans-New Guinea Phylum languages which are now situated in the southeastern tail-end area of the mainland (J. and A. Henderson 1974; Wurm 1981a). The displaced languages, believed to be the ancestors of the present-day East Papuan Phylum languages, show traces of the influence of the Trans-New Guinea Phylum languages which are thought to have displaced them. Some of their speakers appear to have migrated into the central Solomons area, presumably after they had had strong contacts with Austronesian culture which resulted in the imparting by the Austronesians, of seafaring skills to them, and with the help of favourable currents and prevailing winds (Wurm 1978). The languages show very strong influence from Austronesian languages. From the central Solomons, the languages seem to have extended along the Solomon Islands chain and apparently also to Bougainville Island. This may also have been reached by other speakers of early East Papuan Phylum languages from the New Britain area, under the impact of the Austronesian migration believed to have moved through that area about 5,000 years ago. Speakers of early East Papuan Phylum languages are thought to have reached the New Britain area well before the advent of the Trans-New Guinea Phylum speakers and of the Austronesians. It appears that languages of the East Papuan Phylum spread eastwards all the way to Santa Cruz along an Austronesian obsidian trading route extending from New Britain to Santa Cruz for a thousand years, beginning about 3,000 years ago (Green 1976a, b and personal communication).

About 3,500 years ago, an east-to-west language migration within the Trans-New Guinea Phylum seems to have originated in the Markham Valley area. It appears to have spread for some distance to the northwest and southwest, and along the northern slopes of the highlands westwards to the centre of the mainland and beyond into the highlands areas of Irian Jaya, with several side migrations radiating out from the centre of the mainland. This language migration appears to have spread relatively recent eastern Austronesian loanwords within a considerable part of the Trans-New Guinea Phylum.

The present-day Sepik-Ramu Phylum languages appear to have been introduced into, and spread through, their present area from the west as a result of a migration which may have entered that area at least 6,000 years ago or even much earlier. It seems that these languages overlaid Torricelli Phylum languages in much of the country which they entered, but at the same time their speakers do not appear to have had contact with early Austronesians, because Austronesian loanwords in them are very few - except for loanwords of obviously recent origin in near-coastal areas where Austronesians are located and for some Austronesian words which appear to
have been taken over from Trans-New Guinea Phylum languages. Contacts between speakers of ancestral Sepik-Ramu Phylum languages and ancestral Trans-New Guinea Phylum languages appear to have taken place at some later date, resulting in Trans-New Guinea Phylum influence of varying strength upon some Sepik-Ramu Phylum languages.

It seems that the speakers of Sepik-Ramu Phylum languages which are generally river people, may have been living for long periods in some river areas to the west of their present habitat, before their eastward migration began. Laycock (1973) mentions the apparent presence of some linguistic and cultural similarities between Sepik-Ramu language speakers and Australian Aborigines. Such similarities are also present on some genetic levels (MacLennan et al. 1960; Kirk 1980). Laycock draws attention to the general similarity between the phonology of the Ndu Family languages of the Sepik-Ramu Phylum and the general phonological characteristics of Australian Aboriginal languages. There seem to be also some lexical similarities between languages of the Ndu Family and some Australian languages (Laycock 1969). Interdisciplinary evidence such as the genetic evidence mentioned above, also seems to point in this direction. Laycock mentions the use of spear-throwers by some Sepik-Ramu Phylum language speakers as well as the presence of spear forms which are similar to the Australian Aboriginal spear. The speakers of some Sepik-Ramu Phylum languages have a highly developed art of painting on flat surfaces which is not unlike Australian Aboriginal bark painting, and Sepik slit-gongs used in pairs have been found to be tuned to the natural overblowing interval of the Australian didjeridu. Also, members of both sexes used to have the habit of going completely naked in some areas occupied by Sepik-Ramu Phylum speakers, which is a typical Australian Aboriginal custom, but not found elsewhere in New Guinea. All this may seem to make it possible to suggest that Sepik-Ramu Phylum speakers may constitute some remnants of the earlier Australoid population in the New Guinea area who have been strongly affected by thousands of years of contact with Papuans.

There seems to be a possibility that the speakers of the languages belonging to the Sko phylum-level Stock located in the northern coastal border area between Irian Jaya and Papua New Guinea, may be relatively recent immigrants into the New Guinea area. The special tonal systems present in these languages, the nature of their verb structure and certain consonant clusters in them are unique in the New Guinea area and the region closest to the New Guinea area in which such features are also found is in Southeast Asia in the area of the Burmic languages (Laycock 1973, 1975a, c). On the interdisciplinary level, it is of interest to note that Sko language speakers have large sea-going tacking canoes which are not found elsewhere in Melanesia — the area nearest to the New Guinea area in which such canoes are also found is again Southeast Asia (Laycock 1975a). Also the fact that Dongson bronzes had been unearthed at Lake Sentani in northeastern Irian Jaya, quite close to the present location of languages of the Sko phylum-level Stock (Van Heekeren 1958; De Bruyn 1959), is of interest in this connection. All this may perhaps suggest the possibility of some distant connection between the Sko phylum-level Stock languages and its speakers with areas located much further west in Southeast Asia.
REFERENCES


MacLennan, R., Kooptzoff, O. and Walsh, R.J., 1960. 'A survey of the blood groups and haemoglobin values in the Sepik River District', *Oceania*, 30:305-312.


The Austronesian language family is the most geographically widespread in the world, with more than 120,000,000 speakers scattered from Madagascar in the west to Easter Island in the east. Austronesian languages are spoken in Madagascar, the Malay Peninsula, southern Vietnam, Indonesia and the Philippines. They are also spoken by the aboriginal populations of Formosa, where until about 500 years ago they constituted almost the entire population.

Austronesian languages are also spoken to the east of this area, around the coasts of Papua New Guinea, in Micronesia and Polynesia and in almost all of Island Melanesia.

All of the Austronesian languages, then, are believed to go back to a single parent language, called Proto-Austronesian. The time and place at which this ancestral language was spoken is still unresolved, in absolute terms, although it is the opinion of many Austronesian scholars that Proto-Austronesian existed somewhere between 3000-5000 BC, and that its home was either in the area of the South China coast or in Formosa. The details of arguments for and against need not detain us here. There is archaeological evidence suggesting the presence of Austronesian speakers in Papua New Guinea by 3000 BC, so an original dispersal date of 5000 BC is not unreasonable.

Before going on to discuss the subgroupings and migrations of the Austronesian languages, just a word about the relationship of the Proto-Austronesians to other Asian populations. Benedict (1942, 1975) has attempted to demonstrate that the Austronesian languages are related to the Thai-Kadai languages of mainland Southeast Asia. His claim is:

```
    PROTO-AUSTRO-THAI
      /             \
     /               \
 PROTÓ-THAI KADAI   PROTO-AUSTRONESIAN
```

Even if the genetic relationship between the two is not accepted, the linguistic evidence points to ancient contacts between the two descendants of a putative Austro-Thai, and quite possibly to borrowings into Proto-Thai from Proto-Austronesian.
The subgrouping tree which best accounts for the linguistic evidence at present available to us follows Blust (1978), thus:

```
  AN
  /   \
At   Ts  Pw
   /     \
  M-P   \
     /    \
WM-P   C-EM-P
   /   \
CM-P  EM-P
   /   \
SHWNG Oceanic
```

[At = Atayalic, Ts = Tsouic, Pw = Pawiamic, M-P = Malayo-Polynesian, WM-P = Western Malayo-Polynesian, C-EM-P = Central-Eastern Malayo-Polynesian, CM-P = Central Malayo-Polynesian, EM-P = Eastern Malayo-Polynesian, SHWNG = South Halmahera West New Guinea]

The Austronesian languages of Formosa, then, may be considered to constitute three of the four first order groups of Austronesian. This high degree of internal diversity strongly indicates long occupation. Many even prefer Formosa as the original homeland of the Austronesians. It is difficult to be too definite about the matter, however.

About 5000 BC the Proto-Austronesians began to disperse, moving south from the South China/Formosa area through the Philippines and into north Borneo and north Celebes (Sulawesi). It would seem likely that there was a subsequent migration from north Borneo, which populated western Indonesia (WM-P), and another, moving south from north Celebes (Sulawesi) (C-EM-P). This migration would have moved through eastern Indonesia, one branch of which (EM-P) was the source of the languages of Oceania, among which the Melanesian languages are the focus of this seminar.

With the exception of the Papuan languages, all of the languages of Polynesia, Micronesia (except Yap and Palau) and Melanesia east of Geelvink Bay in Irian Jaya are believed to belong to a single subgroup called 'Oceanic', and to have evolved from a common ancestor language, often called Proto-Oceanic. The wider affiliations of the Oceanic subgroup are still being studied, although as the table above suggests, it is most closely related to the South Halmahera West New Guinea subgroup. All Oceanic languages have merged certain Proto-Austronesian proto-phonemes which have remained distinctive in the languages to the west. A number of grammatical features and a significant number of vocabulary items are also shared by the 'Oceanic' languages, exclusive of the Western Austronesian languages.
Austronesian speakers are believed to have reached the northwest of New Guinea about 3000 BC, touching only marginally on the mainland itself. From northwest New Guinea they seem to have migrated directly to the New Britain-New Ireland area, from where further migrations have emanated, some westwards to the northeast coast of the mainland, and some east and south to various parts of the coast of Papua New Guinea (Wurm, Laycock, Voorhoeve, Dutton 1975). From this area the Austronesian populations gradually filtered further south, right through the Melanesian chain, reaching Fiji about 1500 BC.

Attempts at subgrouping the Oceanic languages (with the exception of the Polynesian languages which will not concern us here) have not advanced very far. The overwhelming impression is one of remarkable diversity, with the exception of one large subgroup, called Eastern Oceanic or Remote Oceanic, to which we will return later.

The Oceanic languages (the Austronesian languages of Melanesia for present purposes) fall into between twenty and thirty first-order subgroups, depending on the scholar and the criteria used. While the Oceanic languages show a certain uniformity, it is the overwhelming impression of diversity that has attracted the most attention.

Some scholars, notably Ray and Capell, divided the Austronesian languages into four coordinate first order subgroups, Indonesian, Micronesian, Melanesian and Polynesian. They denied the Oceanic hypothesis, stating that there were sufficient differences between MN and PN to accord them coordinate status. More importantly, they sought to explain the 'remarkable diversity' of the Melanesian languages as being the result of the mixing of the Austronesian language of each immigrant group (called by them Indonesian) with the Papuan or non-Austronesian language(s) of the area settled by the Austronesians. The resultant pidgin languages, then, retained a largely Austronesian grammar but a considerable Papuan vocabulary.

As Professor Wurm has pointed out, there are a number of Papuan languages in island Melanesia and in Papua New Guinea the Austronesian languages are nearly all in close proximity, geographically, to Papuan languages. Undoubtedly there has been considerable interaction between the two groups, and considerable linguistic influence as well. I shall return to this point below.

Many scholars (Grace, Pawley) do not accept the 'pidginisation hypothesis' or 'substratum theory', claiming that a number of other factors must be taken into account, such as an uneven rate of change in the lexicon of Austronesian languages, with some of the languages of Melanesia changing considerably more rapidly than the bulk of Austronesian languages. Reasons for accelerated lexical replacement have not been investigated very fully as yet, although word taboo (Keesing 1969) has evidently played a much larger part than was originally considered possible.

The lexical diversity of the Melanesian languages was pointed up by a lexico-statistical classification of all of the Austronesian languages carried out by Dyen (1965). Dyen stated that Proto-Austronesian originally split into forty first order subgroups. One of these, called the Malayo-Polynesian linkage, covered most of the non-Oceanic languages and
nearly all of the Oceanic languages belonging to the Eastern Oceanic subgroup, to be discussed below. What is significant, for the moment, is that of the remaining thirty-nine subgroups, thirty-three are found in Melanesia alone. Dyen noted that there is considerable evidence of a non-lexical kind which supports an Oceanic subgrouping, but finds it remarkable that there is no lexico-statistical support for such a classification.

Let us, then, examine the subgroupings of Oceanic and try to see if it is possible to reconcile the grammatical and phonological evidence which supports such a grouping and the rather daunting diversity at the lexical level.

The Oceanic languages (after Grace) may be subgrouped as follows:

<table>
<thead>
<tr>
<th>Group</th>
<th>Region</th>
<th>Group</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sarmi Coast</td>
<td>12</td>
<td>Admiralty Island</td>
</tr>
<tr>
<td>2</td>
<td>Jayapura-Irian Jaya</td>
<td>13</td>
<td>Nissan</td>
</tr>
<tr>
<td>3</td>
<td>Sepik-Madang</td>
<td>14</td>
<td>N. Bougainville-Buka</td>
</tr>
<tr>
<td>4</td>
<td>Rai Coast-NW New Britain</td>
<td>15</td>
<td>S. Bougainville</td>
</tr>
<tr>
<td>5</td>
<td>Markham</td>
<td>16</td>
<td>Choiseul</td>
</tr>
<tr>
<td>6</td>
<td>Huon Gulf</td>
<td>17</td>
<td>New Georgia</td>
</tr>
<tr>
<td>7</td>
<td>Milne Bay-Central Province</td>
<td>18</td>
<td>W. Isabel</td>
</tr>
<tr>
<td>8</td>
<td>Northern Province</td>
<td>19</td>
<td>Santa Cruz</td>
</tr>
<tr>
<td>9</td>
<td>Kimbe (NW New Britain)</td>
<td>20</td>
<td>Eastern Oceanic</td>
</tr>
<tr>
<td>10</td>
<td>SW New Britain</td>
<td>21</td>
<td>Southern New Hebrides</td>
</tr>
<tr>
<td>11</td>
<td>Tolai-New Ireland</td>
<td>22</td>
<td>New Caledonia</td>
</tr>
<tr>
<td></td>
<td>Subgroup 20: Eastern Oceanic, may be represented diagrammatically as follows:</td>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

![Diagram of Eastern Oceanic subgrouping]

The composition of the Eastern Oceanic subgroup has altered slightly during the last few years, but is substantially as linguistic observers have sensed it to be for a long period of time. Codrington (1885) and Ray (1926) discussed it in general terms and more recently Grace (1955) and Pawley (1972). The only significant alteration was proposed by Pawley (1977), who excluded the southeast without explaining his reasons. The present writer, currently engaged in a classification of all Solomons languages, believes that the southeast Solomons should remain in the Eastern Oceanic subgroup as diagrammed. (The Eastern Oceanic subgroup has
been renamed Remote Oceanic by Pawley. For purposes of this paper we will retain the better known term, Eastern Oceanic.)

The arguments for and against the inclusion or exclusion of certain languages from the Eastern Oceanic subgroup need not concern us here. What is important is to note that the Oceanic languages fall into numerous small first order subgroups, with one exception, the Eastern Oceanic subgroup. Tryon (1976 and forthcoming) has shown that this subgroup is much larger, in terms of language numbers, than had previously been thought. The Eastern Oceanic subgroup contains approximately 120 languages, while the maximum membership of other subgroups would probably not exceed twenty.

So in island Melanesia we have a linguistic picture of numerous distantly related (first order) groups, and a single large homogeneous group which would seem considerably younger than the other groups as shown by the relatively close relationship of its members. In rough glotto-chronological terms the group could be traced back to a single ancestral language about 3,000 years ago.

Green (1976) has remarked that the Eastern Oceanic languages have been regarded as most like Indonesian languages. In view of the 'pidginisation' theory discussed above, Grace's comments could be reinterpreted as saying that the Eastern Oceanic languages are the least 'contaminated' by Papuan languages, that they are the only group to have escaped significant influence from them.

Grace draws two conclusions as follows:

If these judgements that these languages are more like the Indonesian languages than are the other languages of Oceanic are correct, then either (1) they must have separated from the Indonesian languages more recently than did the others or (2) if they separated from them as early as did the others, they must have changed less in the ensuing period of separate development (1976:108).

From what has been discussed above, it would appear that the first conclusion has more merit than the second. Indeed it is this very question which will be the subject of intensive investigation by the present writer as the Department's Austronesian Research Project develops. It seems that most scholars are not agreed that word taboo and an uneven rate of lexical replacement are insufficient to account for the lexical diversity noted in the languages of Melanesia. The influence of existing Papuan populations must have been a factor, although the degree of this influence remains to be determined. Recent work in the Solomons and the New Hebrides (Vanuatu) has shown links, tentative at this stage, between the presumed 'non-Austronesian' vocabulary of the Austronesian languages in Melanesia and the East Papuan Phylum. While it is not necessary to go as far as a wholesale acceptance of the 'pidginisation' theory, it appears more and more likely that much of the diversity in present day Melanesian languages can be attributed to Austronesian contact with Papuan populations as they migrated into the areas they now occupy.
If this is so, how did the Eastern Oceanic subgroup of languages escape the 'contamination' of the Papuans? The solution which presents itself to me is that they did not follow the same migratory route as the other Oceanic groups (i.e. along the north coast of Papua New Guinea and into the New Britain–New Ireland area), but that they were blown east past New Britain and New Ireland and into Micronesia, from whence they subsequently reached the South Solomons–Northern New Hebrides area and dispersed, perhaps as recently as 3,000 years ago. The traditions of both Malaita and San Cristobal (Solomon Islands) tell that the present Melanesian population was not the first to settle these islands.

What would have been the point of departure for the Eastern Oceanic speakers, presuming that future research confirms the migration route advanced here? Of course it is not possible to answer such a question, especially as our knowledge of the languages of Eastern Indonesia is so minimal. The eastern Indonesia area does, however, look the most likely setting off point, especially as preliminary studies by Blust (1978) have shown an Eastern Malayo-Polynesian subgroup of Austronesian which groups together not only the Oceanic languages, but also the languages of West New Guinea and South Halmahera. Grace (1976) felt that if the Eastern Oceanic languages did share a longer history with the Indonesian than the other Oceanic languages, then the Oceanic hypothesis would be false. However, this statement predated the discovery of the existence of the Eastern Malayo-Polynesian subgroup, which effectively pushes the boundary of the 'Oceanic'-type languages further to the west than has been previously known. Of course the Oceanic hypothesis is not sacrosanct, and further new ideas on subgrouping and migration theory are to be expected as the languages of eastern Indonesia become better known.

The picture in Melanesia, then, is one of great linguistic diversity. The evidence which we have suggests a great and continual movement of peoples up and down the islands of the chain, and a constant interaction between Austronesian-speaking groups, and between Austronesians and Papuans. The extent and degree of the movements in and around the islands of Melanesia has only recently become known (see also Laycock 1975); this subject will be, we hope, fully worked out through interdisciplinary approaches.

What, then, did the Melanesian make of such linguistic diversity and how did they cope in their daily lives? The responses of many are discussed in the papers on trade languages and lingue fraîche. For non-neighbouring groups trade languages were the response to the problem. With geographically contiguous groups, multilingualism was and is still common, any man being reasonably expected to know at least one language apart from his own, excluding the wider-ranging trade languages.

In areas where Austronesian and Papuan language groups are neighbours, the response is varied in terms of which language becomes the language of daily communication. In the Solomon Islands, for example, in the case of Roviana (Austronesian) and Mbaniata (Papuan) speakers, the Mbaniata speakers use Roviana; a little further to the north, however, Sengga (Austronesian) speakers use Mbilua (P) in dealings between the two groups. It is difficult to generalize, but experience has shown that where Austronesians and Papuans come together, it is the normal expectation that the Papuan will know the language of his Austronesian neighbour, but not
vice versa. What is interesting, and perhaps significant, is that the
grammar of the Papuan languages in island Melanesia, with one or two
notable exceptions, is much simpler than that which one normally encounters
in the Papuan languages of Papua New Guinea proper, perhaps reflecting
centuries of contact with Austronesian-speaking peoples and some
accommodation to them.

The diversity remains, but the peoples of Melanesia have evolved
solutions, especially very widely known *lingue fraîche* in the past 150
years. But they had also evolved solutions long before European explorers
entered the Pacific.

REFERENCES

Benedict, P.K., 1942. 'Thai, Kadai, and Indonesian: A New Alignment in


Paper presented at the Second International Conference on Austronesian
Linguistics, Canberra, January 1978.

Paper 136.

Press.

Dyen, I., 1965. *A Lexicostatistical Classification of the Austronesian
Languages*. IDAL Memoir 19.

Grace, G.W., 1955. 'Subgrouping of Malayo-Polynesian: A Report on

Grace, G.W., 1976. Review article of R.C. Green and M. Kelly, eds, 1972,
*Studies in Oceanic Culture History*, vol.3, *Journal of the Polynesian
Society*, (85)1:103-112.

Keesing, R.M. and Fifi'i, J., 1969. 'Kwaio Word Tabooing in its Cultural
Context', *Journal of the Polynesian Society*, (78)2:154-177.

Laycock, D.C., 1973. 'Sissano, Warapu, and Melanesian Pidginization',

Pawley, A.K., 1972. 'On the Internal Relationships of Eastern Oceanic
Languages', in R.C. Green and M. Kelly, eds, *Studies in Oceanic
Honolulu: Bishop Museum.


