Short title:

Social aspects of multilingualism in New Guinea.

Gillian Sankoff

#### ABSTRACT

Title - Social aspects of multilingualism in New Guinea Author - Gillian Sankoff Department - Sociology and Anthropology Degree - Doctor of Philosophy

This thesis examines the nature and extent of multilingualism among the Buang of northeastern New Guinea, treating both the history and present status of multilingualism in Buang society in an analysis which is also relevant to other New Guinea groups. A careful examination of the relationships among Buang dialects, and between them and other Huon coastal area languages forms the linguistic background to this study.

Acquisition, knowledge, use and attitudes about other languages are closely related to the kinds of social relationships existing between Buang and other groups. The extent of multilingualism among the population is described in terms of the results of comprehension tests which, show the Buang to be multilingual both in foreign and in related languages. Usage and code choice are discussed in connection with the former, and non-determinate aspects of code-switching are seen as crucial both to linguistic change (especially code repertoires) and to individual speech strategies. With respect to related languages, the tests, in conjunction with lexical comparisons, throw light on the distinction between mutual intelligibility and bilingualism.

# C SOCIAL ASPECTS OF MULTILINGUALISM

IN NEW GUINEA 3

by

Gillian Sankoff

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

McGill University April, 1968 Montréal

#### PREFACE

This thesis is based on data which I collected in New Guinea from July 1966 to August 1967, during which time I held a Canada Council Pre-Doctoral Fellowship.

In planning this research, I developed ideas which I first discussed with Prof. Margaret Lantis, whose 1960 paper on vernacular culture anticipated in some detail the frameworks subsequently utilised by sociolinguists, and with whom I was privileged to study during 1963-64. Briefly, I planned to study speech variation in situations involving non-native speakers of one of the evangelical languages of the Lutheran Church in New Guinea. After preliminary survey in the field, I altered my original plan, deciding that the constant factor in the situation and focus in my analysis would be the presence not of speakers of a church language, but of native speakers of one of the local languages. This modification was prompted partly by a need for greater understanding of local usage and by the greater relevance of such a study to New Guinea society as a whole, and partly by considerations relating to other projects on which I was concurrently working. In effect, this decision enabled me to bring to bear a range of social science methodologies on the broader aspects of multilingualism.

Most of my time in New Guinea was spent in Mambump, a Buang village in Mumeng Subdistrict, Morobe District. The serious methodological problem of observing and participating in situational behaviour without systematically biasing the behaviour and its subsequent analysis was largely solved by my being accepted as a Buang speaker long before I was one. In addition, I was made to feel accepted as a Mambump villager, participating in any aspect of village life, being supplied with food and housing, and enjoying the emotional satisfaction of belonging to the close-knit community, while at the same time litle of the obligation of village membership was placed upon me, due to the people's understanding and appreciation of the nature of my researches and their concern that I have complete and accurate data. These remarks apply as well to Buang migrants in Mumeng, Lae and Port Moresby.

I paid several visits to each of the seven other headwaters Buang villages, particularly Rari and Vagau, and also visited most of the central and lower Buang villages. I spent a total of approximately four months away from the Buang region, about half of it studying Buang migrants in Mumeng, Lae and Port Moresby, and half travelling through the coastal and hinterland areas of Morobe District, in conjunction with another research project.

My supervisor, Prof. R.F. Salisbury, encouraged me to study Neo-Melanesian before going to New Guinea. By the time I arrived in Mambump I had spent enough time in Lae to be quite confident in this language. Once in the Buang area, I attempted to adopt Buang as quickly as possible although I continued to use Neo-Melanesian for some topics with some in

people throughout my stay. I learned little Yabem, but understood enough at least to be able to positively identify it when it was being used.

In line with the range of approaches I took toward the problem of multilingualism, I collected many types of data relevant to this thesis, including:

- (a) general ethnographic materials, on topics including social organisation and relationships with other groups, historical and current, as well as specific data such as life histories and statistics on intermarriage;
- (b) observations on language usage collected on a continuing basis and recorded in my field notes and sometimes on tape as well;
- (c) test materials on linguistic abilities among the Buang;
- (d) attitudes, purposely elicited and otherwise, relating to languages and language use;
- (e) linguistic materials, especially vocabulary lists, from a number of language groups in the Morobe District;
- (f) historical materials, gathered from miscellaneous sources.

Due to the extensive travel involved in my work, I was dependent on the hospitality of many people. I must single out for special thanks the people of the subdistrict headquarters in Mumeng, most of whom at some time and in some way eased my travels and contributed to my comfort. In particular, Chris and Lyn Heysen and John and Miriam ToVue befriended me and helped me in every possible way. In Lae, my mentors were John and Mary Womersley, who introduced me to New Guinea life and whose useful advice and generous hospitality are much appreciated. I would like to thank my <u>wantok</u>s, Bruce and Joyce Hooley of the Summer Institute of Linguistics, for helpful discussion and encouragement.

Professor Salisbury's supervision has been invaluable in every step of this work. In the formulation of the research proposal and my preparation for the field, in the extensive feedback (from a distance of 12,000 miles) to my periodic reports, in his criticism and suggestions in the crucial last months of field work, in making the long walk from Mumeng to visit us in Mambump, in his support and encouragement in the writing of this thesis, he has devoted a great deal of time and effort on my behalf.

My husband Didi took a year from his own work to accompany me to New Guinea. He was with me and assisted me in my field work in Mambump until January 1967, when he had to find work in Port Moresby (for financial reasons). He also contributed much to the preparation of this thesis. In particular, he organised the numerical data consisting of test results and lexicostatistic data so that they could be tabulated by machine. He wrote the two computer programs mentioned in Appendix B, and is responsible for the precise mathematical description of the borrowing - loss model, also in Appendix B. He also suggested many of the examples in Chapter 5. His interest, support and encouragement throughout has been invaluable.

Montreal, Quebec April, 1968 G.S.

V

Table of Contents

 $\mathbf{O}$ 

C

٦	Ethnolinguistics and multilingualism			٦	
<b>1</b> •	LTNN	INOLINGUISTICS AND MULTILINGUALISM			
	1.1	L <b>a</b> ngu	age vs. culture	1	
	1.2	Ethno	Ethnolinguistics		
		1.21	History of ethnolinguistic study	3	
		1.22	Situations, factors and functions: sociolinguistics and multilingualism	5	
		1.23	Summary	11	
		1.24	Implications for research	11	
	1.3	Multi	lingualism	12	
		1.31	Linguistic aspects	13	
		1.32	Political aspects	16	
		1.33	Educational aspects	16	
		1.34	Psycholinguistic aspects	17	
	1.4	Scope	of this study	19	
2.	Mult	ilingu	alism in New Guinea	22	
	2.1	Langu	age distribution and classification	22	
	2.2	Langu	age diversity and multilingualism	26	
	2.3	Trade	and lingua francas	29	
	2.4	Polit	icians and multilingualism	30	
	2.5	Summa New G	ry: multilingualism in traditional uinea	32	
	2.6	Multi	lingualism and change	33	
3.	The	Buang		38	
	3.1	Locat	ion	38	
	3.2	Ecolo	gy and subsistence	40	

 $\sqrt{1}$ .

Page

	<b>२</b> २	Ortatna	19
	0.0		43
	3.4	Recent history	45
	3.5	Social organisation	48
	3.6	Supra-village groupings	51
	3.7	Bases of power	52
4.	Bu <b>a</b> n	g and neighbouring languages	55
	4.1	Buang as an Austronesian language	55
	4.2	Lexicostatistics and Mumeng-Buang	67
	4.3	Relationships between other neighbouring languages and the Mumeng-Buang family	73
	4.4	The problem of language and dialect	84
5.	Buan folk	g dialects: linguistic comparisons and view	88
	5.1	Phonology	88
		5.11 Description of phonemes	88
		5.12 Distribution of phonemes	95
	5.2	Morphology	98
	5.3	Syntax	98
	5.4	Semantic shifts	99
	5.5	Usage of other dialect forms	101
	5.6	Folk views of dialect and intelligibility	102
6.	Recei	ntly introduced languages: Yabem, Melanogian and English	107
	Neo-1		107
	6.⊥	labem	T07
	6.2	Neo-Melanesian	109
	6.3	English	112
	6.4	Yabem, Neo-Melanesian and English in the diffusion process	114

 $\bigcirc$ 

	6.5	Summary and conclusions	117
7.	Lang and	uage usage in situations involving Buang foreigners	118
	7.1	Foreigners in the Buang area	118
		7.11 Resident foreigners	119
		7.12 Transient foreigners	123
	7.2	Communication with foreigners away from home.	127
	7.3	Languages spoken by Buang	130
	7.4	Summary	132
8.	Lang	uage usage in situations involving Buang only.	134
	8.1	Generalities	134
	8.2	Communication situations involving other- dialect Buang	135
	8.3	Formal situations	140
	8,4	Language usage among leaders	141
	8.5	Form: oral tradition and written commu- nications	142
	8.6	Language usage and language choice	143
9.	Lang	uage proficiency in Mambump	148
	9.1	Introduction	148
	9.2	The test	151
	9.3	The sample	155
	9.4	Test results	158
		9.41 Comparison of the two parts of the test	158
		9.42 Comparison of the languages	159
		9.43 Distribution of results for each language	164

C

Jui

		9.44	Variations in multilingualism in Mambump's population	168
		9.45	Distribution of ability in the languages	174
10.	Test	result	s in Central and Lower Buang	177
	10,1	Testi	ng procedures	177
	10.2	The sa	ample	179
	10.3	Resul	ts	180
	10.4	Non-re	eciprocal intelligibility	182
11.	Situa	tional	factors in code switching	<b>18</b> 5
	11.1	Intro	duction	185
	11.2	The cl	hurch situation	186
	11.3	The vi	illage meeting	190
	11.4	Compar	risons and implications	192
	11.5	The Ya	abem <u>Sam</u>	194
	11.6	Some a	situations	196
	11.7	Analys	sis	200
12.	Summa	ry and	conclusions	206
	12.1	Buang	multilingualism, past and present	206
	12.2	Multil	Lingualism in related languages	207
	12.3	Multil	Lingualism in foreign languages	210
Apper	ndix A	. Popu	lation	214
Apper	ndix B	. Lexi	costatistics	217
	B.1	Collect of perc	tion of word lists and calculation centages of shared cognates	217

 $\bigcirc$ 

B.2 Computations of borrowing and loss rates	221
Appendix C. English versions of texts used in testing	224
References cited	229
Maps:	

Map 3.1	New Guinea, showing the Huon Gulf area	41
Map 3.2	Mumeng-Buang area	42
Map 4.1	Languages of the Huon Gulf	59

.

×

1. Ethnolinguistics and multilingualism.

1.1 Language vs. culture.

Hymes (1964:11) has remarked that,

... the first half of the [20th] century was distinguished by a drive for the autonomy of language as an object of study and a focus upon description of structure

in American linguistics. This somewhat strict delimitation of subject matter proved particularly fruitful in the analysis of language as a code or system, "outlawing the use of semantic criteria for descriptive purposes and basing structural analysis on distributional criteria instead" (Goodenough 1957:169). The seminal work of Sapir (1925, 1933) followed by Swadesh (1934) on the articulation of the phonemic principle paved the way for further developments in morphological and syntactic analysis. Throughout, emphasis was placed on the internal patterning of language, and analysis of these patterns achieved both rigour and elegance.

In anthropology, similar efforts were being made to characterise the subject matter of the discipline as autonomous and susceptible to independent investigation. As early as 1917, Kroeber, in stressing the "superorganic" nature of culture, was at pains to clarify the confusion existing at the time about the relationship between biological evolution and culture (Kroeber 1917); the separation of the three concepts "language", "race", and "culture" was regarded as a major advance in anthropology (Boas 1940; Kroeber 1948). The distinction between the concepts of culture and society was the subject of much debate among anthropologists and sociologists, and although the Kroeber-Parsons statement of 1958 may not be the last word on the matter (see, for example, Aberle 1960), their position, expressed as follows, has been widely accepted: <u>social system</u> refers to "the specifically relational system of interaction among individuals and collectivities"; <u>culture</u> to "transmitted and created content and patterns of values, ideas, and other symbolic-meaningful factors in the shaping of human behavior and the artifacts produced through behavior" (Kroeber and Parsons 1958:582).

The search for pattern, for internal consistency, in languages and cultures, and in "language" and "culture" generally, has led to certain parallels in linguistics and anthropology, though it is incontestable that linguists have been far more successful in their task of "discovering the patterns", or providing parsimonious and sufficient analyses than have anthropologists. Arising from this focus in both linguistics and anthropology has been the development of linguistic and cultural relativism.

Another parallel has been the lack of attention paid in either field to behaviour, to individual activity, as compared with the attention which has been devoted to overall pattern and structure. According to Hymes (1962x47), this emphasis in linguistics on "the regularities of the

code", on <u>langue</u>, as opposed to <u>parole</u>, has arisen partly because of the need "to secure the autonomy of the formal linguistic code as an object of study". Until recently, a parallel trend predominated in anthropology, with more attention being given to the analysis of structural regularities (in British social anthropology) or cultural themes and patterns (in American anthropology) than to the behaviour of individuals within particular social and cultural systems.

1.2 Ethnolinguistics.

# 1.21 History of ethnolinguistic study.

Despite the stress they placed on the autonomy of language and culture, anthropologists and linguists were fully aware of and concerned with the relationships between the two areas of study. Boas, often considered the father of both linguistics and anthropology in America, said in 1911, "... language seems to be one of the most instructive fields of inquiry in an investigation of the fundamental ethnic ideas" (Boas 1911:70). Indeed, most subsequent work in the field which later became known as language-and-culture took the approach suggested by Boas, in dealing with "referential meaning" (Hymes 1962a). Preoccupation with linguistic categories and their relationships with cultural categories and with systems of thought can be traced throughout the work of Sapir and Whorf, and of many others (e.g. Lee 1959). This field has been advanced recently by scholars interested in "ethnoscience" (Sturtevant 1964), or as Schwartz (1967) would have it, "ethnemics".

There have been two main points of view on the relationship between language and culture. The first is that language is a part, or subsystem, of culture, with certain functions for the whole, e.g. Goodenough (1957:169) says, "The relation of language to culture ... is that of part to whole". The second is that language is a separate system, analogous and parallel to culture, what Gumperz (1964a:151) has called "The common view that language stands apart from social phenomena, which is held by anthropologists of many persuasions...", and it appears in statements such as, "The lexicon of language holds as it were a mirror to the rest of culture" (Greenberg 1948:142). Though the term "ethnolinguistics" properly refers to the whole range of aspects of the relationship of language to other parts of culture (Hymes 1964, 1965), the great majority of studies done prior to the mid-fifties reflected the second or "mirror image" model of language and culture. So great was this bias that a review entitled "The basic problems of ethnolinguistics" as late as 1964 (Spence 1964) mentioned only this aspect of the field.

I shall subsequently use the term "language and culture" to refer to the traditional study of the relationship between linguistic and cultural patterns and categories, often involving the "mirror image" view of this relationship. The term "ethnolinguistics", implying the more inclusive idea of "language in culture", will be used to refer to the whole range of studies of the relationship between any or all aspects of culture and any or all aspects of language. Finally, I shall use the term "sociolinguistics" in referring to studies of the interaction of social factors and speech variation.

# 1.22 Situations, factors and functions: sociolinguistics and multilingualism.

Since approximately 1950, there has been a convergence of interest in many of the social sciences about phenomena variously described as "behaviour settings" (Barker and Wright 1954), "contexts" (Scheflen 1963), "encounters" (Goffman 1961), "transactions" (Berne 1964), "vernacular cultures" (Lantis 1960), and "events" (Kimball 1955). These authors represent the disciplines of social psychology, sociology, psychiatry and anthropology, and their common interest is in variations in social behaviour at the micro-level. All are concerned with the concept of "setting" or "situation", and most have discussed a series of factors or components considered to be important in the definition and description of situations.

Those whose primary interest is in variation in speech behaviour have developed similar interests. Thus the concept of "setting" has also been used by Fishman (1964), Ervin-

Tripp (1964) and Hymes (1967). Related closely to some of these formulations is Hymes' (1962a:25) concept of "speech event", which he analyses in terms of seven components or factors: sender, receiver, message form, channel, code, topic and setting.

The investigation of actual contexts and situations of language use has been largely a mapping activity, concerned with finding relevant frames for analysis. Tanner (1967) notes that this situational and contextual focus is related to a long-standing interest in British anthropology and linguistics, beginning with Malinowski's (1935) introduction of the idea of "contextual analysis", and continued in the work of J.R. Firth (1935,1957).

Firth (1935) described the content of what he called "speech situations" as follows:

We learn speech in the routine action of the daily round. Speech is very largely vocal action in control of things and people including oneself, action in relation or in adjustment to surroundings and situation. We establish ourselves on speaking terms with our environment, and our words serve our familiarity with it. "The study of words in cultural familiarity" might almost describe this aspect of semantics. (reprinted in Firth 1957:28-29)

and continuing,

... most of the give-and-take of conversation in our everyday life is stereotyped and very narrowly conditioned by our particular type of culture. It is a sort of roughly prescribed social ritual, in which you generally say what the other fellow expects you, one way or the other, to say.

(Ibid: 31)

He mentions various types of situations without giving any suggestions for possible classification of these, but goes

on to say "There is an obvious need for a more accurate study of our speech situations in order that categories may be found which will enable us to extend such social studies all over the world". (Ibid:31)

Social factors involved in speech variation, including variations in terms of address (Evans-Pritchard 1948), in levels of vocabulary (Newman 1955) and respect vocabulary (Milner 1961), and in choice of allomorphs (Fischer 1958) have prompted some study, but it appears that "speech event" or "speech situation" analysis has been more extensively and more systematically applied in cases where there is a great deal of variation in one variable in particular, that is, in the linguistic code (Ervin-Tripp 1964; Ferguson 1959; Fishman 1965; Gumperz 1964a, 1967a). Such studies concerned primarily with variation in the linguistic code itself, necessarily treat cases in which one characteristic of the speech community is bi- or multilingualism. By focusing on usage of the various languages within a given speech community, rather than trying to separate the various cultural and linguistic stands as in traditional acculturation studies or in historical linguistics, this approach implies a clear break with the one language - one culture model of traditional anthropology. A great deal of sociolinguistic research on multilingualism has in fact used a speech community and situational focus, and has emphasized code switching to the partial exclusion of other variables and other emphases.

Studies of code switching <u>per se</u> include the studies mentioned in the previous paragraph as well as Herman (1961), Diebold (1963), Gumperz (1964b,1967b) and Hasselmo, (n.d.). A large number of variables have been suggested to account for the **alternating** use of linguistic codes, and the following list, abstracted from Fischer (1958), Mackey (1962), Herman (1961), Solenberger (1962) and Ferguson (1959) is classified in terms of Hymes' factors in speech events:

- Sender and receiver. <u>Sex</u>, <u>age</u>, <u>class</u>, <u>social role</u>.
  Other characteristics of mood, physical and men-
- & Other characteristics of mood, physical and men-2) tal state, might be included here, e.g. <u>anger</u>, <u>excitement</u>, <u>fatigue</u>, <u>tension</u> or <u>relaxation</u>. Even the intention of interlocutors might belong in this category, e.g. <u>desire to include or exclude</u> <u>certain people</u> from the communication.
- 3) Message form. <u>Prayer</u>, <u>cursing</u>, <u>poetry</u>, <u>folk\_lite-</u> <u>rature</u>.
- 4) Channel. <u>Mass media</u>, <u>correspondence</u>, <u>diaries</u>, <u>radio</u>, <u>newspaper</u>.
- 5) Code. This is the central variable which the authors concerned are trying to account for, however some of its characteristics, e.g. <u>prestige</u>, may be of great importance in predicting the occurrence of particular codes.
- 6) Topic. <u>Task-orientation</u>, <u>counting</u>, <u>political speech</u>, <u>news broadcast</u>, <u>instructions</u>, e.g. to servants, waiters, workmen, clerks.
- 7) Situation. This is a complex and important category which includes not only physical setting (<u>home</u>, <u>community</u>, <u>school</u>, <u>work</u>, <u>meetings</u>), but also more abstract qualities such as mood (<u>formal</u>, <u>informal</u>, <u>private</u>, <u>public</u>, <u>emotional</u>) or what <u>might be called mental setting (dreaming</u>).

It has been suggested, however, that an analysis of this sort, which aims at establishing a "taxonomy of usage" (Gumperz 1967b:139), cannot adequately account for "the many subtle and often momentary shifts in verbal strategy which are so common in everyday talk" (<u>Ibid</u>:139), that in fact what is needed is an analysis of the rules of selection by which people operate in choosing from among the codes available to them ("codes" referring to dialects, defined socially and/or regionally, as well as languages). Gumperz' objection is to a mechanical cross-tabulation of different code use with lists of variables (the one just cited being one example) whose status would remain forever "etic", and he argues that an "emic" analysis of the choice making criteria used by the speakers would explain the "social meanings [conveyed by] code-switching" (Gumperz 1967b:141).

Though I agree with Gumperz that the type of analysis he advocates would be more powerful as an explanatory tool, I disagree with a unique emphasis on code switching at the micro-level in anthropological and sociological studies of multilingualism. In a broader context, the social, historical, linguistic and other factors which make possible the occurrence of interchanges involving linguistic alternation demand greater systematic study. Even in terms of the immediate situation, the effects of language switching on the course of interaction in the situation may be as important as the reverse.

This latter involves a study of linguistic function, in which the point of departure in viewing the relationship between language and culture (or speech and society) is the obverse of the theoretical position which prompts a stress on factors in speech events. That is, it examines the effects of variation in linguistic form, style, levels, etc. on social relation, rather than <u>vice versa</u>.

Firth (1935) discussed linguistic function as fol-

It is perhaps easier to suggest types of linguistic function than to classify situations. Such would be, for instance, the language of agreement, encouragement, endorsement, of disagreement and condemnation. As language is a way of dealing with people and things, a way of behaving and of making others behave, we could add many types of function - wishing, blessing, cursing, boasting, the language of challenge and appeal, or with intent to cold-shoulder, to annoy or hurt, even to a declaration of enmity. The use of words to inhibit hostile action, or to delay or modify it, or to conceal one's intention are very interesting and important "meanings". Nor must we forget the language of social flattery and love-making, of praise and blame, of propaganda and persuasion. (reprinted in Firth, 1957:31)

To suggest types of function is perhaps no more difficult than to suggest examples of situations. But to propose an exhaustive classification of either is not at all an easy task. Hymes (1962a) cites Jakobson's (1960) theoretical work in this field as "a decisive advance for anthropology and linguistics", as "it breaks with the confinement of most schemes to two or three functions (referential: expressive: conative)" (Hymes 1962a35).

To Jakobson's list of six major functions of speech, Hymes has added a seventh, so that his list of functions corresponds to his list of factors. According to Hymes (1962a:31), the seven major functions of speech are: expressive (emotive); directive (conative, pragmatic, thetorical, persuasive); poetic; contact (in which is included Malinowski's (1935) "phatic communication"); metalinguistic; referential; and contextual (situational).

# 1.23 Summary.

A consideration of both factors and functions in speech, emphasizing speech in action rather than language in thought, brings ethnolinguistics into the realm of behavioral and empirical investigations, and makes it possible to relate these sociolinguistic studies to topics of long-standing interest to social anthropologists, such as social organisation, political and economic activity, socialisation of children, and so on. The theoretical interest of sociolinguists in analysis focused on the concepts of situation and of speech community, more specifically on the phenomenon of code switching, and the fact that multilingualism furnishes exceptionally good data for this type of analysis have combined, however, to make for a plethora of studies from this point of view alone and a more profound understanding of code switching than of other aspects of multilingualism.

# 1.24 Implications for research.

The preceding sections outline the ethnolinguistic literature which led to my planning research on multilingualism in New Guinea. This literature is highlighted by a series of papers in sociolinguistics, which have a situational focus and emphasize code switching. Viewing multilingualism in terms of code switching appeared to be a highly appropriate way of defining the problem. In addition, it offered what Macnamara (1967a:75) has referred to as "the opportunity ... for elegant and rigorous research designs". Further, it suggested applications to decision making, and to the analysis of linguistic and cultural change.

In the course of fieldwork, however, I began to see the code switching model in a somewhat different light. Though it had unquestionable value in the analysis of some aspects of multilingualism, it did not easily provide answers to certain other questions about multilingualism, where other analytical approaches seemed more appropriate. I found that the number of "independent variables" on which data had to be collected and organised in order to feed into a model of code switching (viewed as the "dependent" variable) was extensive, that a number of these variables were highly interesting in themselves, and that certain aspects of multilingualism did not fit naturally into an analysis which has code switching as its central focus. It is worth noting that in a multilingual community of a type different from the one I studied, Diebold (1961a, 1961b) found that "interference" (see 1.31) predominated over code switching.

# 1.3 Multilingualism.

Although the interests of modern anthropologists in

multilingualism have been concentrated rather narrowly on its "sociolinguistic" aspects (as defined in 1.21), the phenomenon has been considered from a wide variety of theoretical viewpoints by workers in other branches of the humanities and social sciences, including linguists, political scientists, educators and psychologists.

## 1.31 Linguistic aspects.

The "purely linguistic" aspects of multilingualism have only recently received systematic attention from linguists, the two outstanding works in the field being Weinreich's (1953) <u>Languages in Contact</u> and Haugen's (1956) <u>Bilingualism in the Americas</u>. Tradition in both historical and descriptive or structural linguistics had stressed the study of "pure" languages and, as Vildomec (1963:67-68) points out the classical linguists regarded "mixing" as impossible. Such a position may be largely attributable to their preponderant concern with <u>langue</u> rather than <u>parole</u>. Only when contact results in integration (Haugen 1956:40) of borrowed elements does mixing become a property of <u>la</u> <u>langue</u>; other stages of interference (Weinreich 1953) are related rather to <u>la parole</u>, that is, they are properties of the speech of bilingual and multilingual people.

Both Weinreich and Haugen have dealt with this microcosmic level in language contact, and Haugen (1956:40) has suggested three stages of diffusion between languages: switching (alternation), interference (overlapping) and integration (adoption or borrowing). Diebold (1961b:101) indicates a method for distinguishing integrated elements (learned by native speakers of the borrowing language during childhood language acquisition) from elements showing interference (acquired through bilingualism), and also suggests a third term for a model involving degrees of bilingualism, i.e. incipient bilingualism, (in addition to coordinate and subordinate bilingualism.

Two types of language contact which have been more extensively studied are (1) situations resulting in the emergence of pidgin and creole languages and (2) situations involving dialects of the same language or closely related languages.

Dialect geography, by its very definition, involves a comparison of related dialects which are geographically contiguous. Multilingualism with respect to dialect is a feature of many such situations, and social factors such as prestige (see Ferguson 1959) and symbolic (e.g. nationalistic) connotations are often important, especially in the folk view of the status of a given code as a language or dialect. Among the more intensively studied groups of dialects is Serbo-Croatian (Ivic 1958).

Pidgin languages, involve a period of multilingualism in their history, as speakers of distinct languages first speak the pidgin as a second language. Even in the creolisation phase, multilingualism may not decline. One possible reason for this is that the creolisation phenomenon is pro-

ceeding at a rate less rapid than the rate of increase in new speakers who speak it as a pidgin; another is that some speakers who have lost their original language may be in the process of again becoming bilingual, this time in the creole language and the more prestigious national language on which the creole is based. This is the case, for example, in the "diglossia" situation which Ferguson (1959) describes as obtaining in Haiti between Haitian Creole and Standard French. A large proportion of the work on creole languages has been carried out in the Caribbean and inter-American area, for which there is an excellent bibliography by Rubin (1963). The majority of these studies do not, however, deal with aspects of multilingualism, and of those which do, most simply present figures of a census type, giving the proportion of people claiming to speak each of the various languages as a mother tongue.

A particularly interesting variety of pidgin language is the lingua franca (almost always pidginized to some extent in the process of becoming a lingua franca) in currency over a wide area, Swahili in East Africa being perhaps one of the more notable examples. Many lingua francas are trade languages, (Samarin 1962) differing from other pidgins in their use over a wider geographical area and in their specialization of function to the trading context.

A pioneer in the study of pidgin languages was Hall, whose work on Neo-Melanesian is referred to in Chapter 6, but serious study of pidgins has not been extensive. For a recent bibliography on pidgins, creoles and trade languages, see Hymes (1964::543-546).

#### 1.32 Political aspects.

Political scientists have been interested in multilingualism where language has become a political question. The establishment of national and official languages has been a crucial political issue not only in the new nations of Africa and Asia, but it has repeatedly served as a focus in ethnic conflicts in many of the older countries, for example Belgium and Canada. Particularly in the ex-colonial countries, the choice of one or more of the local languages as a national or standard languages, and the problem of the future status of the language of the metropolitan country are questions with important policy implications.

In India, for example (see LePage 1964), there have been commissions of enquiry, regional political movements, demonstrations and rioting stemming from the question of whether education should be in an international language (English), the national language (Hindi) or in a local or regional language (e.g. Bengali or Tamil).

## 1.33 Educational aspects.

Educational policy regarding multilingualism usually draws on another area which has become an important focus in applied linguistics, that is the problem of secondlanguage learning (see Rice 1959; Macnamara 1966; Carroll 1963; Spate 1959). Emphasis has been placed on the comparative analyses of "mother tongue" and "target language", in order to arrive at efficient teaching methods, and on evaluation of the effectiveness of ongoing programmes. In the ex-colonial countries, however, the language of the metropolitan country is not necessarily people's "second" language, but frequently their third or fourth, as the incidence of multilingualism is often high. In many of these countries, there is little or no data available on multilingualism aside from the crude outline given by census figures. (On the use which can be made of such figures, see Lieberson 1967).

1.34 Psycholinguistic aspects.

Psycholinguists have been concerned with the examination of the kinds of bilingual skills people acquire, and the relationships of such skills to their other skills and capacities, such as performance on I.Q. tests. See for example, Lambert (1961) on the difference between "compound" bilinguals (those with functionally dependent language systems) and "coordinate" bilinguals (with functionally independent language systems); and Macnamara (1967b) on measurement of different kinds of bilingual skills. Perhaps more than any other group of scholars concerned with biand multilingualism, psycholinguists have been successful in carefully demonstrating the relationships between variables involved in linguistic behaviour and its social, as well as psychological correlates. A large number of experiments have been carried out to find out what sort of ethnic and class identifications people make on the basis of speech cues alone, using taped speech samples from various ethnic, racial and class groups (e.g. Anisfeld <u>et al</u> 1962; Lambert <u>et al</u> 1960; and Putnam and O'Hern 1955). In treating the relationship between variables like linguistic ability and ethnic stereotypes (Anisfeld and Lambert 1964), psychologists are dealing with variables which are at least as important for social as for psychological analysis.

Psycholinguists have gone farther than other students of bilingualism and multilingualism in their use of tests. Macnamara (1967a,1967b) has reviewed a large number of such tests, most of which are indirect measures of bilingualism. About fluency tests in particular, he says the following:

> Many of these tests are ingenious, but their validity as measures of degree of bilingualism remains in doubt. So far, researchers have been content if they found that the data they obtained with such tests correlated with language background questionnaires or estimates of years of experience in the two languages. It remains to be seen how well they correlate with direct measures of language skills. (Macnamara 1967a:62-63)

Direct measures of bilingual proficiency appear to have been used much less frequently by psycholinguists, which may be due to difficulties in standardization and comparability (Macnamara 1967b:72). 1.4 Scope of this study.

In this thesis I examine the phenomenon of multilingualism in a New Guinea speech community (that of the Buang people of north eastern New Guinea) from an ethnolinguistic point of view. Multilingualism is the problem; disciplines upon which I have drawn for a coordinated perspective include linguistics, psycholinguistics, sociolinguistics, sociology and anthropology.

The linguistic perspective is important in a description of the languages included in the "code repertoire" (Hymes 1967:9) of the population, and makes possible the relation of such features as linguistic similarity and mutual intelligibility to the cultural features of multilingualism and language use. Chapter 4 attempts to elucidate the relationships of the Buang language to the languages of neighbouring peoples, and discusses various models for the description and analysis of these relationships in terms of the broader New Guinea context. Chapter 5 is a more intensive comparison of the linguistic differences between the Buang dialects, and provides the linguistic background for some of the questions dealing with intelligibility, acquisition and usage in Chapters 8, 9 and 10.

The perspective of sociolinguistics is adopted in Chapters 7 and 8, which deal with variation in language usage by the Buang, both in situations involving foreigners (Chapter 7) and among themselves (Chapter 8). Certain pat-

terns appear in the differential use of the various languages available to the Buang, and I have induced from these a model for language choice which is schematically represented at the end of Chapter 8. These chapters also explore variations in language usage with respect to groupings within the Buang population, the functions of this for social and political organisation.

Whereas Chapters 7 and 8 indicate that a majority of language choices are predictable from the various combinations of a few basic factors, they also point to the existence of a minority of cases in which code switching is extensive and prediction difficult. Chapter 11 is a systematic analysis of a number of situations of this sort, with reference to conditioning factors, mechanism and function. This analysis provides insight into the process of change in the linguistic habits of a multilingual community.

Although I have not investigated problems which have been of central interest to psycholinguists, the tests I devised to measure multilingual skills among Buang subjects bear perhaps most similarity to the techniques of psycholinguists in that they were administered to a carefully stratified sample under conditions which were standardized and controlled to an extent unusual in anthropological field work. Results of these tests, as well as difficulties encountered in administering them, are discussed in Chapters 9 and 10. Stratification of the sample according to social variables made it possible to examine test results in terms

of different sectors of the population, and to discuss language ability as it relates to opportunities for language acquisition. This analysis also appears in these chapters.

Although the anthropological perspective is particularly useful in treating the history and present status of the relationships between various linguistic and cultural groups (Chapters 3, 6, 7 and 8) and in describing Buang society and the major effects which colonialism has had on it (Chapter 3), its stress on the folk view of linguistic and cultural relationships is a frequent reference point throughout.

To place the ensuing discussion of Buang multilingualism within a context of what is known about multilingualism in other New Guinea societies and areas, Chapter 2 provides an overview of multilingualism in New Guinea. Multilingualism in New Guinea.

# 2.1 Language distribution and classification.

One of the most striking features of New Guinea is its linguistic diversity. Wurm (1960:129) estimates approximately 700 languages for mainland New Guinea and the smaller islands of Australian New Guinea, that is, an average of one language for every three or four thousand people. As Wurm (1960:132) points out, however, the distribution is fairly uneven, with almost a million people speaking just over a hundred languages (an average of 10,000 people per language), with some languages claiming as many as 60,000 (Chimbu) or 100,000 (Enga dialects). Many of the remaining 600 languages have very few speakers, "mostly ranging from a few dozen to a few hundred only" (Wurm 1960:133).

This trait of linguistic diversity in linguistic structure, in phonology and in absolute number of languages present is characteristic not only of New Guinea but also of the whole of island Melanesia (Hollyman 1962) and is especially notable in comparison with the less diverse Polynesian languages. The Solomons and the New Hebrides (Capell 1962a) and New Caledonia (Haudricourt 1948,1961)all show a pattern of small, linguistically diverse and often hostile societies, which has become generally accepted as typifying Melanesia as a whole.

Thus the problem of listing and classifying Melanesian, and particularly New Guinea languages has been found a difficult question (Wurm and Laycock 1961), and one of the most debated aspects of this question is the problem of establishing language and dialect boundaries. Using lexicostatistical procedures for this purpose, Wurm and Laycock took the figure of 81% cognates in basic vocabulary, the base line set by Swadesh, for differentiating between languages, and Wurm classified 50 languages as members of the East New Guinea Highlands Stock (Wurm 1964: 78). This figure (50) was felt to be too high, however, because "mostly it was found that mutual intelligibility seemed only little impaired, or not impaired at all, in cases in which the percentage of basic vocabulary cognates shared by two forms of speech was up to 10% less than 81%" (Wurm and Laycock 1961:129), and on the basis of "observations concerning mutual intelligibility of communalects, and the presence of mutual intelligibility chains, or neighbor intelligibility" (Wurm 1964:79), it is suggested that the number of languages in the stock might be reduced from 50 to 29. Bromley, however, (1967:129) notes a somewhat contradictory finding for Irian Barat (West New Guinea):

> Apart from bilingualism, this writer has never observed effective understanding on first contact between speakers of language forms sharing less than 75% basic vocabulary and has often observed lack of understanding between speakers of language forms sharing 80% or more basic vocabulary but contrastive in phonemic pattern and grammar.

It is possible that Bromley's finding of less intelligibility results in part from his longer stay (several years) in the area he describes, so that he was more familiar with the linguistic skills of his informants, and more prone than Wurm and Laycock to attribute specific instances of intelligibility to bilingualism than to spontaneous understanding.

Wurm and Laycock give several possible interpretations to their results. The languages themselves, they say, may contain multiple cognates: two forms exist in each of two related languages; one set of speakers commonly uses one form, and the other uses the other, but both recognise both and even use both; different forms, however, will probably show up in the basic vocabulary lists elicited in the two communities. They cite the examples of "aye" and "yes" for two dialects of English.

The second feature mentioned by Wurm and Laycock (1961: 135) is the presence of slight semantic shifts in lexemes of related languages.

Such lexemes consequently count as non-cognates in ordinary lexicostatistical procedure which is based on the count of samenesses. However, mutual intelligibility may be only slightly affected by such semantic shifts, but not inhibited.

Both of these features operate among Buang dialects, and examples will be cited in 5.4.

Two further features classed by Wurm and Laycock as "social" reasons for mutual intelligibility being higher
than expected: one is that the subject of the discourse may affect mutual intelligibility (commonly known myths, for example, may be recognized); the second is the existence of what Wurm and Laycock (1961:136) call "passive bilingualism", i.e.

acquired, as contrasted with spontaneous, understanding of a form of speech differing from that of a given community by members of that community.

This latter feature, noted by Wurm and Laycock as being extremely common in New Guinea, is similar to what Diebold (1961b) refers to as "incipient bilingualism". For Wurm and Laycock, interested primarily in taxonomic problems, passive bilingualism is an extraneous complication, and they stress that in such taxonomic work the social factors "should not affect the observer's judgment, though their obscuring and distorting effects are often hard to recognize and to eliminate from the assessment" (1961:136). It is precisely these "obscuring and distorting" effects which the tests to be described in Chapters 7 and 8 were designed to clarify, for the central problem either in assessing the extent of bilingualism or in establishing linguistic boundaries, especially when using a criterion or concept of "mutual intelligibility" is that of ascertaining how much of this intelligibility is the result of purely linguistic similarity, and how much is the result of learning - a feat made all the more difficult when the two (or more) linguistic communities are contiguous.

This is what Wurm calls "spontaneous" vs. "acquired" understanding, and what Bromley is referring to when he provides the caveat "Apart from bilingualism...".

2.2 Language diversity and multilingualism.

Although there is relatively little mention of bi- or multilingualism in the ethnographic literature on New Guinea, particularly for the precolonial period, several authors have accepted it as a natural consequence of the linguistic diversity existing throughout Melanesia. Haudricourt (1961) describes a state of what he calls "egalitarian bilingualism" in precolonial New Caledonia, resulting from social contacts such as intermarriage between small groups. Hollyman (1962) sees this type of bilingualism as responsible for a tendency he has noted in some Melanesian languages toward extensive borrowing, both at the phonemic and lexical But we are left with the problem of whether bilinlevels. gualism, extensive borrowing, and linguistic diversity fit together logically. The borrowing in particular would lead, one might think, to a process of language levelling and a consequent reduction of diversity.

Here we may find that the explanation lies at least in part in cultural attitudes and behaviour with respect to language. Salisbury (1962), for example, describes the importance which the Siane attach to the distinctiveness of their own language from neighbouring languages. A feature which may go hand in hand with borrowing in such a situation is innovation, and the phenomenon of drift, especially in small language groups, can increase the difference initiated by features such as borrowing and innovation.

On geographical grounds alone, it would seem that the degree of bilingualism would be related to the "demography" of language distribution. Roughly speaking, the ratio of border to interior varies inversely as the square root of the area. Thus less bilingualism would be expected in the New Guinea highlands, where there are fewer languages with more speakers than in the coastal and fringe areas where there are a great many very small language communities.

In the highlands as elsewhere in New Guinea, the three main types of contact with foreigners were economic (trade), political (warfare) and social (intermarriage). From the point of view of one unit in the system, all of these contacts tended to be with contiguous peoples; from the point of view of the whole system, the economic and social contacts at least often displayed a chain (possibly parallel in some cases to dialect chains) or circular pattern. Two examples from the highlands are marriage exchanges among the Siane (Salisbury 1956), and the <u>Te</u>, or pig cycle of the Enga. Because of the large size of language groups throughout the area, contacts between contiguous groups probably never involved a great deal of bilingualism.

In the peripheral highlands areas as well as in coastal areas where language groups are smaller, contacts between contiguous groups necessarily involved different languages or dialects. The question is whether or not bilingualism ensued in such situations. Along interior trade routes, contiguous groups exchanged both goods and women. Harding, speaking of the Huon Peninsula, comments (1967:106), "Interlocal trade in the interior follows channels established by marriage". It is highly possible that bilingualism created by intermarriage, however infrequent, helped to maintain communication channels between such groups. When the trade route reached the coast, however, it seems that a very minimal amount of verbal communication ever took place between the "bush" traders and the coastal peoples. escribing such trade, Harding (1967:64-65) says:

At the old-time markets the two groups of men and women, one to three dozen people on each side, sat down in two rows facing each other. The bush people normally initiated the transaction by pushing forward a net bag of food and taking back the goods - fish, coconuts, and pots - which the Sio had in front of him. ...

The exchanges were conducted largely in silence, without haggling or bargaining. Aboriginally only the most rudimentary kind of communication would have been possible anyway.

Hogbin (1947:247) makes a similar comment about trade between coastal and interior peoples on the southern side of the Huon Gulf:

> The peoples of the coast and the interior ... had no common tongue and had to conduct their barter either through a few interpreters or by means of signs.

Among the various coastal groups, bilingualism was probably a feature common, as in other groups, to a minority of people, the "few interpreters" mentioned by Hogbin. Harding (1967:203) endorses this statement with the comment,

... there were always a few men, as there are now, who knew the languages of particular alien communities.

This is in effect the same situation I referred to in describing communication on trade routes in the interior. Two factors may have made, however, for a somewhat greater incidence of this in coastal areas. First is the smaller size of language groups, a factor which I have discussed above. Second is the fact that the languages of coastal communities are generally Melanesian, which a number of linguists have described as simpler and easier to learn. According to Wurm (1960:133)

Speakers of Melanesian languages could on occasions be observed by the writer to acquire a passable knowledge of another Melanesian language in less than a week, which is understandable when considering the fact that most of these languages are very simple, display great similarity in several of their basic structural features, and usually share quite a number of items of their basic vocabularies when they are lexically compared with each other.

#### 2.3 Trade and lingua francas.

A special feature of communication in coastal areas in precolonial times was the existence of pidginized versions of the languages of the trading groups themselves. Thus for the Rai Coast, Sio informants say that communication was based on a pidgin form of the Siassi language (tok <u>Siassi</u> <u>haphap</u>), a trade lingo with a Siassi vocabulary which was useful not only in meetings with the Siassis themselves, but with other island and coastal peoples.

(Harding 1967:203)

Hogbin (1947:247) describes a parallel case for the Huon

Gulf:

It seems that in the past the pot makers from the south, the basket weavers from Labu, and the Tami Islanders all made a practice of learning Gawa (or Kawa), the vernacular spoken on the north coast and around Busama.

Barton (1910:96) mentions a similar trading language which he calls the "lakatoi language", current at the turn of the century in southeastern Papua.

> ... the Motu and the various Gulf tribes visited by them make use of a common trading dialect which is in some measure distinct from the very widely divergent languages of either.

Police Motu, or pidginized Motu, is widely used as a lingua franca in present day Papua.

In addition, Voegelin and Voegelin (1964) mention Gunantuna (also known as Kuanua or Tolai), a lingua franca spoken throughout New Britain and New Ireland, as well as a number of other New Guinea languages used as trade languages (passim).

2.4 Politicians and multilingualism.

As has been mentioned in 2.2, multilingualism was differentially distributed among the population, and there is some evidence that linguistic skills including bilingualism or multilingualism were among the characteristics of many successful leaders.

Skill in oratory has long been considered one of the important characteristics of the successful Melanesian "big men" (c.f., for example, Reay's (1959, Chapter 5) description of the Kuma "rhetoric thumpers"), but only a few authors have considered bilingualism in this connection. Salisbury (1962) mentions it as being a high status characteristic, and Haudricourt (1961) relates lexical borrowings used in the elaboration of verbal art to bilingualism. Biographical material on some current leaders in New Guinea also tends to give supporting evidence. Handabe Tiabe (Member of the House of Assembly, Tari Open Electorate, 1964-67) would appear to fit into the "traditional leader" classification and Van der Veur and Hughes (1965:408) mention his "possession of traditional values" as a possible factor in his electoral success. Clearly he is not a "modern" leader (he cannot speak or understand New-Melanesian or Police Motu), but his multilingualism in Tari area lanquages is probably a mark of local big man status, and probably also helped to increase his vote among tribal groups other than his own.

A second M.H.A. noted for his linguistic skills in local languages is Stoi Umut (Rai Coast Open Electorate). According to Harding (1965:199), Stoi's home in the interior of the Huon Peninsula is

... an area of intergrading, ... known by the indigenous people as the "head" of the Komba, Selepet and Timbe peoples. Linguistically, the area is mainly Komba, but the Timba and Selepet are close as hand and there is a marked degree of multilingualism. Stoi himself is trilingual, ... (but) ... this is but an aspect of the ethnic base of Stoi's popularity. He claims, with justification, that he is a Timbe (primarily), a Komba and a Selepet, thus affirming his solidarity with 25,000 people of the electorate.

It would be expected that a command of more than one language is of great political importance in the consolidation of small groups necessary for a successful leader in present day New Guinea, but it is probable that the traditional leaders of the past also outstripped their fellows in such skills. The Gahuku leader Makis (Read 1965) would appear to be one example.

2.5 Summary: multilingualism in traditional New Guinea.

In the very large language groups of the highlands, it is probable that bilingualism existed to a lesser extent than it did elsewhere in New Guinea. However there is some evidence that even here, bilingualism may have been among the language skills characteristic of "big men"; and at boundary areas between languages and dialects, the situation was probably similar to that existing over the rest of New Guinea, which might be characterized briefly as follows:

Contacts of intermarriage, trade and warfare did occur among different language groups, and these served to establish and maintain a certain proportion of bilingual or multilingual people. Children of linguistically mixed marriages probably had at least a passive control of a second language; important traders knew at least trading vocabulary in a second language; and war leaders may have entered into alliances with people of disparate languages, such alliances perhaps having been made possible by the pre-existence of communication channels established by marriage and/or trade. In phenomena such as dialect chains where whole communities may have had a passive knowledge of the next dialect, bilingualism has probably added to mutual intelligibility.

#### 2.6 Multilingualism and change.

Colonialism has had at least as much effect on the language situation of New Guineans as on any other aspect of their lives, and not only with respect to the introduction and apread of Neo-Melanesian as a lingua franca. Pax Australiana (Reay 1964:243) has made possible greatly increased travel and contact of all kinds, including language contacts. It is possible that, on the whole, bilingualism with respect to New Guinea languages alone may have increased. Yet very little has been said about the effects of the colonial situation on the languages of New Guinea, and more particularly on the changing roles which these languages are playing in the lives of New Guineans. The new languages which New Guineans have been learning since European contact have not only been Neo-Melanesian and

English, but there have been a great many opportunities for learning other New Guinea languages which were not available before. Various of the Christian missions have worked extensively through local languages, some of which have been spread over areas vastly larger than their original territory. According to Wurm (1966b:141), some of these languages are

... Kate, Yabem, and Graged by the Lutherans, Wedau (in the Milne Bay District) by the Anglicans, Dobu (also in the Milne Bay District) by the Methodists, Kuanua (in New Britain and New Ireland) by the Roman Catholics and the Methodists, Toaripi by the Anglicans and the Roman Catholics, and Kiwai (in the Fly Delta area) by the Anglicans.

Rowley (1965:145-146) also mentions some of these missionpropagated languages.

Contacts established through the work situation (in towns, on plantations) have led in some cases to bilingualism among speakers of languages which are by no means contiguous.

In short, the language situation in New Guinea, already complicated in diversity, in distribution, and in sheer numbers of languages, has become more complicated in the less than 100 years of the colonial period. Communication has been opened up through the ban on hostilities and the spread of Neo-Melanesian. (Wurm [1966] estimates 300,000 - 400,000 speakers.) Though it is possible to see Neo-Melanesian as having introduced some order or homogeneity into a heterogeneous situation, its introduction has meant that a great many more people now than ever before in New Guinea have become bilingual. In conjunction with other linguistic changes it has meant that more people are multilingual, and this state of affairs raises a number of questions.

First, it is important to describe the role of multilingualism in New Guinea societies; to discover, for particular societies, what roles are played by the languages concerned, whether these be recently introduced or not, in the lives of the people. Questions like these have long been asked by the socio- and psycholinguists, as described in 1.22 and 1.34, but the New Guinea situation is special in that it offers the opportunity to study the manner in which new languages are introduced into societies, to try to find explanations for the kinds of social roles it acquires and the kinds of cultural attitudes it attracts. The sociolinguists, describing a relatively static situation, can say, "People tend to use language X when desiring to impress outsiders, because of the high status of X". In describing present-day New Guinea, one must also provide an explanation for how X has come to acquire a high status, how it has been learned, and by whom, and why, and how well. Because the situation is in a state of flux, because the multitudinous societies of New Guinea at present display almost every point on a "continuum of multilingualism" (Diebold 1961), the answers to these questions and many more are still discoverable, and it is not enough simply to ask about the different situations of language use (even as "ethnoscientifically" defined by the community involved Hymes 19677 ).

The remainder of this thesis deals with the social aspects of multilingualism and with communication factors involved in cultural and social change in a particular multilingual society, that of the Buang people of northeast New Guinea. I chose to base my research on a single society and to study the ramifications of multilingualism for the people of that society for traditional anthropological reasons of depth - both in the historical sense, and in the sense of a more detailed understanding. Originally I had considered the strategy of following the fortunes of one of the languages of wider distribution through the different societies in which it is used, to give a better general picture of the outlines of a situation which has received little or no systematic attention. Early in the research, however, as the relevance of the various theoretical perspectives became clear, I decided that it would be more satisfying and worthwhile to try to construct a paradigmatic analysis of the social, cultural and linguistic aspects of multilingualism in a particular, changing New Guinea society.

To some extent, then, I have tried to set up my analysis in such a way as to be comparable to other such studies; this does not mean that this study neglects the Buang point of view about their own language and about the other languages which they speak, for its conception as well as its content derives in large part from the way the Buang people think about language, and how they use language.

The Buang situation makes it ideal for this type of study. In terms of the distribution of languages in the area, the Buang are bounded by a number of language groups, some Melanesian and some (possibly) non-Austronesian. Buang itself has three dialects whose mutual intelligibility is open to question. In terms of recently introduced languages, many Buang are proficient both in the mission lingua franca of the area (a Melanesian language) and in Neo-Melanesian. With regard to the latter, the first generation of speakers to learn it is still alive, and among the present generation, some of the children raised in the towns understand only Neo-Melanesian and not Buang. In many of these characteristics, the Buang probably resemble a great number of other New Guinea groups. 3. The Buang.

### 3.1 Location.

From the coastal town of Lae, the view southwest across the Huon Gulf is dominated by the Herzog Mountains. They rise steeply from the narrow coastal plain running north and south of Salamaua to a five to ten thousand foot divide ten miles inland. On the coastal side, numerous small rivers fall from the almost perpetually cloud-covered ridge to empty into the ocean near the villages of Labu, Buasi and Busama. On the other side, mountain streams coalesce into the Snake River flowing from the north and the Bulolo River flowing from the south, which join on the grassy plain near Mumeng to form the Watut River. This empties into the Markham River forty miles upstream from Lae.

The land drained by the Snake and Bulolo, and by some of the more westerly penetrating coastal rivers is the home of the <u>man bilong maunten</u>, the Neo-Melanesian term used by the peoples of the Buang, Mumeng and Hote language groups to differentiate themselves from the Markhams to the north, the coastals to the east, and the "Kukukukus" and other speakers of non-Austronesian languages further inland.

The headwaters of the Snake may be reached from Busama by a two-day climb over the mountains leading to the Buang village of Vagau. Vagau is situated on a fast-flowing brook which, half a mile downstream, empties into an almost treeless swamp covering many thousand of acres. Alternatively, there

is a path leading from Labu (across the mouth of the Markham from Lae) over the mountains to Bugweyau, on a hillside overlooking another finger of the great swamp. The most travelled route over the range, however, starts from the Markham village of Gabensis on the Lae-Wau road and climbs through a mile-high pass before reaching Muniau, two miles from Vagau on the opposite side of the swamp. The water of three tributaries flowing past Vagau, Bugweyau and Muniau are imprisoned in the swamp by slopes which are alternately unobstructed <u>kunai</u> (Neo-Melanesian"grass", henceforward glosses for Neo-Melanesian will be introduced with the abbreviation NM), secondary forest or gardens under cultivation. The water can escape only through a narrow gorge near Mambump Village where it becomes the swift moving Snake River. Four more "upper Buang" villages overlook the river from vantage points on mountains high above the right bank, and then a large tributary joins the Snake, marking the beginning of the territory of the "central Buang". From this point on the mountains on the right bank are steep <u>kunai</u> slopes, maintained by seasonal burning, while the left bank is intensively gardened by people of the villages situated a thousand feet or more above the river. Further down river, in the territory of the "lower Buang", both banks of the river are <u>kunai</u> and the villages are out of sight behind the first or second ridges of the mountain. The river slows down and begins to meander as it passes into the territory of the Mumeng people. It takes only a few further hours' walk to

reach the government post of Mumeng, on the Lae-Wau road.

A map of the Buang-Mumeng area, including Buang village names, appears on page 42; a map of New Guinea showing the location of the whole Huon Gulf area appears on page 41.

# 3.2 Ecology and subsistence.

The Snake River cuts through a range of steep sided limestone mountains, the highest peak being Mt. Shungol, 8978 ft. The Buang villages, situated along the first twenty miles of the Snake's course, are located in a band of mixed vegetation and secondary growth, usually between 1000 and 2000 ft. in depth, which occurs between the primary rain forest above and the grassland below. Until the Snake turns westward just below Wins, this band of mixed vegetation extends to the valley bottom, at approximately 3500 ft., but from here onwards the grassland reaches to higher and higher altitudes, and villages are successively higher and more distant from the valley floor, reaching altitudes of up to 6000 ft.

The twenty-three Buang villages range in size from under 200 to about 700 persons (see Appendix A). The number actually resident in the village at any one time is less, by 20% in the headwaters villages and by 50% for many of those downriver. This organization into villages represents a change, the many more smaller hamlets of the traditional pattern having coalesced under government encouragement. Each village contains twenty to sixty houses of various





shapes and sizes spread out irregularly along a ridge two or three abreast for a few hundred yards, or clustered in vaguely ringshaped or circular arrangements on an unevenly terraced slope. There are usually a few men's houses where young unmarried men sleep, although these structures have probably been more central to village activity in the past.

The Buang are swidden horticulturalists, cultivating yams, sweet potato and "Chinese" taro (Xanthosoma) as basic subsistence crops. Yams are the ceremonial and prestige crop, and the Buang are noted for yam growing (Girard 1957). Pigs and chickens are raised, though people of the headwaters villages have not raised pigs for the past few years. Villagers also hunt for pigs, cassowaries and other game in the high forest. A majority of villages lay claim to some high land, producing products such as nut pandanus, and at least headwaters villages have plots on the sea slopes of the coastal range, producing lowlands products such as coconuts and betel.

### 3.3 Origins.

Little is known of the precolonial history of the Buang people. They claim to be unrelated to the coastal Bukawa or to the people of the Markham Valley. Though there has certainly been some immigration from at least the latter region during recent times, the linguistic evidence (see 4.1, 4.2) would suggest that relationships are rather with the inland peoples to the southwest. Headwaters Buang tradition has it that many of the Mumeng area villages on the road and near the government post are of relatively recent history, and that the Buang are more closely related to peoples farther to the south. In an origin myth told to me by a headwaters man, the two brothers who were the first Buang, Tuk Bul and Mun Ages ( $\chi$  is used to represent a voiced uvular fricative throughout), wandered up the Snake Valley from inland. A similar version of this myth can be found in Hooley (1962**a**), who points out that the word <u>Tuk</u> is presently used only by lower dialect Buang (it is also used by Mumeng area peoples); the central and headwaters equivalent is <u>Gu</u> ("first born son").

From the ecological point of view, the <u>kunai</u> of the lower Snake Valley is anthropogenic (Womersley 1966; see also Robbins 1963), and it is possible that migration and settlement of the valley occurred concomitant with the utilization and exhaustion of the rich gardening land near the river.

In the recent past some of the Mumeng villages have been forced to relocate and fortify for defence purposes against Kukukuku raids from the southwest. This phenomenon, however, did not involve the Buang farther upstream, as far as can be deduced from tradition.

Finally, there are a number of clan names in headwaters villages which indicate origin downriver, including several central and lower Buang locations. For instance, the headwaters village of Bugwev has a clan <u>Ayayenalu</u>, whose members claim an ancestor from <u>Ayaye</u>, a site near the lower Buang

village of Kwasang. In the eight headwaters villages and one central village, seven clan names indicate downriver origin, two indicate upriver origin, eleven indicate origin nearby, and for about fifteen others I could make no assignments. Complete lists of clan names are difficult to compile because of a complicated system of coordinate membership in <u>dunggwa</u> (see 3.5) which has been masked by government-encouraged mergers into "clans". In any case, these totals would have to be considered in conjunction with comparable figures for central and lower Buang villages which are not available at this time.

# 3.4 Recent history.

Post-colonial history until the period after World War II must rely mainly on local memory, as all government records previous to this were destroyed during the war. Headwaters people told me of their first contact with the law of guns and bullets, when a patrol came in reprisal for the killing of the first European (probably a German missionary) to venture any distance into the headwaters, and mentioned an elderly man alive today who, as a baby being carried on his mother's shoulders, was grazed by a bullet in that first encounter. Contact with German labour recruiters, too, occurred prior to 1914. An old Mambump man of perhaps seventy told me in 1966 that he had been among the first group of young men to be indentured as plantation labourers, and he

more than about thirteen. Thus we can make an estimate of 1910, or slightly earlier, as an initial date for the first group of Buang to have had any sustained contact with Europeans. The story was confirmed by a middle aged man from Muniau whose father was in this first group. They stayed away for seven years and learned to speak Neo-Melanesian, and on their return from New Britain plantations, the population rejoiced, as they had been given up for dead. After this time, Buang men continued to work as plantation labourers, and also as carriers for prospectors and explorers. Baum, a prospector active from 1921 to 1932, usually employed Buang carriers. He was killed in the Wau region in 1932, along with his Buang carriers, and his name is still remembered by men who where fortunate enough to have carried for him on prior expeditions only (Hooley 1966).

By this time, two events of great historical importance to the Buang had taken place: the first native evangelists from Buasi, near Salamaua, arrived to spread the gospel of the Lutheran Mission, and the gold rush began in Bulolo (Healy 1967). The evangelists, who were rapidly followed by teachers and pastors, spoke and taught in a language new to the Buang, Yabem, the Finschhafen coastal language which was used by the Lutheran mission in evangelism throughout the Bukaua and Salamaua areas, as well as the Salamaua hinterland. (For further detail on the spread of Yabem, see 6.1) The first schools were established, at least in the Buang headwaters area for which I have the most data, in the late thirties, probably 1936. The first group of men to have gone to school, and thus to know Yabem, is composed of men now in their forties. The gold rush caused a significant migration of young men, whose jobs ranged from domestic servants to mine labourers, and also included: tending market gardens, herding cattle, working in the Bulolo bakery, acting as clerks in trade stores. Even in the more remote headwaters villages, a high proportion of now middle aged men worked in the Wau-Bulolo area as youths. This was the period during which knowledge of Neo-Melanesian became almost universal among Buang men.

The war interrupted all this in 1943, when schooling was temporarily discontinued and all able-bodied men were conscripted to work as carriers for troops in the Salamaua area. Some told me that they had "carried bombs" from Bulolo to Salamaua; a few served as hospital orderlies. The war was important in expanding the Buang world view, at least in terms of geography, because America was now on the map, in addition to Germany and Australia. In the immediate postwar period a large proportion of labourers stayed in wage employment, working on roadbuilding, construction, and exhuming bodies of soldiers killed in the Salamaua area for reburial in military cemeteries.

During the fifties, Buang men were used frequently as carriers, patrolling with Native Affairs officers in newly explored country (Sinclair 1966). I collected accounts of airstrip construction at Menyamya and of patrols to Kainantu and Goroka. They also gained a reputation as expert domestic servants.

To return briefly to mission activities, these too were greatly increased after the war. Schools were reopened; pastors arrived on the scene; and European missionaries (notably Rev. F. Scherle) visited the area. By the mid fifties most of the population had been converted, and the Buang themselves began sending out evangelists to the <u>wail man</u> (NM, "wild men") of Asiki and Menyamya. Particularly influential in the conversion of the headwaters Buang during the fifties was Pastor Onesimus, a Hote, respected by Buang as a fellow mountain dweller.

The trends in this brief history can be summarised as follows. Though contact with Europeans began at least sixty years ago, the pace of change was accelerated in the thirties and has decreased in the past ten or fifteen years. Recent changes have been quantitative rather than qualitative - people migrating in larger numbers for wage labour, people being converted to Christianity in larger numbers, and so on. In the type of employment found by most migrants, there has been almost no change, except that very few now work on plantations (most men who worked on plantations during the fifties did domestic work rather than field labour).

## 3.5 Social organisation.

The traditional basis of social organisation is the <u>dunggwa</u>. The properties of the <u>dunggwa</u> will be described at length elsewhere and can only be briefly summarized here.

(a) Each <u>dunggwa</u> is named.

(b) This name refers to a complex of

i. a territory

- ii. a descent group, at least to the extent that members use the concept of descent in phrasing their unity, or "common substance" (Salisbury 1964)
- iii. a charter myth, and, less important in modern
  times
- iv. a hamlet on the territory, or a residence grouping within the village.
- (c) The descent group does not trace descent to a common ancestor, nor is it necessarily even conceived of as having one.
- (d) A person's affiliation to a <u>dunggwa</u>, which entails rights to <u>dunggwa</u> land, can stem from
  - i. father's affiliation
  - ii. mother's affiliation

iv. being <u>vet</u> or apprenticed to a <u>dunggwa</u> member. Most of those whose primary claim is on the basis of iii. or iv. can, however, also supply some evidence, usually tenuous, for i. or ii.

(e) Relative strength of claims to <u>dunggwa</u> land are based on strength of parents' claims, especially of father's claims. Those with strongest claims are considered to be stewards of <u>dunggwa</u> land.

- (f) Membership in one <u>dungqwa</u> does not preclude membership in any number of others. Although item (d) iv. would seem to indicate the necessity for a major affiliation in former times, this restriction is inoperative now.
- (g) <u>Dunggwa</u> are neither prescriptively endogamous nor prescriptively exogamous.

Multiple membership in <u>dunggwa</u> makes for flexibility in allocating and utilizing resources. It gives substance to (and is reinforced by) a wide range of relationships, and among the ties which can be phrased in terms of <u>dunggwa</u> solidarity are those of kinship, friendship and mutual aid in economic activity, extending even to the intervillage level.

The Australian administration has, for purposes of administrative ease, organised the people into villages composed of a few, well-defined, patrilineal "clans" (see Lawrence 1964: 143), which system has been superimposed upon the pre-existing <u>dunggwa</u> system. This has effectively added a dimension to those mentioned in (b) above, that of a group of names listed in government records as belonging exclusively to that "clan", which has the name of one of the <u>dunggwa</u>. In fact this aspect has taken on far more significance to the people than was intended by the government in using the "clan" system for census and tax convenience. The "clan" concept has, however, been adapted to the <u>dunggwa</u> system rather than simply adopted. For instance, no two men in the village conceive of the official partition into clans in the same way. Each person classifies his fellow villagers according to his own particular position vis à vis each person in the <u>dungowa</u> system.

Despite the multiple loyalties and intervillage attachments fostered within the rubric of <u>dunggwa</u>, primary loyalties, at times of crisis such as a war, or a land dispute, are to the residence group, in modern times the village and in former times the collection of geographically proximate hamlets which have since been grouped to form the village.

3.6 Supra-village groupings.

The composition of villages strongly reflects former warfare alliances. One major alliance of hamlets is now represented by the four villages Bugweyau, Muniau, Aiyayok and Gambia in the northern and eastern part of the headwaters. The other headwaters alliance, south of the first one, stretched from east to west across the Snake, and is now arranged into the Vagau, Mambump and Rari villages. The central Buang village of Wins also has a tradition of alliance with the latter group.

Alliances are still operative in the sense that former allies have maintained and increased friendly relations, former enemies, however, have not remained unfriendly, their opposition having largely disappeared except as a mutually remebered tradition of a now defunct hostility. These traditions of seemingly excessive insularity are, however, balanced by longstanding extra-Buang alliances for trade and warfare, still operative on the trade and friendship level. The alliances I have recorded are Vagau with Buasi, Bugweyau with Labu, Aiyayok and Gambia with Timini and Gurakor (Mumeng language group), and Muniau with the Markham village of Gabensis. (The latter relationship had, in the recent past, broken down a number of times, and there are stories of combined Mambump-Muniau revenge expeditions against Gabensis.) The antecedents of certain types of multilingualism among present-day Buang, to be described in Chapter 7, are to be found in such extra-Buang alliances.

#### 3.7 Bases of power.

Major decision affecting the village, or a group of villages, are made, at least formally, by the <u>alam bap</u> (Buang, "big men"). These include a majority of the men over about forty years of age and some a little younger. The major criterion is maturity, but influence within the group of big men depends on a record of sustained community involvement, oratorical ability, general intelligence and a number of other factors.

It is possible to distinguish certain individuals whose influence with the <u>alam bap</u> is disproportionally great. Such people have the ability to marshall village resources to further their own projects, and command respect and deference from the other villagers. These and other dimensions of power are characteristic of three types of leaders, who draw on different combinations of traditional and modern sources of influence.

One type of leader, which also existed in pre-contact days, is the successful organizer of competitive yam distributions. Another type dates only from early in this century and does not seem to have had a counterpart in pre-contact society. It includes church elders and others having some special relationship with the Lutheran mission, and Local Government Councillors and others having a special relationship to the gavman (NM, "Australian administration"). The most powerful leaders at present are, however, the entrepreneurs in economic activity, who innovate in drawing on both traditional and modern sources of power. Entrepreneurs must have some knowledge of and ability in the sphere of modern economics, but more important to be successful, they must also be extraordinarily skilled at manipulating dunggwa ties and village affiliations in order to muster local support, capitalization, labour and patronage for their enterprises. One type of traditional leader, the war leader, appears to have no modern counterpart.

Such influential men have no common title differentiating them from the other <u>alam bap</u> (in fact entrepreneurs as well as mission and government representatives need not be old enough to be true <u>alam bap</u>). Titles for the modern leaders are given in Neo-Melanesian or Yabem.

Insofar as I have been able to identify them in the headwaters, the handful of economic leaders, the dozens of mission and government affiliated leaders, and the few distribution leaders, each plays a significant role only in his own sphere of activity. This analysis of types of leadership will be particularly helpful in understanding and accounting for variations in speech (Chapters 7 and 8) and in trying to discover the functional aspects of certain anomalies of language use (Chapter 11). 4. Buang and neighbouring languages.

4.1 Buang as an Austronesian language.

In order to understand the linguistic relationship of the Buang people with their neighbours, the possibilities and potential for verbal communication including mutual intelligibility, passive bilingualism (Wurm and Laycock 1961) and other modes of multilingualism, and to assess the importance in these phenomena of the historical linguistic processes causing linguistic divergence and convergence, I undertook a comparison of the Buang dialects and the neighbouring languages, starting with the standard lexicostatistical techniques. Buang and most of its neighbour languages have generally been classified as "Melanesian", and before continuing with a discussion of the relationships of these languages to each other, it might be helpful to sketch briefly the outlines of the larger linguistic family to which they belong, i.e. Austronesian, and the position of Melanesian within it.

The classification of the languages of the Pacific has been a matter of considerable dispute for some time, and there seems relatively little possibility that a reconciliation of the divergent views of linguists will take place in the foreseeable future. The family as a whole, which includes the languages of Southeast Asia, Indonesia and the Pacific, is usually referred to as "Austronesian" (AN)

(the term used by Dempwolff, who did the most important early comparative work on these languages, and reconstructed "Uraustronesisch",or proto-Austronesian (\*AN)), or as Malayo-Polynesian (MP). Usually considered to be major branches of the family are the Indonesian languages (IN), Polynesian languages (PN) and Melanesian languages (MN). Capell (1962b:378) has sketched the relationships among these groups according to Dempwolff's ideas, as shown in Fig. 4.1. Grace's (1959) treatment of the Polynesian languages suggests that PN and MN have shared a common history independent from IN, a relationship shown in Fig. 4.2.

A number of authors have, however, noted some sort of special and more inclusive status for proto-MN as compared with the other branches. According to Milner, Dempwolff's true position was much closer to that depicted in Fig. 4.2, and he draws a very similar diagram (Milner 1962:417).

The Melanesian (MN) category has been one of the most hotly debated of late, not only as regards its historical and taxonomic status relative to the other subdivisions of Austronesian, but as regards its very existence (see Capell, 1962b, including the Comments). Though Capell himself supports the traditional classification, there are two other schools of thought on the matter. First, there are those who feel that the Melanesian languages represent mixed or pidginized languages, created by the influence of the linguistic habits of immigrant Austronesians on the non-Austronesians languages already present. This view was Dempwolff's explanation of the linguistic geography of the Pacific, and it has since been supported by Ray (1926), (1962) Wurm (1961), Capell (1962b) and Cowan, whose general position is represented in Fig. 4.3.



The other group emphasizes diversity in Melanesian languages, and suggests that Melanesia should be considered as a possible area of origin whence spread the peoples of the Pacific, and that proto-Melanesian was ancestral to other major branches of the AN family. Such views have been supported by Fox (1947), Dyen (1962a,1965) and Goodenough (1962). These authors generally reject categorically the idea of mixed languages and the pidginisation theory. Thus Dyen argues that "once a language is discrete, it is always discrete" (1962b:403, emphasis his).

In the ensuing discussion of the classification of Buang and neighbouring languages, the main distinction of importance is Austronesian (AN) vs. non-Austronesian (NAN), referred to by some authors as "Papuan". In stating the

opinions of others, I will use their terminology; otherwise I will avoid the use of the term "Melanesian" and stick to the AN-NAN distinction. A map showing the approximate location of the languages to be discussed appears on page 59.

Buang itself has been classed as Melanesian (Hooley 1964**:35)** but its geographical position at least might suggest the possibility of its being "Melanesian" in the sense of being "mixed". That is, it is contiguous, or nearly so, to languages of the interior which are presumed to be non-Austronesian.

To say that the languages inland from Buang are of disputed status would be putting the case too strongly. In fact, very little is known about these languages, and it is only recently that detailed information on Buang has become available (Hooley 1962a, 1964a, etc.) Capell, for example, has only one listing for Buang, as follows:

Mangga = Buang (Capell 1962a:85). He has, however, classified Mumeng as NAN (1962a, map of Morobe District, p.77). Hooley has remarked on this as follows:

> It is an interesting comment on our general lack of knowledge of the area that Capell lists Mumeng and the Watut dialects as non-Melanesian. Mumeng is definitely Melanesian, and so it is believed are some of the languages of the Watut Valley.

#### (Hooley 1964:247, n. 24)

On Hooley's map (<u>Ibid</u>, after p.224), Mumeng and the Lower Watut area languages are listed as "MN", while the languages of the middle and upper Watut are among the "Papuan"



Map 4.1 - Languages of the Huon Gulf.

languages. On the basis of present knowledge it is difficult to place exactly the division between AN and NAN for this area. Nor do we know whether the split is sharp, or whether there are border areas showing features to be expected of "mixed" languages, languages with a high percentage of lexical or other borrowings, or at least with some NAN underlay (or perhaps AN overlay).

Of the geographic distribution of the two language groups in the Morobe District, Capell (1962a:77) says only,

Melanesian languages are spoken along the Morobe coast from slightly south of Finschlafen as far as the Waria River, south of Morobe itself. In this area non-Melanesian languages do not reach the sea.

This gives us only a very general picture, and does not answer the question of how far inland the AN languages extend. Hooley's view, stated above, is probably the most accurate, as he has a considerably more intimate knowledge of Mumeng-Buang area languages than the other authors quoted. (In neither Dyen (1965) nor Grace (1955), two of the most comprehensive recent classifications, are these languages mentioned). Hooley's position is, however, that the present picture is only tentative. He contrasts the importance of the Morobe District languages in recent theories concerning the origins of the Oceanic peoples (Fox 1947; Dyen 1962a, 1965) with the fact that its numerous and diverse languages are very little known. In summarising information about Morobe District languages, Hooley had access to information collected by various members of the Summer Institute of
Linguistics, and his discussion is superior to others in completeness as well as accuracy. In describing the linguistic geography of the area, Hooley (1964**b**;210) says,

The Melanesian section appears as a large pocket among the surrounding Papuan languages. This is an area requiring intensive reconstruction, and comparative studies, to show whether these consist of one or two groups of closely related languages, or of a number of diverse groups. If the former is the case, the implication would be that these are the results of migration into the area; if the latter, that the groups have been here for a length of time sufficient for the divergences to arise.

It becomes apparent that the most urgent need for the Morobe District is an accurate linguistic map of the whole area, showing the language groups, and their linguistic affinities - at very least with respect to the Melanesian/non-Melanesian dichotomy. An indication of the relationships between each language group, and provision of linguistic materials suitable for lexicostatistical and comparative studies would be preferable... the problem of dialect vs. language, would complicate

the problem of dialect vs. language, would complicate the picture to some extent.

Dyen's (1965) classification does little to clarify the picture for the Morobe District. Of the more than a dozen Austronesian languages in the District, he has included only four in his comparisons. All of these were left "ungrouped", meaning that although they are Austronesian, they are not sufficiently similar to any of the 352 languages Dyen considered to be identifiable as belonging to any particular subgrouping of AN. Only one, Labu (Hapa) shares its highest percentage of cognates in common with another of the four, i.e. 10.8% with Nubami. (Dyen reports that this latter language was recorded by G. Grace at Siboma. This must be Sipoma (TPNG Village Directory) a village in the Kela-speaking area south of Salamaua). Nubami itself, however, shares its highest percentage of cognates (15.2%) with Mota, a language of the New Hebrides. Acira (Azera) of the upper Markham Valley, shares its highest percentage of cognates (7.3%) with Yapese, a language of Micronesia; and Tami shares its highest percentage of cognates (18.7%) with another language of the Micronesian area, Palau.

Let us return to the position of Buang in the midst of this diversity. As an inland Melanesian (or at least Austronesian) language located between AN and NAN languages, Buang is important not only because with more than 8,000 speakers it is the largest of the Melanesian languages of the Morobe District (with the possible exception of Azera) but also because of its interesting dialect situation, to be discussed at greater length in Chapter 5. Further, extensive work has been done on Buang by Hooley (e.g. 1962a, 1964a). He has not, however, published any detailed comparative work on the relationships between Buang and the languages geographically contiguous to it. Hooley says, "linguistically, Buang is related to both Azera and Yabem" (1964:208), and in two unpublished papers he deals with "Buang and the South-East Papuan Languages" (1962b) and "A preliminary comparison of Buang and Proto-Austronesian" (1963).

Some tentative relationships are suggested in the results of lexicostatistical comparisons which I will discuss in 4.2, but first it is necessary to list these languages and to state how they have been classified in the existing literature.

Of all the languages of the area, the Mumeng language already mentioned, located to the southwest of Buang, appears to be most closely related to it. Though classified by Capell as NAN, it seems likely that Hooley's classification of it as Melanesian is the correct one, and some data which support this classification will be given in 4.2. Speakers of Mumeng dialects probably number between 2000-3000.

Due north of the Buang lie the people of the lower Markham Valley, who speak a language known as Laiwomba, or Wampur, also a Melanesian language (Capell 1962a,map:77; Hooley 196, map after p.224). Vial (1937) gives a figure of 1,841 for the Laiwomba population; the Village Directory (1960) gives 4,784 as the population of Lai-Womba C/D, but this includes Labu and Bukawa villages as well.

To the northwest, on the coast just south of Lae, are the three Labu-speaking villages, numbering probably 1,000 people or less. Referred to by Dyen as "Hapa" (1965:6), and by Hogbin (1963) as "Apu"" (map:4), Labu is one of the "ungrouped" AN languages mentioned above. Capell (1962a:78) includes it as Melanesian without further remark, although in another paper he lists a number of Labu cognates with \*AN (1949:98).

South of Labu are the (Bu)kawa speaking people, descendants of immigrants from the Bukawa or northern coast of the Huon Gulf who migrated to this area before 1830 (Hogbin 1963:8-9). Numbering at present about 2,000, their villages stretch from Busama, the northernmost, to Salamaua Point.

Leaf 64 omitted in page numbering.

(Another approximately 3,000 Bukawa speakers inhabit the northern Huon coast). The Bukawa language is considered by Grace to be in his sub-category #12 of "Eastern Malayo-Polynesian", which includes

Southwest New Britain, Kobe, French Is., Siassi Is., and Kelana, Tami, Yabim, Bukaua, and Suam on the adjacent coast of New Guinea. (Grace 1955:339)

One of the few New Guinea languages in which tone is known to be phonemic, Bukawa's close relationship to Yabem, another "tone language" of the Huon Gulf, is discussed by Capell (1949).

The adjacent language of the coast, continuing south, is Kela (Capell 1949), today numbering approximately 1500-2000 speakers. According to Capell, it is "the southernmost Melanesian language of this area." (1949:198), but he says, "there are different Austronesian traditions in Kela" (<u>Ibid</u>:198) - different presumably from Yabem and Bukawa, for he says that apart from these two, "The other Melanesian languages along the coast of the Huon Gulf do not show tone at all" (Ibid:198).

The last of the languages adjacent to Buang is Hote, located in the mountains behind the Bukawa and Kela speaking area, and to the south of Buang. Numbering about 2,500 speakers, Hote has also been classified as a Melanesian language (Hooley 196, map after p.224). Other authors have referred to the language of this region as "Kai" and it is not clear whether the two names refer to the same language, or to two separate languages. To summarize briefly the linguistic geography of the Buangs and environs as discussed in this section: Buang itself is an Austronesian language. According to Hooley, "Its relationship to other members of the family is clearly seen by a comparison of cognates, the pronoun system, and certain grammatical features. Examples of easily recognizable cognates are: <u>mala</u> "eye"; <u>ama</u> "father"; <u>ate</u> "liver"; <u>bngo</u> "cordyline plant (tanket)". (Hooley 1964**a**:35).

Also Austronesian, as far as is known, are all the languages contiguous to Buang on all sides: Laiwomba Labu, Bukawa, Kela, Hote, and Mumeng. One other very small language group located inland on the Bwussi River between the Buang and Bukawa areas is the Buasi language (Hogbin 1963, map: 4), also presumably Austronesian. The relationships among these languages, and their separate or collective relationships with the NAN languages of the interior are, however, still problematic. In the light of the importance of the implications of the relationships among the Melanesian (or Austronesian) languages of the Huon Gulf for establishing a more adequate classification of the Austronesian languages in general, it is unfortunate that it was not possible for Dyen to have included in his lexicostatistical comparisons more of the material which Capell in particular seems to have on many of these languages.

## 4.2 Lexicostatistics and Mumeng-Buang.

As mentioned briefly in 4.1, Buang shows a closer relationship to the Mumeng language than to any of the other languages adjacent to it. Geographically, the mountain ranges on both sides of the Snake Valley separate the Buangs rather distinctly from all their other neighbours; between them and the Mumeng people, who live in the area of the confluence of the Snake and Bulolo Rivers, there is no comparable geographical barrier. A summary of the relationships between the Buang and Mumeng languages is provided in Table 4.1, and a map showing the villages from which word lists were collected appears on page 42. An account of the lexicostatistic procedures followed, as well as a complete tabulation of all figures appears in Appendix B.

It is clear from the table that Buang (represented by A, B, and C) is not a unitary "language" but instead contains three communalects of varying degrees of difference one from the other. The usage follows Hickerson <u>et al</u> (1952) who say, "... the term communalect will be used, as having no implications of intelligibility (dialect) or unintelligibility (language) with that of any other such group", (p.1, footnote 2). Speakers of Buang express these differences as follows: "The language is the same, but there are three 'necks'". Similarly,

			A	В	С	D	E
Upper Mid B	Buang	(A) (B)	79.7				
Lower	Buang	(C)	55.7	61.9			
Mumen	g l	(D)	44.3	46.8	51.5		
Mumen	g 2	(E)	44.8	47.9	51.0	61.5	
Mumen	y 3	(F)	45.3	45.7	49.0	61.9	81.2

Table 4.1 - Mumeng-Buang relationships.

Word lists are as follows:

- A Mambump Village
- B Mean of Wins, Chimbuluk, and Papekani Villages
- C Mean of Manga and Kwasang Villages
- D Bangalum
- E Patep
- F Gurakor

the table shows that Mumeng area communalects, too, show differences among themselves of a similar order. Thus A and B share approximately 80% presumed common cognates, as do E and F. B and C share about 60%, as do D and E, D and F. Further, it can be seen that, to some extent, the communalects represented in Table 4.1 form a "chain". This description of the relationship between the communalects would imply that each one shares a closer relationship with the two communalects contiguous to it in the chain than with any other of those in the chain. Thus A's common percentage with B (80%) is higher than its common percentage with any other; B's common percentages with A and C (80% and 62% respectively) are higher than its common percentages with any others; C's common percentage with B and D (62% and 52% respectively) are not its highest since C also shares 56% with A. D's common percentage with C and E (52% and 62% respectively) are also not its highest - D also shares 62% with F; E's common percentage with D and F (62% and 81% respectively) are, however, higher than its common percentages with any others; and F's common percentage with E (81%) is higher than its common percentage with any other.

It is obvious from the above that the six communalects under consideration do in fact share some of the properties of a language or dialect chain. Let us now consider the extent to which this situation relates to a conception of the historical relationships among the communalects concerned. According to Dyen's (1962b) arguments about the discreteness of languages, it should be possible to classify every language as a member of one and only one subgroup of any given larger grouping, i.e. it should be possible to draw a family-tree or branching diagram for any group of languages.





This is done on the assumption that the two communalects sharing the highest percentage of common vocabulary also share the longest common history; and conversely, the two communalects sharing the least common vocabulary have the longest history independent of each other.

Among the communalects with which we are here concerned, A and B; E and F are the most closely related; A and D are the least closely related. Thus the only node A and D have in common on Fig. 4.4 is node 1, which occurs at the 44% level; A and B stem from a common node 4 at the 80% level; E and F stem from a common node 5 at the 81% level. There is an implication which we have so far not considered, however, which is that every language stemming from any one node should have approximately the same degree of relationship to any language not stemming from that node.

Another way of saying this, in terms of the present example is that the language ancestral to E and F split off from the language ancestral to A and B a very long time ago (3,000 years calculated on a retention rate of 86% permillenium), and that only about 700 years ago E split off from F, and A split off from B, and thus E and F should have about equal numbers of cognates with A and B. Examining these figures, we see that they are not exactly the same, but that they are reasonably close (45%, 45%, 48%, 46%).

Let us now consider the position of D. Quite obviously, D is more closely related to E and F than it is to either A or B, and thus it must have shared some common history with E and F, with which it shares approximately 62% of basic vocabulary. The node from which D stems (3) has therefore been placed at the 62% level, between nodes 1 and 5. As D, E, and F now share a common node (3), they should share approximately the same percentage of cognates with languages not stemming from 3. This is again the case, as D's percentages with A and B, (44% and 47% respectively) are close to those already mentioned for E and F (45%-48%).

The case of C is the last remaining unplaced. It shares its highest percentage of cognates (62%) with B, but less with A (56%), and in fact shares almost as high a percentage with E and D (51% and 52% respectively) as with A. Its mean percentage with A and B (59%) is higher than its mean percentage with D, E, and F (51%) and it has been placed as closer to the AB branch. A dotted line shows where it could have been placed on the DEF branch. It is clear, however, that although C as a member of the AB branch shares a somewhat higher than expected percentage with the DEF branch, its placing as a member of the latter would have created even more problems in explaining its very much closer relationship to AB.

In the Mumeng-Buang language family, there is sufficient evidence to trace genetic relationships by lexicostatistical methods, but all the communalects show some mixing due, it would appear, to borrowing between contiguous communalects, or at least to higher than expected correlations between the words retained. C in particular shows in its

lexicon sufficient relationship to both of the linguistic groups between which it is geographically as well as typologically situated to be termed "mixed" to a considerable extent. This is not to imply that the chain situation can be completely or even largely understood in terms of some sort of equilibrium model of diffusion, where dialects or languages innovate, discard and borrow at certain fixed rates. A pure model of this type for the Mumeng-Buang system where A-B = 80%, B-C = 62%, C-D = 52%, D-E = 62%, E-F = 81% would require that A-F = .80x.62x.52x.62x.81 = .13 (actual proportion of A-F = .45). Hence the diffusion model may be considered only insofar as it modifies the genetic model, and the general conclusion of clear genetic relationship with varying degrees of borrowing would appear to provide the most satisfactory explanation for the figures as given in the table.

## 4.3 Relationships between other neighbouring languages and the Mumeng-Buang family.

The lexicostatistical percentages for all the languages in the area from which I have word lists are shown in Table 4.2.

The separation of the Mumeng-Buang group from the others is fairly clear. The lowest percentage of common vocabulary shared by any two members of this group is 44%, while the highest any of them share with any outside language is 26%. Another clearly defined group consists of

	A												
Buang B	79.7	В											
Buang C	55.7	61.9	С										
Mumeng D	44.3	46.8	51.5	D									
Mumeng E	44.8	47.9	51.0	61.5	E								
Mumeng F	45.4	45.7	49.0	61.9	81.2	F							
Hote	16.5	17.5	22.2	24.7	16.7	16,5	Hote						
Tami	16.2	20.3	20.3	18.9	19.2	17.6	24.3	Tami					
Yabem	19.4	24.5	26.4	23.6	23.9	20.8	25.0	49.2	Yabem				
Bukawa	18.2	22.2	24.2	21.2	19.7	18.2	27.3	51.8	86.4	Kawa			
Lababia	11.3	10.6	14.4	11.3	11.5	11.3	21.6	35.1	43.1	39.4	Lab.		
Laugwei	15.3	14.2	16.9	15.3	13.8	13.6	27.1	44.7	46.7	51.2	79.7	Lau.	
Laiwomba	14.4	16.8	19.1	16.5	16.7	15.5	19.6	16.2	13.9	13.6	11.3	16.9	

Table 4.2 - Lexicostatistic results for languages of the Huon Gulf and its hinterland.

Yabem, Bukawa and Tami and the two Kela dialects represented by Laugwei and Lababia. The lowest percentage of common vocabulary shared by any two members of this group is 35% and the highest any of them share with any outside language is 27%. Hote, which averages 25% with this family compared to 19% with the Mumeng-Buang languages, probably represents an early offshoot of the former. The remaining language, Laiwomba, shares an average of 16% with all the others, with no striking variations. It is likely that this language is more closely related to Azera and the other languages of the Markham Valley.

If Dyen's "Nubami" language is Kela, then his comparison of Tami and Kela would seem to show 18% or less, which constrasts with 40% evident in Table 4.2. This can be ascribed partly to Dyen's conservative policy in identifying cognates and also to the marked difference between Tami initial syllable forms and those of Kela or even Yabem, to which it is more closely related.

As the 20% level is taken to be within the range of the interrelationship of the various families in a stock (Wurm 1960:126,n.28), a branching diagram would show two major families in this stock, i.e. Mumeng-Buang, and what I shall call Huon Coastal (including Tami, Yabem, Bukawa and Kela). A third and fourth contain only one member, though the third, Hote, is almost close enough to the Huon Coastal family to be classed with it. The fourth, Laiwomba, whose common percentage of approximately 16% with most of the other languages is slightly lower than those among the three families discussed so far, can be considered to represent a separate family, as it is still within the "stock" range (12-28%).

A diagram of these relationships is shown as Fig. 4.5.



Figure 4.5 - Huon Coastal languages.

Key:

A,B,C	– Buang	Lb -	Lababia
D,E,F	- Mumeng	Lg -	Laugwei
Y -	Yabem	H –	Hote
Bu 🗕	Bukawa	LW -	Laiwomba
Τ –	Tami		

Although the Mumeng-Buang family may in fact contain more languages than others in the stock (at least four members are here represented: EF, D, C, AB), it is clear that other families have been under-represented through lack of data. Labu and Buasi are serious local omissions, and the other languages in the group which Grace (1955) suggests that Yabem, Bukawa and Kela belong to should also be examined, as should Azera and Kaiwa (see Hooley 1964**b**, map after p.224). Perhaps even more important in terms of general theory would be the examination of the various languages cited in terms of their relationships with bordering NAN languages, such as the Mid and Upper Watut dialects, Biangai and Paiwa.

The one serious problem represented in Table 4.2 is the classification of Kela. Its average percentage of shared cognates with the other languages of the Huon Coastal family is 44%. Its relationship to the other Mumeng-Buang languages is, however, only about 13%, barely sufficient for inclusion in the same stock. Kela's regular correspondences with Yabem, Bukawa, Tami and Hote, however, indicate that the depression of this figure is due to statistical variation in the cognate loss process.

To recapitulate the general relationships as shown in Table 4.2 and Fig. 4.5, it is clear that the linguistic diversity which has been described for this region is substantiated by these data. Among the eleven communalects examined, only a small proportion of the languages of the

Huon Gulf and its immediate hinterland, at least four families are present, although for two of these (Hote and Laiwomba) only one member has been considered. For the smaller region from which the data are drawn (roughly, the shore of the Huon Gulf and part of its hinterland), somewhat more can be said regarding the possibilities for communication which existed among its inhabitants prior to the spread of Neo-Melanesian. In the interior of the region, it appears that although contiguous communities speak languages which are completely separate, belonging (as with C and D) to distinct branches within a language family, the considerable borrowing which has obviously occurred points to a more than trivial amount of contact in the past. The existence of some basic commonalities within the Mumeng-Buang group facilitates the development of chain-type links, and although adjacent communalects may not be mutually intelligible, similarities facilitate bilingualism, including "passive bilingualism" (Wurm & Laycock 1961). The question of mutual intelligibility among Buang communalects will be dealt with in Chapter 7.

Among coastal groups, similar processes were probably operating, at least, with respect to the data at hand, between Yabem and Bukawa. A Gabensis man (native speaker of Laiwompa) told me in 1967 that after learning Yabem in school, he had been able to pick up a good understanding of Bukawa during a short visit to the home village of a Bukawa friend.

For the four families represented in the data it is

probably safe to say, however, that there were many more impediments to verbal communication on an inter-family level, as linguistic differences here presented a more formidable barrier than the lesser differences within families. Although this topic will be brought up again in Chapter 6 in terms of the non-linguistic data bearing on communication among divergent groups, the linguistic data might lead us to make, at the inter-family level, at least the minimal assumption that passive bilingualism was much less prevalent.

In the case of the Mumeng-Buang language family, sufficient borrowing has occurred to obscure to some extent the genetic relationships among the languages and dialects and to make language classification according to a pure genetic model (which assumes that language differences between any two genetically related languages are explicable in terms of a constant or time-dependent rate of loss of lexical items) more difficult. A more appropriate model for this case would account also for borrowing between contiguous languages. This was one of the possibilities suggested by Andreyev in a comment on Bergsland and Vogt (1962), where he stated that,

... a good theory of glottochronology could be based on a <u>changing</u> rate as well. It is necessary to know which functional dependence connects the changing rate with such factors as average increase in percentage of foreign loan-words per century... (Andrevev 1962:130)

Before going on to propose such a model, it should be stated that throughout this chapter I have intentionally avoided one of the more obstructive controversies current

in lexicostatistics, and that is the problem of chronology. Thus Figs. 4.4 and 4.5 have, as intervals on the vertical axis, percentages of shared vocabulary, rather than time intervals, because of problems in time calibration summarized by Hymes (1962b:136):

Lexicostastic measures, if properly obtained, are objective, standardized measures of relations that exist among the vocabularies of dialects or languages. If the measures surprise, perhaps do not agree easily with indications from other sectors of linguistic evidence, or with non-linguistic evidence, then a problem is posed. The difficulty does not inhere in the calibration with time; it but carries over into the calibration with time. The percentage of lexical similarity and difference, the index of closeness and distance, remain.

I would go further and say that, aside from statistical variation, or unusual cultural proclivities for linguistic standardization on the one hand, or innovation on the other, divergence of two isolated languages within a major language grouping will occur at a rate which is a function of the time which has elapsed since their common history ended, or equivalently a function of the proportion of cognates remaining, and that the function will not depend on the two languages involved (although it may depend on the major language groupings). (The first major relaxation of these conditions, to make the model better fit reality, would be to allow for borrowing). It follows that the inverted scale of percentage cognates that I have adopted is a time scale, although the distance representing one year varies from top to bottom, and this scale indicates relative rather than absolute time. Hence, without even converting into units

of time, this method has given us the correct relative ordering in time of the various linguistic events represented by the nodes on the diagram.

Thus to consider relative rather than absolute time in establishing the relationships among languages of a family or stock avoids problems such as faster (Salisbury 1962) or slower (Fodor 1962:131) rates of change which have been postulated for different linguistic or cultural areas, and the problem of a core vocabulary and of different rates of change for different sectors of vocabulary. (See, for example, Chowning (1963) for a discussion of differential stability among words for food plants according to utilization and cultural importance.)

To return to the problem of models: A purely "branching" model of linguistic differentiation implies that if t is the time elapsed since the last moment of common history between two languages, the proportion which they share in common of some criterion vocabulary will be  $P(t) = e^{-2kt}$  or, with divisions into core and non-core vocabulary, or various levels of core vocabulary, P(t) can be almost any monotonically decreasing function, dependent only on time. On the other hand a purely "mixing" model for language change, where the vocabulary of two initially different languages can only be changed by borrowing from one to another, implies that  $P(t) = 1-e^{-2ct}$ . A combined model, allowing for loss of cognate vocabulary by the two languages at a rate proportional to the number of cognate pairs at time t, as in the branching model, and also allowing for borrowing of vocabulary between the languages at a rate proportional to the number of noncognate pairs, as in the mixing model, leads to the relation:

$$P(t) = \frac{k}{k+c} e^{-2(k+c)t} + \frac{c}{k+c}$$

Thus, in a situation where some language groups are sufficiently isolated to behave as in the pure branching model, and others are clearly subject to a borrowing and mixing type of relationship - the whole picture can be elucidated formally by using the branching model where applicable to establish as many nodes as possible and then using this information to solve for c/k (ratio of borrowing rate to loss rate) for various pairs of contiguous languages. I have done this for Buang C and Mumeng D, E and F and for some other cases in the literature, summarised in Table 4.3.

Language groupings	Pl	P <sub>2</sub>	w
Buang Mumeng A D B E C vs. F	A vs. E B vs. F	D C vs. E F	
97 word list 129 word list	46.4% 50.8%	50.5% 53.0%	0.24 0.15
Buang A vs. C 97 word list 129 word list	A vs. C 55.7% 58.2%	B vs. C 61.9% 63.3%	0.60 0.55
Oyana Gadsup vs. Auyana	Gadsup vs. Auyana	Oyana vs.Auyana	
(McKaughan 1964) List I List II Figures from S.Wurm	66.5% 50.5% 46.0%	71.3% 55.0% 53.0%	0.85 0.32 0.43
Western WPGV Dani MGV (Composite)vs. HLGV PWD TLGV	MGV WD vs. HLGV TLGV	PWD vs. WPGV	
(Bromley 1967) Swadesh List Modified List	78.3% 78.3%	87.0% 89.0%	4.8 6.8

Table 4.3

- Relative importance of the processes of lexical borrowing and cognate loss. Pl is the proportion of cognates shared, on the average, by two languages in different groups which do not borrow from each other. P<sub>2</sub> is the proportion of cognates shared by contiguous languages in different groups which are assumed to be borrowing from each other. w is the rate of borrowing per number of non-cognates divided by the rate of cognate loss per number of cognates shared. See Appendix B, for details of computations. 4.4 The problem of language and dialect.

As has been mentioned in this chapter, the figure originally suggested by Swadesh as the boundary between dialect and language in lexicostatistical studies was 81%. There has, however, been some debate about this figure, and Dyen (1965) takes a figure of 70% as the boundary in his classification of Austronesian languages. He refers to this figure as the "provisional language limit", and says (1965:18):

The percentage 69.9 has been taken to be (approximately) the highest score between dialects of different languages... If two lists score 70.0% or more with each other or with the same list, they are assigned to the same language. In fact if a chain of percentages 70.0 or higher connect a set of lists, they are all assigned to the same language.

Wurm and Laycock (1961) also express a feeling that the approximate 80% limit is too high, on the basis of mutual intelligibility, which they claim for the languages of the Eastern New Guinea Highlands stock to exist in most cases for those languages sharing 70% or more, and in a number of cases for those sharing 60% or more. Thus they present two alternative classifications for the East New Guinea Highlands stock, the first using 81% as a language-dialect boundary; the second claiming to use a criterion of "at least limited mutual intelligibility, i.e. at least 60% of information transfer" (p.140). Although Wurm and Laycock say that mutual intelligibility is the real differentiating feature between languages and dialects, it appears that what they have done in their second classification is simply to use their lexicostatistic figures again, this time regarding a percentage of somewhere between 60% and 70% as the language-dialect boundary. (They say that mutual intelligibility was "arrived at largely by the 'ask the informant' method, and to some extent by the 'test the informant' method" (p.134), but give no indication whether or how they converted such indications into percentages of information transfer, and also note the extreme unreliability of the "ask the informant" method).

Using a horizontal axis drawn at the 70% level on the branching diagram Fig. 4.5, we arrive at a classification of the following dialects into separate languages: Mumeng E and F; Buang A and B; Yabem and Bukawa; and Lababia and Laugwei. This classification would be the same if the line were drawn at the 80% level. The arbitrary choice of one or other level is not, however, a satisfactory way of solving the problem. The important consideration is whether or not the two communalects concerned are mutually intelligible, and to what degree. Although lexicostatistics figures can be only a rough indication of degree of mutual intelligibility until proven otherwise, in this case the distinctions are sufficiently marked to validate the above classifications.

In summary, it is obvious that there exists at present no cut and dried solution to the language-dialect boundary problem, when working strictly from lexicostatistical material. The familiarity of the analyst with the languages concerned and the quality of the data may be one variable to consider in setting the limit higher or lower. Lexicostatistical figures alone are, however, obviously not enough, as Wurm and Laycock have discussed (even though their own method seems to ignore their ideal). It is data on information transfer and mutual intelligibility which provides the most satisfactory method of deciding the status of communalects, and it is the relationship of such data to the lexicostatistical figures which should eventually provide guidelines in using lexicostatistical figures alone. Thus in Chapters 9 and 10 I deal with the results of tests of the mutual intelligibility of the three Buang communalects, and relate these to the lexicostatistical figures given in the present chapter, as well as to the more detailed comparisons of Buang which are the subject of Chapter 5.

One further troublesome area in the language-dialect boundary problem is that of the language- or dialect-chain situation. As I have described the implications of chains for the genetic relationships among languages, it seems likely that chains of more than three or four members would not commonly exist without sharp breaks occurring. (The chain configuration appears to be caused by borrowing among reasonably closely related dialects or languages; the borrowing may still take place at a high rate between more distantly related or unrelated languages, but in this case a sharp break should appear in the chain, as between Buang-Mumeng communalects C and D). If longer chains are found

to occur, it would seem that Dyen's (1965:18) rule of thumb regarding the assigning of members of a chain to one language (see quotation on page 84) needs re-examination in the light of data on mutual intelligibility as well as on borrowing. If a chain configuration -> borrowing -> contact ----> mutual intelligibility, it may be that social factors have inflated the percentages. That mutual intelligibility may be a function of social contact as well as of linguistic relationship is a point which Wurm and Laycock's discussion of dialect and language chains (1961:137) seems to miss, (though they agree that social factors may interfere with making assessments, [p.136] they do not consider the implications of the situation which they describe as B-C and A-B being mutually intelligible but A-C not, i.e. that whatever the genetic relationship of the three, the present situation with regard to mutual intelligibility is in an important sense caused also by social factors). This point, too, will be taken up in Chapter 10 in the light of evidence from the Buang communalects.

5. Buang dialects: linguistic comparisons and folk view.

Although the methods of lexical comparison employed in Chapter 4 are standard technique for estimating the degree of relationship of languages or dialects, they provide only one index of relationship. In this chapter I explore in more detail the divergence of Buang dialects on the phonological, morphological, grammatical and semantic levels. These comparisons will be based largely on the work of Hooley (1962a, 1964a) on the central Buang dialect, Buang B, augmented by my own data on headwaters Buang, Buang A. Though no published work as yet appears in lower Buang, Buang C, I have included it in the comparisons as far as possible, on the basis of several texts and vocabulary lists which I collected. In addition, I discuss the views of the Buang people on the differences among the various varieties of Buang and on their inter-intelligibility.

Though the question of mutual intelligibility <u>per se</u> will be treated in terms of test results in Chapters 9 and 10, the present comparison provides a basis for understanding such results in the light of the actual differences existing between the dialects on various levels, as well as from the viewpoint of the people.

5.1 Phonology.

5.11 Description of phonemes.

As languages diverge, a process more subtle but no

less inexorable than cognate loss takes place on the phonological level. McKaughan (1964:102) cites Austin in asserting that:

Phonological change usually proceeds by minimal steps along one phonetic dimension at a time

and then shows how Grimes' technique of phonostatistics can measure divergence and time of separation of languages or dialects by comparing phonetic difference between cognate vocabulary items. Further, he believes that phonological comparisons are more meaningful than lexical comparisons when the languages involved are closely related.

Accordingly, a comparison of the phonology of Buang A and Buang B can be made on the basis of phonemic charts for each dialect. The consonant phonemes of Buang B have been schematized in Table 5.1, adapted from Hooley (1964a), (but see also Hooley 1962a; Voegelin and Voegelin 1964).

Twpe of	Point of Articulation								
Consonant	Labial	Dental	Palatal	Velar	Labio- Velar	Back Velar (Uvular)			
Voiceless stops	р	t		k	k <sup>w</sup>	ķ			
Voiceless fricatives			¥10						
Voiced stops	b	d		g	g <b>~</b>	ġ			
Voiced fricatives			Š						
Continuants	v	1	y ř	8	W	š			
Nasals	m	n		ŋ	უ‴	ņ			

Table 5.1 - Buang B consonant phonemes.

From my data, the consonant phonemes occurring in Buang A appear to be as shown in Table 5.2.

	Point of Articulation							
Consonant	Labial	Dental	Palatal	Velar	Labio- Velar	Back Velar (Uvular)		
Voiceless stops	p	t		k	k <b>~</b>	k		
Voiceless. fricatives		ន						
Voiced stops	b	d		g	g 🖤	à		
Voiced fricatives	5	3						
Continuants	v	l ¥	У		W	š		
Nasals	m	n		Ŋ	<b>ງ</b> ‴			

Table 5.2 - Buang A consonant phonemes.

For both A and B, /w/ = [w],  $[x^w]$ 

For purposes of exhibiting the important correspondences, I suggest a possible phonemic system for proto-Buang consonants in Table 5.3.

Three of						
Consonant	Labial	Dental	Palatal	Velar	Labio- Velar	Back Velar (Uvular)
Voiceless stops	p	t	k	k	k <b>~</b>	k
Voiced stops	b	d	đ	g	g <b>~</b>	g •
Continuants	· V	1	¥ Ť	X	<b>8</b> ~	ķ
Nasals	m	n	n	ხ	<b>5</b> ‴	ຸ່ນ

90

Table 5.3 - Proto-Buang consonant phonemes(reconstruc

ted

The consonant phonemes of Buang C have not been included in the preceding comparisons because of lack of data. It is believed, however, that like A, C has no  $/\gamma/$ , and that there is no phonemic distinction in C between  $[\check{r}]$  and [1] (Hooley 1966-67). Data which I have collected for C support this position. C words have, however, been included in Table 5.4, which gives examples of reflexes of proto-Buang phonemes which are different in different present Buang dialects.

Reconstructed Proto-Buang Phonemes		Examp	les of Ref	English Gloss			
		Buang A	Buang B	Buang C			
1.	x	(y) Ípok	(y)ipoķ	(y)ipak	"knife"		
		b•(y)áŋ	bo(y)áŋ	ba(y)en	"house"		
2.	k	(k)e	(š)a	(š)a	"I, me"		
		vo(k)Év	v <b>ə</b> (š) évəŋ	va(š)en	"yesterday"		
		(s)eu(k)	(š)u <b>x</b> u(k)	(š)o(š)in	"afternoon"		
	g	(g) <b>£</b> p	(g)ep	na( <b>ǯ</b> )ip	"never mind" (lit. "it sleeps")		
		ken <b>£</b> (g)a	ša(g)u	a( <b>ž</b> )a	"this here"		
		(3)í(3)i	(ž) 2 (ž) i	(ǯ)a(ǯ)i	"grease, fat"		
	¥	(1)a	(y)a	(ř)a	"go" (past, 3rd sing.)		
\$		a(1)0ŋ	a(y)o <b>ŋ</b>		"cold"		
		(l)u	(l)u	(y)u <b>ğ</b>	"two"		
		ga(l)us	ga( <b>y</b> )iš	ka(ř)uš	"egg"		
	ñ	i(ŋ)ipaya	(n)ipaya	(n)ipaya	"bad"		
		maga( <b>y</b> )		magi(n)	"sand"		
		to( <b>y</b> )	ato(ŋ)	patu(n)	"walking stick"		
3.	8~	oyiz	wiž		(Village name)		
		oyilək	wil <b>o</b> ķ		"before, long ago"		
Table 5.4 - Reflexes of proto-Buang phonemes in present day Buang							

Two basic distinctions seem to have occurred. First, in Dialect A, and possibly in Dialect C,  $/*\check{g}/$ , realised as /y/, appears to have completely merged with /\* /. (As this explanation would require parallel developments taking place independently in A and C, an alternate hypothesis might be that there was no velar  $/\gamma$  / in proto-Buang, and that  $/*\gamma$  / in B split into /y/ and /y/.) Second, each of the alveopalatal consonants has split, merging in some environments with the corresponding velar, this being very infrequent in C and more common in A than B (except for  $|y| \rightarrow |x|$  being impossible for A), and in other environments remaining in the alveolar position, although in the case of  $/k/ \rightarrow / \check{s} /$  and  $|q| \rightarrow |\dot{3}|$  with altered mode of articulation. This last process has been carried furthest in Dialect A, with the consonants concerned being articulated in the dental position instead of the alveolar, which necessitates, in some environments, a merger of  $/\tilde{n}/$  with /n/, and of /y/ with /1/.

A process of "back velarisation" in A might explain the last reflexes listed in Table 5.4, i.e. A form  $(o_{\chi}-/$ and B form /w-/. If the proto-Buang name for the hamlet of Wins were  $(o_{\chi}^{w}ig/, the loss of initial /o/ in B would have$  $necessitated the occurrence of the [w] allophone of <math>i_{w}/$ rather than the original  $/*\chi^{w}/$ , or  $[\chi^{w}]$  allophone. (Hooley 1962:6 notes that the word medial allophone of  $i_{w}/$  in B is  $[\chi^{w}]$ , the word initial allophone is  $[w_{\chi}]$ ). Presumably the  $i_{\chi}/$  reflex in A results from backing.

On the subject of phonology, the Buang themselves (at least those of Dialect A) distinguish between A and B in terms of the /k/-/s/ correspondence. This holds true for certain /y/-/l/ correspondences as well. Contrasted to this, the / $\chi$ /-/y/ shift does not seem to be especially noted, which could be due to the fact that they perceive [ $\chi$ ] as closer to being an allophone of /y/ than of, for example, / $\chi$ /, (whereas /s/ is perceived as closer to /s/ than to /k/).

There are a number of other systematic consonant shifts between Dialects A and B, but not of comparable importance. In the case of vowels, however, there is another major difference. Hooley (1962a, and in Voegelin and Voegelin 1964) gives the vowel phonemes for Buang B as follows:



In addition, he has shown that vowel length is phonemic, for example /köök/ "wait" and /kök/ "red, blood", where length is indicated by doubling the vowel.

Although long vowels are very common in Dialect B, the length distinction does not appear to be phonemic in Dialect A. In fact long vowels in many Dialect B words can be traced to a consonant or semivowel loss which has not occurred in the corresponding Dialect A word, as shown in Table 5.5.

Examples of	of Reflexes	English Glosses		
Buang B	Buang A			
veeŋ	vawiŋ	"fly"		
ķööķ	kawo k	"wait"		
anöö	anaw	"dog"		
166	lal	"three"		
v <b>7</b> řőö	v <b>ə</b> řoř	"white"		
kuu	kew	"shade"		
tuus	t <b>ə</b> wis	"dry"		
viis	v <b>ə</b> lus	"feathers"		
anii	niw	"second-born daughter"		
ŋʷii	ŋul	"grass skirt"		
řiiŋ	řířoy	"yam pole"		

Table 5.5 - Vowel length in Buang B

C forms for these words, of which I have only a few appear to correspond more closely to A than to B, e.g. <u>yař</u> (C, "three"); <u>vařuy</u> (C, "white"); <u>vařus</u> (C, "feathers").

Further evidence against the existence of the shortlong distinction in A comes in attempting to carry over to A Hooley's basic rule of stress (1962a:10), i.e. that long vowels are always stressed. Many words, e.g. B /řaříi/, A /řaři/, "charcoal"; B /kaköök/, A /kákuk/, "ant" have contrasting stresses in Dialects A and B.

Although the stress rules as enunciated in Hooley (1962a) may differ little from Dialect A to B (with the exception of the stress-on-long-vowels rule, which is inapplicable), shifts in vowel sounds in various words frequently change the stress from syllable to syllable. This effect contributes very significantly to folk distinctions between dialects and possibly to mutual intelligibility, and is noticeable even between villages within one dialect grouping.

In summary, it is evident from this outline of phonology that there are a large number of phonological differences among the three Buang dialects, only some of which have been Though criteria of phonetic rank (Pike 1954) mentioned here. and procedures involving counting of degrees of difference (McKaughan 1964:103) might have been used in guantifying differences, this has not been done for two reasons. First, no phonemicization is yet available for Buang C. Second, in terms of intelligibility, it appears that degrees of difference do not always correspond with major barriers to communication. The /k/-/s/ shift, for example, appears not to impede comprehension, as it is very common and well recogni-Other differences, such as variations in stress or zed. length may cause greater difficulties in intelligibility.

## 5.12 Distribution of phonemes.

As far as the distribution of individual phonemes is concerned, Hooley's rule that /w/ does not occur word finally does not hold true in Dialect A, as can be seen from examples in Table 5.5. In addition, his rule that in unstressed syllables the only contrast is between /a/ and non-/a/, or involving certain occurrences of shewa, would seem to be broken quite freely in Buang A (as well as in Buang B, e.g. /árë/ "name"; /ári/ "brother").

In discussing the co-occurrence of phonemes, Hooley points out that there are no consonant or vowel clusters in Buang B. In Buang A, however, there are a number of words in which the occurrence of the semivowel /y/ presents a problem, as shown in Table 5.6.

	Dialect A	Dialect B	English Gloss
	b <b>ə</b> yób	do sed	"cloud"
Series I	bəyáŋ	bəyáŋ	"house"
	rəyú	r•yú	"meat"
	ຼອງ <b>ະ ຈຸ</b> ໌	psi	"later"
	ny <b>ɛşɛŋ</b>	nəyey	"tomorrow"
Series 11	my <b>E yá</b> nu n	məyönon	"person"
	by <b>E</b> ŋa	b <b>əŋ</b> ö	"cordyline plant - (NM, tanket)"
	my٤ŋ	ny <b>£</b> 9	"place; 'sun'"
Series III	myɛl	nyɛl	"snake"
	kamyt	kany <b>£</b>	"sleeping mat"

Table 5.6 - The problem of /y/ in Buang A.
All occurrences of /y/ as in the first series where it is clearly preceded by a shewa are found to have originated from /y/ as is evidenced in Dialect B. In the second series, however, this is clearly not the case and there is no shewa audible. In the third series, the corresponding sound to /my/ in A is [my] in B, which Hooley is apparently treating as an allophone of /n/, since he no longer appears to regard [my] as phonemic (Hooley 1964a). There are clear contrasts between /m/ and /my/ in A, however (e.g.  $/my \epsilon m/$ "your mouth";  $/m\epsilon m/$  "thus, so"), and the least drastic solution would be to consider the groups /my/, /by/, /py/, /ny/ as consonant clusters.

There are also a number of cases in A where it is difficult to disallow vowel clusters, e.g. /vaus/ "breast"; /taut/ "rotten"; /Vaim/, man's name; /paip/ "knife".

Hooley's analysis of syllable patterns in Buang B, assuming no consonant or vowel clusters, describes four basic syllable types: v, vc, cv, and cvc. Severe restrictions are placed on the occurrence of the first two, especially as independent words. Although I can add for Buang A only one occurrence of the first pattern - /i/, "3rd pers. sing. pronoun" - to his two words of form v, Buang A has several more of form vc. Further, these forms are both very common as components of words.

### 5.2 Morphology.

The two features considered by Hooley to be of importance morphologically in Buang B are the existence of possession suffixes on nouns representing body parts and kin terms, which he refers to as "inalienable possessions", and changes in initial consonants in certain verbs to indicate tense, person and number. These carry through fairly completely to Buang A.

In the case of verbs the only point of difference other than slight changes in some of the affixes involved, is the apparent disagreement over which verbs behave in this manner. For instance <u>sap</u> ("cut") shows initial consonant change for tense in Buang B but not in A. Another point of interest is that whereas in verbs showing this feature in B, possible alternations for tense in initial consonants include /d/ alternating with /l/, and /n/ alternating with /y/, in cases where /y/ has merged with /l/ in Dialect A, the verb retains its alternation with /n/, e.g. /nam/~/lam/ "come", future and past respectively. Thus for Dialect A, some verbs with /l/ in the past alternate with /d/ in the future, and some alternate with /n/. This phenomenon is particularly important in reconstruction.

## 5.3 Syntax.

One construction indicating possession common in Dialect A is presumably absent from Dialect B, as Hooley does not mention it. This is the use of <u>eyi</u> after a noun to make it a possessor with respect to the preceding noun, e.g.

gag stua -eyi - "the discussion about the store" talk store ownership

semuken lagek -eyi - "heaven's bounty" bounty, goodness heaven ownership

This form is an extension of the 3rd person form in the pronoun series: <u>ke-ke</u> "mine"; <u>on-on</u> "yours"; <u>i-eyi</u> "his", etc.

Although in A the standard personal pronouns occur as "objects" of transitive verbs, there is another series differing only in the 3rd person singular <u>i-yaw</u>, which occur as "reflexivizers" for certain verbs. Thus <u>ke kes ke; on kes on; i kes yaw</u>,...("I fall, you fall, he falls"...) compared with <u>ke kes</u> ("I strike") Another such verb is <u>sap</u>; thus, <u>i sap yaw</u> ("he cut himself")

5.4 Semantic shifts.

One facet of the process of cognate loss that bears strongly on mutual intelligibility is semantic shift. Thus the forms listed in Table 5.7 would not be counted as cognates in any lexical comparison.

A form	English glosses for "cognates" in Buang dialects
posív	A, "bad"; C, "small"
b <b>ə</b> yob	Some A villages, "morning"; A,B,C, "cloud"
řuķ	A, "water"; C, "rain"
tatá	A, "tall"; C, "old"
ķoķ	A,B, "blood"; C, "bone"
y úm » k	Some A villages, "yam house"; B, name of one village; C, "house"
manak*	C, "bird" (generic term); B, one species of bird

Table 5.7 - Examples of semantic shifts in Buang dialects. (\* - starred form is a C form, as I know of no corresponding form in A).

Although this phenomenon would certainly interfere strongly with mutual intelligibility in the strict sense, it does not have as great an effect on speakers of the various Buang dialects because having a common word for related meanings facilitates learning by acting as a mnemonic device. Also, a general idea of the meaning of such a "foreign" form can sometimes be gathered even without having learned it.

The existence of what Wurm and Laycock (1961:134) call "multiple cognates" as described in 2.1 is also a feature common to the Buang dialects. Examples of such multiple cognates include <u>myë</u> and <u>avi</u> ("mouth" in A and B respectively); <u>vřoř</u> and <u>řapus</u> ("white", in A and in Wins village

respectively). In these and other cases, the alternate forms are used throughout the area with varying degrees of frequency. The "multiple cognate" category includes a wide spectrum of variation in frequency, from moderately frequent to extremely infrequent, bordering on a closely related category of words which, although not used in more than one dialect area, are widely understood throughout the Buang region.

5.5 Usage of other dialect forms.

There are two bodies of material obtained from speakers of Buang A which reflect on their perception of B. The first is a series of recitations which accompany dancing with drums. These recitations have a distinctive diction, which the performers describe as "archaic" in a number of cases and as "poetic" in others. The "archaic" forms contain many vocabulary items present in Dialect B, and which mirror B phonology. Some of these are fairly recent borrowings. Examples of forms similar or identical to those found in B or C, and heard in A only in these recitations include <u>řayiř</u> (A, <u>řaři</u>, "charcoal"); <u>oyis</u> (A, kak, "red"); <u>melop</u> (A, <u>ayau</u>, "road"); <u>yon</u> (A, <u>on</u>, "you"); <u>řis</u> (A, <u>upu</u>, "leaf").

The second type of data is proper names. Most names are derived from some common noun, but many are forms foreign to A, either the preservation of an older tradition or derived from B. Such names include typical B forms such

as Sok (A, <u>ukwok</u>, "bird") and Melo (A, <u>melew</u>, "pattern"). On being asked the meaning of names, however, people sometimes could not give a translation for B-derived names with common meanings, e.g. Noma (A, <u>oro</u>, "hand").

In both of these bodies of material, not only are a number of forms different from A forms used, but in many cases the non-A phonology is also preserved. That present day speakers of Buang A who use these forms in recitations think of them as poetic (NM, <u>tok bilong singsing</u>) or archaic (NM, <u>tok bilong ol bikpela man bipo</u>) is interesting. To the foreign observer, they sound exactly like middle and lower Buang forms (many, of course, are admitted as such on questioning).

The inference from all this may be that the Buang A speakers regard the speech of the other Buang speakers as "archaic" (much as some modern Frenchmen feel about some Canadian French vocabulary items); nevertheless no one ever made such a statement about the other dialects.

Implications for mutual intelligibility are not entirely clear. Though increased exposure to such "foreign" forms may make for easier recognition of them in the speech of other Buang, there is some evidence to suggest that at least in the case of names, meanings are not always recognized.

5.6 Folk views of dialect and intelligibility.

In this respect it is interesting to note people's views on the differences between the dialects, gleaned both

from their general comments and from their reactions in a testing situation (as described in 10.1). Mambump people, giving a general description of the linguistic picture of the area, would explain, "We Buang have one language but three 'necks'; we here say <u>ke</u>, the <u>Vring</u> (Buang B) people say <u>sa</u>, and the <u>David</u> (Buang C) people say . . . something else". When asked whether A speakers could understand C, people answered, "We understand the <u>Vring</u> speech, but we understand the <u>David</u> speech only partially. Some of us understand it better than others". In the testing situation, when I announced that I was about to play a tape in <u>David</u> ayez (Buang C), many people expressed misgivings about being able to understand it.

In all of the Buang B villages which I visited, people clearly expressed the view that their dialect was central to the other two and therefore easier to understand (not only for other Buang, but for anyone else, e.g. Mumeng people). Nevertheless, the people of Wins had the same reaction in being tested as the A-speakers had, with many of them doubting their ability to understand the tape in Buang C. In both Chimbuluk and Papekani, however, doubts were entertained with respect not to Buang C but to Buang A. Subjects said, "We do not understand the speech of the <u>Alam nen</u>, or <u>Lenggu</u> (Buang A), very well", and told me that, on the other hand, Buang C was easy to understand.

The opinions of Mangga and Kwasang people also fit into this pattern. They understood Buang B with no difficulty, they said, but were more hesitant with respect to A. Furthermore, they claimed to have no trouble understanding the language spoken by the people of Sangas (on a tributary of the Bulolo River ( see map p. 42 ). When asked about the language of Patep, they said that although they did not readily understand it, it only took a few weeks of getting used to in order to be able to "hear" it.

That people are interested in other languages and dialects is evident in linguistic play, particularly in mimicry, where it is possible to observe the stereotypes people hold about the phonology of other languages. Mambump people, mimicking Vring ayez (Buang B) pretended to speak like toothless old people, making [s]'s into [s]'s, and palatalizing and slurring their speech. Buang B people, in turn, mimicked the A-dialect by speaking slowly, drawing out and diphthongizing their vowels. People tended to claim clarity and economy for their own dialect, accusing the others of a lot of extraneous "noise". Even slight differences between villages speaking the same dialect are remarked, as I discovered through the mistakes I made. For example, trying to form the negative of  $\underline{ke} \ \underline{\chi e} \ ("I \ saw")$ , I said  $\underline{ke} \ \underline{su} \ \underline{\chi e} \ \underline{re}$ . Immediately, I was told I was speaking with a "Muniau accent", and that it should be <u>ke</u> su <u>éxe</u> re. Thus even within dialect groups, each village claimed that its own unique variety of speech was the clearest and most correct. The matter of correctness was carried to such extremes by some people that they informed me that in the three villages of

Mambump, Vagau and Rari, which they claimed form a linguistic subdivision of Buang A, only one old man speaks correctly.

A picture of the relationships between Buang-Mumeng languages (from the point of view of linguistics) is provided by the hypothesis of genetic relationship as exemplified in the branching diagrams of Chapter 4. To the extent that borrowing occurs, however, such a group of related languages may take on the appearance of a chain, with highest lexical overlap and mutual intelligibility occurring between geographically contiguous dialects. Sufficient borrowing may even obscure the genetic relationships, making it virtually impossible to reconstruct such relationships from the synchronic data.

The folk view of linguistic relationships, also essentially synchronic, bears considerable similarity to the chain model. From the point of view of the people in any one location, their own dialect is central (as well as being the clearest and most correct); dialects of neighbours form subordinate links, and interest in and knowledge of the more distant links is lessened rapidly beyond the adjacent links, decreasing as mutual intelligibility decreases. Related but unintelligible languages are sometimes referred to as not merely "twisted", but "wrong" or "bad". Symmetry is not necessarily a feature of the model, as people usually say that one of the adjacent communalects is more closely related than the others to their own. Such a view does not depend mainly on the number of cognates shared with the "close" language or dialect, but instead on its geographical proximity. Thus B-speaking Wins people say that A speech is most like their own, and B-speaking Papekani people say that C speech is most like their own.

Finally, the view that all Buang dialects form one language is not supported by any generally accepted lexicostatistic measure, the percentage of common cognates between A and C being only 56%. The Buang view derives from the fact that factors other than strictly linguistic mediate in their comprehension of the other dialects. A measure of the extent to which the two factors of linguistic similarity and geographical proximity contribute differentially to comprehension is provided in Chapters 9 and 10.

 Recently introduced languages: Yabem, Neo-Melanesian, and English.

6.1 Yabem.

Yabem was one of the two New Guinea languages early adopted for use in the Morobe District by the Lutheran (Neuendettelsauer) Mission. According to Zahn (1940:5), Yabem was originally (i.e. in 1886) spoken by about 900 people in the Finschhafen coastal area, between the villages of Kamloa in the north and Busega in the south, but had been spread by the Lutheran Mission so that by 1940 a further 15,000 people at least could speak it, and somewhere between 60,000 and 100,000 could understand it.

Lutheran missionaries translated hymns, portions of the Bible and other material into Yabem, and also published various scholarly and pedagogical works on the language, (e.g. Dempwolff 1939; Lehner 1932; Schellong 1890,1905; Schmidt 1901; and Zahn 1940). Capell (1949) has discussed its relationship to Bukawa, as described in Chapter 3. (I have adopted Capell's spelling, "Yabem", in preference to the German "Jabêm").

Evangelists, trained in Yabem by the missionaries, were sent to spread the gospel to more distant areas, and teachers, also trained in Yabem, later established village schools, the process of evangelisation in this area proceeding in a manner similar to that described for the Madang District by Lawrence (1956). Yabem was thus the first language of literacy for the population of the coastal and sub-coastal Morobe District, and until the 1960's was the only language taught in many village schools.

While Yabem was undergoing this process of becoming a liturgical language and a language of literacy signifying mission education, it was losing ground as a first language in its home area, where Kate has become somewhat more prestigious. In the Yabem village of Ngasingalatu, I was told that the two villages of Katika and Boanga, north of Kamloa, were originally Yabem speaking but have become largely Kate speaking since the immigration of Kate speakers to the coast because of the presence of the missionaries there.

In addition to this possible diminution in the area over which Yabem is spoken as a first language, it has also probably reached its maximum in numbers of speakers for whom it is a second or literary language. Mission sponsored village level primary schools are now switching to a combination of local language (where this is known by the teacher), Neo-Melanesian and English, and evangelists working in the more recently contacted areas, such as Asiki-Menyamya, are now using Neo-Melanesian in preference to Yabem.

The Buang began learning Yabem as a religious language in schools set up by Yabem speaking teachers from the coast during the 1930's (see Chapter 3) and the majority of those who are literate at all are literate in Yabem. Many adults, on being asked whether or not they went to school, were hesitant about whether the village-school level

of training should be counted as "real school" and would say doubtfully, "<u>Mipela skul long tok ples tasol</u>" (NM, "We just went to school in a local language"). Though education, seen as one avenue to modernization, is regarded as much more valuable via the medium of a "modern" language, this does not mean that the Buang regard Yabem as a low status language. The use of the term <u>tok ples</u> signifies that it is recognized as a New Guinea language, nevertheless as a language of literacy and of the mission, it is regarded as occupying a somewhat special position among New Guinea languages. Among the Buang, knowledge of Yabem conveys a certain status, though probably not to the extent that it once did. (The changing position of Yabem among the Buang will be discussed in Chapter 11).

As the spread of Neo-Melanesian to the Buang was contemporaneous with or even antecedent to the spread of Yabem, acquisition of Yabem did not serve a practical end in opening up channels of communication between groups with whom communication would otherwise have been impossible. Nevertheless it did serve as a unifying factor in creating regional identity among southern Morobe District Lutherans.

## 6.2 Neo-Melanesian.

Neo-Melanesian, often referred to as New Guinea Pidgin English, has a history dating back to the 1870's in New Britain and island New Guinea (Salisbury 1967). During the

period before 1920, it was used by the German administration centred at Rabaul in its dealings with the local population, and there was incorporation of both Tolai and German elements (Wurm 1966-67; Salisbury 1967). Indentured labourers from mainland New Guinea who worked on plantations in New Britain during this period also learned Neo-Melanesian.

Wurm (1966-67:17) stresses that from these earliest times, Neo-Melanesian has been most important as a means of communication among New Guineans of different language groups. Its great utility in communication among local people rather than simply in communication between two caste groups, Europeans and New Guineans, has been largely responsible for its rapid spread since this period, and it is now estimated (Wurm 1966a) to have at least 300,000-400,000 speakers. Most of this number are people who speak Neo-Melanesian in addition to the language or languages of their home area, but there are an increasing number of speakers learning it as their first language. Wurm (1966a:52) gives an estimate of about 10,000 such people, mainly in the towns. Although the creolisation phenomenon is occurring, the spread of Neo-Melanesian as a pidgin language in the densely populated Highlands is probably outpacing this development. In addition, increasing numbers of Papuans are learning it.

Outstanding in the literature on Neo-Melanesian is Mihalic's (1957) <u>Grammar and dictionary of Neo-Melanesian</u>, as well as Hall's numerous works (see Hall 1943,1954,1955a, 1955b). Hooley (1962c) has described its syntax in transformational terms, and Wurm (n.d.) and Laycock (n.d.) have prepared pedagogical treatments of it. There is also a growing body of literature published in Neo-Melanesian, including the weekly newspaper <u>Nu Gini Toktok</u>, as well as publications put out by the various missions and by the Australian administration.

Long used as a "language of government" in relations between the people and first the German, then the Australian administrations, Neo-Melanesian has more recently been adopted as one of the three official languages in the Territory's House of Assembly, where it has been spoken very extensively by both New Guinean and expatriate Members. (Of the other two official languages, English and Motu, the latter has very seldom been used to date). Further, the adoption of the position that it should become the national language of Papua-New Guinea by the newly-formed political party, PANGU (Papua-New Guinea Union) illustrates its increasing respectability and its potential.

As described in Chapter 3, the first Buang to learn Neo-Melanesian were those who were recruited as indentured labourers for New Britain plantations in about 1910. Subsequent generations went to the plantations, and later to the goldfields and the towns, and knowledge of Neo-Melanesian on the part of adult men is now almost universal among the Buang (see Chapter 9). Despite the truth of Wurm's statement that Neo-Melanesian is used primarily in communication

among New Guineans themselves, the circumstances of learning have influenced the Buang image of the language, and Buang generally refer to Neo-Melanesian as <u>bubum ayez</u> (Buang A, "white man's talk"). Translating literally from the Neo-Melanesian <u>tok pisin</u> ("Pidgin"), some Buang even call it <u>ukwok ayez</u> ("bird talk"), although the proportion who actually think it has something to do with the "talk of birds" is slight. Many, too, realize that Neo-Melanesian is not in fact the <u>tok ples</u>, or native language, of anyone, even of the Europeans, and that <u>bubum ayez</u> is just a label. On further investigation, these people will admit that the real <u>tok ples</u> of the Europeans is English, or German. Opinions about the origins of Neo-Melanesian are rather vague, but many have a definite idea that it began in a particular place, and that it did not always exist.

#### 6.3 English.

Though New Guinea has been administered by Englishspeaking people since 1914, only since the 1950's has there been a clear Administration policy emphasizing the teaching of English in the schools. According to Spate (1966:119)

> Since 1956-8 the Administration's subsidization policy for mission schools has strongly favoured schools teaching through English.

Thus although a very small percentage of adult New Guineans have any knowledge of English, many of the young people are presently learning at least some English in school. Virtually all of the primary schools in the Buang area in 1967, for example, were offering some instruction in English (all but one were Lutheran mission schools), but only a very few adults of my acquaintance could speak it.

The demand for English education is high throughout the Territory (van der Veur and Richardson 1966), yet it seems that only a fraction of those who aspire to learn it will in fact do so, given the available resources of teachers and schools at present. And even for those who do learn it, the hoped-for advantages of an English education may not ensue. Wurm, for example (1966-67:18) warns that people may be

... tending to overrate the advantages and benefits they are expecting to derive from a successful mastery of English on their part, and one is left wondering what the reaction will be once they arrive at the realization that the knowledge of English alone is only one, though important, step towards the fulfilment of their hopes.

Though prediction for the future is important for the policy makers in the field of education, the present situation is clearly one in which English is very little understood or used by the majority of the population. Unlike Neo-Melanesian, English is not a language which has been acquired by informal means, and formal means have until very recently been lacking. 6.4 Yabem, Neo-Melanesian and English in the diffusion process.

As discussed in 1.31, Haugen (1956:40) has analyzed the process of diffusion of languages in terms of three stages: switching, interference, and integration. Of the three languages discussed in this chapter, English will not be considered in terms of this framework, as it is virtually never used even by those few Buang who have learned it in school. A consideration of Yabem and Neo-Melanesian with respect to their respective stages of diffusion to the Buang is, however, highly instructive.

The alternating use of both Yabem and Neo-Melanesian by speakers of Buang is evidence that code switching is a feature in multilingualism in the Buang speech community. Different patterns of switching exist, however, for the two languages. In Yabem, where switching is less frequent, it occurs mainly at the level of whole utterances and of even longer segments of connected speech. In Neo-Melanesian, on the other hand, switching occurs at the lexical and phrase level as well.

Interference is also a feature in the interaction of Buang with Yabem and Neo-Melanesian. Speaking of interference at the phonological level, Weinreich (1953:14) has said,

> Interference arises when a bilingual identifies a phoneme of the secondary system with one in the primary system and, in reproducing it, subjects it to the phonetic rules of the primary language.

Examples of this occur for Buang speaking Yabem in the identification of the voiced stops /b,d,g/ of Yabem with the compulsorily prenasalized voiced stops [mb, nd,  $\mathfrak{g}$ ] in Buang. Interference has also occurred in the reverse direction, in the case of the  $/\check{r}/-/1/$  distinction present in both Buang A and B but not in Yabem, which has only /1/. Some educated people appear to feel that Yabem phonology is more "correct" than their own in this regard, and although this view did not interfere with their speaking of the language, it did influence forms which some people cited in my taking of word lists, for example, where they carefully pronounced as /1/ both / $\check{r}$ / and /1/ in Buang.

The Buang have several somewhat unique pronunciations of Neo-Melanesian, for example many of them pronounce Neo-Melanesian words ending in /-it/ as /-ik/. Thus Neo-Melanesian forms such as /tit/ and /suwit/ ("teeth", "sweet" respectively) are pronounced /tik/ and /suwik/, though it is not clear whether this is strictly due to interference or not, as a few Buang words have /-it/ as terminal syllables, and other Neo-Melanesian words ending in /-it/, e.g. /mit/ ("meat") are pronounced in the standard way.

In the case of Neo-Melanesian, interference has also occurred to a great extent at the morphological and syntactic levels. In terms of verb morphology, some elderly Buang who do not have a good command of Neo-Melanesian identify its transitive verb ending /-im/ with their own "transitivizing particle" /-in/, arriving at erroneous Neo-Melanesian forms such as /wokin/ ("to make, do") instead of /wokim/. Most such people have had little experience of Neo-Melanesian outside of their own village.

On the syntactic level, "mixed" constructions include the very widely used /ke su save re/ (Buang A, "I don't know"), the Neo-Melanesian word <u>save</u> ("know") introduced into the usual negative construction /su ... re/ to fill a "hole in the pattern", as a single verb "not to know" (<u>dug-in</u>) is the traditional Buang expression.

Integration of Neo-Melanesian lexical items into Buang is a further feature which is true only to a very slight extent of Yabem, and serves as evidence of the much wider currency of Neo-Melanesian in the Buang speech community. The many words for new cultural items, such as tinned meat and fish (<u>mit</u> and <u>pis</u> respectively) form only one category of such imports; words such as <u>save</u> and <u>kamap</u> ("to appear, grow") represent another large class of imports which do not refer to recently introduced cultural items.

To summarize briefly the stage in the diffusion process reached by each of the three introduced languages, it is clear that English has not begun to undergo diffusion, that Yabem is involved in code switching but very little in the further stages of diffusion, and that diffusion of Neo-Melanesian has been considerable and has proceeded to the stage of integration.

6.5 Summary and conclusions.

A brief history and description of the two important languages which have been introduced since the colonial period throughout the Territory of New Guinea, as well as a third which has been particularly relevant to the Buangs, has been presented in this chapter. Such a discussion provides only a background, however, to the important problems and interesting questions which have here been left unanswered. With respect to the Buang situation, we want to know how the availability of these languages as vehicles of communication (or conversely, the lack of it) has affected relationships between Buang and other groups; it is also necessary to consider the extent to which intergroup relationships affected knowledge and proficiency in the various languages. Chapters 7 and 8 discuss usage of these languages in terms of relationships with other groups as well as their usage among the Buang themselves; proficiency is investigated in Chapters 9 and 10.

 Language usage in situations involving Buang and foreigners.

#### 7.1 Foreigners in the Buang area.

Although Buang contacts with foreigners of all kinds have increased greatly since the arrival of the Europeans, even in traditional times they had a variety of relationships with foreigners (foreigners being defined as non-Buang speakers). The two major types of contact which occurred involved alliances for warfare (described in 3.7) and trade, which was principally of the visiting-friend type, though there is evidence that trade existed even where trade friend ties were not well established. (Hogbin's description of trade between the coastal "Gawa", or Bukawa, and the people of their immediate hinterland, quoted in 2.2, is further evidence for this). It is difficult to judge what the situation was with respect to intermarriage, except to say that, aside from cases where a body of people may have immigrated into the area, it was probably less than at present.

When asked about communication with foreign groups during the period prior to the spread of Neo-Melanesian, the Buang told me that traders used a mixture of sign-language and a few words of the other language they had picked up. Supporting evidence for this view is the presence, in every Buang community I visited, of middle-aged and elderly people who know trade vocabulary in one or more of the neighbouring

languages. This vocabulary consists of words for tobacco, common staple foods, net bags, feathers, betel nut and so on, as well as a few words of greeting and commonly used verbs like "go" and "come". As far as can be deduced, the partnership worked both ways, and both trade friends knew a little of the other's language. I met Mambump and Muniau people who knew a little of the Gabensis language (Laiwomba), as well as an old Gabensis man who spoke quite respectable headwaters Buang; Aiyayok people who could understand some of the language of Gurakor and Timini; a Labu man who knew some headwaters Buang; a Vagau man who could speak Buasi and another who knew Hote. The majority of the people who displayed such knowledge had acquired it through channels established during the pre-Neo-Melanesian period (inherited trade friends), and not from opportunities for contact made possible by the colonial situation.

At present, the Buang are in contact with foreigners more frequently than ever before. Not only do the urban migrants interact with foreigners, but even those who stay home have the opportunity to meet a wide variety of non-Buang. Foreigners in the Buang area can be readily divided, for analytical purposes, into residents and transients.

# 7.11 Resident foreigners.

Buang people discuss the changes which have occurred in their way of life since the coming of the Europeans as

being attributable to two institutions, misin tupela gavman (NM "the mission and the government"), Indeed, resident foreigners are divided into two major categories, representatives of government and representatives of mission. Government, or administration representatives, account for the fewest residents, most of whom are aid post orderlies. There were five aid posts in the Buang Census Division in 1967, and of these two were in the headwaters area. I was acquainted with both of these orderlies (referred to locally as dokta [NM "doctor"] ), one of whom was a Wain (from the mountain area northeast of Lae) and the other of whom was a local man from Aiyayok Village. The Wain man had arrived in June, 1966, and understood very little Buang, thus the language used in speaking to him and to his wife was Neo-Melanesian, although the latter in particular had friends whose command of Neo-Melanesian was poor. The only language shared by locals with the Wain <u>dokta</u> was Neo-Melanesian, nevertheless they also used this language to a considerable extent in talking with the Buang dokta. The latter used Neo-Melanesian a great deal, particularly in formal situations. As the other government representatives with whom the Buang have dealings are visitors rather than residents, communication with them will be discussed in 7.12.

The other major category of resident foreigners, that is, mission personnel, includes a variety or people. The first mission representatives to come into contact with the Buang

were coastal evangelists, first from Buasi and later from the Kawa-speaking villages. They spoke to the Buang in Yabem (although most of them stayed long enough to become fluent in the particular dialect of Buang in use where they lived), and Yabem has remained the "official" language of communication between the Buang and mission personnel in the area, now mainly teachers and pastors. Serving the eight headwaters villages and Dawong in 1966-67 were four resident foreign teachers and two Buang teachers; Pastor Onesimus was in charge of the congregation. In addition, a carpenter present for the purpose of constructing school buildings and housing for the mission was resident during most of the period of the study. The total number of foreigners connected with the Lutheran Mission and speaking Yabem was approximately 25 (including the families of the personnel mentioned above) in a total resident Buang population of 1890 (see Appendix A), or about 1.3%. Discussion with such people was by no means confined to Yabem, though its official status was preserved through its use in church services, to some extent in school, and in most conversations with the pastor and with the teachers. In addition, Yabem served as a lingua franca for this foreign enclave (whose members included no native speakers of Yabem, but rather of Hote, Kawa, and Kela), and was used as a household language by at least the Hote-speaking pastor's family. About half of the adults and most of the children in this foreign group could understand Buang A, however, which greatly expanded their opportunities for communication with the sections of the Buang population which did not understand Yabem (see 9.44). Foreign women in particular seemed more willing to use Buang, and frequently conversed with Buang women in Buang during the course of participation in work activities such as gardening.

Yabem was the symbol of mission status, and those who knew Yabem generally chose to use it in talking with mission personnel. Neo-Melanesian was very little used in communication with such people, and almost entirely by those who did not know Yabem. Even this latter group consciously made an effort to summon up the few Yabem words and phrases with which they were familiar. Though two of the teachers spoke English (a Buang man and a Hote man, as well as a third teacher from Busama who arrived during the latter part of my stay), they had little or no opportunity to speak it, except in the process of teaching it to their classes. People appeared to prefer to speak in Buang to the Buang teachers, although the latter themselves used Yabem to some extent.

Of the small number of Buang who have intermarried with other New Guineans from far-flung areas, most are now resident in the towns. A few have brought their spouses home to live, however, and these people have learned Buang so well that the Buang claim they have forgotten their original <u>tok ples</u> (NM, "local language").

One further group of foreign New Guineans resident for several months during the period of the study included the

clerks who staffed the two bulk trade stores set up at Vagau during January 1967 (One a private European concern; the other belonging to Namasu, a trading concern affiliated with the Lutheran Mission). Like the aid post orderlies, they were addressed in Neo-Melanesian.

Some Europeans have been resident in Buang territory for varying periods of time, ranging from a few months to several years, and have communic ated with the Buang in both Neo-Melanesian and in Buang, the latter correlating strongly with the length of their residence. These people include Bruce and Joyce Hooley and family, Joan Healey and Roma Hardwick, (all of the Summer Institute of Linguistics), Mile. Françoise Girard, an anthropologist from Paris, myself and my husband, and Toni Voutas, (Member of the House of Assembly), an adoptive "resident" of Muniau Village.

# 7.12 Transient foreigners.

Transient visitors to the headwaters Buang area from September,1966 to August, 1967 included at least the following: Government personnel:

Department of District Administration Officers	4
Agricultural officers	5 (3 of these paid a total of at least 10 visits)
Infant welfare nurses	4-5 supposed to come once a month by plane; they actually made approx. 8 visits.

Commonwealth of Australia 2 working on road building in the Dept. of Works headwaters region for approx. 2 months 2 visits by inspectors. Lutheran Mission 1 visit by Malalo Circuit missionpersonnel ary and his family (6 people); 10-15 visits by foreign pastor and teachers resident in the central Buang area. Local Government Council 8- (health and medical inspectors; tax collectors) Representatives 10 Others on business 12- visits (prospectors, trade store 15 owners and supervisors, 1 botanic-al researcher, House of Assembly Member and his representative). 15- visits Highland traders 20 Tourists and social visit- 8-10 ors

A large number of other visitors, mainly mission personnel, were in attendance at the Yabem <u>Sam</u> (see Chapter 11) and many made visits prior to this for organisational purposes. Communication which took place in this connection will be discussed in Chapter 11.

Many more visits could be added to this number if the central and lower Buang regions were taken into account, as the headwaters area is the most inaccessible and many visitors turn back before reaching it.

Almost all of the transients mentioned in this section were visiting the Buang area for reasons that did not exist in traditional society, and as representatives of institutions that did not exist in traditional society. Most, too, were not neighbouring foreigners but distant foreigners - Europeans, Papuans, highlanders, and so on, - and thus had no language in common with the Buang except Neo-Melanesian, which is the general language of communication used between the Buang and all of the above categories of visitors except for mission personnel.

Most representatives of the gavman, visiting the Buang in their official capacity, hold some kind of official meeting with the village people. At such meetings, a majority of the official speeches are made in Neo-Melanesian (all the speeches of the visitor and many by the people of the village). Nevertheless, there is always much discussion in Buang, as an interpreter is appointed to give a phrase by phrase translation of what the visitor says. So many of the listeners know Neo-Melanesian, however, that discussion over the precise translation often occurs. Nevertheless, translation is not redundant, because there are always some people present who do not understand Neo-Melanesian; socially, it has important functions in marking the importance of what is said and who is saying it (see Salisbury 1962). In addition, a number of side conversations are held in Buang, even while the meeting is going on, discussing what has been said.

Yabem is never heard in situations involving the <u>gavman</u>, as it is recognized, with considerable justification, that many government officials are not well disposed toward this language.

Thus, for example, government officials frequently object to being given Christian names when taking censuses, etc., and instead ask people for their <u>nem bilong graun</u> (NM, "ground name", "traditional name").

Communication with government officials on informal occasions (when there are only a few people present) is entirely in Neo-Melanesian. From early days, those who could speak Neo-Melanesian had a distinct advantage over their fellows in communication with the <u>gavman</u>, and knowledge of the language was often a prime factor in appointment to the post of <u>tultul</u> (NM, "assistant village headman", often also interpreter). On an informal level, most officials still choose to communicate to a very great extent only with those who speak Neo-Melanesian, rather than use an interpreter to communicate with those who do not speak it.

Of those who visit the Buang area "on business", one interesting group are the wandering traders from the highlands who walk through the area in twos and threes in search of feathers for use in headdresses. Called "Chimbus" by the Buang, these men, mainly from the Kerowagi area, go from village to village seeking the desired plumes. Some of them have established trade-friend relations with locals, and can count on hospitality from their friends. They and the Buang communicate entirely in Neo-Melanesian, a pattern which holds for all of those who come on (private) business. A few of the "social" visitors from distant places are affines, because there has been a small degree of intermarriage in recent years between the Buang who have migrated to the towns and foreigners they have met there. The Papuan wife of a Muniau man came to spend a short visit; one "Chimbu" told me he had come to visit the relatives of his ex-wife, claiming that he was on good terms with his Bugweyau <u>tambu</u> (NM, "affines"). Such people and other recent friends from distant places (e.g. the Sepik driver of one of the Buangowned trucks) sometimes know a little Buang, but converse mainly in Neo-Melanesian.

Though few of the visitors to the Buang area during the period of the study were close neighbours (except for those who were there as representatives of some external institution), the Buang still have some special ties with these people. Because their neighbours on almost every side, however, are closer than they to the new centres of influence (the European towns and posts), visiting is now usually in the opposite direction. Such relationships will be discussed in 7.21.

## 7.2 Communication with foreigners away from home.

There has been some continuance of friendly relations between the Buang and neighbouring peoples in the area of trade, though cash is now frequently involved. Thus when Mambump men went to Patep to buy a pig, they were prepared

to pay in cash. The main location where Buang now trade, however, is the Lae market, where most of the traditional trade goods are usually available on a regular basis for cash. The subdistrict headquarters at Mumeng provides the second most popular market, and a common "rural" meeting place for the various peoples of the subdistrict. The Buang often visit and sometimes trade at Gabensis on their way to Lae, and during the period of the study a large group was also entertained at Labu (in conjunction with a meeting about territorial boundaries).

In almost all communication with neighbouring peoples, however, one of the newly-introduced languages is used generally Neo-Melanesian and sometimes Yabem, the latter in particular to native speakers of Yabem, Kawa and Kela, who claim that Yabem is the <u>tok ples bilong mipela ologeta</u> (NM, "the language of all of us"). In almost all of these villages, however, are a few old men who learned one or other variety of Buang while working in the area as evangelists, and can welcome occasional Buang visitors in their own language. People who know trade vocabulary, words of greeting, etc. in any neighbouring language use them as an expression of goodwill towards the neighbours whom they visit, and also evidence of their special relationship with them.

The other major type of communication which takes place between Buang and foreigners in rural areas involves Buang evangelists, who talk to the people of their adoptive

communities sometimes in the language of those communities but mostly in Neo-Melanesian.

Of the dozen cases I recorded of currently existing marriages between headwaters Buang and foreigners, all except one couple were living either in a town or in the spouse's home area (including Mumeng, Gabensis, New Britain). Most of the children of such marriages speak Neo-Melanesian as their first language, and only a few speak a little Buang. Many town-born children of other long-time migrants also do not speak Buang, as is the case with those who have grown up in areas where there is no large Buang contingent, such as Madang. Town dwellers generally speak Neo-Melanesian much more freguently even at home than do their rural counterparts.

In the work situation, Neo-Melanesian, as the language of widest currency, is used almost universally. In the larger towns (most Buang work in Lae or Port Moresby), daily contact with New Guineans from all parts of the country makes its use essential for communication. Moreover, even in the smaller centres, it is used almost exclusively. On questioning returned migrants who had worked on plantations, for example, "Did you learn the language spoken by the people there?", the answer received was always negative because, as they explained, "<u>Mipela stap wantaim ol masta</u>" (NM, "We were with the Europeans"). That is, they were in the area by virtue of their working for Europeans, and as such had more contact with other immigrant workers than with the New Guineans native to that area.

Neo-Melanesian is used in most formal situations and meetings where participants represent a number of language groups. Two such examples involving Buang people are the meetings of the Mumbu Society (Mumeng-Buang Welfare Society, in Lae) and of Namasu, a marketing and supply company in which many Buang are shareholders. Even in situations where groups of Buang interact informally or socially with non-Buang speakers (e.g. in residential areas or compounds; among work groups), Neo-Melanesian is the preferred language, a temporary switch to Buang made only for reasons of privacy or secrecy.

In the towns, as elsewhere, those who know Yabem use it in talking with missionaries and church officials, and sometimes with their co-religionists. In church services and church meetings, however, its use is much restricted.

Many Buang children who have grown up and gone to school in Port Moresby speak Motu outside as fluently as they speak Neo-Melanesian at home. The children presently at school in Port Moresby are literate in English but generally use Motu in speaking with their friends.

7.3 Languages spoken by Buang.

As described in 7.1, many Buang have some degree of ability in neighbouring languages acquired through traditional channels such as inherited trade friend ties. In addition, travel and social contacts made possible since the coming of

the Europeans to New Guinea have resulted in the learning of a great many languages by some people.

Among the other languages known by one or more Buang of my acquaintance are:

- Police Motu common among long time (5 years or more) residents of Port Moresby and, more especially, their children.
- Rigo Daru Marshall Lagoon
- Asiki spoken fluently by children of a Buang missionary to Asiki and, to a lesser extent, by himself and his wife.
- Tolai learned (but since forgotten) by a Buang who worked in Rabaul before the war, and
- Japanese acquired during the Japanese occupation of Rabaul by the same man (he still has some facility in this language).
- Chimbu presently being acquired by a school teacher stationed in the Highlands.
- Graged the evangelical language of the Lutheran church in the Madang District, spoken by a long-time resident of Madang.

Buasi -Laiwemba -Hote -Mumeng -Buang Neo-Melanesian Yabem English,

a total of 17 languages, not including other varieties of Buang.

An idea of the distribution of language skills within the population, i.e. the proportion of people who understand the major languages mentioned above, is given as a result derived from comprehension tests in Chapter 9. An estimate of the incidence of bi-, tri-, and quadrilingualism in the population is also included in this section.

#### 7.4 Summary.

In this chapter I have reviewed some of the different situations in which the Buang use the different languages which are available to them, with respect to differential usage in communication with foreigners of various kinds.

Although even in precolonial times the Buang were by no means strictly monolingual, their linguistic repertoire has recently been considerably augmented. Nevertheless the rapid and wide ranging spread of Neo-Melanesian has made this language the most practical, and in many cases the only possible, choice for communication with foreigners of all kinds. In terms of efficiency criteria in verbal inform-
ation transfer, it is also more practical for the Buang to use Neo-Melanesian in communicating with neighbouring peoples whose languages only a few Buang know.

In summarizing the role Yabem plays in contacts between Buang and other groups, the most important point is that although it has not increased the contacts possible for the Buang, in a numerical sense, it symbolizes the special relationships they have with coastal people, especially the Bukawa speakers south of Lae, as co-religionists, as friends, and as rivals. 8. Language usage in situations involving Buang only.

## 8.1 Generalities.

As might be expected, most informal conversation taking place in a context of face-to-face interaction among groups of Buang is in the Buang language. Particularly among rural Buang, this is the communication situation which characterizes most daily activities, including the various phases of gardening, a majority of which involve cooperation among small kin groups; food preparation and family life; training of children in traditional activities; and most other aspects of traditional village life. For most villages, by far the greatest proportion of interaction takes place with other people who live in the same village.

Use of Buang predominates in all situations involving Buang people, including those in which Buang of different dialect groups interact with each other (see 8.2). On a trip down the Snake River, Patep is the first village where the Buang use Neo-Melanesian in communicating with the residents. It is only among speakers of the three Buang dialects that Buang is commonly used.

Some exceptions to the situation described above (apart from the formal situations to be discussed in 8.3) occur in the towns where, as described in Chapter 7, Neo-Melanesian is used to a greater extent. In addition, there have been cases in the towns of Buang speaking to each other in Neo-Melanesian by accident, through lack of having recognized each other as <u>wantoks</u> (NM, "compatriots"). Such incidents occasion great merriment, and the interlocutors switch to Buang on discovering each other's identity.

Even in home territory, however, Buang is not the only language used in informal speech. In joking and mimicry, both Yabem and Neo-Melanesian (and sometimes other foreign languages) are used. Children's play involves use of other languages, particularly Neo-Melanesian and to a lesser extent Yabem, not especially in the repetitive learning situation as described, e.g., by Mead (1953:33), but in mimicking situations in which these languages are used, such as visits by government officials or policemen, and in giving instructions to each other about how the game should be played. The use of a few words in other seldom-heard languages (e.g. Asiki) by children who know them is regarded as particularly hilarious.

Another common situation in which Neo-Melanesian was used locally was among work groups (of men) occupied in community tasks such as construction of bridges or clearing the airstrip. Work such as carpentry was often discussed almost entirely in Neo-Melanesian, even when no foreigners were present. (The effect of my presence as an observer is controlled by the absence of this usage in contrasting situations.)

8.2 Communication situations involving other-dialect Buang.

When groups contain people of different Buang dialects,

generally each person speaks his own dialect and understands what is said in the other(s). Headwaters Buang have a great deal of contact with central Buang, especially those of the villages of Wins, Bulantim and Lomalom, and communication appears to proceed with no difficulty under this system of passive bilingualism.

Although there is much less contact with C-speakers on the part of headwaters people, the occasional C-speaking visitor is always addressed in Buang, (A), rather than in Neo-Melanesian, and he, in turn, replies in Buang, (C). Despite the protests (to me) of many headwaters people that C is too different from their own language to be able to understand, C visitors and their hosts appear to be able to communicate in Buang. A similar situation is reported to prevail when Aspeakers visit C. An explanation for this apparent discrepancy is that those C and A people who have occasion to interact with each other (trade friends, distant kin, etc.) have acquired a greater understanding of the other dialect than have the rest of the people (see 9.44). Thus, although a relatively small proportion of A and C speakers actually have the opportunity to communicate with each other, all of these people communicate in their different dialects of Buang.

Of the various types of contact among the three groups which give people experience in understanding the other dialects, intermarriage is most important, as it provides the best opportunity for a whole group of people to become

accustomed to the speech habits of a "foreign" group (as represented by the other-dialect wives).

Seven Buang villages which I surveyed counted 27 otherdialect wives among their number, as well as a further 51 same-dialect wives from other villages. As demonstrated in Table 8.1, foreign-dialect women comprise about 4% of all married women, or only about 1% of the population. Nevertheless, their importance in providing a sample of a different dialect is greater than these figures would suggest, as their "foreign" speech habits become familiar not only to their children, but also to other people with whom they daily come into contact.

Villages (Total population: 2622)		<u>Foreign</u> Same dialect	Wives Other dia- lect	Total	Est. total married women	Foreign Wives % of mar- ried wo- men	Other dialect foreign women as a % of married women
Upper	Vagau	8	6	14	50	28%	12%
Buang	Mambump	12	0	12	65	20%	0%
Cen-	Dawong	3	5	8	76	11%	7%
tral	Chimbuluk	10	0	10	49	20%	0%
Buang	Papekani	1	8	9	113	8%	7%
Lower	Manga	16	4	20	182	11%	2%
Buang	Kwasang	1	4	5	139	4%	3%
Total		51	27	78	674	12%	4%

Table 8,1 - Foreign wives in seven Buang villages.

Observation of and questioning about the speech behaviour of such foreign wives revealed the same pattern, i.e. foreign born women generally continue to speak their home dialect, whereas their children speak the language of the community in which they grow up.

In Mambump, the village where I lived, there were no other-dialect wives. Of the 12 wives from other headwaters villages, however, the 5 from Bugweyau had retained certain phonological differences characteristic of the Bugweyau variety of the headwaters dialect, most notably the occurrence of /gy/ word initially, where the corresponding Mambump form is /by/. Thus the daughter of a Bugweyau woman explained to me that her mother always addressed me as /gyak/ rather than /byak/ (Buang A, "first born daughter") because she had a Bugweyau accent. Similar retention of the linguistic habits of the home area were observed among central dialect wives in Vagau.

Among the older other-dialect immigrants, however, there has usually been some accommodation to the speech habits of the adoptive community, although native-born members of that community still maintain that they speak with a foreign accent. A woman born in Mambump about 70 years ago, and who has lived in Wins all her married life, uses mainly central dialect forms, notably the /š/ reflex in the /š/-/k/ correspondence. Speaking to me, she made an effort to use /ke/ rather than /ša/, but forgot to make the switch in other words, such as /šej/ rather than /keg/ (Buang B and A, respectively, "fifth born daughter").

Through the example of foreign wives, people become accustomed both to phonological shifts and to lexical items which differ between dialects. Thus intermarriage, as a mechanism important in exposure of the population to different speech habits, facilitates comprehension and promotes communication of various types among speakers of different dialects.

Kinship ties, maintained between various villages over the generations through a system of delayed exchanges whereby one of the daughters of a foreign wife usually goes back to her mother's home community in marriage, imply economic cooperation. Various types of economic cooperation provide further situations in which Buang of different dialects communicate with each other, and in all of these situations Buang is used almost entirely.

Events of traditional importance in Buang society were closely related to the growing of yams, and large scale gatherings are still held for the planting, distribution and consumption of yams. Other-dialect helpers and guests are usually present, in small numbers, at such affairs, and Buang is the predominant language spoken. At one typical Mambump yam-planting, for example, there were 7 B-dialect people out of a total of 89 present; at a feast at Rari, there was a sizeable contingent from the C-speaking village of Mangga.

Cooperation in modern economic ventures has also taken place in recent times, and has included projects such as the

joint financing of trade stores and trucks. The Sake Rural Progress Society has been formed, with Department of Agriculture supervision, to market coffee produced throughout the Buang area. Partly since much of the discussion involved in these modern 'projects is at meetings where the advisory officers concerned do not speak Buang, much of it takes place in Neo-Melanesian. Even when no such foreigners are present, however, Neo-Melanesian is spoken to a considerable extent in discussions of these topics.

8.3 Formal situations.

Formal situations are defined by the Buang as those involving a minding (from English, "meeting", and used in preferm ence to the Neo-Melanesian <u>kibung</u>) or <u>supinken</u> (Buang A, "gathering", with the connotation being that speeches will be made). Among the main types of meeting held in the headwaters area during 1966-67 were the weekly meetings held on Sunday afternoons immediately after church services; the regular Friday lain (NM, "line-up") held in a number of individual villages; bisnis (NM, "business") meetings held to discuss coffee growing, trade stores, the buying of trucks or other money-making enterprises; special meetings called by visitors such as government officers; and unscheduled meetings of one (or sometimes two) village(s) on various miscellaneous topics. In all of these formal situations, as well as in church and in school the two recently introduced languages, Neo-Melanesian and Yabem, are used to a much greater extent than usual.

Two of these types of meeting - the special meetings called by outside persons, and the after-church meetings usually involve some people who have little or no knowledge of Buang, although the resident foreigners at post-church meetings generally understand considerably more than the transient officials. Both, too, often if not usually involve Buang from more than one dialect group. A general idea of the format of the "special" meetings has been given in Chapter 7, and the after-church meeting will be discussed at greater length in Chapter 11.

Most of the other meetings involve only Buang participants and all types (except, perhaps, meetings to discuss land - usually land boundaries) feature a number of speeches made in Neo-Melanesian. Meetings are generally opened with a prayer, which is either in Buang or in Yabem. The latter is used more frequently in church, in school and in after-church meetings. Neo-Melanesian, on the other hand, predominates in meetings about <u>bisnis</u> and in the Friday <u>lain</u>.

8.4 Language usage among leaders.

In 3.7 three main types of leaders were distinguished: traditional leaders, concerned mainly with the regulation of the yam cycle, and particularly with the organization of yam distribution; religious leaders and village officials, drawing their power from the externally based institutions of mission

and government; and entrepreneurs, who manipulate the institutions of traditional society in order to succeed in modern Language usage follows these distinctions very society. closely. Thus traditional leaders very definitely prefer to speak Buang. One such leader rather successfully perpetrates the myth that he cannot speak Neo-Melanesian and is very reluctant to do so, although in fact he has been heard speaking it on some occasions (this is the same man who is cited as speaking the "best" headwaters Buang). In general, the mission and administration leaders ase Yabem and Neo-Melanesian respectively to a greater extent than do other people; mission leaders are sometimes called upon to lead prayers or read announcements Entrepreneurs and others involved in modern economic in Yabem. activity use Neo-Melanesian especially frequently.

A statistical analysis of the language usage of various types of leaders on formal occasions appears in Chapter 11.

8.5 Form: oral tradition and written communications.

Some language usage is specific to special forms of written communications and verbal art. As described in Chapter 5, for example, Buang B is very frequently heard in the <u>sini</u>, or recitations, of A dialect speakers. Hymns are mainly in Yabem, although a few Buang hymns have been composed in recent years, and the children now in school sing hymns in Neo-Melanesian and even English. People also sing songs they

have heard on the radio in Neo-Melanesian, English and Motu, to the accompaniment of guitars or ukeleles, although in the case of the latter two languages they frequently do not know the meaning of the words. A recent and very popular borrowing from the coastal peoples is the <u>duadua</u>, or "children's play", which involves pantomime, singing, and group games, held on nights when there is a full moon and often attended by groups of admiring adults as spectators. <u>Duadua</u> songs are mainly in Yabem.

Written communications are of two main forms: letters and minutes of meetings. Both types are written either in Neo-Melanesian or in Yabem, and use depends more on the educational background of the writer than on factors such as the topic of the communication or, in the case of minutes, the language spoken at the meeting in question.

8.6 Language usage and language choice.

The order of presentation of this chapter as well as of Chapter 7 is "ethnemic" in the sense that the distinctions drawn between types of situation, types of participants and types of topics parallel those drawn by the Buang themselves in making decisions about which language to use. This structure of decision making has been schematized in Fig. 8.1, which attempts to clarify the order in which decisions relating to language choice are made.



Figure 8.1 - Decision-making in language choice for Buang speakers.

This diagram parallels not only the order of choice-making, but also to some extent, my heuristic process of investigation. In collecting data on language choice, my first approach was simply to accumulate, in as exhaustive as possible a manner, examples of language use occurring both in the village and in the towns, and my data include notes, tapes, and transcriptions of a large number of communication situations, both informal and formal, as well as normative statements about language use. I rapidly became alert to any instance where a language other than the Buang A dialect was used. This, in turn, let to a number of obvious generalizations about the use of Yabem and Neo-Melanesian, and the search became one of looking for refinements and counter examples to these generalizations. At this point I was dealing with slight differences in situations which could lead to differences in the code used. Reconstruction of the decisions taken could now proceed on the assumption that the clearest or most frequently made distinctions will be drawn first, and distinctions which are both subtle and infrequent are among the last made.

Thus, reading from the top of the diagram, the first decision to be made is whether one's interlocutor is or is not a Buang (or, in a group, whether or not there are non-Buang among the group). Where non-Buang are involved, the next decision still pertains to the category of the interlocutor, this time as a stranger or not, with strangers being addressed in Neo-Melanesian and non-strangers being further subdivided at least

according to their ethnic identity, occupation, and knowledge of other languages. Where Buang only are involved, the next level of decision making involves a categorization according to situation, whether formal or informal, after which more subtle distinctions are made on the basis of topic, form, etc.

The presentation of a schema involving several levels of decision making is not to imply that every speech act is preceded by a complicated process of deliberation. On the contrary, the straight line just to the left of the center in the diagram and representing by far the majority of speech acts, (especially in the rural areas), does not require the speaker to take any of the "factors" into account, and the next most frequent, (especially in the towns), represented by the straight line just to the right of the center, requires only one distinction the identification of the interlocutor as a stranger. The more subtle distinctions, involving social and political manoeuvre rather than factors of efficiency in communication, are among the last to be made, as well as being the most variable and the least predictable (see Chapter 11). In these cases, in the diagram I have merely listed the language according to the frequency of usage.

The various levels of decision making also serve to discriminate among various sectors of the population in terms of their language ability. Thus rural children, and those women who know only Buang, are prevented from making even the first

choice. In fact, this schema represents the decision-making procedure for a hypothetical average Buang male.

Evidence in the form of a number of statements of individual Buang about language usage tended to validate my assessment of the early portion of the decision making process. Reaction to "mistakes" (defined here as usage contrary to that specified in the model) also supported my view of the choice order, in that mistakes involving wrong assessments at the earlier stages, or higher levels, occasioned a much stronger reaction than did lower-level mistakes, as in the case of the strong reaction of amusement occurring when a Buang incorrectly identifies another Buang as a stranger and speaks to him in Neo-Melanesian.

Although the schema represented in Fig. 8.1 gives a well-defined picture of language usage on the macro-level, it is not fully inclusive, as it does not account for changing developments within situations, including code-switching, and hence cannot make predictions about situations in which this is likely to occur, except to specify which situations these will be. In these cases the number of decisions being made and the factors influencing them are too varied and difficult to identify to fit into a general schema of this sort. This problem will be discussed further in Chapter 11.

9. Language proficiency in Mambump.

9.1 Introduction.

As discussed in 1.4 and 2.1, testing was necessary in order to ascertain more precisely the extent of people's capacities in the various languages they had occasion to use. I decided to test principally for comprehension rather than productive ability. This decision was based primarily on four factors:

(1) On methodological grounds, testing for productive ability as contrasted with comprehension would have been a much more complicated task. Even a relatively simple test such as translation of vocabulary items from the subject's own language to any other language would have involved difficulties in scoring - in this case I would have had to score alternate translations in six languages and dialects. Testing for comprehension, on the other hand, required the less onerous task of compiling such lists in the various languages beforehand, and scoring the alternate choices in only one language, the home language of the subject.

(2) While productive ability is an important phenomenon with respect to foreign languages, it is peripheral in the case of closely related dialects, restricted to mimics and to the few people who reside for extended periods of time in different dialect areas.

(3) The distinctions made by New Guineans between productive ability and comprehension are quantitative rather than qualitative. They consider comprehension and production as stages in

the same process. The Neo-Melanesian phrases expressing these stages are as follows:

<u>Mi harim haphap</u> "I understand a little" <u>Mi harim, tasol mi no inap bekim</u> "I understand it but I can't speak"

<u>Mi harim, tasol maus i heve</u> "I understand it, but I can't speak it properly" (my mouth is heavy)"

Mi harim, na mi bekim "I both understand and speak"

People consider these stages to be strongly correlated with the learner's length of contact with the language in question.

Hence it does little violence to the significance of these phenomena for the New Guinea context of communication to assume that (in the case of foreign languages at least) in testing for degrees of comprehension, one is also testing for productive ability.

(4) Although productive ability is of more importance in language choice from the speaker's point of view, his choice is also conditioned by the level of comprehension of his audience. As long as the interlocutors understand each other's language, communication can proceed. The "ethnemic" distinction here corresponds to the practical determinants of communication.

Testing for mutual intelligibility is mentioned as a criterion, or as one possibility of ascertaining languagedialect boundaries in New Guinea by Wurm and Laycock (1961).

Though I modified a procedure suggested in this article, I was not interested only in the guestion of mutual intelligibility in the sense of comparing languages presumed to be mutually intelligible because of their similarities, their genetic realso lationship, but, in making a judgment of how well learned languages were understood. The problem in distinguishing languages from dialects involves, in the borderline case, making a distinction between mutual intelligibility, presumed to be based on a certain high degree of similarity between the communalects in question, and universal or near-universal passive or incipient bilingualism, presumed to result from social factors such as contact and learning. Such borderline cases appear to be widespread in New Guinea, particularly in the context of language and dialect chains. In the Latin-American case studied by Diebold (1961b), who coined the term "incipient bilingualism", bilingualism was clearly attributable to learning only, Spanish and Huave being sufficiently different to imply no degree of mutual intelligibility. In the New Guinea chain situation, it is much more difficult to separate these effects, as learning (bilingualism) occurs over a base of some degree of linguistic similarity and genetic relationship. Wurm and Laycock (1961) describe for the Eastern New Guinea Highlands Stock a situation of mutual intelligibility among languages sharing as low as 60% common cognates, much lower than the 80% boundary set by Swadesh. It is possible to interpret such a situation in terms of a combination of linguistic similarity and social contact.

Of course much bilingualism in New Guinea does not involve mutual intelligibility .Siane-Dene bilingualism described by Salisbury (1962) is one such case; others include the learning of Neo-Melanesian and of mission linguae francae by thousands of New Guineans speaking hundreds of different languages (in the latter case, the target language has varying degrees of genetic similarity, sometimes none).

As the linguistic situation of the Buang today involves learned as well as genetically similar languages, I attempted to devise a test which would measure comprehension of both types of language, in order to provide comparable results. This test is described in 9.2.

## 9.2 The test.

The test was composed of two main parts, the first of which involved overall comprehension of a short text, measured in terms of answers to questions on the text, and the second of which required translation of individual vocabulary items from the target language into the subject's native language. The first part of the test was adapted from a method suggested by Voegelin and Harris (1950) for testing mutual intelligibility, and later used by Hickerson <u>et al</u> (1952) on Iroquois languages. The method as they describe it involves having subjects listen to taped texts in the test language; the tape is interrupted at close intervals and the subject is asked to translate into his own language. The tester evaluates each

translated segment in terms of whether the subject understood nothing, 1/3, 2/3, or everything; meanwhile the test is being recorded on a second tape recorder so that rescoring and reevaluation of responses can be made at a later date. For a situation where there was only one tester (myself) and only one tape recorder, I decided that a method involving on-thespot decisions with no possibility of later re-evaluation would make for too large an error (writing out each translated segment would have been extremely time-consuming as well as difficult to evaluate in doing later tests with native speakers of Buang dialects with which I was unfamiliar). Accordingly I asked subjects to listen to the whole of a short text at once, and then asked them three guestions about it. Questions were phrased so as to have brief answers which I could write down rapidly for future scoring. Though a possible drawback of my method was that subjects might understand what was being said but then not remember when asked a question, this did not act as a drawback for my purpose, which was not to provide an absolute measure of the subject's comprehension of any language, but to measure his comprehension of that language relative to his comprehension of other languages; the good or poor memory of any given subject was assumed to bias his scores on all languages in the same direction.

The second part of the test was designed to measure comprehension of vocabulary items in the texts. It was included to provide a comparison with the results on comprehension of connected speech; to measure finer degrees of difference between subjects among whom the first part of the test

might not discriminate; to provide results which could more easily be compared with, for example, the percentage of common cognates shared by the test language and the native language, or with the percentage of cognates in the test list. The first part of the test measured comprehension of vocabulary, but it also measured something different, in that connected speech involves many linguistic features at once, including inflected and conjugated forms not immediately recognizable to the foreigner, proceeding at a pace which may seriously impede comprehension by the foreigner.

Mambump residents were tested in six languages: three Buang dialects, Yabem, Neo-Melanesian and English. Testing Mambump people in their own headwaters Buang dialects (Communalect A) provided a control on the difficulty of the questions; testing in English also provided another control in that it was a language unknown to almost all of those tested. The texts used in the test were six short stories, composed by myself, each having to do with daily life in the village. Texts appear as Appendix C. They were all approximately the same length, the English text of each being about 100 words long. Words occurring in the stories were used as vocabulary items in the second part of the test, so that after the subject had listened to the story and answered the question, we went over the text again, stopping the tape at ten selected words with the subject translating each one into his own dialect. For the text the subject heard in his

own dialect, the second part of the test was omitted. Vocabulary lists from each text were made as comparable as possible, with certain common verbs, craft objects, food, and so on occurring in each one.

After composing the stories and choosing vocabulary items, I had to have help in translating the stories into the other five languages, and in recording them. This I did in Mumeng, the Subdistrict headquarters. Recording the stories in the three Buang dialects posed the greatest problem, for although all three translators were literate in some language, written Buang was new to them, and recording had to be done phrase by phrase, repeatedly stopping and starting the tape recorder. The finished product nevertheless turned out to be remarkably coherent, and subjects evinced no difficulty in hearing the taped stories. Recording the Yabem, Neo-Melanesian and English stories was much easier. All texts were recorded by native speakers except for Neo-Melanesian and Yabem, and the English texts were recorded by an Australian, as this is the variety of English with which New Guineans are in contact. All texts were recorded by men. Thus I had thirty-six taped stories, as each of the six stories was recorded in each language.

Forty-eight Mambump people took the test. Each heard a different combination of texts in the different languages. As far as possible, the first half of the subjects listened to the texts in the following language order: Headwaters Buang, Central Buang, Lower Buang, Yabem, Neo-Melanesian, and English. I felt that it might give people more confidence in the test situation if testing began with a text in their own language; as testing proceeded, however, results indicated that this order might bias the results in favour of Central Buang as compared with Upper Buang, because of familiarization with the procedure during the first text. Accordingly for the second half of the sample, the relative order of the first two texts was reversed.

## 9.3 The sample.

The sample of 48 people included about 35% of Mambump's resident population over the age of twelve, and was stratified in terms of age, sex and education. Age was estimated by presenting to a number of Mambump people a list of the people in the village, which they ranked in terms of birth order. Absolute dates were then assigned to a number of individuals at different points on the list through correlation with well-known historical events such as the Bulolo Gold Rush, World War II, etc.

During the testing, which took place over a five-week period, the most important and most difficult condition to ensure was privacy, and for this reason I did not use ordinary random sampling procedures. Instead, people were approached to take the test whenever an opportunity presented itself, that is, on occasions such as the appearance at our house

of any Mambump person at a time when very few people were within earshot of the tape recorder, or someone's presence in the village when almost no-one else was there. Having stratified the population according to the criteria mentioned above, I established a quota for each segment of the population, and tested the first individuals available from that group until its quota was filled. For example, from the five old ladies over 60 I chose the first two available at a time convenient for both of us. When I had trouble filling the quota for a particular group, I sometimes made a visit to several households until I found someone in the category I was looking for to come to my house and take the test. No one refused to be tested, and everyone was cooperative and helpful. The only possible direction of blas would appear to be in the direction of people who lived close to me (itself a chance factor, as I occupied a housewhich happened to be vacant when I arrived) or who were frequent visitors. I feel that such people showed no particular linguistic variation (my most frequent visitors were by no means the most fluent speakers of NM, for example), and that the sample is highly representative of the population of the village. The composition of the sample by age and sex is shown in Table 9.1. Besides representing the population in terms of its age, sex and education structure, the sample also contains adequate representation of the population as it includes variation in other variables, notably length of

time absent from the village.

	Sex:	M		F		Total		
Age		Sample	Total	Sample	Total	Sample	Total	
<u>12-19</u>		6	21	7	18	13	39	
20-29		6	14	4	11	10	25	
30-39		3	11	4	15	7	26	
40-49		4	11	4	11	8	22	
50-59		2	5	3		5	9	
60 -		3	5	2	5	5	10	

Table 9.1 - Breakdown of sample and population in terms of age and sex.

I was somewhat worried that those who took the test early in the test period would talk about it to others and thus influence the scores of the latter, so I carefully explained the importance of secrecy to each person after taking the test. As far as I can tell, there was very little gossip about it, as many people whose close relatives had previously taken the test were genuinely surprised not to have heard about it before when their turn came. In any case, I think that there were too many questions for anyone to have had much of an effect on another person's performance, except perhaps to make him worried or anxious about the test, which I do not think happened both because of the similarity of scores throughout the five-week period and because people seemed to enjoy the test, and expressed no apprehension about it. Almost everyone in Mambump was guite used to both

the tape recorder and me by this time, as I had been in the village some ten months before carrying out the tests, and had made a large number of tapes which most of them had heard. I administered all the tests myself.

The test was later administered to 36 people in five other Buang villages, but as this is to be the subject of Chapter 10, I will postpone a discussion of sampling and testing methods used in other villages until Chapter 10.

9.4 Test results.

9.41 Comparison of the two parts of the test.

Before distinguishing how the variable aspects of language and population affected performance on the test, it is worthwhile to compare the overall distribution of scores on the two parts of the test, i.e. the questions and the vocabulary items. A maximum possible score of 2 points per question and 1 per vocabulary item resulted in scores ranging from 0-6 and 1-10 respectively.

Table 9.2 compares the distribution of the two scores for all subjects and all languages (excluding Buang A, for which subjects were not tested on vocabulary).

Vocabulary Scores:	1	2	3	4	5	6	7	8	9	10	Tot al
Question Scores:											
0	9	13	12	12	12	10	10	4	5	8	95
1 - 2	1		2	3	4	5	5	8	9	16	53
3 - 4				1	l		3	8	12	27	<b>5</b> 2
5 - 6						l	2	l	5	31	40
Total	10	13	14	16	17	16	20	21	31	82	24 0

Table 9.2 - Distribution of scores on vocabulary and questions.

e.g. Out of 240 test units (48 subjects times 5 languages), a score of 10 was achieved 82 times on the vocabulary part. Of these 82 test units, the guestion part was scored zero in 8 cases, 1 or 2 in 16 cases, 3 or 4 in 27 cases, and 5 or 6 in 31 cases.

In this tabulation, three points are evident:

- (a) The tests, both questions and vocabulary were neither too difficult nor too easy, since there is little clustering at the end of the scales.
- (b) As expected, high score in vocabulary is necessary for (is implied by) high score on the questions. This is evident from the distribution of zero cells.
- (c) High score on the questions is not necessary for (is not implied by) high score on vocabulary.

Points (b) and (c) prove that a high score on the questions required both vocabulary skills as well as some additional linguistic facility.

9.42 Comparison of the languages.

Despite the high degree of variation evident in Table 9.2, when averaged over all subjects, as in Table 9.3, the score for the vocabulary (v) in a particular language shows a strong relationship to be mean question score (q). Indeed, as shown in Fig. 9.1, points representing the five languages fall very close to the least squares line.

q = 0.65v - 2.5

	Buang A	Buang A Buang B		Yabem	Neo-Mel,	English	
Vocabulary	(10.0)	9,66	6.06	7.17	8.81	4.29	
Questions	4.35	4.00	1.52	1.88	3.17	0.44	

Table 9.3 - Mean scores for all languages.



Fig.9.1 Relationship between vocabulary test and question test for five languages.

Table 9.3 and Fig. 9.1 show that on the basis of tests, there is a certain ranking of languages in terms of their comprehension by Mambump people. Although on the "Question" scale, the differences between A and B, and C and Yabem are barely statistically significant ( p < .18, and p < .14, respectively), the "Vocabulary" scale shows significant differences between <u>any</u> pair of languages. Hence when the two scales are used in conjunction, a clear rank ordering is shown as follows:

A > B > NM > Y > C > E.

Though the two tests are closely related overall, this relationship is not a direct or simple one on the individual level. This can be explained in terms of the relative difficulty of the two tests. Vocabulary items were "easier" because they did not demand remembering of events in a story heard only once, because vocabulary was repeated both in the story and by myself, the tester. In other words, if the subject was at all familiar with the particular vocabulary item in the target language, there was a very good chance of his getting it right on the test. Thus very few scores lower than 4 occurred for vocabulary (less than 1/16 of all scores, as shown in Table 7b). This is because most people understand a few simple words in all of these languages except English (Yabem and NM are frequently spoken in the village, and both Buang B and Buang C are

sufficiently similar to A to make possible comprehension of many vocabulary items). Though most of the scores lower than 4 were for English, many subjects scored higher than this. With the one-word stimulus involved in the vocabulary test, they made guesses on the basis of Neo-Melanesian words with which they were familiar, although they were unable to comprehend a single English utterance. Words such as "garden", "house", "meat", "hurry up" (NM, gaden, haus, mit, hariap) and so on were often correctly guessed, though other items, subject to interference, were not. "Fence", for example, was interpreted as "pants", the Neo-Melanesian for "fence" being banis; "food" was interpreted as "foot", the Neo-Melanesian for "food" being kaikai. Both of these incorrect responses, it should be noted, involve familiarity with English, as neither of the wrong answers sounds like its Neo-Melanestan equivalent. "Pants" is trosis and "foot" is lek. As far as vocabulary testing is concerned, English, (because of NM cognates) really provides no basis for a control, or completely unknown element in the situation. For this particular vocabulary test, the mean score of 4.29 out of 10 for English points to the establishment of 4 as a base line representing virtually no comprehension (cf.Diebold's [19616] figure of 37%, on a vocabulary test of productive ability, for incipient bilinguals). Of the 48 people tested only one man was able to converse in English.

The relationship of the scores of Mambump subjects (native speakers of Buang A) on Buang B and Buang C to the lexicostatistical figures for these three communalects is shown in Table 9.4

Languages	Shared 100-word list	cognates Mean for vocabulary in 6 texts	Mean vocabulary score	Mean question score	
A with A	100%	100%	(10.0)	4.35	
A with B	80%	85%	9.7	4.0	
A with C	56%	67%	6.1	1.5	

Table 9.4 - Relationship of lexicostatistical similarities between Buang A and B; A and C, with test scores.

Although vocabulary scores are approximately what would be expected from purely lexicostatistic considerations (for these dialects only, of course, and not for foreign languages such as Yabem and Neo-Melanesian), comprehension scores on the questions on C tests are much depressed. The comprehension of connected speech in C by native speakers of A is drastically reduced, and it appears that there is no linear relationship between comprehension and language similarity as measured by lexicostatistics. Mambump subjects' comprehension of Central Buang (B) is high, despite the fact that common vocabulary is only about 80% and that there are a number of sound shifts. Comprehension of Lower Buang (C), with which only 56% of vocabulary is shared, is much diminished, Mambump subjects averaging less than one correct answer on the three questions.

Apart from B, C is the language most similar to A, yet native speakers of A scored higher on both Neo-Melanesian and Yabem than on C. This would suggest that the six test languages can provisionally be classified into two groups, genetically related languages and learned languages. This distinction will be elaborated in the next section, where results on each language are examined in more detail.

9.43 Distribution of results for each language.

The histograms presented as Fig's 9.2 through 9.12 show the distribution of scores on both vocabulary and questions for each language. One of the most interesting comparisons which can be made of these distributions is the difference between the genetically closely related languages and the purely learned languages. Graphs of the vocabulary scores of both Yabem and Neo-Melanesian (9.7 and 9.9 respectively) show a bimodal distribution not evident in any of the other cases. Such a distribution indicates that there is greater diversity in the extent of learning of these languages than in those showing a unimodal distribution.

This result would probably have been even more clear on a more difficult vocabulary test, especially of Neo-Melanesian. People who know it would have done almost as well,

and there would have been a more definite gap between them and those whose knowledge is slight.

In this regard it is interesting to compare Yabem and Buang C. Though scores on Yabem are consistently higher, the mean scores on both parts of the test were comparable for these two languages, and their distributions on the questions are similar (Fig's 9.8 and 9.6). The very different distributions which they show on vocabulary (Fig's 9.7 and 9.5) demonstrate the extent to which differential learning is a much more important factor in Yabem. Whereas the mode for Buang C occurs at a score of 5-6, the mode in Yabem occurs at socres of 9-10, with only 4 people scoring between 5 and 6, in contrast to 16 people who scored in this range for Buang C. Either people knew a minimal amount of Yabem, obtaining a score of 4 or less (11 cases) or they knew it quite well and obtained a score of 7 or more. Neo-Melanesian shows an even more distinct break, with 7 people obtaining scores of 5 or less and 41 people obtaining scores of 8 or more. (Distributions of vocabulary scores as shown in the graphs are drawn from the figures appearing in Table 9.5).



165a



165b

	Scores										
Languages	1	2	3	4	5	6	7	8	9	10	
Buang B								3	9	36	
Buang C.		3	2	6	6	10	11	3	6	1	
Yabem	5	1	3	2	1	l	6	8	7	14	
Pidgin			l	3	3			6	5	30	
English	5	9	8	5	6	6	3	2	3	1	

Table 9.5 - Vocabulary scores for all languages.

Distribution of scores on the questions test also shows a marked difference between Neo-Melanesian and Buang dialect B, which have comparable mean scores (4.0 and 3.2 respectively). Neo-Melanesian (Fig.9.10) shows a flat distribution, with almost equal numbers of people answering 0, 1, 2, or 3 questions correctly, whereas Buang B (Fig.9.4) shows a more peaked distribution. Subjects demonstrated a wider range in their comprehension of Neo-Melanesian than in their comprehension of Buang B.

It is possible to consider these differences in terms of a general theory relating mutual intelligibility and bilingualism. Theoretically, mutual intelligibility is a purely linguistic property having to do with the degree of similarity between any dialects x and y, and which could be measured, again theoretically, by noting the percentage of information transfer which would take place in a situation where a native speaker of x was hearing y for the first time, or <u>vice versa</u>.
Thus communication occurring among speakers whose communalects are closely related genetically is usually taken as evidence of the mutual intelligibility of the two.

Bilingualism, on the other hand, is considered to be a social characteristic which results from language learning. Thus communication taking place between speakers of languages which are only distantly related or unrelated (i.e. a situation where each of the interlocutors speaks his own language) is taken as evidence of bilingualism, at least of the passive variety.

In the population on which I have presented data, we have seen that comprehension of languages which are sufficiently different from the subject's native language to require special or extra learning varies to a much greater extent among subjects than does comprehension of languages which are related to the subject's native language. The pattern is, in the latter case, a clustering of people who understand the language moderately well. In the former case, however, some people understand very well and others hardly at all. We should expect that of languages which are moderately closely related (such as A and C), comprehension would include one component deriving from their similarity, and another deriving from some modicum of learning superimposed on this. In breaking down the population into its component subgroups, we shall see that this is in fact the case with respect to the Buang A speaker's comprehension of Buang C.

### 9.44 Variations in multilingualism in Mambump's population.

The population of Mambump was not at all uniform in its linguistic abilities, and even the variables of sex and age served to discriminate among various segments of the population which had had differential exposure to the five test languages other than their own. Fig.'s 9.13 and 9.14 show the relative mean scores of males and females for each language tested, on the guestion and vocabulary test respectively. From a comparison of the relative scores of the two groups on the guestions, designed to test comprehension of connected speech, we see that the men did better than the women in every language except Buang C. The same pattern is evident in the vocabulary scores, where it holds for all languages. One interpretation of this result is that women do not comprehend other languages That the differential holds up even for the as well as men. native language, however, might suggest an alternate interpretation, which is that women are less skilled at answering guestions than men. Such an interpretation is readily explicable in terms of the greater experience men have had with Europeans and with modern institutions in general (including school and work experience), but it does not fully explain the data, as it is obvious that in both tests the sex differential is greater for the learned languages than for the similar languages. Clearly, there is a better understanding of these languages (Yabem, Neo-Melanesian and English) on the part of

the male population than there is on the part of the female population, and this better understanding is probably the result of the same situation mentioned above, i.e. the more extensive experience of the men in situations where these languages are required.







Figure 9.14 - Vocabulary scores by sex.

Multilingualism in Mambump is also a function of age, with the different age groups in the population showing differential skills in the various languages. Tabulations were done on the basis of six age categories: 12-19; 20-29; 30-39; 40-49; 50-59; 60 - , and results are depicted in Fig's 9.15 through 9.18.

Fig's 9.15 and 9.16 show figures for the Buang communalects; Fig's 9.17 and 9.18 show figures for the three learned languages. For the learned languages the younger age groups score consistently higher, with the 20-30 age group doing slightly better than the under-20's in each case. With respect to Neo-Melanesian, it is the 20-30 age group which is presently the most in contact with this language. The younger people have not yet left the village for any length of time, and the older men, most of whom did work at some period away from the village, have now been home for a number of years and may have forgotten to some extent (this figure may, however, result from the fact that most older women never left home). For Yabem, the age curves reflect the fact that this language has largely been learned at school, and no-one over about 45 has been to school. The curve for English is to a considerable extent an artifact of comprehension of Neo-Melanesian.

The most interesting of the age curves is, however, one of the Buang communalects, i.e. Buang C. Both tests show a peak for the 40-50 age group, with the under-30's, who



Figure 9.15 - Vocabulary scores

Figure 9.16 - Questions scores by age: Buang A, B, and C.

generally score consistently better than the others, scoring It is the scores of the under-30's which, I feel, much lower. approximate most closely to the ideal situation described earlier in this chapter for measuring mutual intelligibility. That is, the younger people are much less likely than their elders to have been in contact with the distant C-speakers, and thus the test situation for them approximated very closely to that of the theoretical "native speaker of one dialect hearing the other dialect for the first time". The mean vocabulary score of the youngest group is only half that of the 40-50 age group, and the mean score of the two youngest groups combined on the questions is less than 1, compared with a mean of just over 3 for the 40-50 group. In terms of similarity of these two communalects alone, it is obvious that mutual intelligibility is very limited. Over this basic and limited amount of mutual intelligibility has occurred sufficient learning, among the middle aged A-speakers, to dramatically increase comprehension of C. From what informants told me, however, it appears that the amount of contact necessary to produce this great increase is rather slight. People insisted that the C's spoke the same language as they did, but that "their necks are twisted". They said that a visit of a couple of weeks to C territory would becall that was needed to get used to the odd accent of the C's, whom the headwaters people refer to as <u>David</u>. This view is substantiated by the test data,

for men who for any reason have spent even a few weeks in C territory scored much better than other people.

Such a situation requires some modification of the following statement by Wurm (1960:133):

Speakers of Melanesian languages could on occasion be observed by the writer to acquire a passable knowledge of another Melanesian language in less than a week, which is understandable when considering the fact that most of these languages are very simple, display great similarity in several of their basic structural features, and usually share quite a number of items of their basic vocabularies when they are lexically compared with each other.

Wurm's view certainly applies to the sort of situation prevailing between Buang A and C, but for such rapid learning to operate requires that the "other Melanesian language" be related at something like this order of magnitude; it would be impossible, for example, for Mambump people to learn Laiwomba or Hote in such short order. In fact, a common folk measure of linguistic similarity in New Guinea is the length of time of residence considered necessary in order to "hear" the language.

With respect to education, the sample was divided into three groups. The first group (of 27 people) has no formal education at all; the second group (of 14 people) has attended village school, i.e. Standard I or less; and the third group (of 7) has had some education beyond this, ranging from Standard II to Standard VI. The variation in test performance of these three groups is shown in Fig's 9.19 and 9.20. Aside from one aberrant case (Group III's performance in Buang B), there is no systematic difference in comprehension of the Buang dialects.

Scores 10 6 2 Y Eng С NΜ В. Languages: Figure 9.19 - Vocabulary scores by schooling. (Shaded = village school, hatched = higher level of schooling, Scores blank = no school.) 5 4 3 2 1 С Y NM Eng В Languages: A

Education is related, however, to comprehension of the learned languages. In Yabem, there is a marked-difference between the scores of the non-educated group and the two educated groups, though the most educated group is not superior to the village educated group. Results for English show a clear relationship between the amount of education and test scores, with distinctions between each of the three groups. The same pattern

Figure 9.20 - Question scores by schooling.

holds for Neo-Melanesian, but the differences here are much less. Neo-Melanesian is not a "school language".

The possibility that the number of years ever spent away from the village might bear a relationship to ability in Neo-Melanesian was also considered, but as only one man in the sample had not been away for any sustained period, and only two women had, the distribution was almost exactly the same as the relationship between sex and comprehension of Neo-Melanesian. It would be reasonable to assume that the intervening variable here is time away and not sex, but the sample did not contain enough variation to show this. In addition, the tests were not sufficiently difficult to distinguish between the comprehension of Neo-Melanesian according to length of time away.

Finally, a similar analytical problem was encountered in the case of Yabem. It was thought that since Yabem is a church language, people such as church elders, pastor's housekeepers, mission educated people, and so on would score higher than others in Yabem. However the set of such people was almost identical to the set of educated people, and hence no distinction can be drawn between these two variables.

9.45 Distribution of ability in the languages.

If a correct answer on one out of three questions together with correct identification of five out of ten vocabulary items is arbitrarily chosen as distinguishing

those who understand a language and those who do not, then the proportion of the sample understanding each language can be estimated as in Table 9.6. Buang B has not been included for these purposes, as it is considered to be the same language as Buang A.

	Language				
	Buang C	Yabem	Neo-Melanesian	English	
Percentage of sample under- standing lan- guage	46%	52%	54%	10%	

Table 9.6 - Proportion of population over 12 years of age, exhibiting at least minimal comprehension in four languages.

(The figure for English appears to be somewhat higher than would be expected, as my estimate of the abilities of the people in the sample was that only one could really understand English. The figure of 10% would be considerably lowered if slightly higher scores were taken as showing minimal comprehension).

As might be expected from the preceding sections of this chapter, these skills are not distributed randomly among the sample. Table 9.7 shows that there is a sizeable proportion of people who are exceptional language learners, scoring sufficiently high on 3 or 4 languages other than Buang **A** and B, whereas the number knowing only 2 other languages is depressed by the same proportion. The deviation from a random distribution (probability of any one person knowing C =  $\frac{1}{2}$ ; of knowing Yabem =  $\frac{1}{2}$ ; of knowing Neo-Melanesian =  $\frac{1}{2}$ ; of knowing English = 1/10, independently) is significant at the 5% level. The number of quadrilinguals (N = 3) is still significantly higher than expected if higher scores are taken as the level of minimal comprehension.

Frequencies	Number of people knowing N languages in addition to Buang A and B					
	N≓O	N=1	N= 2	N <b>= 3</b>	N <sub>=</sub> 4	
Observed	4	17	12	13	2	
Expected from random distribution hypo- thesis	5	17	18	7	l	

Table 9.7 - Numbers of bi-, tri-, and multilinguals. As noted in 7.3, a small proportion of people also know one or more other New Guinea languages. 10. Test results in Central and Lower Buang.

10.1 Testing procedures.

To compare the abilities of speakers of the other two Buang dialects in comprehending the three dialects with those of the headwaters people, I administered the same test to the people referred to by headwaters Buangs as <u>Vring</u> and <u>Dayid</u> (speakers of Buang B and C respectively). I visited the three central Buang villages of Wins, Chimbuluk, and Papekani, and the two lower Buang villages of Mangga and Kwasang, and tested a number of people in each village - thirty six in all.

Standardization of testing conditions was much more difficult in these villages where I was not well known. Upon my arrival crowds collected, making private testing impossible. In Wins, the first village I visited, numerous onlookers whispered, giggled, called out answers, made subjects nervous, and created a very uncontrolled testing situation. Even when my host, the Local Government Councillor, gave me a separate room in his large house in order to test people in privacy, others congregated in adjacent rooms and created a general nuisance. A modification in strategy proved successful in the next village, Chimbuluk, and so I continued using it in the remaining villages. Briefly, I arranged to arrive in the village around noon or slightly after (as most of the villages were from two to three hours' walk apart, this was easy to

accomplish, leaving the preceding village some time before 10:00 a.m.). When I arrived, I chatted with the welcoming group for a little while. On securing accomodation, however, (usually with the family of the Local Government Councillor) I would say I was tired from my walk and would like to sleep for an hour or so. The performance of opening up my sleeping bag was interesting to the crowd, but after a few minutes it would disperse. Arising in mid afternoon when all but a few people were at work in the gardens, I explored the village on my own, tape recorder in hand, and usually managed to find at least five or six people to interview in relative privacy. The time after the evening meal, when private testing would have been impossible, was used for collecting word lists, for which large numbers of people were a help rather than a hindrance.

In all of the villages, I tested people only on the Buang communalects, and not on the learned languages, Yabem, Neo-Melanesian and English. This shortening of the test was done for several reasons. First, testing time was cut in half and more tests could be carried out. Second, I assumed that scores on these languages would probably be very similar to the scores of Mambump people. Further, not having ancillary data on the subjects (analogous to the life-histories I had collected for Mambump people) would make any refined analysis of their skills in these languages impossible. Lastly,

the fact that I had six taped stories and was testing people on only three meant that I could still use as a subject a person who had overheard someone else being tested, simply by asking him the three other texts.

Naturally, people were more nervous and reluctant to take the test than their Mambump counterparts had been, though I had no trouble finding people who were willing to try it. Nervousness in the test situation may, however, have caused results to be somewhat lower, on the average, than they would have been had people felt more at ease with the testing.

#### 10.2 The sample.

The composition of the sample was as difficult to control as was the test situation in these villages where I was only a temporary visitor, as I had to use whatever subjects were immediately available. Of the 36 people tested in the five villages, the sex composition is as shown in Table 10.1.

, <u>, , , , , , , , , , , , , , , , , , </u>	M	F	Total
3 Buang B villages	8	12	20
2 Buang C, villages	7	9	16
Total:	15	21	36

Table 10.1 - Sample in Buang B and C villages. The higher proportion of women in the sample probably reflects the population presently in the villages, as labour migration is higher in the central and lower Buang villages than it is

among the headwaters Buang. Age distribution (in terms of estimates made by myself at the time) was: 9 people age 25 or less; 21 people between about 25 and 50; and 6 people over 50.

Probably the only striking bias in the sample is that it contains a disproportionate number of Local Government Councillors and their immediate families (3 councillors were tested).

10.3 Results.

Mean test scores on questions and vocabulary are presented in Table 10.2. Mambump scores have been included as a comparison.

	Question scores in di <b>ale</b> cts			Vocabulary scores in dialects			Sample
Villages	A	В	C	A	В	С	Size
Mambump	4.4	4.0	1.5	-	9.7	6.1	(48)
Wins	3.8	2.3	1.1	10.0	-	7.4	(10)
Chimbuluk	2.6	4.0	3.1	9.9	-	9.4	(7)
Papekani	2.4	3.2	3.6	9.6	-	9.8	(5)
Mangga	2.6	2.6	4.1	8.8	8.8	-	(10)
Kwasang	3.0	3.0	3.3	9.0	9.0	-	(16)

Table 10.2 - Test scores in six Buang villages.

A summary of these results for each dialect groups is given in Table 10.3.

	Question scores in dialects			Vocabulary scores in dialects			
	A	В	C	A	В	С	Sample   Size
Buang A	4.4	4.0	1.5	-	9.7	6.1	(48)
Buang B	3.0	3.2	2.4	9.9	-	8.7	(20)
Bu <b>a</b> ng C	2.8	2.8	3.8	8.7	8.9	-	(16)

Table 10.3 -Test scores in three dialect areas. Table 10.3 shows that, on the questions, native speakers of each dialect taken as a whole score highest on their own In the mean scores for individual villages, there dialect. are two exceptions to this, as Wins people scored much higher on Buang A than on their own dialect (B), and Papekani people scored a little higher on Buang C than on their own dialect (B). Wins is the closest B-speaking village to the A villages, situated across a deep gorge from the other B villages, to the north of them. Similarly, Papekani is situated across a deep gorge to the south of the other B villages, and is much closer to the C-speaking villages than are any other B villages. When considering individual village results, it should be kept in mind that the small size of the sample may have resulted in a certain amount of error (in Wins in particular, poor testing conditions probably contributed to this), thus a more reasonable statement to make about the cases of Wins and Papekani is that people in each of these villages show abilities in comprehending the neighbouring dialect which are

about the same as their abilities in their own dialect.

Though figures for any one village may have been subject to statistical error, the trend clearly shown by the figures for all the villages taken together is that, geographical proximity is a mediating factor in comprehension. The same trend appears in the scores on the vocabulary test, although the B and C sample scored so high on vocabulary for all three dialects that differentiation here is not as great. Comparing these test scores with the lexicostatistical figures for the three dialects shows this result even more strikingly. Though Papekani people share 77% common vocabulary with Mambump and only 61% with Mangga and Kwasang, scores for both questions and vocabulary show that their comprehension of the latters' dialect, Buang C, is much better than their comprehension of Buang A, the language spoken by Mambump people. Chimbuluk people, too, score slightly better on Buang C than on Buang A.

### 10.4 Non-reciprocal intelligibility.

The results tabulated in Table 10.3 show a considerable amount of differential intelligibility, particularly between Buang A and Buang C. The results of Table 10.2 have been diagrammed in the Figs. 10.1 and 10.2 showing question and vocabulary scores respectively. These sets of figures demand an explanation of why the C-speakers do so much better in A than vice versa. (C-speakers averaged 3.8 on questions for



Figure 10.1 - Question scores on dialects A,B, and C, recorded at villages in all three dialect groups.

Figure 10.2 - Vocabulary scores corresponding to Fig. 10.1. their own language and 2.8 on A, whereas A-speakers averaged 4.0 on their own and only 1.5 on C). One possible explanation for this sort of phenomena has been suggested by Eunice V. Pike (1954), in terms of the relative phonetic rank of the corresponding segments in the two languages or dialects in question. Wurm and Laycock (1961:131), in discussing the application of these criteria to the New Guinea situation, say,

It appears that sound changes in cognate words in related languages have a differential effect upon mutual intelligibility according to whether such changes result in the lowering or increasing of the rank of corresponding segments.

and they explain that the speaker in whose language the higher ranking segments occur can understand the language in which the lower ranking segments occur more easily than vice versa. The four major phonetic shifts differentiating between A and C and their relative rank are as follows. A reflex /k/ ranks higher than C reflex /š/ (stop outranks fricative), and A reflex /1 / similarly outranks C reflex /y/, (on the basis of greater closure). C reflex /n/ outranks A reflex /  $\eta$  /, however, on the basis of its being farther forward in the mouth, and C reflex /  $\check{z}$  / outranks A reflex /g/ on the basis of its "secondary acme stricture" both are articulated as stops but / $\check{z}$  / ranks higher on the basis of the additional friction involved in affrication.

The result given by Pike's criteria is thus equivocal: two of the four major shifts operate in favour of A's better comprehension; two operate in favour of C's better comprehension. We are still left with the unexplained fact that C's in fact comprehend A better than vice versa.

A tentative explanation in this case might again draw on the related features of geographical proximity and social contact. Buang A and Buang B, as the lexicostatistical comparisons have shown, are much more similar to each other than either is to Buang C, with B only sharing a slightly higher proportion of vocabulary with C than does A (A-B = 80%; A-C = 56%; B-C = 62%, from 4.2). In the earlier chapters as well as in the present one, a situation has been described whereby contact between adjacent communities creates both borrowing and sufficient experience on the part of adult speakers in "hearing" the other language to make communication possible. In the present case, this implies that since C-speakers understand a high proportion of what is said in B, they are able to extrapolate from their knowledge of B to the very similar A, even though their contact with A-speakers is much less and they do not entertain very high expectations of being able to understand A (5.6). On the other hand, it is much more difficult for A-speakers to extrapolate from their knowledge of B, as C is too different from B to make this possible, and A's low expectations with regard to C (5.6) are more frequently justified. That the ability of B's in understanding C is due in large part to social contact is shown by the fact that the people of Wins, the most distant of the B villages from C, scored as poorly on C as did the A-speakers.

11. Situational factors in code switching.

## 11.1 Introduction.

The set of rules for language choice outlined in 8.6 allows us to predict the choice for the great majority of speeches. Factors involving efficiency of communication, such as the Buang's greatest fluency in and understanding of their mother tongue, the necessity of using a common language when speaking with foreigners, and the lexical suitability of various languages for various topics override other considerations on most occasions. In certain cases, however, two such factors operate in opposition, or social factors become of comparable or greater importance. In these cases the social relationships of the participants in the situation, their differential ability in comprehension and production of the various possible languages, the degree of formality of the situation, the nature of the topic being discussed or argued, and other factors frequently act in different directions, towards different language choices. It is on such occasions that the phenomenon of code-switching occurs. These instances, though relatively few, are more instructive with respect to the interaction of the various factors, both those related to efficiency of communication in the narrow sense, and those not. From these instances we can gain further insight into the functional aspects of the different languages in Buang and New Guinea society in

general, and we can induce something about the relative social significance to the Buang of various institutions, types of leadership, and social groupings.

In this chapter, I will examine these situations from three points of view. First, for two particular recurring situations on which I have collected extensive data, I will present a statistical summary of language choice and code switching behaviour, and then investigate possible explanations in terms of factors affecting the "speech event". Second, I will analyze multilingual behaviour in a number of situations which occurred within a few days in October 1966 around the time of the Yabem <u>Sam</u> (Lae District Conference of the Evangelical Lutheran Church of New Guinea) which convened near Mambump Village. Finally, proceeding from these two approaches I will discuss the relationships between factors in speech events, language choice, and linguistic change at the macro-level.

11.2 The church situation.

The eight headwaters villages and three of the central Buang villages constitute the Biangkon Lutheran Congregation. This congregation usually worships in a large church at Biangkon, near Mambump, built by community effort in the 1950's, and constructed entirely of hand-hewn planks. On occasion the service is held at one of the more remote villages. Sunday services bring together several hundred people, although a large proportion of those who come, especially the men, do not actually enter the churchbuilding. Aside from the service, which is conducted by the pastor or the mission teachers (mostly non-Buang), there is usually a lengthy meeting on community affairs afterwards, mainly involving Buang.

I have data on fourteen such church meetings from September 1966 to June 1967. From these data, I can abstract the figures presented in Table 11.1.

	Total		
Buang	Neo-Melanesian	Yabem	speeches
19	35	34	70

Table 11.1 - Languages used in church situations. (Some speakers used more than one language).

The first and most obvious way to try to account for this variation is to consider language choice in the religious part of the meeting as distinct from the community affairs part, as shown in Table 11.2.

	Language used				
Topic	Buang	Neo-Melanesian	Yabem		
Religious	l	8	15		
Community affairs	18	27	19		

Table 11.2 - Language use as influenced by topic. The dichotomy in this table accounts for much of the variation in Table 11.1, religious discourse being preferentially in Yabem, and community affairs being discussed preferentially in Neo-Melanesian. Another variable which suggests itself is the origin (Buang or not) of the speaker, which is crosstabulated with language choice in Table 11.3.

Origin	Language used				
or Speaker	Buang	Neo-Melanesian	Yabem		
Buang	19	21 ·	12		
Foreign	0	14	22		

Table 11.3 - Language choice as influenced by origin of speaker.

This, by itself, accounts for about as much variation as does topic. When both variables are taken into account, the picture becomes only slightly clearer, as shown in Table 11.4.

	Topic							
of	Religious			Community affairs				
Speaker	Buang	NM	Y <b>a</b> b	Bu <b>a</b> ng	NM	Yab		
Buang	1	3	3	18	18	9		
Foreign	0	5	12	0	9	10		

Table 11.4 - Language use as influenced simultaneously by topic and origin of the speaker.

With knowledge of these two variables, it is still impossible to predict which language will be used in the church and church meeting situation. With further subdivision of Buang into those with a history of special mission involvement and those without, we can progress a little further, as shown in Table 11.5.

Relationship	Language used			
to Mission	Buang	NM	Yabem	
Mission Identification	7	6	9	
No Mission Identifica- tion	11	12	0	

Table 11.5 - Language use by Buang, discussing community affairs, in church situation.

Results so far can be phrased as the following generalizations:

- (a) Foreigners do not speak Buang.
- (b) Foreigners prefer Yabem to Neo-Melanesian for religious topics.
- (c) Buang who do not have special mission involvement do not use Yabem.

This is still a long way from total predictability. Trying to quantify the above variables so that there are more distinctions, or trying other "factors", or even taking into account tendencies of speech to remain homogeneous or to involve switching, we are sooner or later confronted with the fact that in a number of cases, the same speaker on the same topic will use two or three languages in his two or three contributions to a discussion over some 10 or 15 minutes. This phenomenon also appears in the other type of situation studied, the village meetings. Before discussing this, however, it is important to note that the data on church situations were not collected specifically for this analysis. In fact, upon reassessing the procedure for collecting them, there are two very definite biases. First, the number of speeches on religious topics in Yabem is in fact much higher than appears in my data and second, the number of speeches in the Buang language on community affairs is much higher than what appears in my data. Correction of either of these biases would not affect the nature of the results, nor would it increase predictability to any great extent.

## 11.3 The village meeting.

Another type of formal situation at which community affairs are discussed is the village meeting. Meetings are held in a large open area in the village and are attended by most of the important men and whichever of the women and children happen to be in the vicinity at the time. Further, if the discussion is of interest to other villages, a delegation of five or six men from each will be present. A summary of language usage for eight such meetings (December 1966 - February 1967) is presented in Table 11.6.

Lang	Total		
Buang	NM	Yabem	speeches
96	37	5	121

Table 11.6 - Language usage at village meetings. (Some speeches used more than one language).

This pattern is very different from that of the church situation. Use of Yabem was confined to opening prayers (and not all opening prayers), the reading of a letter (see 8.5) and one question by a non-Buang observer (which was answered by a Buang mission elder in the Buang language). Other than this, classification of the speeches by topic does not increase the predictability of language choice. There is a way of classifying speakers, however, which does reduce variability somewhat. A consideration of the language choices of two Mambump men who attended these meetings, an administration-oriented leader (the komiti bilong kaunsil, or council representative in villages which do not have a Local Government Councillor) and the major entrepreneur appears in Table 11.7, and a comparison of their choices with those of other people who attended these meetings indicates that they have special linguistic characteristics.

Speckars	Language	used	Total speeches
speakers	Buang	NM	Yabem)
Government leader	9	9	13
Entrepreneur	12	11	17
Others	75	17	86

Table 11.7 - Language choice behaviour of two leaders compared to other men.

The first characteristic which distinguishes the two leaders is that they both use Buang and Neo-Melanesian equally often in this situation, whereas most speakers preferred Buang in the ratio 4.4:1. Secondly, by comparing total number of speeches made to the sum of the number of speeches using Neo-Melanesian and the number of speeches using Buang, it is clear that the government-oriented leader switched languages at least five times in 13 speeches and the entrepreneur switched at least 6 times in 17 speeches, while the others switched only about 6 times in 86 speeches. Further than this, the data do not suggest any breakdown which would account for variability in language use.

11.4 Comparisons and implications.

There is a clear difference in language usage in these two situations. In terms of "factors in speech events" the "setting", then, is important. To support this statement we could add another easily distinguishable group situation, namely the yam-planting feast in which the Buang language is used exclusively, except possibly for a prayer in Yabem and an instance or two of Neo-Melanesian.

Within the situations, other factors which can account to some extent for variations in speech use are topic, origin of speaker, mission connection and power position. Possibly others could be found, even in these few situations, although more data would be required for this. On the other hand, it

seems increasingly evident, as more factors are introduced to account for variation, that this process has diminishing explanatory value from the sociolinguistic point of view. Factors important in determining a particular choice may range from whether or not a speaker is chewing betel nut, to his bad humour after a quarrel with his wife, to a lapse of memory with respect to a key vocabulary item or construction in Yabem or Neo-Melanesian. The enormous number of factors, social, cultural, linguistic, psychological and historical in both the usual sense and the immediate sense, which can have more than marginal effect on any particular situation, suggest that there is a point at which it becomes more important to emphasize that there <u>is</u> a choice for the speaker to make, and the fact that the choice situation itself exists can have social significance. Particularly in the case of the leaders described in 11.3, realization that code switching and variation in language choice will still occur no matter how closely the sociolinguistic environment is specified ("free variation" in linguistic terms), and that this variation itself is a crucial aspect of their position, as they conceive it, as the people conceive it, and as the analyst must conceive it, is more useful and meaningful than the attitude which prompts the construction of an elaborate deterministic model covering every possible instance of language choice.

A closer examination of the language behaviour of these two men who, on the evidence of their obvious fluency in both Buang and Neo-Melanesian, may be classed as at least close to being coordinate bilinguals (Lambert 1961) reveals that their shifts in verbal strategy, realised as code switching, are analogous to the choice of styles of speech or levels of vocabulary on the part of monolingual orators. The shifts themselves are an expression of the position of these men vis à vis traditional and modern **so**ciety.

Variation can be seen as part of the strategy in the church situation as well, particularly with respect to Neo-Melanesian. In fact, I was told by various church officials that the inclusion of Neo-Melanesian in some part of the service is deliberate policy, in order to make the proceedings more interesting and more intelligible to those whose knowledge of Yabem is slight. Prediction of the language of any one prayer, or scripture reading, or homily is impossible; the important thing is that Neo-Melanesian is included somewhere.

Deliberate variation explains why these situations cannot be fitted into a model which predicts only one possible choice. The rule of choice in both cases is a choice to vary and to switch. In this way, such variation may be fitted into the system of basic or "emic" distinctions schematized in Fig. 8.1.

# 11.5 The Yabem <u>Sam</u>.

Another approach to the study of language choice is to look for a variety of situations in which there is a

maximum of variation in choice and extensive code-switching. I was presented with an unusual opportunity to do this when the <u>Sam</u> was taking place near Mambump village.

The Biangkon congregation as well as another congregation of Buang B speakers (both members of Malalo circuit) were responsible for much of the preparation of the Sam, including the erecting of fifty or sixty houses, and donating several tons of food. Assisting them in the final stages of preparation, such as cooking, were several coastal groups as well as some Hote speakers, all belonging to Malalo circuit. At the Sam itself were representatives of a neighbouring circuit including the Buang C group and adjacent Mumengspeakers, as well as delegates from the more distant circuits of the district, representing dozens of distinct languages. All the delegates from the longer established circuits, such as Malalo, were fluent in Yabem. Complicating the linguistic picture was the presence of a group of about thirty Englishspeaking Europeans, mainly missionaries, several of whom were native speakers of German. Most of them were also fluent in The official language of the Sam was Neo-Melanesian, Yabem. however, as virtually every adult present had at least a fair grasp of the language. Except for Neo-Melanesian, Yabem and, to some extent, English, the use and understanding of any language represented at the Sam was almost wholly confined to its native speakers.

#### 11.6 Some situations.

A few days before the Sam was to take place, about 30 Buang elders gathered at a secret meeting to voice discontent about the alleged reluctance of some of the coastals to do their share of work. Also present was the Biangkon congregation's Hote pastor (who understands Buang). This meeting featured a majority of speeches in Buang, in one or the other dialect, with the pastor listening and making contributions in Yabem. Some of the Buang men, including those who had had extensive mission involvement, also spoke in Yabem, In this situation the choice of the Buang language by most of the Buang elders simply indicates that they were making no special provision for the pastor, the task-orientation of the meeting predominating over considerations of deference, courtesy, and the like. On the other hand, those Buang who spoke in Yabem were acting according to the pattern described in 11.2. Considerations other than those affecting efficiency of information transfer were more important in such cases. The behaviour of the pastor also fits the pattern established in 11.2.

After an agreement was reached among this group, the leaders of the coastals, including the circuit president, were summoned. When the meeting was reconvened, almost a hundred people were present. The president made a speech in Neo-Melanesian, starting with a request that Neo-Melanesian be used throughout, in favour of the non-Yabem speaking ob-

server, and in anticipation of official usage during the Sam. He was followed by the pastor, who, speaking Neo-Melanesian, introduced the problems to be discussed. The next speaker was a Buang, an old man whose connection with the mission is of long standing. He spoke rather haltingly in Yabem, words being frequently supplied to him by associates more fluent than he. This particular man probably speakes better Neo-Melanesian than Yabem. The social considerations which influence the pattern of 11.2 were strong enough in this situation that he ignored both an explicit agreement of the meeting to carry on in Neo-Melanesian and the example set by the first two speakers. Perhaps even more interesting was that subsequent speakers did not switch back to Neo-Melanesian, but continued in Yabem. This was true even of the pastor and the circuit president. It should be noted that although there were certainly a number of Buang present who did not understand Yabem, probably every person present could understand and speak Neo-Melanesian. Later in the meeting an argument broke out between the two dialect groups of Buang, and several excited speakers switched from Yabem into Buang or Neo-Melanesian in mid speech. In these cases the orators were trying to make their points unequivocally, loudly and coherently, so that the factor of relative fluency superseded the socially conditioned desirability of using Yabem.

Some time after this meeting, about fifty coastal people and twenty Buang were gathered about the site of a large, open air meeting ground. In the centre of the gathering,

twenty or thirty coastals were singing songs in Yabem. The Sam was to start in two days, and the sight of this nonproductive activity evidently infuriated one Buang, a mission elder, who suddenly stood up, and in Neo-Melanesian, spoke rather vehement words to that effect. This speech, which was quite unexpected, was made in an angry tone and was followed by an embarrassed silence. Adding to this was the anomalous sound of Neo-Melanesian in a hitherto Yabem situation. This particular man, although a mission elder, does not know Yabem well anyway, and the effect of his speech in Neo-Melanesian illustrates not the social determination of choice but the social effect of that choice. When a circuit official broke the silence by translating the Buang's remark into Yabem, and ordering people to work, tensions eased, apparently more because of the switch back into Yabem than because of the content of his speech. Speaking alternately in Neo-Melanesian and Yabem, the group eventually reached a compromise.

Another incident which occurred on the day before the <u>Sam</u> opened began as two Buang A villages brought their share of food to the conference site. A "big man" from the B-dialect group who was in charge of overall food collection and distribution, arrived on the scene. Speaking Neo-Melanesian, he asserted that authority over all food was transferred to him as soon as it reached the conference site. (This man uses Neo-Melanesian whenever he is giving orders or haranguing a large audience, which he does frequently).

The leader of one of the villages concerned translated

this speech into Buang, implicitly agreeing to the content. The "food boss" continued, this time in Buang, elaborating on his theme and breaking into a few Neo-Melanesian instructions at the end of the speech. At this point the leader of the other village involved interrupted, in his dialect, to protest against possible abuses of the arrangements. The switch into Buang from Neo-Melanesian was consistent with this man's position as a yam distribution leader. The subsequent arguments were also in Buang, as both men tried to make their points as eloquently as possible.

When the <u>Sam</u> actually started, there was a noticeable shift in preference from Yabem to Neo-Melanesian, even outside the formal sessions. This was initiated by the officials, who were conscientiously following the decision to use Neo-Melanesian to insure widest participation. Once the participants became used to hearing exclusively Neo-Melanesian used by church officials in discussing religious topics, Neo-Melanesian became more and more acceptable, although a number of elders from the older areas of the district spoke out in favour of Yabem, the "holy language", afraid that this precedent would lead to the disuse and discarding of Yabem.

The business of the <u>Sam</u> was allocated to committees which later reported to plenary sessions. It was common in committee meetings for people to shift from Neo-Melanesian into Yabem. Often this appeared to be for the sake of clarifying a point or issue, and committee members fluent in Yabem tended to shift into it when they found Neo-Melanesian not sufficiently clear. Scriptural quotations in Yabem, for example, are more familiar generally and thus mean more to the hearers. On such occasions the discussion sometimes had enough momentum in Neo-Melanesian to be resumed in that language (i.e. when one or two speakers had Neo-Melanesian speeches already prepared, and when the Yabem interruption was short). At other times it continued in Yabem. One or two of the older New Guinean delegates used Yabem consistently, and speakers immediately following them often spoke in that language.

The other main multilingual feature of committee sessions was the frequency with which English or German speakers held short side conversations in their native tongue, also for the purpose of clarifying a point amongst themselves, and arriving at a decision more rapidly. As circuits had only one representative per committee, New Guinean delegates did not share native languages and such behaviour was impossible for them. On some occasions, however, small side conversations in Yabem analogous to those in German or English were held by New Guinean delegates.

# 11.7 Analysis.

These cases are examples of situations where the factors influencing speech events are not only numerous, but are in a state of flux. As the importance of social considerations changes with respect to that of efficiency of communication,
it is clear that this can have dramatic effects on choice of language. In some cases the situation is such that from the language behaviour we can induce the relative importance of social factors, and in other cases, knowledge of the social factors is sufficient to predict tentatively what the choice will be. Taking this into account as well as a certain "inertia" which is apparent in language choice (i.e. there is a tendency to speak in the same language as one's predecessor in the discussion) it is possible to achieve post hoc a degree of understanding of the choice mechanism. Further, it is guite feasible to make distinctions between groups of people (Buang big men prefer Buang; church elders prefer Yabem; young educated people prefer Yabem in certain situations; conference officials prefer Neo-Melanesian), or by classification of topics (Yabem for theological points; Neo-Melanesian for general discussion and official matters; Buang for discussion during preparatory work, cooking, etc.) or to allow for setting (Neo-Melanesian in the trade store on the conference site; local languages during meals and in sleeping quarters; Yabem during church services). Finally, there is the overall shift during the course of the <u>Sam</u> from Yabem to Neo-Melanesian in many situations.

All of those generalizations, however, are made in the statistical sense and do not necessarily account for all or even any particular choice of language; neither can they be used as predictions about future situations.

This must be compared with the results of Chapters 7 and 8, and of 11.2 - 11.4, where language choice was analysed as a decision or sequence of decisions based on social, linguistic and other criteria. In these sections, systematic study of the sociolinguistic environment of the choice gave an insight into the mechanism of decision making. For a majority of language choices these decisions are more or less predetermined by the identity of the sender and receiver, by topic, and perhaps by one or two other factors. For some decisions this was not so, and with or without introduction of further factors we could only make statements of prediction with probabilities attached to them. The amount of data required to substantiate these results required well-defined, recurrent situations.

The situations I described for the <u>Sam</u> (which are examples of the approx. two dozen cases which I collected) are neither recurring nor easily defined. Interaction was often spontaneous and transitory, and any particular configuration of factors was unstable and ephemeral. Changes in personnel (and their accompanying code repertoires and statuses), or changes in topic, mood, setting, reasons for speaking and other determinants of code choices could not be observed in isolation, but only when combined with many others. The precise evaluation of the relative weights of all these factors which influenced any given choice was difficult to make, because the situations were seldom duplicated, even to within

one or two factors, on other occasions. Though for any choice it is possible to suggest a reason or set of reasons, as I have done, this is a <u>post hoc</u> explanation difficult to validate. A change in any one of the factors may be sufficient for a language switch to take place; when several are changing at a time, explanation becomes a matter of subjective judgment.

Future meetings of the <u>Sam</u> will no doubt involve the participation of numerous and diverse language groups, and much of the interaction will be characterized by code switching. Nevertheless many of the factors important in determining code choices (locale, code repertoires of participants, relative proportion of participants from various areas) will have changed so radically that prediction in terms of events at the 1966 <u>Sam</u> is not possible.

The multiplicity of differently defined situations stems in part from the fine categorization which is necessary in trying to account for each different choice situation. If, however, we relinquish our concern with this level of explanation, and collapse categories, we can distinguish general types of situation about which we can make generalizations, as at the beginning of this section. Further, in a consideration of <u>types</u> of situation, in which language use can be described statistically, we can class the situations of the <u>Sam</u> with others common throughout urban New Guinea. This type of situation, involving extensive code switching, is important as it demonstrates the way in which linguistic change occurs in bilingual and multilingual communities.

These situations, involving the alternate use of more than one language, represent an intermediate stage in the process of adoption of new languages. As more individuals acquire a new language, there are more situations in which its use is possible. The relevant measure is the higher frequency of use of the new language over time. Such a pattern also applies to the introduction of an already widely known language in a new setting or situation. Thus the trend towards using Neo-Melanesian rather than Yabem in church services, resulting from a number of factors (Administration policy filtered down through the mission hierarchy; rapid assimilation of non-Yabem speakers into the religious community) results in changing frequencies of use of the two languages, rather than a drastic change in rules of language choice.

Situations in which language choice and code switching are especially unpredictable and changing may be considered as evidence of a highly variable stage transitional between stages in which language usage is more determinate. In historical terms (including immediate or situational history), speakers' choices can also serve as factors important in determining future choices.

The argument here is that change in the code repertoire

of a speech community (or of an individual), as well as in other factors in speech events, proceed by degrees, and thus are best described in a statistical manner. Change in usage may parallel such a change in repertoire, or may proceed independently, as in the case of the application of a known language to a new situation. Nevertheless it proceeds in a similar manner, and it is only when some sort of equilibrium (temporary or of long duration) is reached that particular code choices are well recognised as specific to particular situations, and it becomes feasible to investigate the detailed structure of the decision process.

12. Summary and conclusions.

12.1 Buang multilingualism, past and present.

From a number of points of view, the languages in which the Buang are multilingual can be seen as falling into two groups. The first group comprises dialects or languages sufficiently similar to their own speech variety to be to some degree intelligible; the second comprises languages which have no such close relationship to the Buang language. This distinction accords with the historical background, the folk view of linguistic relationships, the evidence of comparative linguistics, the distribution of language ability, and with patterns of language usage.

The kind of relationships which existed between the Buang and adjacent speech communities in the pre-colonial period largely determined the type and extent of multilingualism which existed. The Buang are typical of many of the smaller New Guinea language groups in that they were in contact with speakers of several very different languages, and there were a few people in most communities who were to some extent multilingual in one or other of these languages. The Buang do not, however, appear to have been multilingual with respect to any local lingua franca, which in the Huon coastal region was probably Bukawa (Hogbin 1947).

Thus although multilingualism did exist to some extent among the Buang prior to the colonial period, its incidence has increased greatly since the spread of Yabem and Neo-Melanesian. Because of this increase in multilingualism with respect to truly foreign languages, it becomes more useful to discuss the two types of multilingualism separately, as each poses distinct analytical problems. Basically, the distinction lies in the difference between active and passive bilingualism. Bilingualism in closely related speech varieties is almost always of the passive type, involving "decoding" skills, because active skills are not relevant or necessary to communication between speakers of such languages. Bilingualism in foreign languages, however, is usually also of the active variety, involving "encoding" skills as well.

12.2 Multilingualism in related languages.

Comparisons of the languages of Buang and adjacent speech communities show that of the three Buang dialects (so called), the two I have referred to as A and B are closely related to each other and more distantly related to the third, C. Of the other neighbouring languages, the various Mumeng dialects are the most closely related to Buang.

According to the view held by speakers of A and B, all Buang speak one language, with three major <u>nek</u> (NM, dialects). Buang C speakers also tend to see the languages spoken by the Mumeng villagers who live near them as simply another dialect. The folk view of language relationships thus mitigates the sharper distinctions obtained from the linguistic comparisons.

The mechanism which makes possible a folk model of close similarity between speech varieties not actually sufficiently similar to be immediately intelligible to the untrained ear is social contact between neighbouring speech communities, particularly border area villages. Intermarriage is of major importance as a type of contact which provides large groups of people with the opportunity to become used to other dialects through the speech habits of foreign wives.

It is clear, however, that although geographical proximity leads to understanding and perceived closeness of otherwise minimally intelligible speech varieties, such a mechanism does not operate when contiguous speech varieties are related only very distantly. Buang A villagers, for example, do not regard the very different language of Gabensis, the closest non-Buang village to them, as being in any way related.

That knowledge of related dialects and languages includes an important "learning" component is proved by the test results as presented in Chapters 9 and 10. "Passive bilingualism" is thus a more accurate term than "mutual intelligibility" for describing the understanding of related speech varieties (other than A and B) among Buang speakers.

The preceding discussion provides a basis for making

a distinction between the terms "passive bilingualism" and "incipient bilingualism", which have both been considered as restricted types of bilingualism. The restriction in "passive bilingualism" refers only to usage, and does not necessarily imply a restricted or incomplete knowledge of the speech variety in question. As we have seen, widespread passive bilingualism in related speech varieties permits efficient communication and a high degree of information transfer.

The restriction in "incipient bilingualism", on the other hand, applies to understanding of or ability in other speech varieties. For the Buang, this includes people who, through living in communities where a sizeable number of people know and speak Neo-Melanesian and Yabem, have only a certain minimal knowledge of the vocabulary of these languages. In addition, minimal mutual intelligibility or basic linguistic similarity produces "incipient" or even "latent" bilingualism in these related languages among that part of the population which has had no special opportunity for learning them. Of course, the extent to which such related speech varieties are understood by this segment of the population is also a measure of the extent of their mutual intelligibility.

Where related languages are concerned, the basic distinction between mutual intelligibility and passive bilingualism is one which, as we have seen, the folk model does

not make. Where widespread passive bilingualism exists, people infer a close linguistic relationship and mutual intelligibility. Such a situation may obtain between languages sharing as little as 45%-50% basic vocabulary cognates. I have shown, however, that the bilingual nature of such relationships becomes clear from an examination of both the attitudes towards and the degree of comprehension of such a distantly related language on the part of speakers of a language equally distantly related but not contiguous to it.

Social contacts between contiguous speech communities whose communalects are related at approximately the 45% level or more are thus of great importance in creating the borrowing or diffusion (see Chapter 4; Appendix B) which results in a chain-like synchronic model of linguistic relationships, in facilitating passive bilingualism, and in creating a folk model of intelligibility and close relationship.

12.3 Multilingualism in foreign languages.

The central problem in multilingualism with respect to foreign languages is one of usage. As we have seen, individual ability in and knowledge of the various languages is one important variable, related in part to the differential opportunities among the various sectors of the population for learning other languages. Hence language choice is frequently conditioned by the practical requirements of communication, including the code repertoires of both (or all) parties to that communication.

Nevertheless, the use of other languages by Buang speakers is to a great extent explicable in terms of social categories and social factors. Different types of leaders, traditional and modern, tend to use different languages, the modern leaders speaking a great deal of Neo-Melanesian on public or formal occasions. Language choice is also strongly related to the topic of discourse. Setting or situation is also an important factor, even in terms of very broad distinctions, such as town vs. country.

In situations involving only Buang speakers, variation according to setting, topic, and characteristics of the interlocutors (including the self-image they wish to express or the categories in which they wish to place each other) tends only to account for the major direction of departure from the use of the Buang language. In most such situations, some speakers continue to talk almost entirely in Buang and others talk some of the time in Buang. Code switching on the part of the leaders in particular can be explained in terms of their strategies of speaking. In situations such as the village meeting, language usage, although varied, can be described in terms of a set of rules about appropriate language usage. Some of these rules must be stated in probabilistic terms either because they are, in effect, deliberate randomization (e.g. leaders' code switching) or because factors not otherwise relevant sociolinguistically may sometimes determine language choice.

Such a formal consideration of language use in situations like those described for the Sam, however, is of doubtful value. Although each speaker has certain rules of language use customary to his own speech habits, at the Sam, we saw two or more such sets of rules in conflict (e.g. the rule requiring use of Yabem for religious topics, held by many of those present, conflicted with the rule made by the conference organizers that Neo-Melanesian be used throughout). Theoretically, communication in such highly variable and rapidly changing situations still operates in terms of rules; practically, discovery of which rules determined any particular choice is difficult. Analysis is complicated and obscured by the plethora of possible factors and the rapidity of switching. An analysis of such situations must involve not only interpretive efforts at explaining switches, but also the description of trends in the usage of the various languages.

The process of change in overall patterns of linguistic usage in multilingual communities is the summation of changes in the individual choice patterns of community members who, under many possible influences, alter in some way (usually changing the relative probabilities for various languages in various situations) their speech rules with respect to code use. As such, intermediate stages in the transition are represented in situations where code switching is very frequent and language use highly variable. Appendix A. Population.

Census figures have been abstracted from the census carried out by officers of the Department of District Administration, Mumeng Subdistrict, in April and May, 1967.

Villages		Popula at 1	ation time	of ce	illage nsus				Abser	ntees				Total	
I. Headwaters	Ch	ild	Ad	ult	Tot	tal	Chi	lld	Adı	ılt	Tot	al	ъл	T.	Trate 1
(Dialect A)	М	F	Μ	F	Μ	F	M	F	М	F	M	F		Г	
Aiyayok	52	44	58	73	110	117	4	2	38	7	42	9	152	126	278
Bugweyau	51	58	69	114	120	172	19	17	61	12	80	29	200	201	401
Bugwev	34	47	52	65	86	112	5	0	22	6	27	6	113	118	231
Gambia	28	38	28	56	56	94	0	3	23	2	23	5	79	99	178
Mambump	39	45	55	67	94	112	7	2	19	5	26	7	120	119	239
Muniau	81	54	53	83	134	137	4	7	52	13	56	20	190	157	347
Rari	30	36	<b>3</b> 9	38	69	74	6	6	23	8	29	14	98	88	186
Vagau	43	40	40	49	83	89	4	4	20	7	24	11	107	100	207

Table A.1 Headwaters Buang (Dialect A) population.

Villages		Populat	ation time	in vi of cen	llage sus				Abse	ntees				Total	
II. Central	Ch	ild	Ad	ult	То	tal	Ch	ild	Ad	ult	То	tal	Μ	F	Total
(Dialect B)	Μ	F	Μ	F	М	F	M	F	M	F	М	F			
Bulantim	103	111	95	146	198	257	19	14	104	35	123	49	321	<b>3</b> 06	627
Chimbuluk	13	28	22	40	35	68	21	20	33	15	54	35	89	103	192
Wins	55	55	54	67	109	122	11	8	45	18	56	26	165	148	313
Lomalom	51	57	77	86	128	143	15	11	58	18	73	<b>2</b> 9	201	172	373
Mapos I	64	83	80	146	144	229	25	29	110	47	135	76	279	305	584
Mapos II	78	62	82	157	160	219	29	20	131	51	160	71	320	290	610
Papekani	26	38	28	65	54	103	66	47	108	61	174	108	228	211	439
Sagaiyo	51	50	45	79	96	129	42	33	112	51	154	84	250	213	463
Sinagei	18	30	30	51	48	81	20	8	38	20	58	28	106	109	215
Siyugei	29	36	27	57	56	9 <b>3</b>	18	15	47	17	65	32	121	125	246

Table A.2 Central Buang (Dialect B) population.

Villages	F	opula <sup>o</sup> at t	ation Sime	in vi of cer	llage nsus				Abser	ntees				Total	
III. Lower	Chi	ld	Ad	ult	Tot	ťal	Chi	ild	Adı	ılt	То	tal	ЪÆ	T	Totol
(Dialect C)	Μ	F	Μ	F	М	F	М	F	М	F	Μ	F	INI	r	IUUAL
Bogomatu	31	<b>3</b> 6	33	55	64	91	22	14	46	20	68	34	132	125	257
Kwasang	84	72	80	117	164	189	40	31	83	37	123	68	287	257	544
Lagis	34	53	38	67	72	120	28	38	87	40	115	7 <b>8</b>	187	198	385
Mangga	63	58	67	111	130	169	64	71	163	91	227	162	357	331	688
Tokanen	28	44	35	48	63	. 92	25	<b>2</b> 6	62	25	87	51	150	193	293

Table A.3 Lower Buang (Dialect C) population.

Dialect		Popul at	ation time	in v of ce	villag ensus	es			Abse	ntees	3	:		Total	
Groups	Ch M	ild F	Adu M	lt F	T M	otal F	Ch M	ild F	Ad M	ult F	To M	tal F	М	F	Total
Headwaters (A)	358	362	394	545	752	907	49	41	258	60	307	101	1059	1008	2067
Central (B)	488	550	540	894	1028	1444	266	205	786	333	1052	538	2080	1982	4062
Lower (C)	240	263	253	398	493	661	179	180	441	213	620	393	1113	1054	2167

Table A.4 Comparison of population of 3 dialect groups.

a second

Appendix B. Lexicostatistics.

## B.1 Collection of word lists and calculation of percentages of shared cognates.

Data for the lexicostatistic procedures were collected as follows. For the Buang villages of Mambump, Wins, Chimbuluk, Papekani, Mangga and Kwasang, the Mumeng villages of Patep, Gurakor and Bangalum, and the villages of Lababia (Kela), and Gabensis (Laiwomba), as well as for the Hote language, informants were asked for words from the 190-item Survey Word List (Standard) of the Summer Institute of Linguistics (SIL). 76 items from this list were also collected from a Laugwei (another Kela dialect) informant. Bukawa and Yabem lists were compiled partly from a 100-item list which I had composed before obtaining the SIL list, and partly from published sources (Capell 1949; Zahn 1940). The Tami list was compiled by Miss Candy Brown from Bamler (1900).

From these lists a standard list was drawn up, based on Swadesh's 100-word list (Hymes 1960), but omitting 3 items for which equivalents in many of the languages were the same as for some other item on the list. For comparative purposes, and since some items were missing from some of the lists, an extension of this list to 129 items was also used. See Table B.1 for these alterations.

For each word, all 16 lists were compared simultaneously, each language being allotted a code number such that

Words omitted from the 100-item list		Words added to the 129-item 1	form ist
<pre>27. bark (= skin) 53. liver (<u>confused</u>     <u>with</u> heart) 88. green (= black)</pre>	ye pig he run no taro yam bean axe they bad when	four cough five house frog arrow heavy banana three mother where father tobacco	tomorrow rope (vine) sugar cane string bag sweet potato yesterday cassowary

Table B.1 Changes made to Swadesh word list (Hymes 1960) for this study.

only those languages which were cognate with respect to that word had the same code number. The data were then punched on IBM cards (one card per word, with sixteen code numbers per card) at the McGill University Computing Centre and a program was written and executed which calculated the proportion of cognates out of all comparisons possible between any two lists. This was done for both the 97-item list and the 129-item list, and the results are depicted in Tables B.2 (97-item list) and B.4 (129-item list). The number of comparisons on which these percentages are based are given in Tables B.3 and B.5.

	1	6		
Ŧ				

Lists l

0

		2						Т	able B	.2 P€	ercenta	ges of	' cogna	tes sh	ared
2	80.4		3							be	etween	pairs	of the	16 li	sts.
3	81.4	86.6		4						Se	e Tabl	e B.6	for li	st cod	е
4	77.3	85.6	91.8		5					n	mbers.				
5	56.7	63.9	60.8	61.9		6									
6	54.6	62.9	60.8	60.8	92.8	Ū.	7								
7	44.8	47.9	47.9	47.9	51.0	51.0	1	8							
8	45.4	45.4	45.4	46.4	49.5	48.5	81.2	-	9						
9	44.3	48.5	46.4	45.4	51.5	51.5	61.5	61.9		10					
10	19.4	23.6	25.0	25.0	26.4	26.4	23.9	20.8	23.6		11				
11	18.2	21.2	22.7	22.7	24.2	24.2	19.7	18.2	21.2	86.4		12			
12	11.3	11.3	10.3	10.3	14.4	14.4	11.5	11.3	11.3	43.1	39.4		13		
13	15.3	15.3	13.6	13.6	16.9	16.9	13.8	13.6	15.3	46.7	51.2	79.7	-	14	
14	16.5	17.5	17.5	17.5	22.7	21.6	16.7	16.5	24.7	25.0	27.3	21.6	27.1		15
15	14.4	17.5	16.5	16.5	18.6	19.6	16.7	15.5	16.5	13.9	13.6	11.3	16.9	19.6	-7
16	16.2	18.9	20.3	21.6	20.3	20.3	19.2	17.6	18.9	49.2	51.8	35.1	44.7	24.3	16.2

1 2 3 4 5	97 97 97 97 97 97	2 97 97 97 97	3 97 97 97	4 <u>97</u> 97	5 97_	6	7	Т	able B.3	8 Num cal B.2 siz	ber of culati • Fig e of 1	f compa ing val gures a lists.	risons ues in bove l	used : Table ine ind	in dicate	
6 7 8	97 96 97	97 96 97	97 96 97	97 96 97	97 96 97	97 96 97	96 96	8 97	9	10						
9 10 11	97 7 <b>2</b> 66	97 72 66	97 7 <b>2</b> 66	97 7 <b>2</b> 66	97 72 66	97 72 66	96 71 66	97 7 <b>2</b> 66	97 72 66	72	11 66	12	13			
12 13 14	97 59 97	97 59 97	97 59 97	97 59 97	97 59 97	97 59 97	96 58 96	97 59 97	97 59 97	72 45 72	66 41 66	97 59 97	<u>59</u> 59	14 <u>97</u>	15 <sub>,</sub> 1	-6
15 16	97 74	97 74	97 74	97 74	97 74	97 74	96 7 <b>3</b>	97 74	97 74	72 59	66 56	97 74	59 47	97 [ 74	<u>97</u> 74 7	74

219

棄

V														~		
16 Lists	l															
2 3 4 5 6 7 8 9 0 1 1 2 3 4 1 4	83.7 82.9 79.1 58.9 57.4 48.2 20.0 18.8 12.1 14.8 21.7	2 87.6 86.0 63.8 86.2 548.1 523.2 12.1 85 221.1 85	3 93.08836 9622.99.92 5491.22 113.3	4 64.3 63.1 551.2 551.2 221.3 13.1 23.3	5 944.77 5521.355548 1104.24	6 54.7 511.3 551.3 523.5 146.0 24.0	7 85.2 64.8 23.4 21.2 13.0 13.3 21.1	8 64.3 20.0 18.8 12.1 13.1 20.9	Table 9 23.2 22.4 12.9 14.8 27.9	B.4 C T 10 83.5 46.2 44.7 26.3	omputa able B 29-ite 11 44.0 51.2 27.1	tions .2, fo m list 12 80.3 23.4	as in r the 13 26.2	14	15	
15 16 _1 2 3 4	14.7 19.6 129 129 129 129	17.1 21.6 2 129 129 129 129 129	17.1 22.7 3 129 129 129	16.3 23.7 4 129 129	17.8 21.6 5 7 120	18.6 21.6	17.2 19.8	16.3 17.5	17.1 20.6 Table	15.8 53.3 B.5 C	16.5 51.5 ompari	12.9 35.5	16.4 42.9 s in	20.9 26.8	16.5	
6	120	120	120	120	120		I	6		- - -	20 1+0	$m^{-1}ic^+$				

A

~	129	L~7_	-	4												
3	129	129	129		5											
4	129	129	129	129		6			Table	B.5 Co	mparis	sons as	in			
5	129	129	129	129	129_	•	7			Ta	ble B.	.3, for	the			
6	129	129	129	129	129	129.		8		12	9 <b>-</b> iten	n ĺist.				
7	128	128	128	128	128	128	128	4	9							
8	129	129	129	129	129	129	128	129	_1	10						
9	129	129	129	129	129	129	128	129	129	-	11					
10	95	95	95	95	95	95	94	95	95	95		12				
11	85	85	85	85	85	85	85	85	85	85	85		13			
12	124	124	124	124	124	124	123	124	124	93	84	124		14		
13	61	61	61	61	61	61	60	61	61	47	43	61	61	-	15	
14	129	129	129	129	129	129	128	129	129	95	85	124	61	<u>129</u>	4	16
15	129	129	129	129	129	129	128	129	129	95	85	124	61	129	129	
16	97	97	97	97	97	97	96	97	97	75	68	9 <b>3</b>	49	97	97	97
															-	



Table B.6 Code numbers of lists.

B.2 Computations of borrowing and loss rates.

For two languages, if the rate of borrowing of noncognates varies as the proportion of non-cognates in a list, and the rate of loss of cognates varies as the proportion of cognates in the list, then the rate of change of the proportion of cognates, P, is:

 $\frac{dP}{dt} = -2kP + 2c(1-P)$ 

where c is the proportionality constant related to borrowing and k to loss. The factor 2 accounts for the fact that two languages are undergoing these processes. When the languages are isolated, c = 0 and then we have the familiar solution:

Otherwise,

$$P_2 = \frac{k}{k+c} e^{-2(k+c)t} + \frac{c}{k+c}$$

If there are two closely related languages, the first isolated from a third and the second in a borrowing relationship with the third, we can measure  $P_1$  for the first and third and  $P_2$  for the second and third, and solve for  $w = \frac{c}{b}$  (by a successive approximation method) in

$$P_2 = \frac{P_1^{(1+w)} + w}{1 + w}$$

Substituting the n<sup>th</sup> approximation for w in the exponent of  $P_1^{1-w}$  and solving

$$w_{n+1} = \frac{P_2 - P_1^{1+w_n}}{1 - P_2}$$

yields a better approximation. A table has been constructed by programming this procedure for a high speed computer, and is included as Table B.7. It is clear from this table that estimates of w will be very unstable for values of  $P_1$ greater than about 40%.

Note that from the expression for  $P_2$ ,  $P_2$  approaches <u>c</u> as an equilibrium value. <u>k+c</u>

D_			. P	2 - P <sub>1</sub>			
11	.01	.02	.05	.10	.15	.25	.40
0.95 .90 .887 .70 .60 .50 .40 .30 .20 .10 .05	9.13 $2.07$ $0.88$ $0.48$ $0.30$ $0.20$ $0.14$ $0.11$ $0.08$ $0.06$ $0.05$ $0.04$ $0.03$ $0.02$ $0.02$ $0.02$ $0.02$ $0.02$ $0.01$ $0.01$	22.18 4.49 1.85 1.00 0.62 0.41 0.29 0.22 0.17 0.13 0.11 0.09 0.07 0.06 0.05 0.04 0.03 0.03	15.47 5.55 2.83 1.70 1.12 0.79 0.59 0.45 0.35 0.28 0.23 0.19 0.16 0.13 0.11 0.09 0.08 0.07	18.10 7.50 4.15 2.63 1.80 1.31 0.98 0.76 0.68 0.49 0.40 0.33 0.28 0.23 0.19 0.16 0.14	18.76 8.31 4.83 3.17 2.23 1.65 1.26 0.79 0.64 0.53 0.31 0.22	18.98 8.86 5.41 3.70 2.69 2.04 1.59 1.27 1.03 0.84 0.70 0.58 0.49 0.41	19.00 8.99 5.63 3.95 2.94 2.27 1.80 1.45 1.19 0.98 0.81

Table B.7 w =  $\frac{c}{k}$  tabulated for selected values of

 $P_1$  and  $P_2 - P_1$ , where  $P_2 = \frac{P_1^{1+w} + w}{1+w}$ 

(see Chapter 4).

Two-way linear interpolation gives a good first approximation (about 2 significant figures) except near the upper right and lower left corners.

Appendix C. English versions of texts used in testing.

Vocabulary items which subjects were asked to identify are underlined. In Text 4, the word "sleep" was masked by a cough on the Buang C tape, and for this test only subjects were asked to identify the word "home" instead. Questions are listed immediately after each text.

Text 1.

<u>Three</u> women were coming back from their little garden. A woman with her old mother and her young daughter. The old woman had filled two <u>bilums</u>\* with sweet potatoes, and this food was very <u>heavy</u>. The old woman went first, and the mother and daughter went to wash at the water. When the two had finished washing, the <u>mother</u> said, "Oh, I have left my saucepan in the garden. Run and <u>bring it back</u>, and I will <u>wait for</u> you." The daughter answered, "No, I am afraid because night is coming. The path is in the <u>bush</u> and there is no moon. Let the saucepan stay there. You can cook the <u>sweet potatoes</u> in the fire and the greens in bamboo." The mother said, "All right, <u>let's go</u> home."

- 1. What was the old woman carrying?
- 2. Who went to wash at the water?
- 3. Did the young girl want to go back to the garden? Why?

<sup>\*</sup> Bilum is a Neo-Melanesian word meaning "string bag" which has been adopted into the English vocabulary of many Europeans in New Guinea. In this text it was given the characteristic anglicized pronunciation, and many of those tested did not recognize it.

Text 2.

Everyone was going to a big man's garden to plant <u>yams</u>. A woman called to her little boy, "The <u>sun</u> is shining! Get up! We are going to the tultul's"<u>big</u> garden." The little boy answered, "I am lazy. I will sleep at <u>home</u>." The mother said, "No, you come. In the afternoon we are going to eat meat. The tultul's <u>wife</u> will cook a cassowary. Now <u>hurry up</u>! Your father already went <u>this morning!</u>" The child asked, "Where is my <u>food</u>? I am already up." The mother answered, "Your <u>taro</u> and pitpit" are in the saucepan." The child said, "Father forgot his <u>axe</u>." The mother said, "Let it stay. We are not going to cut bush; we are going to plant yams." The boy said, "All right, let's go."

1. Where were all the people going?

2. Did the little boy want to go?

3. What did the father leave at home?

Text 3.

A man was tying up <u>bananas</u> near his <u>house</u>. He saw a bird in a tree. He said to his child, "<u>Run</u> and get my bow and arrow." The child ran and brought the <u>bow and arrow</u>. The man shot the bird and it fell down dead. A <u>big</u> dog saw the bird and wanted to eat it but the little boy got there first and brought the bird to his father. He asked, "Who

\* <u>tultul</u> - Neo-Melanesian, "assistant village official". pitpit - Neo-Melanesian loan word, Saccharum edule. will <u>cook</u> this bird? <u>I am hungry</u>, but mother went to Mumeng this morning with her sister." His father answered, "Your <u>grandmother</u> will cook it later this afternoon." His grandmother said, "<u>Good</u>. I am happy that you shot a bird. We three will eat Chinese taro with meat."

1. What did the dog want to do?

2. Who went to Mumeng?

3. Why was the grandmother happy?

Text 4.

A young man and his <u>brother</u> went fishing. The two went down to the river and the young man <u>said</u>, "I forgot my tobacco at the men's house. Go and get it." The <u>little</u> brother ran and brought the tobacco and they sat down on a <u>stone</u>. They caught one eel and four small fish. They cooked the fish and ate them, and went to <u>sleep</u> under a tree. Later they got up and went <u>home</u>. Their mother asked them, "Did you catch any <u>fish</u>?" They lied, "Only one eel." Their mother said, "Come, I will cook it, and we will <u>eat</u> it with <u>tapioca</u> and coconuts." The young man said, "Coconuts! We live in the <u>mountains</u> and there are no coconuts." His mother said, "Your sister brought it from Lae <u>yesterday</u>."

- 1. What did the young man forget?
- 2. When the mother asked the two boys what they had caught, what did they tell her?

3. What doesn't grow in the mountains?

Text 5.

A man and his <u>wife</u> were clearing their new <u>garden</u>. The baby was sleeping in a <u>bilum</u> and the little girl was washing the saucepans in the water. The man said, "I am going to the bush to get vines for the <u>fence</u>."

He came back at noon and sat down under a tree. He said to the little girl, "The <u>sun</u> is very hot. Bring some sugar cane and I will <u>drink</u> it." Then he said to his wife, "I am hungry. Cook some <u>food</u> and we will eat." The woman cooked <u>sweet potatoes</u> in the <u>fire</u> and <u>called</u> them all. The little girl carried the baby. She said, "We were washing in the water and the baby fell in." The mother was very cross with the little girl.

1. Where did the man go?

2. What did he say when he came back from the bush?

3. Why was the mother cross?

Text 6.

The little boy stayed home with his mother because his mother was sick. His mother was making a bilum. She said, "The <u>sun</u> is shining. Go and play outside." The little boy was sad because all the children had gone to the <u>gardens</u>. He was alone. Then he heard his first brother and his father <u>calling</u>, "We have <u>shot</u> a <u>pig</u>!" and saw them coming up the main path. His <u>father</u> called, "Run and bring betel nut for me to eat." The first brother sat down on the <u>mat</u> and asked his mother, "Where is my <u>food</u>? I am hungry." The mother answered, "I have cooked a <u>yam</u> and greens for you. They are in this saucepan." The little boy laughed. He said, "Tomorrow we will eat <u>meat</u>."

1. Why did the little boy stay at home?

2. Why was the little boy sad?

3. Who shot the pig?

## REFERENCES CITED

ABERLE, D.

1960 The influence of linguistics on early culture and personality theory. <u>In</u> Essays in the science of culture in honour of Leslie A. White; G.Dole

and R.Carneiro, eds. New York, Crowell, pp. 1-29. ANDREYEV, N.

1962 (Comment). Current Anthropology 3:130. ANISFELD, E. AND W.LAMBERT

1964 Evaluational reactions of bilingual and monolingual children to spoken languages. Journal Of Abnormal and Social Psychology 69:89-97.

ANISFELD, M., N.BOGO AND W.LAMBERT

1962 Evaluational reactions to accented English speech. Journal of Abnormal and Social Psychology 65:223-231.

BARKER, R.G. AND H.F.WRIGHT

1954 Midwest and its children. Evanston, Row, Peterson. BARTON, F.R.

1910 The annual trading expedition to the Papuan Gulf. <u>In</u> The Melanesians of British New Guinea, C.G.Seligmann, Cambridge, Cambridge University Press, pp. 96-120.

BAMLER, A.

1900 Vokabular der Tamisprache. Zeitschrift fur

afrikanische- und oceanische-Sprachen 5:217-253. BERSLAND, K. AND H.VOGT

1962 On the validity of glottochronology. Current Anthropology 3:115-153.

BERNE, ERIC

1964 Games people play. New york, Grove Press. BOAS, FRANZ

1911 Handbook of American Indian Languages, Part 1. Smithsonian Institute, Bureau of American Ethnology, Bulletin 40. Washington, Government Printing Office.

1940 Race, language and culture. New York, Macmillan. BROMLEY, M.

1967 The linguistic relationships of Grand Valley Dani: a lexico-statistical classification. Oceania 37:286-308.

CAPELL, A.

- 1949 Two tonal languages of New Guinea. Bulletin of the School of Oriental Studies 13:184-199.
- 1962a A linguistic survey of the southwest Pacific. South Pacific Commission Technical Paper No. 136.
- 1962b Oceanic linguistics today. Current Anthropology 3:371-427.

CARROLL, J.B.

1963 Research on teaching foreign languages. <u>In</u> N.L.Gage, ed. Handbook of research on teaching. Chicago, Rand McNally. CHOWNING, A.

1963 Proto-Melanesian plant names. <u>In</u> Plants and the migrations of Pacific peoples, Jacques Barrau, ed. Honolulu, Bishop Museum Press, pp.39-44.

COWAN, H.K.J.

1962 (Comment). Current Anthropology 3:398-400. DEMPWOLFF, 0.

1939 Grammatik der Jabêm Sprache auf Neuguinea. Hamburg, Hansische Universitat Abhandlungen aus dem Gebiet der Auslandskunde, Vol. 50.

DIEBOLD, A.R.

- 1961a Bilingualism and Biculturalism in a Huave community. PhD dissertation, Yale University.
- 1961b Incipient bilingualism. Language 37:97-112. <u>Reprinted in</u> Hymes(1964), pp.495-505.
- 1963 Code-switching in Greek-English bilingual speech. Monograph series on language and linguistics No. 15, Georgetown University, pp.53-59.

DYEN, I.

- 1962a The lexicostatistical classification of the Malayo-Polynesian languages. Language 38:38-46.
- 1962b (Comment). Current Anthropology 3:402-405.
- 1965 A lexicostatistical classification of the Austronesian languages. International Journal of American linguistics Memoir No. 19.

ERVIN-TRIPP, S.

1964 An analysis of the interaction of language,

topic, and listener. American Anthropologist

66, Number 6, Part 2:86-102.

EVANS-PRITCHARD, E.E.

1948 Nuer modes of address. The Uganda Journal 12:

166-171. <u>Reprinted in</u> Hymes(1964), pp.221-225. FERGUSON, C.A.

1959 Diglossia. Word 15:325-340. <u>Reprinted in Hymes(1964)</u>, pp.429-439.

FIRTH, J.R.

- 1935 The technique of semantics. Transactions of the Philological Society (London), pp.36-72. <u>Reprinted</u> in Firth(1957), pp.7-35.
- 1957 Papers in linguistics, 1934-51. London, Oxford University Press.

FISCHER, J.L.

1958 Social influences in the choice of a linguistic variant. Word 14:47-56. <u>Reprinted in Hymes(1964)</u>, pp.483-488.

FISHMAN, J.

- 1964 Domains of language choice in multilingual settings. Indiana University, mimeographed.
- 1965 Who speaks what language to whom and when. La Linguistique 2:67-88.

FODOR, I.

1962 (Comment). Current Anthropology 3:131-134.

FOX, C.E.

1947 Phonetic laws in Melanesian languages. Journal of the Polynesian Society 56:58-118.

GIRARD, F.

1957 Quelques plantes alimentaires et rituelles en usage chez les Buang. Journal d'Agriculture Tropicale et de Botanique Appliquée 4:212-227. GOFFMAN, ERVING

1961 Encounters; two studies in the sociology of interaction. Indianapolis, Bobbs-Merrill. GOODENOUGH, W.

1957 Cultural anthropology and linguistics. <u>In</u> Report of the seventh annual round table meeting on linguistics and language study. Monograph series on languages and linguistics No.9. Washington, Georgetown University, pp.167-173.

1962 (Comment). Current Anthropology 3:406-408.

GRACE, G.

- 1955 Subgrouping of Malayo-Polynesian: a report of tentative findings. American Anthropologist 57: 337-339.
- 1959 The position of the Polynesian languages within the Austronesian language family. International Journal of American Linguistics Memoir No.16.

GREENBERG, J.H.

1948 Linguistics and ethnology. Southwestern Journal of Anthropology 4:140-147. <u>Reprinted in Hymes(1964)</u>, pp.27-31.

GUMPERZ, J.J.

- 1964a Linguistic and social interaction in two communities. American Anthropologist 66, Number 6, Part 2:137-153.
- 1964b Hindi-Punjabi code-switching in Delhi. <u>In</u> Proceedings of the 9th International Congress of Linguists. The Hague, Mouton:1115-1124.
- 1967a On the linguistic markers of bilingual communication. Journal of Social Issues 23, No.2:48-57.
- 1967b How can we describe and measure the behaviour of bilingual groups? International Seminar on Bilingualism, Université de Moncton, preprint: pp. 133-144.

HALL, R.A.

- 1943 Melanesian Pidgin English grammar, texts, vocabulary. Baltimore, Linguistic Society of America.
- 1954 Hands off Pidgin English. Sydney, Pacific Publications.
- 1955a A standard orthography and list of suggested spellings for Neo-Melanesian. Port Moresby, Department of Education.
- 1955b Innovations in Melanesian Pidgin (Neo-Melanesian). Oceania 26:91-109.

HARDING, T.

1965 The Rai Coast Open Electorate. In The Papua-

New Guinea elections, 1964; D.Bettison, C.Hughes and P. van der Veur, eds. Canberra, Australian National University, pp. 194-211.

1967 Voyagers of the Vitiaz Strait: a study of a New Guinea trade system. Seattle, University of Washington Press.

HASSELMO, N.

n.d. The configurations and the conditioning of codeswitching: a study of American Swedish texts. Ms. HAUDRICOURT, A.G.

- 1948 Les langues du nord de la Nouvelle Calédonie et la grammaire comparée. Journal de la Societe des Océanistes 4:159-162.
- 1961 Richesse en phonèmes et richesse en locuteurs. L'Homme 1:5-10.

HAUGEN, E.

1956 Bilingualism in the Americas: a bibliography and research guide. American Dialect Society, Number 26. Alabama, University of Alabama Press.

HEALY, A.M.

1967 Bulolo: a history of the development of the Bulolo region, New Guinea. New Guinea Research Unit, Bulletin no. 15.

HERMAN, S.

1961 Explorations in the social psychology of language choice. Human Relations 14:149-163.

HICKERSON, H., G.TURNER and N.HICKERSON

- 1952 Testing procedures for estimating transfer of information among Iroquois dialects and languages. International Journal of American Linguistics 18:1-8. HOGBIN, H.I.
  - 1947 Native trade around the Huon Gulf, North-Eastern New Guinea. Journal of the Polynesian Society 56:242-255.
    - 1963 Kinship and marriage in a New Guinea village. London, Athlone Press.

HOLLYMAN, K.J.

1962 The lizard and the axe: a study of the effects of European contact on the indigenous languages of Polynesia and island Melanesia. Journal of the Polynesian Society 71:310-327.

HOOLEY, B.

- 1962a A Buang text. M.A. Thesis, University of Pennsylvania.
- 1962b Buang and the South-East Papuan languages. Typescript, Summer Institute of Linguistics, Ukarumpa.
- 1962c Transformations in Neo-Melanesian. Oceania 33: 116-127.
- 1963 A preliminary comparison of Buang and Proto-Austronesian. Typescript, Summer Institute of Linguistics, Ukarumpa.
- 1964a A problem in Buang morphology. Linguistic Circle
of Canberra Publications, Series A - Occasional papers, No.3.

- 1964b The Morobe District, New Guinea. Oceanic Linguistics 3:201-247.
- 1966 Mata Bom (An account of the death of prospector Baum, in Buang B dialect). Mimeographed, Summer Institute of Linguistics, Ukarumpa. Earlier version "We fight for Mr.Baum", Work papers of the Summer Institute of Linguistics, University of North Dakota, 1961, pp.87-91.
- 1966 Personal communication. -1967

HUGHES, C.A., and P.W.VAN DER VEUR

1965 The elections: an overview. <u>In</u> The Papua-New Guinea elections, 1964; D.Bettison, C.Hughes and P.van der Veur, eds. Canberra, Australian National University, pp. 388-429.

HYMES, D.

- 1960 Lexicostatistics so far. Current Anthropology 1:3-44.
- 1962a The ethnography of speaking. <u>In</u> Anthropology and human behavior; T.Gladwin and W.Sturtevant, eds. Washington, D.C., Anthropological Society of Washington, pp.13-53.
- 1962b (Comment). Current Anthropology 3:136-141.
- 1964 <u>In</u> Language in culture and society: a reader in linguistics and anthropology; Dell Hymes, ed. New York, Harper and Row.

237

- 1965 Corrigenda and addenda to R.J.Goodell. Anthropological Linguistics 7:No.3, 84-87.
- 1967 Models of the interaction of language and social setting. Journal of Social Issues 23, No.2:8-28. IVIČ, P.
  - 1958 Die serbokroatischen Dialekte: Ihre Struktur und Entwicklung, I: Allgemeines und die stokavische Dialektgruppe. The Hague, Mouton.

JAKOBSON, R.

1960 Concluding statement; linguistics and poetics, <u>in</u> Style in language, T.A.Sebeok, ed. New York, Wiley, pp.350-373.

KIMBALL, S.

1955 Problems of studying American culture. American Anthropologist 57:1131-1142.

KROEBER, A.L.

1917 The superorganic. American Anthropologist 19: 163-213. <u>Reprinted in A.L.Kroeber</u>, The nature of culture; Chicago, University of Chicago Press, 1952, pp.22-51.

1948 Anthropology. New York, Harcourt Brace and Co. KROEBER, A.L. and T.PARSONS

1958 The concepts of culture and of social system, American Sociological Review 23:582-583.

LAMBERT, W.

1961 Behavioral evidence for contrasting forms of bilingualism. Monograph series on languages and

LAMBERT, W., R.HODGSON, R.GARDNER, and S.FILLENBAUM

1960 Evaluational reactions to spoken languages. Journal of Abnormal and Social Psychology 60:44-51. LANTIS, M.

1960 Vernacular culture. American Anthropologist 62: 202-216.

LAWRENCE, P.

- 1956 Lutheran mission influence on Madang societies. Oceania 27:73-89.
- 1964 Road belong cargo. Melbourne, Melbourne University Press, (paperback edition 1967.)

LAYCOCK, D.

n.d. Course in New Guinea (Sepik) Pidgin. Mimeographed, Australian National University.

LEE, D.D.

1959 Freedom and culture. Englewood Cliffs, N.J., Prentice-Hall.

LEHNER,S.

1932 The notion of 'maja' in the Jabêm language of North East New Guinea. Journal of the Polynesian Society 41:121-130.

LePAGE, R.B.

1964 The national language question: linguistic problems of newly independent states. London, Oxford University Press. LIEBERSON, S.

1967 How can we describe and measure the incidence and distribution of bilingualism? International Seminar on Bilingualism, Université de Moncton, Preprints, pp.145-159.

MACKEY, W.F.

1962 The description of bilingualism. Canadian Journal of Linguistics 7, No. 2:51-85.

MACNAMARA, J.

- 1966 Bilingualism and primary education. Edinburgh, Edinburgh University Press.
- 1967a The bilingual's linguistic performance a psychological overview. Journal of Social Issues 23, No.2:58-77.
- 1967b How can one measure the extent of a person's bilingual proficiency? International Seminar on Bilingualism, Université de Moncton, Preprints: pp.68-90.

MALINOWSKI, B.

1935 Coral gardens and their magic, Vol.II, The language of magic and of gardening. New York, American Book Co.

McKAUGHAN, H.

1964 A study of divergence in four New Guinea languages. American Anthropologist 66,6, Part 2:98-120.

MEAD, M.

1953 Growing up in New Guinea. New York, Morrow.

Mentor edition.

MIHALIC, F.

1957 Grammar and dictionary of Neo-Melanesian.

Westmead, New South Wales, Mission Press.

MILNER, G.

1961 The Samoan vocabulary of respect. Journal of the Royal Anthropological Institute 91:296-317.

1962 (Comment). Current Anthropology 3:416-417.

NEWMAN, S.

1955 Vocabulary levels: Zuni sacred and slang usage. Southwestern Journal of Anthropology 11:345-354. Reprinted in Hymes (1964):397-402.

PIKE, E.V.

1954 Phonetic rank and subordination in consonant patterning and historical change. Miscellania Phonetica 2:25-41.

PUTNAM, G. and E.M. O'HERN

1955 The status significance of an isolated urban dialect. Language dissertations, No.53; Supplement to Language 31, 4, Part 2. Baltimore, Linguistic Society of America.

RAY, S.H.

1926 The Melanesian island languages. Oxford, University Press.

READ, K.E.

1965 The high valley. New York, Charles Scribner's Sons.

REAY, M.

- 1959 The Kuma: freedom and conformity in the New Guinea highlands. Melbourne, Melbourne University Press.
- 1964 Present-day politics in the New Guinea highlands. American Anthropologist 66, Number 4, Part 2:240-256.
- RICE, F.A.
  - 1962 (Editor) Study of the role of second languages in Asia, Africa and Latin America. Washington, D.C., Center for Applied Linguistics of the Modern Language Association of America.

ROBBINS, R.G.

1963 The anthropogenic grasslands of New Guinea. <u>In</u> Proceedings of the UNESCO Symposium on humid tropics vegetation, Goroka, 1960. Canberra, Government Printer.

ROWLEY, C.D.

1965 The New Guinea villager: a retrospect from 1964. Melbourne, Cheshire.

RUBIN, J.

1963 A bibliography of Caribbean creole languages. Caribbean Studies 2, 4: 51-61.

SALISBURY, R.F.

- 1956 Asymmetrical marriage systems. American Anthropologist 58:639-655.
- 1962 Notes on bilingualism and linguistic change in New Guinea. Anthropological Linguistics 4, 7:1-13.

- 1964 New Guinea highland models and descent theory. Man 64:168-171.
- 1967 Pidgin's respectable past: a matter of New Guinean pride. New Guinea 2, 2:44-48.

SAMARIN, W.J.

1962 Lingua francas, with special reference to Africa. In Rice (1962):54-64.

SAPIR, E.

- 1925 Sound patterns in language. Language 1:37-51. <u>Reprinted in</u> Selected writings of Edward Sapir in language, culture and personality, D. Mandelbaum, ed. Berkeley, University of California Press, pp. 33-45.
- 1933 La réalité psychologique des phonèmes. Journal de Psychologie Normale et Pathologique 30:247-265. <u>Reprinted in</u> Selected writings of Edward Sapir in language, culture and personality, D. Mandelbaum, ed. Berkeley, University of California Press, pp. 46-60.

SCHEFLEN, A.E.

1963 Communication and regulation in psychotherapy. Psychiatry 26:126-136.

SCHELLONG, O.

- 1890 Die Jabim-Sprache der Finschhafener Gegend. Leipzig, Friedrich.
- 1905 Weitere Mitteilungen uber die Papuas (Jabim) der Gegend des Finschhafens in Nordost Neuguinea.

Zeitschrift fur Ethnologie 37:602-618.

SCHMIDT, W.

1901 Die Jabim-Sprache (Deutsch Neuguinea) und ihre Stellung innerhalb der melanesischen Sprachen. S.B.Akad. Wiss. Wien. Philos.-hist. Kl.Bd.43. Abhandlung 9:1-60.

SCHWARTZ, T.

1967 Event-centered ethnography: some concepts and dimensions of event structure. Paper delivered to American Anthropological Association, 66th Annual Meeting, December 3, 1967.

SINCLAIR, J.

1966 Behind the ranges: patrolling in New Guinea.

Melbourne, Melbourne University Press.

SOLENBERGER, R.R.

1962 The social meaning of language choice in the

Marianas. Anthropological Linguistics 4, 1:59-64. SPATE, O.H.K.

1966 Education and its problems, <u>in</u> New Guinea on the threshold, E.K.Fisk, ed., Canberra, Australian National University Press, pp.117-134.

SPENCE, N.C.W.

1964 The basic problems of ethnolinguistics. Archivum Linguisticum 16:145-156.

STURTEVANT, W.C.

1964 Studies in ethnoscience. American Anthropologist 66,3, Part 2:99-131. SWADESH, M.

1934 The phonemic principle. Language 10:117-129. TANNER, N.

1967 (paper not available), in Anthropological Linguistics.

TERRITORY OF PAPUA AND NEW GUINEA

1960 Village directory. Department of Native Affairs,

Port Moresby, Government Printer.

VAN DER VEUR, K., and P. RICHARDSON

1966 Education through the eyes of an indigenous urban elite. New Guinea Research Unit, Bulletin No.12. VIAL, L.G.

1938 Some statistical aspects of population in the

Morobe District, New Guinea. Oceania 8:383-397. VILDOMEC, V.

1963 Multilingualism. Leyden, Sythoff.

VOEGELIN, C.F., and Z. HARRIS

1950 Methods for determining intelligibility among dialects of natural languages. Proceedings of the American Philosophical Society 95:322-329.

VOEGELIN, C.F., and F.M. VOEGELIN

1964 Languages of the world: Indo-Pacific Fascicle 3. Anthropological Linguistics 6, 9. Anthropology Department, Indiana University.

WEINREICH, U.

1953 Languages in contact. New York, Linguistic Circle of New York. WOMERSLEY, J.

1966 Personal communication.

WURM, S.

- n.d. Course in New Guinea highlands Pidgin. Mimeographed, Australian National University.
- 1960 The changing linguistic picture of New Guinea. Oceania 31:121-136.
- 1961 The linguistic situation in the highlands districts of Papua and New Guinea. Australian Territories 1,2:14-23.
- 1964 Australian New Guinea highlands languages and the distribution of their typological features. American Anthropologist 66, 4, Part 2:77-97.
- 1966a Pidgin a national language: 300,000 New Guineans can't be wrong. New Guinea 1,6:49-54.
- 1966b Language and literacy. <u>In</u> New Guinea on the threshold, E.K.Fisk, ed., Canberra, Australian National University Press, pp.135-148.
- 1966 Papua-New Guinea nationhood: the problem of a -1967 national language. Journal of the Papua and New Guinea Society, 1, 1:7-19.

WURM, S., and D. LAYCOCK

1961 The question of language and dialect in New Guinea. Oceania 32:128-143.

ZAHN, H.

1940 Lehrbuch der Jabemsprache. Berlin, Reimer.