USE OF THESES

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Always we are last: a study of planning, development and disadvantage in Melanesia.

Joan M. Herlihy

Thesis submitted for the Degree of Doctor of Philosophy in the Australian National University

February 1981
'Always we are last'

Dear sir: Re: Agricultural grants and the people in the bush.

A very hard thing was told us last week. Many people living in the bush will not be allowed cattle grants because our farms are not accessible. I ask: 'Not accessible to who?' Our farms are accessible to us the people. So the only one [sic] who can't get there are the agriculture staff. I don't think government policy should think about staff first time but with the people.

But what is even worse is that this rule was never made known to us until last week. I have a copy of the Pasture Grant form (ref. no. EP8) of Department of Agriculture. It is dated 5/10/73. Under the word Conditions nothing is said about accessibility. Yet, they say that this has always been so but that some local staff just didn't say. I think something else. If it were just the local staff not knowing, then this condition should be on the form. But it is not. Maybe next year other rules will come and they will say that these rules have been from the beginning also.

Here again, I see the government helping those who are better off, those who have something already (little as it is) and telling the people of the bush: 'You wait! You must wait first time! This pells plan (this road, this project, this grant) him he finish first time and behind you (bush people) come'. Never are we first in line. Never is our business thought about before the others. Never are things going first to the people in the bush but always we are behind, always we are last.

...I hope you will make all of this known to Govco. I hope you will tell them our feelings and the Govco members will correct this policy of favouring coastal people over the people in the bush, the areas closer to Honiara to those at a distance, the towns over the villages, the educated over those who didn't go to school.

(letter from a Solomon Islands village spokesman to his member of parliament, 1974)
Except where otherwise acknowledged in the text, this thesis represents my own original research.

Joan M. Herlihy
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ABSTRACT

This thesis examines the relationship between rural development planning and rural development, as it has affected disadvantaged areas of Melanesia. Its 'problem-solving' framework shows that, in the colonial and post-colonial period, the poor articulation of macro and micro-level interests has resulted in a marked divergence between the issues associated with development planning and those of real world rural development. Attitudinal changes at theoretical level have served to complicate this problem. To some extent the dichotomy can be attributed to the international politics of an era characterized by rapid decolonization, with its implicit or explicit demands for equally rapid and often major socio-economic reforms. In the search for simple answers and universal panaceas, much of the complex Third World rural dynamic has been ignored or subordinated to macro-level issues.

The study shows that development planning has been a persistent and reliable problem-solving device for macro-level government in Melanesia, but that it usually has addressed problems other than those stated in development plans. These problems centred on the uncertain legitimacy of the colonial and post-colonial governments, and on the capture of scarce resources from the Western world. Though plans and planning have not been directly productive of rural development, they have been conspicuously successful in achievement of their unstated aims and thus in the improvement of government's capacity to govern.

The micro-level evidence demonstrates that planning to date has not been geared to cope with the development of a multiplicity of disparate rural communities. Implementation of rural development plans can be inhibited by a wide variety of factors and, even at the preliminary stage of resource and situational assessment, the margin for error in broad-spectrum planning can be enormous. At the same time, the study concludes that villagers and government share many
development objectives, one of the most pervasive of which is the need for expanded cash-earning opportunities.

Patterns of European contact indicate that the imposition of macro-level government has been a significant factor in the marginalization of some areas. Nonetheless, villagers display considerable adaptability and have continually acted as 'rational economic man' in their attempts to obtain the benefits of modernization. These attempts illustrate the importance of informal networks to village development. At the same time, the study shows that the lack of development and of reliable government assistance in the 1970s has become a vicious circle, perpetuating itself by the constraints it places on village self-help.
ACKNOWLEDGEMENTS

This study was made possible by the award of an Australian National University Scholarship in the Department of Human Geography, Research School of Pacific Studies. I am particularly grateful for the opportunity to expand my understanding of Third World development in a discipline with which I was not familiar, under the guidance of Gerard Ward, Diana Howlett and Godfrey Linge. The interest and assistance of other present and former members of the department, including the cartographers, research assistants, clerical staff, and scholars who had no direct involvement in my field, was a major source of moral and practical support throughout. Similar support, and valuable criticism, was provided by colleagues from other departments. Among them, Judy Bennett, Murray Chapman, Rodney Cole, Roger Keesing and members of the R.S.Pac.S. Department of Economics were especially generous with their time and knowledge. I am under a deep personal and professional obligation to John Ballard, Bill Standish and Elspeth Young for their constant help and encouragement.

Some of my debts to Melanesians for their contribution to this study predate it by a decade. I would like to express here my particular gratitude to various people in the Madang, Lae, Rabaul, Highlands and Sepik areas for the way they taught and protected a very insignificant expatriate during the 1960s and early 1970s, sometimes at considerable cost to themselves. During the fieldwork for the present study I became additionally indebted to many Kilimeri and Ningil villagers in the West Sepik, and Bugotu and East Bauro villagers in Solomon Islands. Their cooperation, patience and practicality made my village fieldwork a very rewarding and comprehensive experience. I found that the main culture shock was not in entering these villages, but in leaving them. I am especially grateful to Man Wako and Wei, Walo, Iwe, Keri and Wasko, Bepe, and Mage Sia in Kilimeri; to Jakob and Francesca Talis, Otto Warag, Gerald
Suwarin, Marak Mait, William Wanig, Angelina Kouli and Joana Yafei in Ningil; to Lulwick Vahia, Silas Saelo, Richard Gorea, Sela Tangowe and Stephen Natei, John Jorokana, Solomon Manitove and Janet Ronua in Bugotu; and to Aniseto Wabwo, Jacinth Kound, James Mahumahu, Peter Giro, John Taureperepe and Matteus Wangementi in East Bauro. I am equally grateful for the assistance given me in many different ways by members of their families.

In all study areas mission personnel provided valuable insights, information and support. Among them were Bishop Sweeney of Vanimo and the staff of the Ossima vocational centre; Bishop Rowell, Father Tim Elliott and others from the Aitape Franciscan Mission; and the staff of the Marist Mission at Wainoni Bay. I am exceedingly grateful to Father Richard Fallowes, previously of the Melanesian Mission in Solomon Islands, for information generously provided over a correspondence of several years' duration.

Of the innumerable government representatives who actively assisted my work, particular thanks are due to Charles Lepani and the staff of the National Planning Office in Port Moresby; to Tony Hughes, David Edwards and other CPO staff in Solomon Islands; and to Isaac Koloni, Hugh Paia, Peter Larmour and Ben Kinika for their spontaneous help in the adjustment to a totally unfamiliar country. Thanks are also due to Michael and Veronica Somare, and to my erstwhile fellow-students and colleagues at the University of Papua New Guinea, for their unstinting assistance in so many ways in the years prior to and during the study.

Among my many personal obligations, I am most deeply indebted to my husband John, both for the intellectual stimulus he continually provided and for the burden he took on himself, in addition to his own work, to make a difficult period easier for me. It was due to his efforts, even more than to mine and those of the many other people who helped me, that the thesis was brought to its eventual conclusion. I must also record the contribution of my daughter Katherine Boaeta, who was my
field assistant at age 18 months, my supervisor and critic throughout, and a conscientious parent surrogate to her new twin brothers during the last painful months.
ABBREVIATIONS

AC  Area Council
AILB Agricultural and Industrial Loans Board
ANGAU Australian New Guinea Administrative Unit
APB Area Planning Branch
AR Annual Report
AS Area Study
Aust. Australia
BPC Budget Priorities Committee
BSIP British Solomon Islands Protectorate
CDC Commonwealth Development Corporation
CDW Colonial Development and Welfare (Act)
CFS Committee on Food Supplies
CO Colonial Office
CPC Constitutional Planning Committee
CPO Central Planning Office
CRDD Commonwealth Regional Development Division
CS Chief Secretary
Cwth. Commonwealth
DA Department of the Administrator
DAC District Advisory Council
DASF Department of Agriculture, Stock and Fisheries
DC District Commissioner
DCC District Coordinating Committee
DC(E) District Commissioner (Eastern District)
DDA Department of District Administration
DEDC District Economic Development Committee
Dept CM & DA Department of the Chief Minister and Development Administration
Dept Ed. Department of Education
DHT District Health Team
DIES Department of Information and Extension Services
DNA Department of Native Affairs
DO District Office
DO(E) District Office (Eastern District)
DOET Department of External Territories
DPI Department of Primary Industry
<table>
<thead>
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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>EII</td>
<td>Eastern Inner Islands</td>
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<tr>
<td>EIU</td>
<td>Economic Intelligence Unit</td>
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<tr>
<td>FM</td>
<td>Franciscan Mission</td>
</tr>
<tr>
<td>GFEP</td>
<td>General Financial and Economic Policy Division</td>
</tr>
<tr>
<td>GIG</td>
<td>German Imperial Government</td>
</tr>
<tr>
<td>Govco</td>
<td>Governing Council</td>
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<tr>
<td>HAD</td>
<td>House of Assembly Debates</td>
</tr>
<tr>
<td>HC</td>
<td>High Commissioner</td>
</tr>
<tr>
<td>HH</td>
<td>Household</td>
</tr>
<tr>
<td>H.M.S.</td>
<td>Her (or His) Majesty's Ship</td>
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<tr>
<td>IBRD</td>
<td>International Bank for Reconstruction and Development</td>
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<td>ILO</td>
<td>International Labour Office</td>
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<tr>
<td>IULA</td>
<td>International Union of Local Authorities</td>
</tr>
<tr>
<td>LAD</td>
<td>Legislative Assembly Debates</td>
</tr>
<tr>
<td>LL</td>
<td>Lumi Local (Administrative Area)</td>
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<tr>
<td>MAL</td>
<td>Ministry for Agriculture and Lands</td>
</tr>
<tr>
<td>MC</td>
<td>Makira Council</td>
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<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
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<tr>
<td>MECA</td>
<td>Ministry for Education and Cultural Affairs</td>
</tr>
<tr>
<td>MEP</td>
<td>Malaria Eradication Programme</td>
</tr>
<tr>
<td>MET</td>
<td>Ministry for Education and Training</td>
</tr>
<tr>
<td>MGA</td>
<td>Makira Government Agent</td>
</tr>
<tr>
<td>MHA</td>
<td>Ministry for Home Affairs</td>
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<tr>
<td>MM</td>
<td>Melanesian Mission</td>
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<tr>
<td>MNR</td>
<td>Ministry for Natural Resources</td>
</tr>
<tr>
<td>MP</td>
<td>Member of Parliament</td>
</tr>
<tr>
<td>NDP</td>
<td>National Development Plan</td>
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<td>NIDA</td>
<td>National Investment and Development Association</td>
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<td>NLD</td>
<td>Native Labour Department</td>
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<td>NPD</td>
<td>National Parliamentary Debates</td>
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<tr>
<td>NPEP</td>
<td>National Public Expenditure Plan</td>
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<td>NPO</td>
<td>National Planning Office</td>
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<tr>
<td>ODA</td>
<td>Overseas Development Administration</td>
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<tr>
<td>OCM</td>
<td>Office of the Chief Minister</td>
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<tr>
<td>OEA</td>
<td>Office of the Economic Adviser</td>
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<tr>
<td>OIC</td>
<td>Officer-in-Charge</td>
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<tr>
<td>OPAC</td>
<td>Office of Programming and Coordination</td>
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<td>Parl.</td>
<td>Parliament</td>
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pers. comm. personal communication
PHD Department of Public Health
PMD Prime Minister's Department
PMO Provincial Medical Officer
PN Public Notice
PNG Papua New Guinea
PO-RD Planning Officer—Rural Development
PR Patrol Report
RC Resident Commissioner
RDO Rural Development Officer
RIP Rural Improvement Programme
RTC Rural Training Centre
SD Sub-District
SDA Seventh-Day Adventist
SDO Sub-district Office
SI Solomon Islands
SIC Santa Isabel Council
SIG Solomon Islands Government
SO Statistical Office
SPEC South Pacific Bureau for Economic Cooperation
SSEC South Seas Evangelical Church (Mission)
SVD Spirit of the Divine Word (Mission)
TPNG Territory of Papua New Guinea
U.K. United Kingdom
UN United Nations
UNDP United Nations Development Programme
UNESCO United Nations Educational, Scientific and Cultural Organization
U.S. United States of America
WPNC Western Pacific High Commission
WSD West Sepik District
WSP West Sepik Province

Where necessary for clarity of reference, two abbreviations are combined, thus: Aust.:CRDD; PNG:DDA; SI:MHA.
CONVENTIONS

Over the course of their contact history Papua New Guinea and Solomon Islands have used a number of different currencies. These include the German mark, the British pound sterling, the Australian pound and later the Australian dollar, and the national currency, respectively the kina and the Solomon Islands dollar. For ease of comparison all currency references in this thesis have been converted to $A at the appropriate exchange rate for the time. Rates of exchange are as supplied by the Reserve Bank of Australia.

Nomenclature throughout is the standard official nomenclature, where available, and the common usage nomenclature where it has not been standardized. Unless otherwise indicated in the text, the modern spelling is used for all place-names. New Guinea refers to the administrative area officially designated as such before the amalgamation of the Papua and New Guinea administrations. Where reference is made to the western half of the island, the preface 'Netherlands' or 'Indonesian' New Guinea is used for clarity, rather than the various names by which it was officially known as different times. Similarly, the eastern half of the island is called Papua New Guinea (PNG) as it is now known, rather than its chronologically correct variations. Solomon Islands refers to the political unit previously known as the British Solomon Islands Protectorate, and does not include the Papua New Guinean island of Bougainville, now known as the North Solomons Province.

As the spelling of Papua New Guinean and Solomon Islands Pidgin words differs, the anglicized spelling is used for words common to both, such as one-talk (the Papua New Guinean wantok), and italicized.

In most cases the modern form of reference is used. Unless otherwise specified, for example, the term 'province' is used for the old district divisions in Papua New Guinea. The exceptions to this are where a distinction is necessary.
between the present and the earlier meaning of the term, as with existing provincial boundaries and the old district boundaries in the Sepik. The term 'district' currently is applied to sub-provincial divisions, but to avoid confusion is used here in its older and more well-known sense.
INTRODUCTION

As originally proposed, this study was an attempt to compare the effects of development planning on actual rural development in two Melanesian countries. As such, it was relatively straightforward. Aims and objectives which could be considered relevant to any rural area would be selected from the appropriate development plans, and the extent to which they had been implemented determined by field research. From a fairly early stage of my fieldwork it became obvious that this approach would be unproductive. I had assumed, as have many others, a relationship between rural development plans and rural development which did not exist in the study areas.

As rural development planning in Melanesia has been almost exclusively a governmental activity, the study was divided into two streams of research, the micro-view of the village and the macro-view of planners and other government representatives. I had thought to find answers to problems with implementation of plans at the interface, or in a lack of concern or comprehension at national level about the village situation, but found very few. As my fieldwork progressed from one area to another, it showed that very little could be excluded from consideration as a variable in development, but that the mix of variables and the relative weights of each in the mix could exhibit high areal or even village specificity. These factors meant that the study became far more complex and wide-ranging than originally intended, and brought major problems in the selection and presentation of data.

Conceptualization

As the first chapter demonstrates, planning and development, either separately or in conjunction, are concepts which frequently have reflected changes in cultural values and in the climate of academic investigation. The immensity of the literature on the subject is such that no general
coverage can do full justice to the components. The problem of selection is multiplied exponentially when a variety of Third World micro-level considerations are introduced, as these usually are a separate specialization. I found during fieldwork that my own preconceived values, those which had survived, or had been inculcated by, the development literature, needed considerable revision in the light of the complex picture that was emerging. The popular radical explanations of underdevelopment in particular often did not accord with the evidence or, where they did fit, the data were equally or better suited to alternative conclusions. This created a terminological problem. The marginalization of the study areas, for example, was not 'a process in which the periphery appears decreasingly "necessary" to the centre for the provision of raw materials and export markets for goods and capital' (Emmanuel 1974:71-2). It was a process in which rural communities had decreasing opportunities to satisfy their real or perceived needs, and increasing difficulty in the maintenance of levels of living they regarded as adequate.

Sample selection

On the grounds that a balanced understanding of the planning process requires an awareness of its penetrative capacity, the study villages were selected from areas outside the centres of greatest 'unplanned' development, and in locations where the respective governments considered that development assistance was desirable. This was also designed to minimize the difficulty of isolating, from developmental results, those causal factors related to the plan or the planning process (see also Van Arkadie 1972:90). The difficulty, in the event, proved to be one of finding any development that could be attributed, however distantly, to plans.

Due to the difference in size between Papua New Guinea and Solomon Islands, one Papua New Guinea province was used for the two Papua New Guinea samples, and one area selected from each of two much smaller Solomon Islands
council areas (later provinces). Selection of the most suitable locations within each province was made on the basis of suggestions by the provincial authorities and, in the West Sepik, by mission personnel, who had the closest experience of the province's disadvantaged areas. As the average village\(^1\) in the provinces selected was small, to obtain an adequate sample size I needed a village within walking distance of several other villages. This reduced the options considerably, and did not permit the application of secondary criteria such as ease of access, aidpost or tradestore facilities, or villagers with sufficient English to act as interpreters. The places eventually chosen for the West Sepik were a cluster of six villages in the Killimeri census division near the Papua New Guinea-Indonesian border, and the four Ningil hamlets in the Torricelli Mountains. Vulavu and five nearby villages in the Bugotu area of Santa Isabel, with Maniwiriwiri and five other East Bauro villages on San Cristobal, made up the Solomon Islands sample.

**Methodology**

Data were collected from a wide variety of sources, in a wide variety of ways. One handicap was the relative lack of easily obtainable material on the specific cultural groups, a particular problem in the West Sepik. Much essential data on cultural matters had to be obtained from old and often incomplete reports by government field staff, and from individual and group discussions with villagers. Whereas most Solomon Islanders valued their oral history, many West Sepik villagers, traditionally hunter-gatherers, had limited knowledge of or interest in their history. On some matters, notably the uncommon form of sorcery and the extent of sympathies with the West Irianese Free Papua Movement (OPM) in Kilimeri, government and mission condemnation had

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1. The term 'village' is used in its Melanesian sense of *pla* (place), or a discrete unit of settlement. Most villages in the study areas, though small, were such separate units. The main exception to this was Ningil, a single village comprised of several hamlets which interacted for communal purposes.
created a fear that discussion would be interpreted as complicity. Data collection on such matters was a laborious and fragmented task. On others, such as the determination of respondents' ages, a list of significant events, by year, was necessary for each area (cf. Chapman et al. 1974:D.1-8). This was more difficult in some areas than in others, with consequent problems for accuracy. Awol villagers in Kilimeri, for example, commonly used only two events to establish dates: World War II and 'the year we left new Awol'.

Despite the obvious difficulties, the 'backwardness' of most study villages had several advantages. Of these, possibly the most valuable were their ready acceptance of questionnaire-based interviews, their active efforts to provide a balanced and representative sample, and the relative simplicity of calculations of income and expenditure. To avoid the likelihood of error or deliberate inaccuracy from direct questions on monetary matters, the village questionnaire (Appendix B) was structured so that monetary flows could be estimated from official records and from the type, amount and frequency of village monetary dealings. As sources of income were few and cash exchange a memorable event for most villagers, the information in most cases was freely provided and easily checked.

As the constraints of the fieldwork situation prevented use of statistical random sampling techniques, interviews were carried out on a household basis. At least one adult

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1. I was spared considerable difficulty in checking these in Bugotu, where almost all the sample were able to produce a mission birth certificate; and in Ningil, where Fr Tim Elliott with the permission of the Ningil church elders gave me access to the church records.
2. Some of the major dates are given in Appendix A, which shows the chronological sequence of events for the four areas, but which omits most of the minor village-specific occurrences that were used as a working reference for ages and dates.
member\(^1\) of each occupied house was interviewed. To check against the omnipresent possibility of reporting error, duplicate information was collected wherever practicable from other members of the family or household. The questionnaires were collated by household and compared for inconsistencies in spare moments during the day, which — due to the unremitting efforts of most villagers to ensure that I absorbed as much data about their situation as possible — were far fewer than anticipated. For computer analysis the information which related to general household matters was then separated from that which was concerned with individual differences. Interviews were conducted in Pidgin, with the assistance of interpreters when clarification of the local language, or my questions, was required.

Two of the main fieldwork difficulties were the spatial distribution of relevant government records; and the lack of areal expertise — a function of the rapid staff turnover — among government personnel. This required work in four major centres and six minor ones, in addition to about twenty villages. Problems of communication and access frequently were compounded by adverse weather conditions, as each area was subject to climatic extremes and a large part of the fieldwork was carried out in the wet season. In addition to the formal government reports and plans, a considerable amount of material was obtained from the records of government agencies and mission stations.\(^2\) Part-structured, part-unstructured interviews were carried out with politicians and representatives of government departments at national, provincial and sub-provincial levels; with church and private

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1. As the age at which males and females attained full adult status varied between the study areas, adults were defined for the purposes of the interview as aged 15 years or over (E. Young 1977:51). In fact, the youngest respondent was aged 17 years in East Bauru and 16 years in the other three areas.

2. These were obtained from a variety of sources. For consistency, ease of referral and, in a few cases, for the protection of informants, they are referenced in the text to their original source.
enterprise personnel; and, where possible, with outmigrants from the study areas. To balance the village data on outside contacts, a second questionnaire (Appendix C) had been prepared for use in interviews with absentees from the relevant villages. This was found to be logistically impossible, due to their dispersion and the difficulty of tracing a suitable sample. To obtain some indication of urban-elite linkages with their villages, the questionnaire was administered instead to West Sepik students at the University of Papua New Guinea and to Solomon Islands students at the Honiara Teachers' College. The results are analysed in Appendix D.

Data selection and presentation

In the process of editing the enormous range of information with which, willy-nilly, I was saturated during this study, much has had to be omitted. In some instances data were discarded because, despite relevance and interest, similar situations have been documented by other writers in detail that this study would not permit. They include cultural and historical detail, individual employment and migration histories, and quantified data on transport and communications systems. Census data, national and regional statistics, and macro-level indicators were employed in the analysis, but have not been presented in detail in the text. A further omission was the data on decentralization and provincial government. This was an important element of the decolonization process in both countries, but had not impinged significantly on the rural communities of the study at the time of writing.

The study is presented in three parts. The first section examines the 'development of development' and the evolution of development planning theory, the basic ecological parameters of the study, and the influence of cultural and areal idiosyncracies. Part Two focusses on the role of government, first in its longitudinal impact on rural communities of the West Sepik and Solomon Islands, and second in its macro-level and planning capacity. In Part
Three the village approach to development is investigated in relation to village welfare and the significance of cash-earning opportunities. The conclusions are briefly summarized in Chapter Nine.
Part I

CHAPTER 1

PLANNER'S CHOICE: DEVELOPMENT FASHIONS
AND THE ART OF THE POSSIBLE

The interaction between the scientist's pronouncements and social life almost invariably creates situations in which we have not only to consider the truth of such pronouncements, but also their actual influence on future developments (Popper 1961:16).

The definitional morass

One of the distinctive features of the twentieth century has been the development of the ability to plan ahead or to exercise foresight in anticipation of future needs and resource allocation, an essential element of effective government, into an esoteric specialization. Centralized state planning of production, distribution and internal consumption patterns theoretically is one of the main characteristics which distinguish socialist systems from capitalist 'market economies', but in practice it has become identified with development administration rather than with political ideologies. This has been due in part to the mechanistic and technocratic approach which dominated 'economic growth' development theory of the 1950s and 1960s; in part to the use of quasi-military planning techniques derived from World War II experience; and, largely, to the fact that institutionalized planning represented the refinement of a familiar organizational duty. Though the preparation of development plans has been a major concern of developing countries and international agencies alike, during the course of a generation the main issues in development and the main issues in development planning have diverged. The dramatic swings in theoretical analysis have not been matched by significant shifts in real world development patterns. This has focussed attention on the brokerage of planning organizations. As Helleiner (1972: 338) and others pointed out, the question is
Has anything actually now changed in the practices of development planning and policy-making, either in the poor countries for whom prescriptions are being offered, or in the international agencies which serve as marginal participants in their efforts? So far the answer has to be a pretty clear "No".

The reason for such unusual constancy in a period of rapid global change can be found largely in the 'predominantly universalistic, affectively neutral, collectivity-oriented and functionally specific, as well as achievement-oriented' (Meyerson 1973:244) role assigned to development planners. The over-riding priority was achievement. In developing democracies where major changes of political direction could occur every few years, results usually were required in the short-term. Whereas colonial and totalitarian governments could make long-term plans, in post-colonial democracies the usefulness of planning techniques designed for the long-term was severely curtailed. As development theory veered away from the 'economic growth' model, one of the main tasks and possibly one of the major accomplishments of planning organizations in developing countries became the maintenance of a politically acceptable equilibrium between development theory and developmental pragmatism. While the 'ideology of planning' was 'essentially rationalist in approach and interventionist in conclusions' (Myrdal, cited in Fisk 1975:11), it typically involved 'a rhetorical commitment to socialist objectives, a technological commitment to "neutral" policy tools, and a practical achievement of capitalist results' (Van Arkadie 1972:111).

Planning by definition is both technological and teleological, in that it 'deals with means, and seeks to order and control the means in the attainment of certain ends' (Fisk 1975:1). This alone sets it apart from the historicist.

1. Use din Popper's (1964:3) sense of 'an approach to the social sciences which assumes that historical prediction is their principal aim, and which assumes that this aim is attainable by discovering the "rhythms" or the "patterns", the "laws" or the "trends" that underlie the evolution of history'.

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stream in which it originally acquired prominence, and which placed it in the 'logically incoherent' position of trying to realize a blue-print of a scientifically unpredictable future (Magee 1975:100-4). The growth of institutionalized planning and 'grand plans' (Hasluck 1976:285) tended to increase this conceptual incoherence. While development planning ideally should widen the range of options for a community, in fact the introduction of planning as a development technique frequently pre-determined the range of development options and limited social choice. Plans often were expected to maximize economic efficiency, and to minimize the adverse effects of too great a preoccupation with economic efficiency. In situations of rapid change the continued relevance of a plan often required flexibility (Stolper 1964), but flexibility vitiated the purpose of planning as a commitment to action (Sundrum 1976:9). Plans which attempted to overturn the values and nature of the system that produced them, if successful, would themselves be overturned (Popper 1966). The whole issue of the relationship between 'primary' aims and 'secondary' objectives or targets, especially in countries which had no national ideology, involved subjective judgements and possible problems of reconciling the irreconcilable (Hughes 1975; Fisk 1975).

Though these problems and paradoxes impinge on the whole sphere of planning, they are particularly significant in the field of rural development. While development was regarded as a linear progression towards integration in the world economy, on equal par with the developed countries, the task for planners was relatively simple. Planning was largely a matter of the choice of policy instruments for a particular purpose, from a range of such instruments commonly used in macro government (see Chenery 1970:702) and theoretically applicable in any cultural situation. The extension of the planner's role from the macro-economy to socio-cultural matters such as the rural 'quality of life' brought a massive increase in the number of variables to be considered. With these, inevitably, the possibility of error, inaccuracy and sub-optimal decision-making increased. In
addition, it moved the focus of development planning away from matters over which government planners had full control, into an amorphous area where, due to the influence of individual decisions, they had little or no control.

One obstacle to effective integration of development theory with national planning and administrative capacity has been definitional differences. Definitions of development fall into four basic categories. On the one hand are the definitions which treat development as a final state, or goal, and those which regard it as a process leading to that state. Both of these are essentially optimistic, action-oriented and outward-looking, and for political reasons alone tend to be favoured in development administration. On the other hand are definitions based on underdevelopment as a state or process. They are usually pessimistic, inward-looking and, if not passive, are conducive mainly to preventative or remedial forms of action. The latter approach is central to much of the so-called 'radical' thinking on development. Though its merits are debatable, 'what matters ... is that many developing countries see their place in the international system in this way and their perception is a political fact to be reckoned with' (Streeter 1977:15).

Either approach is complicated by the need to distinguish whether the terms 'development' and 'underdevelopment' are used in an absolute or a relative sense. Since it is possible to have a situation in which development in the absolute sense becomes underdevelopment in the relative sense, and vice versa, this poses a need for clarification of absolute and relative parameters and, in turn, for specification of the temporal, spatial and socio-economic parameters. Conceptualization of development thus becomes inseparable from context.

At the same time, the increasing complexity of development-related issues has heightened the need for consensus on the basic components of the developmental state, or process. This often has raised definitions to a level of generality which renders them relatively meaningless for planning purposes. As Colebatch (1977a:2) points out
The term "development" implies that social change is not a random process, but that it is cumulative; particular small changes leading in many cases to other changes, and these patterns of linked change resulting, over time, in substantial transformations of the society in question. To describe a pattern of change as "development" implies a notional starting-point in time, and some model of a transformed society—i.e. a goal. When a given change moves a society away from our notional starting-point and towards the goal, we may speak of that change as "development". But not everyone has either the same starting-point or the same goal in mind when they speak of development, and for this reason these must be specified for any use of the term to be unambiguous and useful.

An important implication of these criteria is the coexistence of multiple forms and interpretations of development, which in a 'real world' situation means that apparently contradictory causes and consequences can be seen as developmental.

The essential pluralism of development is particularly evident in Third World rural development. Whereas urban or industrial development to a large extent can be built unilaterally on 'modern' enclaves provided by colonial investment, rural development usually involves the transformation of a culture and way of life for whole populations, predominantly subsistence farmers and peasants. The term 'rural development' is itself misleading, since it implies a homogeneity based on pastoral or agricultural activities, that can be used as the starting-point for the transformation; whereas the enormous diversity in rural cultures, attitudes and aspirations suggests that interpretations by rural people of what represents rural development are likely to be many and various. To some, like many villagers in this study, 'rural development' means an increase in cash incomes at minimal social cost and the opportunity to choose their own path. To others it means government intervention, specifically

1. For a useful analysis of the meaning of this term, and some characteristics of Third World countries, see Harries et al. (1979:195-215).
in 'quality of life' issues such as improved medical care, educational facilities, and adequate housing (see de Souza and Porter 1974:3). Some see it as a process in which levels of consumption are progressively raised (Belshaw 1955), and emphasize expansion of opportunity (Oyemelukwe 1974), reduction of risk (Joy 1971:185), distribution of scarce resources (Brookfield 1975a:206) and wider participation in decision-making. All, in one way or another, imply raising living standards (Hodder 1973:1), either directly by government involvement in welfare services, or indirectly by increased rural productivity, improved cash incomes and consumer facilities.

This 'goal-oriented' approach to rural development leaves much of the rural dynamic outside the scope of development planning, with consequent distortion of the process of development. Many of the micro-changes which occur at village level, including some that are commonly regarded as anti-developmental, demand that

instead of regarding development as a matter of "progress" towards a "better life" motivated by an incurable dissatisfaction with our present lot, we see that it is a process of solving a succession of problems which from time to time threaten the productive system and the efficiency of our subsistence (Wilkinson 1973:105).

Integral to the 'problem-solving' approach is the realization that Colebatch's 'notional starting point' is not a tabula rasa. Even where a gradualist approach is not politically acceptable (Fisk 1975:2-3), it may be the only viable option. One of the main advantages of the problem-solving framework is that it is as applicable to theoretical analysis as it is to empirical work, and in fact is the basis of Popperian analysis, the incrementalist approach (Lindblom 1959; Braybrooke and Lindblom 1970), Stavenhagen's definition of a 'fruitful social theory' (1971:336), and Wilkinson's environmental model. In the present study the 'logic of problem-solving' provides the main link between a number of disparate issues related to rural development in Melanesia. Among them are the 'pendulum swings' which have characterized
development theory. As these often appear incomprehensible when separated from their chronological, problem-solving context, this chapter reviews the literature on development and development planning as itself part of a dynamic process of global change.

The period of 'economic growth'

Though Third World development and development planning are mainly identified with the latter part of the twentieth century, both predate the decline of colonialism which triggered their rise to prominence. Fisk (1975:1-2) gives several examples from ancient history, and Waterston (1965:28) mentions isolated attempts at planned development in its modern sense in the Belgian Congo and the African Gold Coast during the early 1900s. Centralized socialist planning was formalized in the Soviet Union with a Five-Year Plan in 1929. Prior to World War II it aroused considerable interest in developing countries, notably India and the Philippines, though it did not become a widespread development strategy until the post-war period. At that time Keynes' work on the 1930s Depression and trade cycles encouraged a belief among economists that government intervention was essential to economic efficiency, though a strong group in what became the Chicago tradition continued to extol non-interventionism and the free market system. For approximately 20 years after the war the importance Keynes assigned to quantitative aggregates and government intervention (Keynes 1936), and the new field of macro-economic theory which he opened, were the cornerstone of national planning theory. Keynes believed in a capitalist rather than a socialist society (Stewart 1969:127), but his advocacy of government intervention and his main point, that the sum of micro-economic theories which explained the actions of individuals or firms was not adequate for management of the macro-economy, appealed to capitalist and socialist alike. In later years the popularity of Keynes' methods became one of the main stumbling blocks to successful implementation of development plans, as it led to neglect of the converse of Keynesian theory:
that simple disaggregation of a macro-plan into operational units did not constitute micro-economic planning.

Keynesian theory and the aftermath of World War II gave a strong macro-economic bias to the theory and practice of Third World development. Polanyi in 1944 made a strong case against allowing economic market forces to control society, but Hayek, in the same year, challenged the concept of centralized control (Hayek 1962). Popper in 1945 widened the field enormously in 'the most scrupulous and formidable criticism of the philosophical and historical doctrines of Marxism of any living writer' (Berlin, cited in Magee 1959:9). These important works were by-passed in the formulation of development theory. As such theory was essentially macro-economic, it also ignored the revolutionary work of nineteenth century planners such as Howard and Geddes, who gave a strong developmental ethic to the 'Town and Country' model that dominated pre-war British planning (Eversley 1973:53-83).

Another serious omission from early development and planning theory was the enormous body of Third World empirical data provided in case studies by non-economic disciplines. Where this was applied to development, it was mainly as background information for colonial officials and, in lamentably few cases, as pertinent situational data for planners. The problem was largely a matter of scale. Technical descriptions of Third World countries and their resources fitted the popular economic credo that 'the real bottlenecks to expansion are...capital and natural resources' (Lewis 1954:406), and were employable within a macro-planning framework. Anthropological studies, many of which posed highly relevant questions for planners (Mair 1934; Hargbin

1. Popper's celebrated 'refutation' of Marxism (1966) is highly coloured by his personal circumstances. Its indiscriminate acceptance, as Loys (1975:xii) correctly points out, helped to stifle serious study of the determinants of social knowledge. This is a criticism which can be equally levelled at Marx. In retrospect, both giants have suffered more from imitation than from refutation.
1939; Belshaw 1950, 1954), usually were carried out at the micro-scale and were unsuitable or insufficient for the type of aggregation used in macro-planning. Studies such as Furnivall's (1956) major work on colonial administration in British Burma and Netherlands Indonesia were relevant to planning in scale and scope, but outside the then current economic paradigm. The requirement for resource data in economic planning was filled largely by geographic and other physical science studies. This established a role for geographers, in development, which required little adaptation of their traditional skills; and aligned geography with planning on the empiricist side of the development debate for the best part of a generation.

The two writers whose work was most influential in development theory in the early post-war period were Rosenstein-Rodan and Rostow. Rosenstein-Rodan in 1943 initiated the notion of a 'Big Push' to overcome developmental constraints, and was the main forerunner of the 'balanced development' theory of the 1950s and 1960s. Rostow posited a linear model of development, analogous to economic growth, which he based on a deterministic five-stage model of history (Rostow 1958, 1960). Central to Rostow's thesis was his third stage, that of 'take-off', in which social or institutional change to traditional systems allowed a marked increase in productive investment and manufacturing, and a high rate of growth. For some time economic planners concentrated on the identification and removal of the blockages to 'take-off'.

Though Rostow's model was criticized on 'logical, moral, political, historical, and economic grounds' (Streeter 1977:14), the significance of his argument, like that of Marx, lay less in its actual premises than in the framework it provided for subsequent analysis. Rostow's simplistic

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1. See McGee (1978:6-8) for some of these geographical contributions, and also for the few notable exceptions to the usual geographic pattern.
historicism exposed his theory to challenge from such writers as Kuznets, whose seminal work on the relationship between development and distribution (1955, 1962) led into another major debate, that on equality and equity in development. Nonetheless, for planners who were committed to a 'Big Push', either in the linear tradition of Rostow or the structural school of Schumpeter (1969) or Rosenstein-Rodan, the notion of blockages to 'take-off' remained paramount. This resulted in a tendency to emphasize single-factor models, one of the most persistent of which was the theory that shortage of capital was the major development constraint.

In a simplified interpretation of a celebrated article by Lewis, who determined (1954:416) that 'the central fact of economic development is rapid capital accumulation (including knowledge and skills with capital)', the main focus for economic development planning became the mobilization and manipulation of capital, rather than land or labour. One of the most influential of the theories of capital formation was the Harrod-Domar model, which combined 'Keynes's emphasis on the income-creating aspect of capital ...with Marx's emphasis on its output-creating aspect' (Streeben 1966:74). Though not specifically tied to Rostow's theory, models of this kind offered no significant challenge to it, and gave it the quantitative balance that planners for practical reasons tended to favour.

A more serious problem for planners was the division of economic opinion between theories of balanced and unbalanced growth. In effect this was a debate on method (Nurkse 1953:16), with which planners were primarily concerned. Though it did not confront the belief that development was a transferable process that could be achieved in Third World countries by macro-level economic tinkering in the Western

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1. The Harrod-Domar equations, which relate the rate of growth of income to the average propensity to save and the capital-output ratio, were originally applied to industrial societies, but have been adapted in various ways for use in developing countries. For this and several other then popular 'economic growth' models see Sen (1970).
tradition, independent of the micro-level situation, it eventually converged with the debate on distribution and equity and thus with considerations of sub-national issues.

The doctrine of balanced growth as promulgated by Nurkse (1953) depended on the external economies which he argued would accrue to simultaneous development of multiple industries, and would stimulate investment that otherwise was limited by the small size of markets in underdeveloped countries and low income-elasticity of demand for their agricultural exports. Lewis, who became one of the most influential writers on economic development planning, related this to situations of surplus labour, with balanced growth between agriculture, manufacturing and export production (Lewis 1955).

The main proponent of the unbalanced growth theory was Hirschman, who made an even more significant contribution to subsequent development theory in his emphasis on decision-making capacity, the need for strong 'backward and forward' linkages in industry, the possibility of development with population growth, and the position of lagging regions (Hirschman 1958). Hirschman's main premise, like that of Nurkse and Lewis, was the need for economic growth, which came under increasing criticism in the 1960s and 1970s. Though all three were outstanding representatives of this stream of thought, their emphasis on aggregates and external economies, and their relative neglect of 'supply limitations' (Streeken 1963) and non-quantifiable variables, tended towards the Utopianism which subsequently hampered much 'broad-spectrum' planning.

1. For the most cogent analysis of this concept, and its manifestation in centralized planning, see Popper (1961, 1966). As Popper correctly points out, much of the Marxist literature also exhibits a strong Utopian streak. It is this which poses one of the major conceptual dilemmas for development planners.
The 'model-building' approach which dominated development planning in the 1950s was paralleled on a broader scale by a series of 'dualism models'. One of the earliest of these was Boeke's concept of 'social dualism', which he defined as 'the clashing of an imported social system with an indigenous social system of another style' (1953:3-5). Boeke's model was criticized by leading economists such as Higgins (1956) for its essentially static approach and Indonesian bias, and soon gave way to considerations of economic and technological dualism. Nonetheless, it set a precedent for subsequent analysis on several fronts. One of the most commonly used was the 'technological dualism' model (Higgins 1968), which stressed the lack of linkages between the supposedly capital-intensive modern sector and labour-intensive traditional sector. Other dualism models juxtaposed agriculture and industry, rural and urban areas, subsistence and monetary production, and village and modern goals and aspirations.

This binary framework, an important element in the 'balanced versus unbalanced growth' debate, became central to a very large proportion of subsequent development theory. Myrdal's 'spread and backwash' effects (1957a), Frank's metropoles and satellites (1969a), Wallerstein's two-class model (1975), core-periphery theories, the issues of unequal exchange (Emmanuel 1972), and the debates on efficiency versus equity and 'top-down' versus 'bottom-up' planning, were all couched in a binary framework. Brookfield (1975a: 53–54), in his detailed analysis of the various development theories, was one of the few to realize the significance of this framework on the evolution of development theory (see also Higgott 1978:29). He concluded that 'the themes of dichotomy and transition have bodevilled clarity of thought and have permitted a great deal that is important to remain obscure' (1975a:53). One of the main consequences was a tendency to extrapolate value-judgement antonyms from the counterpoised concepts, which led in turn to their analysis in terms of conflict and competition, to prescriptive contrariety, and to pendulum swings in development administration.
The 'winds of change'

The trend towards reversal of earlier priorities received added impetus from the international politics of decolonization. More and more newly independent governments, whose interests were 'to do always the opposite to what the colonial powers had done' (Streeten 1972a:60), articulated their problems in international forums. Development theory swung away from simple considerations of growth into more complex considerations of Third World values. If colonialism meant primary production and exports, independence came to stand for secondary production and import substitution (Streeten 1972a:60). Where colonialism meant an administrative oligarchy, decolonization required mass participation and a multiplicity of indigenous political organizations to control the bureaucracy. Opposition to colonial promotion of large-scale, capital-intensive or foreign-investment-based development was expressed as support for indigenous modes of production, low-level technology, labour-intensive projects and Schumacher's (1974) 'small is beautiful' concept. Where centralized colonial administration was the issue, decentralization of political or administrative authority, or both, was assumed to be the solution. Where institutionalized planning had not been a feature of colonial administration, it often became an early post-colonial priority. Where planning organizations had existed previously, decolonization usually meant a radical revision of their role and modus operandi. While many such pendulum swings can be challenged on logical and practical grounds, they had a place in the pragmatic arena of decolonization politics which had little to do with their intrinsic merit. For many Third World countries they were an essential element in the establishment of legislative legitimacy and of a strong bargaining position vis-à-vis the developed world.

One of the critical factors in the swing from economic growth theory to anti-colonial alternatives was the demonstration efforts of several political activists. In India the lifestyle, influence and philosophy of Mohandas
Gandhi focussed international attention on the approaching end of empire and on indigenous modes of production.\(^1\) Equally influential was the ideology of Mao Tse-Tung in China. While Mao's writings (e.g. 1971, 1972) on revolution and guerrilla warfare seriously disturbed Western colonial complacency, in the longer term 'if he can be said to have creatively developed Marxism-Leninism it must surely be in his perception of the rural peculiarities of the Chinese nation and his adaptation of foreign theory to Chinese practice' (Simmonds 1970:129). Both Gandhi and Mao adopted a low-level, 'basic needs' approach to rural development and, significantly, demonstrated their theories in practice on a national scale. Both stressed self-reliance, decentralization of administrative machinery, mass participation, and elimination of the gulf between the leaders and the people (Chaudhri 1979:2). Coterminous with this thrust was the revolutionary idealism and concurrent 'spirit of internationalism' (Castro 1967:26) which was epitomized in the 1960s by the work of such men as Fanon (1967) in Algeria, Guevara (1969) in Cuba and Freire (1972) in Brazil.

International agencies such as the United Nations and the International Bank for Reconstruction and Development (IBRD) played an ambivalent role in this paradigm shift. On the one hand, the United Nations included in its 1945 Charter instructions to governments of 'non-self-governing territories' to ensure, with due respect for the culture of the peoples concerned, their political, economic, social and educational advancement, their just treatment, and their protection against abuses; to develop self-government, to take due account of the political aspirations of the peoples, and to assist them in the progressive development of their free political institutions, according to the particular

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1. For a readable and comprehensive interpretation of decolonization in Gandhi's India see Collins and Lapierre (1973). Gandhi's own views are given in his autobiography (Gandhi 1970).
circumstances of each territory and its peoples and their varying stages of development;
...to promote constructive measures of development, to encourage research, and to cooperate with one another...
(UN 1945:38);

and the IBRD in 1956 decisively shifted its lending policy from developed to underdeveloped countries (Brookfield 1975a: 40). On the other hand, the United Nations took the initiative to popularize macro-planning based on the capital-put ratio, and both agencies usually made the provision of aid contingent on a plan (Griffin and Enos 1970:20; Mehmet 1978:18,21). Their influence, and the United Nations resolution in 1961 which launched the 'First Development Decade', led to the submersion of several other strands of contemporary development thought in a strong drive for economic growth. While this ensured continuity in development planning techniques, it also inhibited their adaptation to the political realities that became increasingly prominent in development theory in the 1960s.

During the First Development Decade the need for development planning in Third World countries was an almost universal, though untested, assumption. The majority of development economists regarded it as essential for efficient economic management, and debated only the amount and type (as Lange 1961). A few influential writers, such as H. G. Johnson (1962), argued that development planning should concentrate on improvement and strengthening of market forces rather than on their replacement by state controls, but government intervention and control became progressively more central to prescriptions for development. This approach received strong reinforcement from the work of Myrdal (1957b, 1968) and advocates of socialist planning (e.g. Zielinksii 1968). 'Economic growth' planning became an increasingly complex task as thinking on development diverged at the theoretical level. Considerations of distribution, and the apparent distortions between developed and developing countries (Singer 1950; Kaldor 1960; Prebisch 1964), led
into a major reappraisal of previous growth theory. Due to their links to both conservative and radical approaches to development, these considerations later became a central issue for planners. The work of Perroux (1955) on growth poles, Myint (1954) on 'economic backwardness', Myrdal (1957a, 1957b) on 'spread' and 'backwash', Hirschman (1958) on 'trickle down' and 'polarization', and Boeke's successors on dualism, all of which adumbrated the spatial element in later planning, also contributed to a rapid enlargement of planning horizons. By the mid-1960s the scope of development plans had expanded from simple economic objectives to a multiplicity of socio-economic goals.

Two potentially important contributions to development theory which remained outside the mainstream for some time during the active (as opposed to reactive) stage of the First Development Decade came in the work of Baran on surplus and Simon on decision-making. Baran's interpretation of surplus as 'actual surplus', or the existing difference between output and consumption, and 'potential surplus', or the hypothetical difference between potential output and essential consumption (1957:22-3), provided the basis for much of the radical analysis of the late 1960s and early 1970s. These were macro concepts (Leys 1975:9), and encouraged a tendency in radical theory to concentrate on macro-level or global analysis. Simon's work was more relevant to development administration and the neglected field of Third World micro-economics. His seminal concepts of 'bounded rationality' and 'satisficing' (Simon 1957) provided a challenge for orthodox development theory which it met by the simple expedient of ignoring them, as extraneous to its established parameters. Simon argued that modifications to the concept of rational 'economic man', implicit in developments in utility theory, business behaviour, goal

1. This assumes the goal of the individual or firm to be the attainment of a satisfactory return, or profit, rather than the maximization of profit or attainment of the optimum possible return as predicted by classical micro-economics.
conflict, decision-making under uncertainty and the formation of expectations, in effect vitiated 'all the conclusions about resource allocation that are derivable from the maximizing model when perfect competition is assumed' (Simon 1959:46). His 'satisficing' model was adapted to geography by Pred (1969). Though never a main element of developmental empiricism, the model was contiguous with some of its conclusions, notably Fisk's early work on modern sector involvement (1964) and Brookfield's findings that Melanesian villagers made choices on the basis of risk minimization rather than profit maximization (1969b, 1972). Neither writer followed up the relationship in depth. Realization of the full potential of Simon's model for development required a knowledge of Third World micro-economic systems which was still at an embryonic stage 20 years later.

The emergence of the 'rural sector'

While international requirements for loan and aid finance provided the major stimulus for the preparation of development plans in Third World countries, rural development remained a confused area. This was due largely to a lack of governmental capacity and a general reluctance to become too deeply involved in matters which were both complex and outside the usual responsibilities of macro-government. Through anthropological studies contributed to an understanding of the diversity of rural peasant economies, they also helped to erect the myth of peasant resistance to change (Miller 1977:14). The majority of systems which had been studied in detail were analysed in terms which 'proceeded as though the "traditional" state were given and static' (Brookfield 1975a:78), and the general assumption was that they would be absorbed into a modern economic system once 'take-off' was achieved. Georgescu-Roegen, who made a strong appeal for greater appreciation of rural realities in economic development theory, claimed (1960:69) that non-capitalist economies simply presented no interest for Classical economists. Marxists, on the other side, proceeded
from preconceived ideas about the laws of a peasant economy. ...the agrarian economy has to this day remained a reality without a theory.

Development planners, well-equipped — possibly even over-equipped — with models and methodological tools for macro-economic tinkering and urban-industrial development, were ill-prepared to cope with the development of a multiplicity of rural systems. In effect the tools available dictated selection of the developmental product, rather than the desired ends dictating the choice of tools.

Economic planning for rural development concentrated on the role of agriculture in raising rural incomes, in capital formation and foreign exchange earnings, in creation of investment opportunities and in import substitution. These usually were assumed to involve tensions between the agricultural and the industrial sector, and a one-way flow of labour from 'stagnant' subsistence agriculture to 'dynamic' modern industry. The main theoretical inputs for the transformation of agriculture were drawn from the best-known macro-level precedents, the transformation of Western societies from peasant agriculture to urban industry and services. A considerable body of literature grew up in the style popularized by Mellor (1970), who amalgamated Western agricultural economics with case studies from developing countries. In line with the dominant paradigm of his time, Mellor believed that 'a dynamic contribution to economic development from the agricultural sector and significant improvement in rural welfare depend upon the modernization of agriculture through technological change' (Mellor 1970: 223). This approach dominated rural development planning long after the euphoria for industrial development had died, though it was expanded and refined in accordance with 'growth centre' theory and experiences with the so-called 'Green Revolution' in grain production.

Notable exceptions to the conventional wisdom on agricultural development were Boserup (1965), Chayanov (1966) and Dumont (1970). Boserup regarded greater intensity of
agricultural land use as a function of population pressure; whereas development planners, with the extensive literature on the Indian and Indonesian situations in mind, tended to favour population control policies based on a Malthusian approach and the mathematical logic of economic growth equations. Boserup argued that population-induced agricultural intensity resulted in lower returns per unit of labour but higher returns per unit of land (Brookfield 1975a: 68), the less flexible of the two resources. This accorded with the 'francophone' hypothesis that rapid population growth was a pre-condition of development (Ware 1974:1), and was extended in Dumont's vigorous attack on 'neo-Malthusian economics'. Dumont, one of the rare agricultural experts to base agricultural development recommendations firmly in existing environmental and socio-economic systems, concluded that Malthusian economics were largely to blame for 'the world's hunger' (1970:516-37). Though the anti-Malthusian approach rarely exceeded Hirschman's (1958) proposition that population pressure could cause countervailing activity to maintain living standards, it fell into disfavour with the growing evidence that a major problem for Third World development was predominantly youthful populations. Promotion of population control by international agencies placed many governments and planning offices in the invidious position of pursuing, in the interests of national development, population policies which often were antipathetic to cultural and developmental assumptions at the micro-level.

Chayanov's work on peasants in the USSR, first published in 1925, also proved to be of dubious utility for economic planning. His analysis of peasant households in the dual roles of producer and consumer (Chayanov 1966) was a valuable conceptual tool (Arrighi and Saul 1973:415), but Chayanov's 'rule' was less transferable. This hypothesis, that the intensity of labour per worker would increase in direct relation to the domestic ratio of consumers to workers or, conversely, that the higher the proportion of productive members the less they worked, was subject to wide variation in different contexts. Sahlin's, in his study of primitive
economical systems, found that the rule held in general but not in detail, and that the greatest deviations were at the extremes of household composition (Sahlins 1974:102-9). Chayanov's analysis, which was essentially static, became progressively less applicable as subsistence societies moved into modern sector activities. His basic assumption, that leisure was preferred to labour unless needs dictated otherwise, proved to be an over-simplistic view of subsistence lifestyles.

Two contributions to the understanding of rural development processes which had a greater impact were those of Geertz (1963a, 1963b) and Fisk (1962a, 1962b, 1964, 1971). Both were distinctive in that their models, unlike the majority of those in development planning, employed the concept of a dynamic subsistence economy rather than that of a change-resistant, static traditional sector, passive recipient of impulses for change from the urban areas (Stavenhagen 1964:2). Both extrapolated from situations of fixed land and technology, but from widely different micro-economic cultures. Geertz' model of 'agricultural involution', as a result, was descriptive and pessimistic. Fisk's model, based on a situation of 'subsistence affluence' (Fisk 1971:368) with a concealed surplus of potential food and labour, inclined to the optimism and developmental activism of the then dominant planning paradigm. Geertz believed that agricultural improvement depended on a labour-shift from agriculture to industry, which accorded with the thrust for industrialization of the time; but he argued that capital-intensive industrial development tended to create a vicious cycle of dependency, sectoral polarization and increasingly marginal, labour-intensive production in rural areas (Geertz 1963a). Fisk developed a model of discontinuous participation in modern sector activities, with areas of growth and stagnation as farmers maximized their total utility relative to the cash incentive (Fisk 1964). It became the basis of a major theoretical statement which related 'subsistence affluence', nutritionally and socially defined food requirements, and the supply of labour (Fisk and Shad 1970). These pointed
to a 'target income syndrome' in rural areas, in which the supply of labour declined once a certain level of cash needs were met. Fisk later incorporated population growth as a major variable, and concluded that 'with some rare exceptions, more population can be absorbed into subsistence agriculture only at the expense of the subsistence standard of living, under the conditions defined' (Fisk 1971:376). The major problem for generalization from either Fisk's or Geertz' models was that conditions frequently were not 'as defined'; so that regardless of their considerable merit the models were not suitable for aggregated macro-level planning, and had limited transferability between micro-societies.

The one fact which has been repeatedly evaded in the literature on development planning is that 'the western superstructure is only one aspect of a distinctive character, common to all tropical dependencies...: the many-coloured pattern of the population' (Furnivall 1956:304). Even where the rural or agricultural sector is treated as a single entity, and its cultural and political diversity ignored, the characteristics of rural production give rural development a markedly different set of parameters from those which govern industrial growth or public sector activity. Whereas the characteristics of the urban/industrial sector and the public or services sector are related, and to a considerable extent overlap, those of the rural sector often are diametrically opposite (Table 1.1). This not only suggests that macro-planning models with considerable transferability between the urban/industrial and the public/services sector have very few points of reference for rural development, but implies a basic structural problem in the use of the governmental or public sector as a rural development agent. A structure

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1. Here a parallel can be drawn with Chayanov's rule, though Fisk's model is more adaptable. The weakness in both is the division they make between work and leisure, which Fisk and Shand fail to define. The evidence of the present study suggests that the two overlap, and frequently merge to an extent that renders such a division relatively meaningless.
This is a criticism which can be equally levelled at Marx. In retrospect, both giants have suffered more from imitation than from refutation.

<table>
<thead>
<tr>
<th>Nature of production unit</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many small dispersed firms</td>
<td>few large firms</td>
<td>variable-sized units, usually large</td>
<td></td>
</tr>
<tr>
<td>Heterogeneous</td>
<td>Homogeneous</td>
<td>Unified heterogeneous leadership</td>
<td></td>
</tr>
<tr>
<td>Uncoordinated leadership</td>
<td>Leadership</td>
<td>Monopoly leadership</td>
<td></td>
</tr>
<tr>
<td>Competition</td>
<td>Often monopolistic</td>
<td>Monopolistic</td>
<td></td>
</tr>
<tr>
<td>Variable accountability</td>
<td>Fixed accountability</td>
<td>Fixed accountability</td>
<td></td>
</tr>
<tr>
<td>Usually unskilled management</td>
<td>Skilled management</td>
<td>Skilled management</td>
<td></td>
</tr>
<tr>
<td>Consensual decision-making</td>
<td>Executive decision-making</td>
<td>Executive decision-making</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market characteristics</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many producers, few, little products, little product differentiation</td>
<td>few producers, many products, considerable product differentiation</td>
<td>few producers, few products, little product, little product differentiation</td>
<td></td>
</tr>
<tr>
<td>Production and marketing very time-sensitive</td>
<td>Relatively little time-sensitivity</td>
<td>Relatively little time-sensitivity</td>
<td></td>
</tr>
<tr>
<td>Relatively inelastic supply and demand</td>
<td>Elastic market demand</td>
<td>Elastic market demand</td>
<td></td>
</tr>
<tr>
<td>Supply relatively inelastic</td>
<td>Supply according to transferability of resources</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment critical, little control</td>
<td>Environment not significant, high control</td>
<td>Environment not significant, high control, generally low risk</td>
<td></td>
</tr>
<tr>
<td>Endemic high risk</td>
<td>Selected risk</td>
<td>Low risk</td>
<td></td>
</tr>
<tr>
<td>Reserves over subsistence marginal</td>
<td>Usually adequate reserves</td>
<td>Adequate reserves because of multiple operations</td>
<td></td>
</tr>
<tr>
<td>Few alternatives</td>
<td>Many alternatives</td>
<td>Fair range of alternatives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diffusion of information</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult because units scattered</td>
<td>Can be concentrated</td>
<td>Rational, simple, usually directive</td>
<td></td>
</tr>
<tr>
<td>Slow response</td>
<td>Usually rapid response</td>
<td>Slow response</td>
<td></td>
</tr>
<tr>
<td>For established channels</td>
<td>Some established channels</td>
<td>Established hierarchical channels</td>
<td></td>
</tr>
<tr>
<td>Rapid distance decay</td>
<td>Distance decay not significant</td>
<td>Little distance decay</td>
<td></td>
</tr>
<tr>
<td>Mainly personal, informal</td>
<td>May be personal or impersonal, formal or informal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Producer/consumer relationship</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internalized and highly interrelated</td>
<td>No relationship or very little</td>
<td>No relationship or very little</td>
<td></td>
</tr>
<tr>
<td>Little role specialization</td>
<td>Isolation of producer role from consumer role</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Rural/Agricultural Sector</th>
<th>Urban/Industrial Sector</th>
<th>Public/Services Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
<td>Considerable scope for control</td>
<td>Simple, almost complete control</td>
<td></td>
</tr>
<tr>
<td>Generally indirect</td>
<td>Direct or indirect</td>
<td>Direct</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Gittinger, in McPherson (1964: 261-4)
which is optimal for purposes of control, as in the early colonial situation, or for the development of an industrial economy, or a combination of the two, is unlikely to resemble significantly a structure designed for optimal rural effect.

The government link

While the divergence of Third World rural interests from those of the urban and industrial sectors has been widely recognized, the implications for development planning of government's relationship with the two have rarely been rigorously pursued. In much of the 'economic growth' debate, government was treated as the independent variable. In the 'dual economy' framework, its role usually was seen as the creation of 'backward and forward linkages' (Hirschman 1958) which would break down the dualism and reduce the disparities between the two elements. Radical thinking tended to attribute problems between the rural and the public sector to the 'colonialized condition of the minds of the people' (Beckford 1972:235), or specifically to the colonialized minds of the governmental elite.

If macro-level government in its political and bureaucratic manifestations is considered as one of a cluster of interdependent development variables, rather than as a neutral mechanism for sectoral equilibration or a colonial spectre, several now-conventional wisdoms become suspect. First, the application of theories of nineteenth century imperialist exploitation to analyses of late twentieth century colonial, neo-colonial, and metropole-periphery relationships loses coherence. Second, the whole issue of dualism can be re-opened to questions of how development aims are best served and whether dualism in Third World circumstances is necessarily, as it is usually assumed to be, a handicap to development. Third, it raises the question of the role of government and, in particular, of development administration, which 'seems currently to occupy a limbo between rather sterile analyses of the "organizational model" on one side and critical analyses of the "overdevelopment" of the post-colonial state
on the other' (Goldsworthy 1977:29).

These questions turn largely on the central issue, brought out by earlier writers such as Furnivall (1956) but largely glossed over in more recent work on development, of the relationship between the governing and the governed. Though Furnivall's analysis was of a colonial government, it is now necessary to ask how many problems in independent developing countries, usually ascribed to the pernicious influence of exploitative colonialism or capitalism, should in fact be ascribed to basic sectoral and structural differences. As Moris has pointed out in an African context, adaptation of introduced administrative practices by Third World peoples has meant that 'in truth, it has not been for many decades "the British" or "the French" or "the Dutch" system of administration; it is now fundamentally the national system' (Moris 1977:77).

Though the 'colonial heritage' and capitalist influences undoubtedly have played a part in the formation of these national systems, they are an inadequate explanation of the continued tensions between the governmental and the rural sectors. As Mair (1962), Epstein (1968), Sahlin (1970, 1974) and others have shown, many traditional political and economic systems contained equivalent stratification prior to European contact. Millar adds the incontrovertible fact that international capitalism has had many 'complex, competitive manifestations' and a 'very varied reception and influence'; and argues that 'although no one would want to discount the international pressures acting on national economies, they are only a part of the whole, usually a minority part, and often a very pluralistic part' (Millar n.d.:17-18). Dependency theory is weak on this point, especially as

1. Though the role of the state has received some attention in the 1970s (e.g. Leys 1976; Frankel 1978), such work usually has been at a level of generalization which leaves much to be clarified.
in a number of closely-examined cases dependency relationships have simply not operated where they might have been expected to, or have not operated in a totally exploitative manner, and...various countries have actually grown generally prosperous by virtue of their dependency on major capitalist powers (Goldsworthy 1977:21; see also Warren 1973).

This suggests that some of the basic causes for rural development problems may need to be sought internally, in the nature of the relationship between macro and micro-levels. One of the few consistent elements in development theory through the changes from the economic growth approach to the welfare, basic needs or radical diagnostic approaches has been the central role they assigned, in various ways, to macro-level activity and to the institution of government. It could therefore be argued that a massive proportion of the development debate, by association, has strengthened the macro-perspective and thus worsened the 'terms of trade' for the disparate rural communities of the Third World.

**Growth in Planning**

While the economic growth thrust had some successes (e.g. Adelman 1969), it came under increasing criticism through the 1960s as the advantages it brought to some social and regional groups highlighted the relative disadvantages of others. Considerations of distribution became a major issue. For some time the economic approach to distribution of the 1950s, epitomized in the work of Lewis (1954, 1966), the Kuznets hypothesis (1955), and the Kaldor model (1960), vied with moral issues. Kuznets and Lewis contended that 'in the early stages of development, when the rate of economic growth is accelerating, the distribution of income becomes more uneven; in the later stages distribution stabilizes, then tends to be less uneven' (Lewis 1966:87). This thesis was essentially long-term and, though central to the continued use of 'economic growth' planning techniques, it was politically unpalatable. Kaldor also posed questions that were disquieting in terms of the political and humanitarian issues of
decolonization, as he argued that economic growth through capital intensification in a developing economy was unlikely to be accompanied by full employment (Kaldor 1960:89–90).

Though Kaldor was not opposed to the concept of growth, other writers on distributional issues expressed serious reservations about it. Notable among them were Mishan (1969a, 1969b) and Galbraith, one of the most devastating critics of conventional theory and an influential proponent of welfare considerations. Galbraith's concern for rural poverty in the United States led him to question the 'Keynesian conviction that nearly all social ills could be cured by more production' (1962:19–20). The main dilemma for development planners and administrators in this approach was that conventional theory protected 'the continuity in social thought and action' which was essential for long-term planning, but in the political context of the Third World there were 'grave drawbacks and even dangers in a system of thought which by its very nature and design avoids accommodation to circumstances until change is dramatically forced upon it' (Galbraith 1962:44).

One innovation in the 1960s was the introduction of the concept of the region as a unit for planning. A major influence in this was the work of Friedmann, who developed a theory of regional planning (Friedmann and Alonzo 1964) which summed up 'much of the wisdom of the time, translated into a spatial dimension' (Brookfield 1975a:101). The addition of this dimension to development theory brought much more interaction, based on mutual interests and some methodological similarities, between geographic and economic approaches to development and, in particular, to development planning. The notion of 'spatial planning' greatly illuminated the problems of internal distribution, inequality and resource allocation, though often it was applied merely as an additional refinement of the established economic response to these essentially political questions. On the one hand, it aimed 'to disperse the non-generative concomitants of economic growth (hospitals, schools, banks, piped water supplies, post offices and so on) in as equitable and efficient manner as possible'. On the
other, it tried 'to mobilize the productive capacities of all regions by linking them in both a structural and an organizational sense to the mainstream of the national economy' (Logan 1972:230).

In planning circles, identification of the spatial dimension encouraged attention to aspects of development that were amenable to manipulation within the framework of a space-economy. Some economists, notably E. A. J. Johnson (1970), significantly expanded the capacity of their discipline by the analysis of economic development in terms of the organization of space. Development planners found the concept readily transmutable into concrete programmes. During the 1960s and early 1970s, it was applied most often in relation to urban structure, transport networks, population studies, innovation diffusion and, for a relatively brief period, to 'growth centres'.

In the mid-1960s the concepts of regional development and sub-national development planning were closely linked to growth centre theory. Though locational analysis had been applied to depressed agricultural situations by Neutze in 1962, and Hirschman had elaborated on inter-regional growth issues in 1964, the first major theoretical input into spatial planning was Friedmann's development of 'core-periphery' theory from Prebisch's concept into a tool for regional assessment (Friedmann 1966a). Friedmann, like many others of the time, considered that economic growth centred on urban areas, which became the developmental 'core' and, as industrialization progressed, created 'backwash' effects that had an adverse effect on their hinterland, or 'periphery'. Weinand, using the Myrdal and Hirschman models and the work of geographers Morrill and Næglerstrand, hypothesized that if the 'friction of distance' were high and the information field limited, backwash effects would be felt most strongly in areas near to the centre of growth (1973:249). Friedmann's work and that of other geographers, notably Berry (1967) on market centres, Næglerstrand (1965) on innovation diffusion and urban/regional analysis, and
Christaller and Losch on central place theory, provided the basis for attempts to overcome these adverse effects by the creation of 'development centres' (Hermansen 1972), or 'rural growth centres' (Sen 1972). Where Myrdal and Hirschman regarded government intervention as the solution, growth centre theory gradually came to mean the establishment of small centres which would 'urbanize the countryside' (Nard 1972a:371). This led to a proliferation of strategies designed either to 'promote the development of lagging regions by concentrating development so as to reap scale and agglomeration economies' (Hansen 1972b:103), or to integrate service centres with the planning of agricultural development (as van Dusseldorp 1971).

Although the increasing criticism of 'growthmania' (Nishan 1969a) probably contributed to the decline of growth centres as a development technique, their poor record in the industrialized countries (Hansen 1972b:103) from which the concept originated made them a dubious prospect for Third World planning from the first. Many of the assumptions on which growth centre theory was based were very suspect in a Third World context. Not least of these was the assumption that rural communities, given a choice between infrequent use of a relatively inaccessible but higher order service centre, and a more accessible but much inferior centre, would use the smaller centre enough to justify its costs. Equally doubtful was the assumption that scaled-down urban services were what rural communities needed for development. Richardson, a leading proponent of regional economics, regarded the concept of space as incompatible with the normative assumptions of neo-classical economic theory (1973:23), and contended that the economic conditions which facilitated core growth would militate against significant diffusion of its benefits (1969:316). Higgins, in a historical comparison of regional development in the United States, Canada, Australia and Brazil, argued that high rates of development required long-run regional convergence, which was impossible without large-scale emigration from lagging regions (1972:289-95). Taylor, in a Kenyan case study, demonstrated the importance of mobility...
and linkages with other centres to the effectiveness of a growth centre (1975:239), while geographers such as Santos (1975) mounted their critiques on more theoretical grounds. The concept enjoyed a brief popularity in Papua New Guinea 'as a means of implementing the aims of decentralization and rural improvement' (Conyers 1975:23), but lapsed after investigations indicated that

the emphasis should not...be on growth centres as such, but on the means by which development can proceed in all areas where desired in a way responsive to the needs, desires and characteristics of the people concerned (Scott 1973:1-6).

An integral element of most thinking on development in the 1950s and 1960s was the assumption that major socio-economic advance somehow could be achieved in every underdeveloped country that wished it (Zelinski 1966:24-39) and that, given the appropriate inputs, it could be planned. Nonetheless, to paraphrase Polanyi (cited in Brookfield 1975a: 173), while development was planned, planning itself was not. Though a considerable body of literature grew up around the perfection of planning as an administrative process, most of it was incremental and much akin to Lindblom's 'science of muddling through' (1959) or Popper's 'unplanned planning' (1966). Until the mid-1960s the majority of theoretical inputs derived either from the experience of metropolitan planners (e.g. Neyerson and Banfield 1955; Davidoff and Reiner 1962; Dror 1963), who were concerned with such issues as decision-making and choice; or, as a by-product, from economic development theory.\(^1\) Though Stolper in 1964 had made a good case for flexibility in planning from his analysis of the problems of comprehensive development planning (1964, 1967), most of the mathematical model-building and quantitative refinements which dominated the planning process were designed to edit out uncertainty and thereby obviate the need for flexibility. Both approaches had much to recommend them, and considerations of flexibility versus commitment became a perennial problem for development planners.

\(^1\) See Moi\(er\) (1970:749-52) for the main writers on planning in this stream.
The first significant attempts to assess development planning as a discrete function with its own theoretical, practical and spatial matrix came in the mid-1960s, with the work of Waterston (1965), Lewis (1966), Tinbergen (1967) and Friedmann. The main value of Waterston's analysis was his assessment, in a broad-based context, of the developmental successes and failures attributable to institutionalized planning. As did many others before and since, Waterston endeavoured to differentiate these according to the 'planning model' or approach used. This not only detracted from the insights he brought to problems of implementation, and which often were neglected in subsequent work on the subject, but it established a 'planning model' framework for analysis, which became increasingly meaningless.1 Lewis and Tinbergen, on the other hand, adopted an essentially macro-economic approach. Unlike many of his colleagues, Lewis believed that 'the Economics [sic] of development is not very complicated; the secret of successful planning lies more in sensible politics and good public administration' (1966:7). The main weakness of his work, nonetheless, was his failure to balance his economic expertise with sufficient attention to these factors. Despite this defect, Lewis' simple operational guidelines for economic planning were exceptional for a period characterized by increasingly complex model-building (see Chenery 1971; Mennes 1973). Tinbergen, whose classic formulation of quantitative techniques for macro-level analysis was largely responsible for the dominance of quantitative method in development planning, also recognized the importance of politics and administration in implementation of plans (1972:159). At the same time, he was an advocate of central- ized planning, and tended to disregard sub-national considerations and to lean towards global solutions. Friedmann also treated planning primarily as a matter for macro-level planners (e.g. Friedmann 1966b, 1973), although his work on centre-
periphery relationships and dependency in a regional context provided a link between Western regional development theory, some of the central issues of Marxist thought (Brookfield 1975a:124), and the growing body of evidence that the micro-level 'culture of planning' (Bolan 1969) could no longer be ignored.

**Challenge and change**

The development of these lines of thought was paralleled by increasing, and largely philosophical, doubts concerning the nature, value and relevance of development. Hardin, analysing 'the tragedy of the commons', pointed out one inherent weakness of monetary sector development in systems where land ownership was common. As he astutely noted, it encouraged short-term exploitation of the land by individuals, who thereby reaped the short-term benefits while the long-term costs were dispersed among all the land-owners (Hardin 1968). A new approach to development emerged, in which it was specifically related to man's environment. This became the basis of two major contributions, Clarke's (1971, 1973) 'ecological geography' and Wilkinson's (1973) 'ecological model' of development, one of the few successful attempts to construct a model with general applicability for disparate real world situations. It gained additional support from a growing international concern with resource scarcity and the 'limits to growth' (Meadows and Meadows 1972), which Heilbroner (1974) argued was causing major shifts in the patterns of distribution between rich and poor. The notion that development required not only a 'Big Push' in developing countries, but also major changes within the developed countries, was put in the innovative writings of Illich (1969, 1971, 1973a, 1973b, 1974), in Haytor's controversial presentation of aid as imperialism (1971), and in Goulet's work on universal development values (1968) and the problems of modernization, planning and choice (1971, 1976). In geography a major contribution to the debate came with Soja's (1968) detailed study of modernization and spatial organization in Kenya, which queried the suitability of
colonial systems of organization for post-colonial development. The search for more appropriate forms of development was taken up by the influential Institute of Development Studies at Sussex and, largely through its theoretical and practical output, became a major element in Third World development planning.

Until the late 1960s the majority of case studies on development planning derived from the Indian experience. Though the range of context-related studies then expanded considerably with such works as Myrdal (1968) and others (e.g. Roxas 1965; Ness 1967) on planning in Asia, Baldwin (1967) on Iran, and Adelman (1969) on Korea, the significance of context to development patterns emerged more from political considerations. Notable in this respect was the influence of African writers and politicians such as Nyerere (1968, 1971) who, like Gandhi and Mao Tse-Tung, developed and demonstrated models of development based on a particular national situation. The 1970s saw a massive swing in development theory and case studies away from Indian and Asian models, towards the decolonization experiences of the new African nations. Associated with it was a growing awareness of the need for a new development paradigm (de Vries 1975:170; Seers 1977:3-5). This had its roots in the decolonization process itself and the lagged international swing against imperialism; in growing disenchantment with the effects of economic growth; in concern over the lot of the poorest (McNamara 1973, 1977) and the evidence that unchecked dualistic growth made them worse off (Adelman and Norris 1973:21); and, in all probability, in the relative prosperity of the 1960s, which allowed the relaxation of considerations of efficiency in the developed world in favour of equity and social justice. It led in turn

1. See, for examples of particularly influential works, Seers (1969), Seers and Joy (1971), International Labour Office (ILO) (1972), Faber and Seers (1972), and Jolly et al. (1973).

2. Among the most useful of these are A. H. Hansen's (1966) review of India's five-year plans since they were introduced in 1951, and the collection of Streeter and Lipton (1968). Several earlier works, such as Lewis (1962) and Rodlauway (1962) also provide useful insights into the conceptual weaknesses of the Indian model.
to the dominance of 'radical-diagnostic' theories of development and underdevelopment, and to a period of supposed 'people-planning' (Apthorpe 1970b).

Central to the new paradigm was the work of Andre Gunder Frank, whose use of Marxist dialectic to relate underdevelopment in satellite (or periphery) nations to the development of the metropole (or core) nations (Frank 1969a, 1969b, 1972) challenged the ideology of economic growth theory, and cast its proponents into the role of perpetrators of global injustice. Frank's approach received considerable reinforcement (and some criticism) from others of the Latin American school (e.g. Furtado 1970), from Emmanuel's interpretation of exchange relationships between developed and developing countries as an extension of earlier exploitation patterns (1972), and from the global perspectives of Amin (1974) and Wallerstein (1974a, 1974b, 1974c, 1975). At the same time, his use of the concept of dynamic historical process carried the development debate back to the level of macro abstraction. Though much of his theory was falsifiable, and therefore useful, the scale made simplification inevitable. This placed Frank's work and much subsequent dependency theory in essentially the same position, vis-a-vis real world development problems, as economic growth theory. Frank's simplified approach was queried by other radical writers, notably Laclau (1971), who challenged Frank with evidence of persistent linkages between capitalist and non-capitalist modes of production; and Leys, who argued that the notion of 'underdevelopment' was 'almost impossibly wide' and denoted a concept of development which was 'purely that of the capitalist development of the imperial powers' (1975:xv; see also Palma 1978).

In the early period of radical reassessment of development relationships, the basic argument was a historicist presentation of the forces which created 'underdevelopment', and depended largely on Baran's elucidation of the concept of surplus (1957). This and the second main strand of the argument, that of unequal exchange between the developed and the developing world due to poor internal generation of surplus or to metropolitan expropriation of Third World surplus, had
strong 'backward linkages' to the work of Prebisch (1964), Myrdal (1957a, 1957b), Hirschman (1958) and Friedmann (1966). The conclusion promoted by the binary framework was that developing countries should become self-reliant, should 'put up barriers between themselves and the destructive intrusions of trade, technology, transnational corporations, and educational and ideological influences, and should aim at...insulating and isolating themselves from the international system' (Streefen 1977:15). Self-reliance for developing countries, historically a major goal of colonial governments with a tight budget and political accountability in the metropole, thus became the supposed counter to the system which, in its own interests, instituted it. The radical critique offered very few alternatives to autarky. Millar summarized these with reasonable accuracy as 'the strategy of seizing the chance', in which 'strongish peripheral countries' could gain an advantage by 'aggressive action against weakened core countries', and the 'strategy of promotion by invitation', in which 'semi-peripheral countries' could use foreign investment to develop (Millar n.d.:12) — both strategies which in the longer-term were likely to increase the dependency of the peripheral countries on the developed world. A third element of the radical argument was its use of the concept of class struggle and class structures as a positive or negative variable in development. This theme, temporarily subordinated to other issues as Africa and the 'Tanzania model' drew radical interest away from the more clearly defined class situation in Asia, re-emerged in the work of Wallerstein (1975).

At the time that Wallerstein was writing, experiments with socialism in a number of new nations, notably China and Tanzania, had run into difficulties, and a number of the predictions of Marxist and dependency theories seemed to be falsified. In particular, the emerging patterns of development deviated from those anticipated by the historicist models, and deviated in many different ways. It was clear that the empirical evidence from Third World socialist states was not going to provide a counter-balance to that from the capitalist states, and was no more conclusive as a test of development theory than earlier data. Wallerstein surmounted this problem
by arguing that as the dominant world system was capitalist, socialist states locked into it perforce operated in the capitalist mode (1974a, 1974b). At this point Wallerstein veered close to the Popperian contention that many Marxists 'systematically evade refutation by continually reformulating either...theory or...evidence in order to keep the two in accord' (Magee 1975:43). Nonetheless, this theory became a fourth strand of radical argument, based on the analysis of the articulation of modes of production between the developing and the developed world and the hypothesis that they were weakened by the capitalist nature of the world-economy.

While underdevelopment theory has a number of weak points when viewed either in the light of Popper's scientific methodology1 or from the perspective of subsequent radical comment (e.g. Warren 1973; Leys 1977), it was an important unifying influence in development theory, which had become increasingly fragmented spatially and conceptually. At the same time, it created a more serious division, as it overrode disciplinary and areal differences and split development theorists broadly into two groups: those primarily concerned with diagnosis of causes for developmental problems, and those whose orientation was corrective (see also Foster-Carter 1973:69). Development planners in particular experienced an identity crisis as one paradigm gave way to another, as their role was criticized from both perspectives and as the new paradigm, in sharp contrast to its predecessor, offered little or no guidance for developmental action. Nonetheless, it was not easily rejected. The alternative, a re-evaluation of pluralism and 'more complex multiple-factor explanations of development' (Goldsworthy 1977:21), posited a need for resources and data far beyond those which could be realistically anticipated.

1. The essence of Popper's method is in his *Logic of Scientific Discovery* (1972a), first published in English in 1959, though his best-known challenge to Marxist thinking (1966) preceded it by 14 years. In the context of current development theory his earlier analysis of historicism (1961) and subsequent extension of his philosophy (1972b, 1975) probably are more valuable.
The Pacific connection

The move away from simplistic 'world scale' analysis received considerable impetus from the work of Leys (1975, 1977), Seers (1969, 1977), Faber and Seers (1972) and others of the Sussex tradition; from Schumacher (1974) and the 'intermediate technology' school; and from the growing involvement of geographers in what McGeeh has called the 'dirty boots begets wisdom' approach (1978:9), the study of development issues at the micro-scale. The latter group, which worked within Brookfield's flexible interpretation of 'micro' and 'macro' (1973:10-12), tended to operate outside the conservative and the radical paradigms, though it had links to both. Its contributions, notably those of Brookfield himself, Lea (1964), Ward (1964), Lasaqa (1968), Chapman (1969), Clarke (1971), Waddell (1972), and Howlett (1973), allied to the contributions of a number of anthropologists and other social scientists, provided a strong foundation for the generation of a 'Pacific model' in development theory. This was slow to emerge. Apart from the work of Brookfield and a few economists, such as Fisk and Shand, the theoretical inputs into the study of Pacific development usually were derived from elsewhere. One reason for this was the enormous scope of the subject. In development theory, as in its planning and practice, integration of theory and empiricism was hampered by increasing specialization, either in terms of the disciplinary approach, the area or region, or the level at which the subject was addressed. A further problem was the widespread uncertainty in Western thinking about development issues and the role of the Western social sciences in them. This often was exacerbated by Western guilt and Third World resentments over colonial experiences, both of which frequently were expressed in the credo that 'the expatriate cannot really grasp the inner workings and nuances of indigenous societies' (Lasaqa 1973:309). Probably even more significant was the fact that on the international scale decolonization was almost complete. For the Pacific nations, small, isolated and relatively powerless, the general assumption was that development theory would be a one-way flow, and that
their main aim as recipients should be the avoidance of mistakes made elsewhere (Hart 1974:8).

Several aspects of the Pacific situation cast considerable doubt on the practical relevance of development models derived from Asia, Africa and Latin America. The position of most Pacific nations as 'late-comers' is itself an important variable. The demonstration effects and 'impulses' from other countries, both in the developed and the developing world, significantly altered 'the nature of the development process' (Streiten 1977:14) in the Pacific. A major factor in this was the application in the Pacific of metropolitan lessons from previous experiences with decolonization, which affected the pace and style of colonial withdrawal. In addition, many Western countries in the mid-1970s faced problems of inflation, unemployment and political instability at home, and were less prepared than they had been to concede Third World 'assertions...about the moral obligations and responsibilities which fall on former Western colonial powers' (Harries et al. 1979:116). The attitudinal changes which this produced, combined with the uncertain state of the international economy, blunted rhetorical anti-colonialism as a mechanism for improvement of resource flows to newly emergent Third World nations. A further element was the economic evidence that international trading relationships were biased in favour of the developed countries (Johnson 1967) — a conclusion supported, though from a different rationale, by radical analysis. Such factors, reinforced by a strong subsistence survival ethic, resulted in a widespread concern in the Pacific for political and economic stability, and caused Pacific countries to evaluate their developmental options with a different perspective from that of countries which decolonized in the 1950s and 1960s.

In addition to their temporal position vis-à-vis most Third World countries, the majority of Pacific nations were spatially and structurally in a different situation. Unlike the majority of previous new nations, most were small and, unlike most of the other small new nations, they were internally fragmented and very isolated. Though the significance of smallness in terms of land area, resources and
population received some attention in relation to under-development in the Caribbean (Selwyn 1975:8) and in West Indian plantation economies (Beckford 1972), consideration of the positive and negative implications of small scale for development has been slight. Notable exceptions to this were Benedict’s collection on the problems of small territories (1967), Best’s advocacy of diversity (1972), and Selwyn’s series on policy for small countries (1975) and their general problems and prospects (1978). Nonetheless, the main thrust of development theory in relation to small-scale issues has been towards patterns of development originally conceived on a much larger scale, so that it has done little more than identify some peculiarities of small nationhood.

These considerations apart, several differences between the Pacific situation and that of most Third World countries make the Pacific potentially a very valuable testing ground for general theories of development. Among them are its contact experiences, which include a fairly unique World War II experience and the monolithic Australian-American involvement in it. Additional elements are a relatively benign colonial history, a consequent lack of motivation to ‘destroy the enemy’ (Somare 1970:490), proximity to comparatively small, isolated enclaves of the developed world in Australia and New Zealand, and remoteness from the rest of the developed and developing world. Other factors are the scarcity of capital, entrepreneurial experience, and technical expertise (Ward 1977:164); the highly personalized nature of relationships between political, administrative and economic institutions (see also Selwyn 1975; May and Tupouniua 1979); and, in Melanesia, the absence of a unifying national religion or dominant culture. In addition, the combination

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1. In 1979 a Development Studies Centre seminar series at the Australian National University pursued the general theme of these works in relation to countries of the Pacific and Indian Ocean but, as subsequent comment from representatives of the island states involved indicated, it failed to come to grips with the central issue of what small nations could do to improve their situation. The few suggestions offered usually were confined by the general assumption that their options for development were few (Cole 1979:22), an assumption which indicates that much work is yet to be done in this neglected area.
of fairly high wages, areas of 'subsistence affluence', low overall population densities and Western demonstration effects often makes capital-intensive enclave development a more cost-effective strategy than a low-level, labour-intensive approach. Such factors markedly vitiated the application in the Pacific of development models from elsewhere, though the 'Tanzania model' was advanced as a possibility for Papua New Guinea (Clunies Ross 1973). They also caused some lag in the Pacific response to the growing controversy about the role and achievements of institutionalized planning.

Planning under the new paradigm

A notable feature of the debate over planning in the late 1960s and 1970s was the primacy assigned to welfare and humanitarian objectives, social change, and 'basic needs' (Seers 1969; Apthorpe 1970a; Singer 1977). Related to these was the empirical evidence, predominantly from African studies, that the 'poverty of planning' (Blair 1973) in dealing with the major political issues within the developing world had brought it to the point where a radical review of the issues was essential (Faber and Seers 1972; Helleiner 1972; Grabow and Heskin 1973). This approach was based on the by then general conclusion that

one could hardly talk of development having taken place in any true sense, if average incomes have risen, but at the same time inequalities have grown more severe, unemployment increased, and the lowest quarter of the population became absolutely poorer (Seers and Joy 1971:140).

The perspectives of a number of writers on the African situation, including Ellman (1970), Gertzel (1970), Davey (1971), Arrighi and Saul (1973), Leys (1975), Hyden (1975), and Moris (1977), also drew attention to the relationship between political developments, decision-making processes and the effectiveness of development plans and planning. For development planning, hypothetically a 'value-neutral' activity, it revived considerations of goal formulation, the structure of influence, and the political will. These had received extensive coverage in the planning literature of the developed world (e.g. Naslou 1963;
Bolan 1967; Manheim and Hall 1968; Braybrooke and Lindblom 1970) but had been outside the technological framework of development planning.

An important element in the 1970s approach to planning was its expansion to include issues related to the implementation and monitoring of plans. This was due partly to the new awareness that 'planning is an essentially political process...Thus ends are in question' (Cowan 1973:5; see also Rondinelli and Ruddle 1978), and partly to the evidence that the implementation of plans which aimed at community change could be, and frequently was, aborted by poor community acceptance. This led in turn to a call for 'bottom-up' planning, flexibility, and local participation.

The role of the planner in this new situation became that of 'a radical agent of change...an educator and at the same time a student of the ecological ethic as revealed in the consciousness of the people' (Grabow and Hoskin 1973:112). He also had a responsibility for the implementation of his plans (I.U.L.A. 1968), for innovation and creativity (Jefferson 1973; Lim 1975), for rational allocation of scarce resources (Eversley 1973:5), for the 'design and creation of alternative institutions' (Heloinger 1973:337), and for the elaboration and maintenance of a data base which would enable him to monitor his success at these activities. At the same time he had to act as intermediary between aid donor and aid recipient countries and, in particular, provide plans and information which would draw foreign aid. This function, traditionally the primary reason for preparation of development plans (Lewis 1966:152; Mahmut 1978:21), was the one which in most cases determined the amount of attention paid to the others. One consequence in the late stages of international decolonization was an upsurge of interest in elaborate techniques for project appraisal (e.g. Little and Mirrless 1974) and in the adequacy of development indicators (Baster 1972; ILO 1977; Apthorpe 1977). It was increasingly clear that the theoretical responsibilities of development planners had far outstripped the capacity of their discipline, and that functional differentiation between planning organizations and the rest of the administrative structure was unsatisfactory either for
practical or theoretical purposes.

One consequence of the over-extension of planning capacity was a revival of the notion of 'executive capacity' as a scarce resource' (Chambers 1969), and an emphasis on 'management systems' techniques for the planning and achievement of development objectives. The 'management systems' approach gained its initial impetus from considerations of regional development, notably in McLoughlin's (1969) textbook for regional planners. Regional planning, despite a strong theoretical input (Kristensson 1968; Logan 1970; Hall 1970), became a relatively sterile pursuit in the political climate of the Third World in the 1970s; but the application of systems theory to the rural development (Bolshaw and Chambers 1972, 1973) and administrative capacity (Katz 1971; Jarman 1973) gained a few, albeit specialized, adherents. This approach to development was challenged by Moris (1977), who argued cogently that the 'administrative culture' it represented could not be easily, if at all, transferred to post-colonial Third World administration. In fact, the 'management systems' approach had very little to offer that had not been propounded in simpler and less limited terms in earlier 'economic growth' theory, in the structuralist analyses of Furnivall (1956), Griffin (1969) and Gellner (1971), and in the work of Riggs and others on development administration (Riggs 1964, 1971).

A second consequence was an increasing dissatisfaction among aid donors in their dealings with Third World planning organizations. This was based on a general concern that aid was not reaching the population it was intended to serve, and that the projects requested by developing countries did not accord with their national objectives as stated in their plans (Irwin 1977:9) or with the 'poorest of the poor' ethic of donor countries. With this the one function which had been the indisputable prerogative of planning organizations through all the theoretical shifts, the organization of foreign aid requests, was placed at risk. The proposal that aid donors should deal direct with their target populations rather than with host governments (Wohmat 1978), though presented in the
assumption of a continuing role for planners in other fields, in practical terms threatened to bring the end of an era.

The late 1970s saw a marked diminution in the flow of innovative thought which had distinguished the analysis of development and development planning in the 1960s, coincident with the closing stages of decolonization and the tightening of the world economy after the 1974 oil crisis. While radical writers revitalized class analysis (Lipton 1976; Leys 1977; Forbes 1980) and the role of the state (Harvey 1973; Logan 1978), development planning was left in the limbo of disenchantment with plans which followed the identification of a 'crisis in planning'. This was particularly evident in the field of rural development. On the one hand, the hypothesis that 'simple is optimal' in 'poverty-focussed' rural development led to an emphasis on decentralized project selection (Chambers 1978). On the other, the larger-scale 'integrated rural development' approach (Leupolt 1977; Schulz 1977) tended to solve the problem of scarce or uncoordinated planning and managerial skills by importing them as a package. Both implied a decline in the direct influence of central planning organizations on rural development. At the same time, the renewal of concern for scarce executive capacity brought swing back to the notion of centralized state control as a means of economizing on scarce resources (Rothstein 1976). This in turn involved considerations of access to government services (Schaffer 1973; Schaffer and Lamb 1974), and thus of macro-micro linkages.

From the general to the particular: questions and conclusions

By far the greatest part of the literature and theory which has grown up around the idiosyncracies of development planning has been directed at perfection of the planning process per sé. Though implementation difficulties were recognized as a major problem from a comparatively early stage (e.g. Waterston 1965), relatively little work has been done to assess the real impact of the planning process, and the plans it produced, on the people involved. The present
study, as one attempt to fill a serious lacuna, is of necessity also a study of development in general, rural development in particular, and macro-micro relationships. Due to the enormous scope of the subject matter, it is unavoidably incomplete. The range of issues which emerge even from the fairly narrow perspective of a small number of supposedly disadvantaged rural communities in Melanesia indicates that much work has yet to be done. Of the many questions on which the evidence is insufficiently broad to generalize, probably the most important for development theory are those concerning the relationship between the government of a developing country and the governed. On these the literature of development provides very few guidelines, apart from the patronizing and ethnocentric assumption of many growth theorists and macro-economists that development is achieved through government action, and the equally patronizing and ethnocentric conclusion of many in the radical school that the rural peoples of the Third World are no more than passive victims in their debasement by the forces of the developed world. Sufficient evidence now exists to indicate that neither is tenable as an explanation of development or underdevelopment, much less as a framework for development planning. On the other hand, a considerable body of literature exists, largely outside the mainstream of development theory, which is highly relevant in theoretical and in practical terms. It comprises the work of a mixed group of writers, the majority of whom, such as Popper, Lays, Rothstein, Stavenhagen, Lindblom and Wilkinson, are linked by a common interest in problem-solving and real world testability, both of which are integral to the dynamic of development and in particular to the perspective of development planning.

That the extensive changes in development fashions and global conditions in the last two decades have not changed the practice of development planning, as Halleiner concluded in the quotation at the commencement of this chapter, raises several questions. The first, and most conceptually complex, is the relationship between development planning and development. If, as Sears (1972:19) and others have argued,
many plans 'do not have a great deal of operational relevance -- some have been little better than fantasies', the persistence of planning and the concurrent elaboration of planning techniques is sufficiently curious to warrant investigation. If plans do not in fact address development, the amount and type of actual change, especially in rural areas, is crucial to an understanding of Third World processes and development capacity.

In the course of this thesis it is suggested that development planning has been essentially a problem-solving device. The changes which have occurred in rural areas can be analyzed within the same framework. The results of the study indicate that, the rhetoric of rural development goals notwithstanding, the macro-level as represented by government and government planners, and the micro-level as represented by rural villagers, have been solving very different problems. At the same time, the two levels have become interdependent to an extent that previously was restrained by the fact that macro-level government was a foreign enclave and basically part of the organization of another country. As a result, the inherent conflict of structure and scale has become a major development issue. A significant element in this conflict has been the struggle of government as an institution, both in the colonial and post-colonial period, to establish its legitimacy. Its efforts to solve the problem of legitimacy often were antipathetic to the effort of rural communities to solve the problem of government encroachment, which in effect was a threat to a system where survival and security derived from small-scale autonomy and self-sufficiency. It is argued that while the integration of macro and micro-levels is incomplete, and while development is tied in one way or another to macro-micro integration, the process of decolonization intensifies the stresses which cause problem-solving conflict. This further complicates the task of reconciliation. One consequence is the perpetuation of patterns of disadvantage established during the struggle for macro-governmental legitimacy, which in some instances leads to 'cumulative causation' (Myrdal 1957b:13) with consequent
deterioration in the position of disadvantaged groups. Development planning, as a tool and function of government, has not been able to resolve this dilemma, and frequently has aggravated the problem. Its main significance has been its central role in the resolution of the macro-level problems of decolonization.
CHAPTER 2

PHYSICAL ENVIRONMENT, RESOURCES AND PEOPLE

In one of the most comprehensive studies of the Southwest Pacific, Melanesia is described as

... an ethnic region, distinguished first and foremost by the dark skins of its people, but it also has geographical unity; Melanesians inhabit a group of large, mountainous islands, thus distinguished from most of the Polynesians, lighter-skinned people who live mostly on much smaller islands; Melanesians are almost all root-crop agriculturalists, thus differentiated both from the Australian Aborigines and most Indonesians; Melanesians mostly have societies without hereditary chiefs; without rulers or central government until colonial times, unlike both Polynesians and Indonesians... Its differences are of an order not too unwieldy for analysis, and the similarities give the analysis some unifying structure. Lastly, there is growing evidence that Melanesia is becoming a unit in the minds of at least some of its people (Brookfield with Hart 1971:xliii).

Formation of a formal 'Melanesian Federation', to include Papua New Guinea, Solomon Islands, the New Hebrides and possibly the Indonesian territory of West Irian, occasionally is proposed on similar grounds. The logistic difficulties of Pacific regionalism, on the scale envisaged by the United Nations (Selwyn 1975:9), the South Pacific Bureau for Economic Co-operation (SPEC) and the South Pacific Forum, has given the idea of a smaller, Melanesian alliance added merit to those who assume that a conjunction of scattered mini-states will produce economies of scale. In this hypothetical alliance, the key positions in terms of location, land area, population and resources are held by Papua New Guinea and Solomon Islands (Fig. 2.1).

In addition to their Melanesian ethnicity, Papua New Guinea and Solomon Islands share a border, easily and frequently crossed, and a considerable number of development problems. Both are newly independent, and have only started
Figure 2.1 Melanesia in the Southwest Pacific, with approximate area covered by the 200 nautical mile zones.
significantly to diversify their sources of export income and their trading partners within the last decade. Both have a relatively benign colonial heritage, an inherited plantation economy and export-oriented infrastructure. Both have a major handicap in the difficulty of communications and access. Papua New Guinea has problems with its mountainous central spine and outlying island provinces, and Solomon Islands with the dispersion of its seven main island groups in a strip approximately 1500 km long within 1.52 million km² (Ward and Proctor 1980:4) of ocean. In both cases communication problems are exacerbated by a multiplicity of disparate languages, so that communication between language groups usually requires a knowledge of Pidgin, the post-contact lingua franca. The use of English is largely confined to the better educated. Many of the numerous sub-cultures include religious beliefs or social practices which constrain or distort application of modern development techniques. Land tenure in both countries is predominantly entailed on a clan basis. This, and colonial hypersensitivity about formal land rights, tends to inhibit change to population/land relationships created by and for conditions that often no longer apply. Climatic and geological disturbances cause frequent ecological damage. Finally, both countries have elaborately specialized bureaucracies, semi-autonomous government departments, relatively new national planning institutions, and a Westminster-model political system with a parliamentary term of approximately four years. Mechanisms for reconciliation of the conflict potential inherent in the difference between the time horizons of the bureaucracy and those of the legislature are at a relatively early stage of development.

Considerations of scale alone create major differences between the two countries in the developmental impact of these problems, and in the ability of the respective governments to adjust it. In terms of population and land area, Solomon Islands is less than one-tenth the size of Papua New Guinea (Table 2.1). The difference in size has advantages and disadvantages for both countries. Papua New Guinea gains certain economies of scale from its larger size, while for
Solomon Islands the consequences of smallness are aggravated by fragmentation and distance. These consequences include high infrastructural costs and increased societal vulnerability to demographic or environmental fluctuations, but also include more manageable unit size and more scope for informal checks and balances in politics and administration. Specialization of macro and micro-level functions is easier for Papua New Guinea, but increases the difficulty of effective interaction between the two levels. The limited numbers of personnel in macro level management in Solomon Islands restricts task specialization, creates a greater need for multi-skilled personnel, and allows greater distortion of formal processes by individuals, but politicians and public servants are less able to cut themselves off from their communities and hide behind their institutions. The mechanics of operation as a state make Solomon Islands 'top-heavy' for its size, but its small size facilitates a more general awareness than in Papua New Guinea of the constraints imposed by externalities, and to some extent eases the pressure on government that they cause. At the same time, the need for a certain minimum size makes government in Solomon Islands a fairly high-cost operation relative to the capacity of the population to support it and to the benefits it can provide for the average villager. Solomon Islands has one main urban centre, the capital Honiara. For most Solomon Islanders, local blockages in access to urban benefits and government assistance can be overcome through Honiara contacts. Papua New Guinea has more — and better developed — urban centres, but the capital, Port Moresby, is poorly located to serve the bulk of the population. Movement to Port Moresby and other centres tends to involve less of the short-term circular migration which is one of Solomon Islands' main developmental advantages, and more problems of rural-urban drift. Conversely, programmes to stimulate rural development and to counteract rural-urban drift face more serious competition in Papua New Guinea, though the range of locationally and administratively feasible projects is more extensive.
isolated and relatively powerless, the general assumption was that development theory would be a one-way flow, and that

Table 2.1—Land area, population and population density

<table>
<thead>
<tr>
<th>Place</th>
<th>Land area (km²)</th>
<th>Population (No.)</th>
<th>Population density (No./km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Papua New Guinea</td>
<td>462 840</td>
<td>2 990 000 (1978 est)</td>
<td>6.5</td>
</tr>
<tr>
<td>Solomon Islands</td>
<td>27 556</td>
<td>214 000 (1978 est)</td>
<td>7.8</td>
</tr>
<tr>
<td>West Sepik</td>
<td>36 300</td>
<td>93 978 (1971)</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>101 741 (1976 est)</td>
<td>2.8</td>
</tr>
<tr>
<td>Santa Isabel</td>
<td>4 013</td>
<td>10 420 (1976)</td>
<td>2.6</td>
</tr>
<tr>
<td>San Cristobal</td>
<td>3 495</td>
<td>13 034 (1976)</td>
<td>3.7</td>
</tr>
<tr>
<td>Kilimori census division</td>
<td>637</td>
<td>2 211 (1973 est)</td>
<td>3.5</td>
</tr>
<tr>
<td>East Au census division</td>
<td>559</td>
<td>5 000 (1973 est)</td>
<td>8.9</td>
</tr>
</tbody>
</table>

PNG: Department of C.H. & D.A. (1973)
SIG: (1976, 1979)

The study areas

At the smaller scale represented by the sample areas (Figs. 2.2.2.7), minor differences from the national perspective have a disproportionate significance. This has serious implications for development planning based on national needs and a hierarchical mono-system of government. Small deviations of demographic data from the national norm, even where the problems of appropriate technique are minimized (see Peoney 1975), can cause major variations to development capacity and resource use. Application of national aggregates for small population units can disguise areal or temporal fluctuations that actually contraindicate conclusions drawn from the aggregated data. (McArthur 1970). Differences in the social and cultural context affect extent and method
Figure 2.2  The Bugotu and East Bauro study areas, Solomon Islands
of exploitation of perceived resources, while perception of a resource as such varies according to the 'needs, knowledge, beliefs, and technical capacities' of the potential user (Ward and Proctor 1980:18). Patterns of change and adaptation often have developed from a fortuitous combination of particular individuals and particular circumstances at critical times. As a result, they usually are area specific, highly personalized, and relatively unpredictable for more than very small units and short periods of time.

Location and physical environment

Though all study areas are handicapped to a varying degree by their location and physical environment, in no case is absolute lack of resources or excessive distance from a modern centre the dominant factor in their relative lack of development. Even within the limitations imposed by governmental criteria for resource potential, resources such as bait-fish on the Bugotu coast and timber in Kilimeri are commercially viable. All areas fall within a radius from a town centre which, in terms of distance or travelling time, is considerably less than applies for many other communities nearby. Soil fertility varies between and within the study areas, but all have some commercial crops and several have pockets of land assessed by government as 'suitable' for further agricultural development.

Bugotu

The Bugotu area, which comprises Vulavu village and several neighbouring villages (Fig. 2.3), is the only true coastal settlement of the study. It lies close to the narrow southeast tip of Santa Isabel, the longest of the Solomon Islands and, due to the great diversity of its rock types and land systems, one of the most structurally complex (Hansell and Wall 1977:9,51). Uneven steep ridges from the main central spine form an enclosure of volcanic rock around Vulavu, which gives way to limestone sediments and fluvial plains towards the tip of the island. Several short rivers drain from the hills and separate the villages
the political will. These had received extensive coverage in the planning literature of the developed world (e.g. Maslow 1963; 

Figure 2.3 The Bugotu villages, Santa Isabel
on the narrow coastal strip. Opposite Vulavu in Thousand Ships Bay is the southern end of San Jorge, the largest of Santa Isabel's numerous coastal islands. The now uninhabited area is used by some villagers for their coconut plantations. A short distance inland, on the eastern side of the central spine, is a pocket of land with 'good agricultural potential' (SI:CPO 1978:26-7). This area, and a school at Kamaosi, has stimulated further spatial diversification of commercial cultivation.

Much of the area which encompasses the scattered parcels of land to which the Bugotu people have traditional access has been classified as unsuitable for 'riculture. Cultivation of coconuts or subsistence crops is restricted by infertile soils with high concentrations of heavy metals (Hansall and Wall 1977:108). Nonetheless, the Ministry for Agriculture and Lands (MAL) estimated that with the use of fertilizers almost three times the land area in use in 1971 theoretically could be planted with cash-crops, pasture or subsistence gardens (SI:CPO 1978:25). In practice, governmental development activity focussed on the two areas of Santa Isabel, in the northwest, large enough to rate the classification of Agricultural Opportunity Area (Hansall and Wall 1977:117) (Fig. 2.5). The demonstration effect of this concentration caused a subtle village devaluation of their land as a development resource.

**East Bauro**

Though Maniwiri and several other villages of the East Bauro study area (Fig. 2.4) lie on or near the coast of San Cristobal, coastal settlement is relatively recent. East Bauro villagers are essentially an inland people. A considerable proportion of the population of the area still lives in foothills of the central mountains and, with the inland communities of the neighbouring Mainoni Bay area, comprises most of the island's few remaining settlements in the interior. The coastal strip, to which villagers were drawn after World War II for Marching Rule and subsequently for better access to modern facilities, consists
Figure 2.4
The East Bauro villages, San Cristóbal
Figure 2.5 Agricultural Opportunity Areas, Solomon Islands
of calcareous and volcanic debris used primarily for coconuts. This extends inland into river floodplains and terraces of high agricultural potential (Hansell and Wall 1975:69, 79-80). Most of the eastern end of the island is covered by basaltic lava, and the fluvial plains run back to limestone foothills which range from 40 to 500 metres high. Areas of freshwater swamp occur near the outlets of the major rivers. In addition, the island has an unusually high number of inland swamps, by Solomon Islands standards (Hansell and Wall 1975:18). Two of the largest rivers on San Cristobal, the Ravo and the Warihito, drain swiftly from the central mountains and become impassable in flood. These rivers frequently isolate the East Bauro study area from the governmont headquarters at Kirakira, 10 km to the west, and from the Wainoni Bay mission station to the east. Rocky coral coastline, which is generally more exposed than in other parts of Solomon Islands (Grover 1958:62), and inland mountains of up to 800 metres, complete the enclosure of the area.

Ningil

Ningil in the East Au Census Division is situated at approximately 500 metres above sea level, in the heavily populated belt of the Torricelli Mountains which runs between Lumi in the West Sepik and Maprik in the East Sepik (Fig. 2.9). It lies between the two main rivers in East Au, the Napan and Assini, which drain southward into the Sepik River. Five river crossings separate Ningil villagers from the nearest town centre, 25 km away at Lumi. Branching ridges and peaks of soft rock create an irregular terrain with consequent problems for transport, communication and commercial agriculture, from erosion and landslips. Ningil is within a major earthquake belt. From ten to twenty shocks of magnitude 6 or over on the Richter scale have been estimated per square degree per century (Haantjens et al. 1972:9). The grain of the mountains favours road access through the southeast to Newak, in the opposite direction from the nominal West Sepik headquarters at Vanimo. Even then the scarcity of
macro-governmental legitimacy, which in some instances leads to 'cumulative causation' (Myrdal 1957b:13) with consequent
Figure 2.7 The Ningil and Kilimeri study areas, West Sepik Province
Frequently crossed, and a considerable number of development problems. Both are newly independent, and have only started
Figure 2.9  The East Au Census Division and Ningil village
suitable surfacing materials hampers road construction and maintenance (Haantjens et al. 1972:17,223). The Ningil hamlets are unique among the study areas for the existence of a mission station, next to the village, which has brought subsidiary services and an airstrip, and has linked the village to the Franciscan mission headquarters at Aitape.

Though coffee is grown extensively, the area generally has been assessed as having 'high capability for improved pastures but low capability for arable crops and tree crops' (Haantjens et al. 1972:222). Much of the secondary forest which covered the area has been cleared in the past, but regeneration after subsistence gardening, with fallow periods of up to one generation, maintains adequate cover. The secondary vegetation is interspersed by patches of bamboo and plantings of the sago palm which is one of the main, albeit officially unrecognized, resources of the West Sepik.

**Kilimeri**

The Kilimeri Census Division lies approximately 25 km inland from Vanimo, with roughly three-quarters of its area within the 30 km (20 mile) quarantine strip or *corridor sanitaire* which parallels the border with Indonesia across Papua New Guinea (Fig. 2.D). The villages of the study are situated on the edge of floodplain forest between the Pual River and its tributary the Puwani River, which rise in the Bewani Mountains to the south. Low hills and ridges of soft sedimentary rock rise from the alluvial floodplains, and are interspersed with stretches of floodplain swamp which toward the eastern edge become permanently inundated. All villages are sited on knolls surrounded, to

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1. Since completion of fieldwork in Ningil the long-awaited Sepik Highway to Wewak has reached the village and, according to reports from the area, produce is now transported for sale in East Sepik Province.
locationally and administratively feasible projects is more extensive.

Figure 2.10 The Kilimeri Census Division and study villages
a greater or lesser degree, by poorly-drained lowlands which
hamper communication between the villages in the wet season.
Government services are based at Bewani, 13 km southwest,
while villagers to the east of the study area use the mission
centre at Ossima.

The Pual River valley contains large tracts of
commercially exploitable forest, which in Kilimeri comprises
approximately 80 per cent of the total area taken under a
forty-year government lease in 1968 (PNG:Dept Forests 87-8-10 of
23.11.64, 04/87-10-10 of 5.3.73). This is mixed with herbaceous vegetation and
extensive areas of sago palm, mostly in natural stands. Soil
types vary considerably, but on average are moderately
fertile (PNG: Development Bank n.d.; 6), though land use
capability for arable and tree crops in much of the area has
been assessed as moderate to low (Loffler 1972:18-20 and
appended maps). Stretches along the two rivers have reason-
able capacity for improved pasture but, due to the quarantine
zone, cannot be used for cattle.

Climate

All study areas except Ningil, with its greater
altitude, have high humidity, relatively high precipitation
and mean maximum daily temperatures of about 25°C. Data
on rainfall for the immediate vicinity of the study areas
are scanty, but the majority of areas in Solomon Islands
where rainfall records have been kept have a mean annual
rainfall in excess of 2500 mm. This indicates that it is
among the wettest regions of the globe (Brookfield 1969:207).
The shortlived records for Tatamba government station and
Kolosori mining camp near Buotu give figures between 2946
and 3099 mm annually (Ash et al. 1974), whereas those for
Kirakira range from 3658 to 3739 mm. Mean annual rainfall
at Ossima, at approximately 2040 mm, is somewhat lower than
that indicated by its position (Loffler 1972:45), whereas
Ningil experiences an annual rainfall of 2032 to 2540 mm.
Monthly totals in general are highest from November to April.
Seasonal variations are relatively slight towards Ossima.
though they increase towards Bewani. For all study areas
the 'ideal conditions, in which the right amount of water
is available at the right time', are rarely achieved (Hodder
1973:25). In Solomon Islands in particular high mean
rainfalls tend to obscure high variability. For some East
Bauro villages, floods in the wet season sometimes give
way to water shortages so acute in the mid-year dry season
that they constitute a health hazard.

Natural hazards

In Bugotu, East Bauro and Ningil, where social
organization is based on a cultivar economy, the incidence and
threat of 'Act of God' disasters are a major development
constraint. Loss of a food garden in a landslip or flood,
even where it does not cause a famine, usually requires
re-allocation of labour-time to food production and often
has an adverse effect on cash-cropping. Though the effect
on infant development of pre or early post-natal mater-
nal undernutrition from such shortages is uncertain, preliminary
work by one education official in Solomon Islands suggests
that it can influence later performance at school (see also
Hornabrook 1972:44). These hazards greatly increase the
risk attached to investment in permanent settlements, farm
improvements, tree crops and contractual production.

Distribution of labour-time often is distorted as
much by the possibility of a disaster as by the occurrence.
On three occasions in 6 weeks during the 1977 wet season,
iclement weather or rumours of an imminent cyclone caused
East Bauro villagers to cease production, chop down trees
near the village, tie down houses, pack up their possessions
and retreat to a safer position. Actual occurrence of a
major disaster, which usually draws public assistance, can
be less disruptive to villagers than the costs of anticipation,
and of minor hazards. The 1975/76 floods in Bugotu, which
affected the subsistence cycle for almost two years after-
wards, were not 'serious' enough to attract aid. Chapman's
analysis on Guadalcanal shows that natural hazards also have
a significant effect on population movement. From 1850 to 1972 they were second only to government as a primary reason for movement, and caused 46 per cent more moves than any other single reason (Chapman et al. 1974: Table 2:1).

Government development plans are handicapped directly by the frequent recurrence of natural disasters, or indirectly by the need to divert resources from planned expenditure to disaster relief. Damage in the 1977 earthquake on Guadalcanal was estimated at $A0.8 to 1 million (New's Dum 6.5.77), equivalent to about 10 per cent of local revenue for that year. Small countries with a limited range of natural resources are particularly vulnerable to such disasters (Jacobs 1975:137). In the early 1970s a cyclone with winds of 150 km per hour wiped out the timber resources of northern Santa Isabel, causing its major private enterprise operation to move away from the island. New Hebrides planners determined that winds in excess of 110 km per hour 'meant that for some areas 'certain forms of agriculture cannot be practised' (Casals and Potten 1977:5).

In the Solomons region from 1948 to 1974 an average of one cyclone, and up to three, occurred each year (Hansell and Wall 1976:41). Ninety-five major earthquakes were recorded from 1952 to 1956. Thirty-five were felt in the Eastern Solomons during 1954-55 alone (Grovor 1958:25-6, 148). For the Solomons study areas in particular this means a strong possibility that a natural hazard will strike in the 4 to 10 years before new coconut plantings are bearing, and when they are most susceptible to damage.1 As a result, villagers are less responsive than they might otherwise be to government incentives to upgrade production. Use of fertilizers and high-grade seed nuts, though subsidized, involve investment of cash and labour-time that could be fruitless. Despite some political moves in the 1970s to regularize the crisis

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response' of government to unpredictable but frequent disasters, the scarcity of government resources makes even basic contingency planning a zero-sum manoeuvre, usually at the expense of development programmes. Frequent ad hoc diversion of resources previously committed to development not only reduces the rate of successful plan implementation, but has produced among villagers distrust, disinterest and rejection of plans.

Mineral resources

Minerals were one of the earliest natural resources to be identified in Papua New Guinea and Solomon Islands. Apart from surveys of land potential, which are generally not used in project planning because of their inappropriateness (Ward and Proctor 1980:22), minerals have been investigated in the vicinity of the study areas in more detail than most development prospects. Iron, copper, tin and other minerals were reported on San Cristobal as early as 1887 (Guppy 1887:11), and their low commercial potential periodically re-examined over the next century. Gold was discovered in the Sepik region in 1937 (Reed 1943:202). In the late 1930s the Sepik goldfields were the second most productive field in the then Mandated Territory, and provided employment for over 500 indigenous labourers (Nelson 1976:259). In the 1970s, after the fields had closed, small-scale gold-mining was still considered the 'only possible viable venture for the foreseeable future' (WSD:DAC minutes 21.11.73) for isolated communities in the Ningil vicinity. With the discovery of traces of petroleum in the early 1960s, the triangle of land between the then Dutch border, the sea and the Sepik River — most of the Sepik area — was reserved by the German Treasury for further prospecting (Bak and Clark 1979:366). Drilling for oil commenced near the border between the West and East Sepik in the 1970s (PNG:CP0 1973a:128) but, as elsewhere in the West Sepik, petroleum proved a chimera. The discovery of nickeliferous laterite, chrysotile asbestos, cobalt and chromite in the Bugotu area in the 1950s (Grover 1958:143-5) brought periodic geological investigations for
the next 20 years. Despite the high estimated cost of extraction (BSIP 1971a:81), further prospecting was planned for the 1980s (SI:CP 1978:22-3). Mineral exploration in Papua New Guinea expanded over the term of its first five year plan (PNG:CP 1973b:78-80). Early in 1980 the Somare government authorized the mining of its major gold and copper deposits in the inaccessible Star Mountains of the West Sepik and Western Provinces.

For villagers, as for their respective governments, mineral exploitation is a highly favoured development prospect. While the debate on large-scale foreign investment projects still rages at national level, several studies of their micro-impact (e.g. Chapman et al. 1974:6.167-77; Horlihy 1976; Jackson 1977) indicate that for otherwise neglected areas their value outweighs many disadvantages. Spin-off benefits from the investigations done have been considerable. For Bugotu villagers the most recent example, although brief, provided employment near home for six of the sample, a ready market for produce for many others, and a legacy of tools and equipment when the mining team left. Private enterprise often paid higher rates to employees than government, Kilimori villagers calculated, and provided a range of ancillary services such as health care and improved communications. Two analyses of village agricultural potential and capacity to benefit from large-scale mining and timber projects in the West Sepik predicted little consequent generation of village economic development (Kendal et al. 1975:11-16; PNG Development Bank n.d.:34), but the supposedly secondary advantages of these projects could only be provided by government at a cost that was not politically or economically feasible. As a result, they were not provided at all.

1. Griffin (1977), by comparison, suggests that multi-national corporations such as those can inhibit provision of basic needs.
Figure 2.12 Variations in mean average population density of census divisions, West Sepik Province
Population trends

Population size, structure and density for most countries with a predominantly non-mechanized agricultural economy is indubitably one of the most critical variables for development, either 'economic' or 'welfare'. Population data form one of the most commonly used planning indicators, and provide one of the simplest tools for monitoring social change. At the same time, the predictive value of demographic statistics tends to drop sharply below the minimum sample size set by the context and the tolerable sampling error. In Melanesia the variability of the total populations increases the sample size necessary for accuracy within a set confidence limit. Alternatively, by comparison with more homogeneous populations, it decreases the predictive capacity of a set sample size. Even at the level of a full census this variability, often compounded by the use of inexperienced enumerators, limits the applicability of national demographic data in plan formulation and assessment.

On a number of factors the apparent divergence between the figures for the sample populations and their respective national aggregates was small. The populations, as in other areas (Chapman 1969:126; Pirie 1971:13; Bathgate et al. 1973:9), were predominantly youthful, with between 42 per cent (Ningil) and 51 per cent (Kilimori) in the under-15 age group. The rate of natural increase ranged from 2 per cent in Bugotu to 4 per cent in East Bauro (Table 2.2).

Age-sex pyramids had the foreshortened appearance typical of many developing countries (Figs 2.13, 2.14), though the 'sister

1. A check of the work of one enumerator in East Bauro against the author's results showed several instances where age at census had been grossly misreported, sometimes by 20 years or more. In addition, comparison of the results of the 1970 and 1976 censuses showed a drop in total population for the area from 420 to 339 and in number of households from 77 to 59 (Croonowagon 1972:172; SI:80 1977:Table 2); whereas in the sample, drawn from only eight of the eleven areas listed in the 1976 census, the total was 425 in 68 households, which indicated an increase.
Figure 2.14  Age-sex Pyramids, West Sepik, total and sample populations
exchange bulge \(^1\) distorted the Kilimeri pyramid, and the Solomons had a greater proportion of advanced age. Except for Kilimeri all areas had high masculinity, and all had dependency ratios greater than unity with high child mortality in the under 2-year-old group.

Table 2.2 — Natural increase of sample areas per annum, over 4 years prior to survey

<table>
<thead>
<tr>
<th></th>
<th>BUGOTU</th>
<th>EAST BAURO</th>
<th>NINGIL</th>
<th>KILIMERI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Births per 100 population</td>
<td>3.0</td>
<td>5.5</td>
<td>4.7</td>
<td>6.7</td>
</tr>
<tr>
<td>Deaths per 100 population</td>
<td>0.6</td>
<td>1.3</td>
<td>1.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Natural increase per 100 population</td>
<td>2.4</td>
<td>4.1</td>
<td>3.3</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Figures do not add due to rounding

Source: field data 1975-77.

A more detailed analysis shows that such aggregates disguised a number of differences with major implications for each area's development. The rate of natural increase in Bugotu, for example, was approximately the same as that for Kilimeri, but it was held down in Bugotu by a relatively low birth rate which balanced the low death rate. In Kilimeri a high death rate, attributable mainly to malnutrition and paucity of medical care, restrained what could otherwise have been an explosive birth rate.

Differences in the occurrence of deaths among children of each age group point to differences in causality which,

1. See p. 88. The predominance of females has been consistently reported by DDA census patrols in all villages of the Kilimeri sample except Ilup. Awol, where it is particularly noticeable, is known in the area as p'ts mama (the place of women, or the place of wives).
combined with variations in village patterns of attributed causality, affect the efficacy of, and response to, such government intervention as maternal and child health care programmes. A dependency ratio which includes a high proportion of elderly people, as in Bugotu, has different implications for future population/land relationships than one where dependents are almost entirely children. Differences in the age at marriage, fertility, and preferred family size influence patterns of resource usage, and interlock with cultural beliefs and mores which further differentiate development capacity. As a result, identification of the time-frame and limits within which the data usefully can be applied is a particular problem for planning. In addition, the complexity of possibly relevant demographic variables is such that, without massive and probably disproportionate expenditure of planning resources upon maintenance of the demographic data base, their usefulness is dependent largely on the 'intuition and judgement' (Feeney 1975:59) of planners, who are rarely close enough to village communities to use their intuition and judgement to best effect.

Natural increase

From ex post data, Bugotu was the only sample area with a rate of natural increase lower than the national average (see Groenewegen 1972:12). For both West Sepik samples it was considerably higher than the rate of 1.6 percent reported in 1971 for the province as a whole (PNG: Bureau of Statistics 1971 a), which shared with Southern Highlands, Chimbu and East New Britain the smallest percentage increase in the total born in the province of any area of Papua New Guinea (Howlett et al. 1976:39). In Kilimori, however, this

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1. Howlett’s figures are adjusted for the change to the boundary between East and West Sepik, which caused an apparent decline in the population of West Sepik between 1966 and 1971.
was combined with a births to deaths ratio of 1.7:1 and a low population density. Ningil had a births to deaths ratio of 3.2:1 and almost three times the Kilimeri population per square kilometre, though the Ningil birth rate for some time had been lower than that for the full East Au Census Division (DDA census patrols 1964-72).\(^1\) Ranking of the four areas by their access to modern health care and general health status (PNG:NPO 1978e:49-50) roughly paralleled the inverse ranking by births per 100 population. This suggests (Fig. 2.19) that each of the study areas was at a different point of the lagged relationship between decreased mortality and a declining birth rate (Pirie 1971; van de Kaa 1971:29). These were significant differences, but even for the two areas with the highest birth rates — Kilimeri and East Bauro — population pressure on land for subsistence requirements was not an immediate problem. In fact, one of the major development constraints for Kilimeri and East Bauro was low population density. In the medium to long term, the time lag between a reduction in mortality and a reduction in the crude birth rate is therefore likely to be advantageous to the development of such areas.

**Child mortality and survival rates**

Tables 2.3 and 2.4 indicate that several changes have taken place in child mortality over the space of a generation. Though the data are liable to reporting error, especially among the older generation,\(^2\) differences in the proportion of surviving children born to women under forty (Table 2.3) accord with differences in general health status and access to health care. In Kilimeri the slightly lower mortality rate for the children of young or women probably is no more than can be explained by the briefer period

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1. DDA census data unfortunately are not entirely reliable over time, due to methodological variations (McArthur 1955:324-37) and changes in the census boundaries.
2. For example, McArthur's figures for the 1959 census of Gau-Bugotu give a 1.1:1 male to female ratio (1961:55). The preponderance of male births reported by the over-40 age group may be exaggerated.
Figure 2.15 Schematic relationship between birth rates, death rates and health ranking, showing rates of natural increase
<table>
<thead>
<tr>
<th>Female sample age group</th>
<th>BUGOTU Male</th>
<th>BUGOTU Female</th>
<th>BUGOTU Total</th>
<th>EAST BAURO Male</th>
<th>EAST BAURO Female</th>
<th>EAST BAURO Total</th>
<th>NINGIL Male</th>
<th>NINGIL Female</th>
<th>NINGIL Total</th>
<th>KILIMERI Male</th>
<th>KILIMERI Female</th>
<th>KILIMERI Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 40-year-old</td>
<td>10.2</td>
<td>8.7</td>
<td>9.5</td>
<td>13.9</td>
<td>21.8</td>
<td>17.8</td>
<td>30.2</td>
<td>16.3</td>
<td>23.4</td>
<td>33.3</td>
<td>29.8</td>
<td>31.4</td>
</tr>
<tr>
<td>40-year-old and over</td>
<td>29.6</td>
<td>30.7</td>
<td>30.0</td>
<td>38.6</td>
<td>37.4</td>
<td>38.1</td>
<td>34.3</td>
<td>30.5</td>
<td>32.5</td>
<td>40.6</td>
<td>36.0</td>
<td>38.0</td>
</tr>
<tr>
<td>All ages</td>
<td>24.2</td>
<td>23.3</td>
<td>23.8</td>
<td>29.8</td>
<td>31.2</td>
<td>30.5</td>
<td>32.8</td>
<td>25.2</td>
<td>29.1</td>
<td>37.2</td>
<td>33.2</td>
<td>35.0</td>
</tr>
</tbody>
</table>

1. Deaths as percentage of births of each sex and of total births.

Source: field data 1975-77
<table>
<thead>
<tr>
<th>Female sample age group</th>
<th>BUGOTU M : F</th>
<th>EAST BAURO M : F</th>
<th>NINGIL M : F</th>
<th>KILIMERI M : F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 40-year-old:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>birth ratio</td>
<td>1.2:1</td>
<td>1.0:1</td>
<td>1.0:1</td>
<td>0.8:1</td>
</tr>
<tr>
<td>death ratio</td>
<td>1.4:1</td>
<td>0.6:1</td>
<td>1.9:1</td>
<td>0.9:1</td>
</tr>
<tr>
<td>survival ratio</td>
<td>1.2:1</td>
<td>1.1:1</td>
<td>0.9:1</td>
<td>0.8:1</td>
</tr>
<tr>
<td>40-year-old and over:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>birth ratio</td>
<td>1.5:1</td>
<td>1.2:1</td>
<td>1.1:1</td>
<td>0.8:1</td>
</tr>
<tr>
<td>death ratio</td>
<td>1.5:1</td>
<td>1.2:1</td>
<td>1.2:1</td>
<td>0.9:1</td>
</tr>
<tr>
<td>survival ratio</td>
<td>1.6:1</td>
<td>1.2:1</td>
<td>1.0:1</td>
<td>0.7:1</td>
</tr>
<tr>
<td>All ages:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>birth ratio</td>
<td>1.4:1</td>
<td>1.1:1</td>
<td>1.1:1</td>
<td>0.8:1</td>
</tr>
<tr>
<td>death ratio</td>
<td>1.5:1</td>
<td>1.1:1</td>
<td>1.4:1</td>
<td>0.9:1</td>
</tr>
<tr>
<td>survival ratio</td>
<td>1.4:1</td>
<td>1.1:1</td>
<td>1.0:1</td>
<td>0.7:1</td>
</tr>
</tbody>
</table>

**Source:** field data 1975-77.
for which children of youthful mothers have been exposed to the risk of death (Groenewegen 1972:77). The decrease in the proportion of female deaths in childhood in Ningil is consistent with 20 years of mission influence and the decline of infanticide, but the continuation of a relatively high mortality rate for male babies is indicative of the gap which still exists between traditional and modern beliefs associated with birth and maternal health. The proportion of both Solomon Islands study areas shows the considerably lower mortality rate, among children of younger mothers, which normally would follow improved maternal health status; but in East Bauro, unlike the other study areas, the proportion of deaths among girl children of younger mothers is notably higher than that for male babies. In relation to the generally low levels of development, most of these changes in the study areas represent effects rather than causes.

From 54 per cent (Bugotu) to 90 per cent (Kilimori) of child deaths occur in the first 2 years of life (Table 2.5). For the Solomons sample approximately 20 per cent of deaths are during or immediately after birth, with 22 per cent and 34 per cent for Bugotu and East Bauro respectively in the period from birth to 6 months. In Kilimori, where maternal nutrition is particularly poor, deaths in the first 6 months represent almost 70 per cent of total child deaths, double the proportion of any other study area. Maternal mortality is also high. In 1975 four villages in the Kilimori sample, which contain 22 per cent of the census division's population, had 40 per cent of deaths recorded for the entire census division (CDA Pagoi M2 75/76). Approximately one-third of those deaths were among women of child-bearing age. In Ningil, which like Kilimori has a nutrition problem and has less than 10 per cent of its child mortality, losses are fairly evenly distributed between birth and 6 months and children of 6 months to 2 years. While losses from birth to 6 months indicate poor antenatal and post-partum maternal nutrition, those from 6 months to 2 years usually are attributable to poor infant feeding practices.
<table>
<thead>
<tr>
<th>Age at death</th>
<th>BUGOTU (N=97)</th>
<th>Eeast BAuro (N=118)</th>
<th>Ningil (N=115)</th>
<th>KIlimeri (N=111)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>At birth</td>
<td>21.4</td>
<td>14.6</td>
<td>15.2</td>
<td>27.1</td>
</tr>
<tr>
<td>Birth to 2 years</td>
<td>39.3</td>
<td>29.3</td>
<td>54.2</td>
<td>39.0</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>8.9</td>
<td>14.6</td>
<td>8.5</td>
<td>5.1</td>
</tr>
<tr>
<td>5 to 10 years</td>
<td>12.5</td>
<td>19.5</td>
<td>13.6</td>
<td>13.6</td>
</tr>
<tr>
<td>10 to 15 years</td>
<td>3.6</td>
<td>4.9</td>
<td>6.8</td>
<td>10.2</td>
</tr>
<tr>
<td>Over 15 years</td>
<td>14.3</td>
<td>17.1</td>
<td>1.7</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1. As percentage of deaths of each sex, and of total deaths. Figures do not add due to rounding.

Source: field data 1975-77
A third problem, that of the lower social status and the more arduous role usually assigned to girl children, is indicated by the higher proportion of females dying in childhood from 2 years onwards. This exceeds the proportion for males by 2 per cent (Bugotu) to 9 per cent (Kilimeri).

Both men and women in the Solomons samples display considerably more sophistication and correspondingly less belief in supernatural causes of death than West Sepik people. The cause of approximately 60 per cent of deaths in the Solomons was identified by informants as malaria or other physiological complaints,¹ compared with 18 per cent of deaths in Ningil and less than 10 per cent in Kilimori. For many informants in the West Sepik, however, sorcery or supernatural causes were a blanket reason used in lieu of better knowledge. 'If we know it is malaria or something like that then we do not think death is caused by sorcery', said one Kilimeri man. 'Influenza [often a fatal disease in Kilimori] is a sickness belonging to this unhealthy place we live in. It is not caused by sorcery.'

**Family size**

As Table 2.6 demonstrates, the total number of children for women between 40 and 50 years old is considerably higher in East Bauro than in the other study areas, but the average family size for both Solomons samples is almost identical,² 5.7 and 5.6 for East Bauro and Bugotu respectively. As family size is adjusted from the actual number of surviving children by the frequent practice of adoption of children from other parents, or by allowing other families to adopt one or two offspring, the average final family size is a more accurate measure of the perceived optimal number of

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¹ Those who specified malaria, tuberculosis, poliomyelitis, tetanus, measles and other diseases by name without exception were able to give an accurate description of the symptoms.

² See Groenwegen (1972:64,72) and McArthur (1961:39) for the difficulties in interpreting and projecting from these figures. The technique of duplicate information, collected separately from each parent and from adoptive parents, proved particularly useful in counteracting the problem of forgetfulness and underenumeration here.
Table 2.6 — Fertility, survival and family size\(^1\) by female age group

<table>
<thead>
<tr>
<th>Age group of women in sample</th>
<th>Born per adult female</th>
<th>BUGOTU (N=68) Alive Family per adult female</th>
<th>EAST BAURO (N=59) Alive Family per adult female</th>
<th>NINGILI (N=73) Born Alive Family per adult female</th>
<th>KILIMERI (N=62) Born Alive Family per adult female</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 19 years</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>1.0</td>
<td>1.0</td>
<td>1.3</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>25 to 29 years</td>
<td>2.5</td>
<td>2.2</td>
<td>2.7</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>30 to 34 years</td>
<td>4.0</td>
<td>3.8</td>
<td>4.0</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>35 to 39 years</td>
<td>7.6</td>
<td>6.5</td>
<td>6.6</td>
<td>5.3</td>
<td>4.0</td>
</tr>
<tr>
<td>40 to 44 years</td>
<td>6.4</td>
<td>5.2</td>
<td>6.0</td>
<td>4.5</td>
<td>4.0</td>
</tr>
<tr>
<td>45 to 49 years</td>
<td>6.3</td>
<td>4.2</td>
<td>5.7</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>50 years and over</td>
<td>6.7</td>
<td>3.8</td>
<td>7.2</td>
<td>4.7</td>
<td>-</td>
</tr>
</tbody>
</table>

1. Own children still alive, minus children adopted by others, plus children adopted into family.

Source: field data 1975-77.
children than is actual births. For both West Sepik areas this average, at 3.5 children, is much lower than for the Solomon’s samples, and reflects the generally lower levels of living and village-perceived development capacity of the West Sepik communities. With the exception of Ningil, where the proportion of children adopted in or out of the family is relatively small, families in all areas prefer to increase rather than reduce the number of their children by adoption. This is particularly the case in East Bauro, where the ratio of children adopted in to children adopted out is 12:1; and in Kilimeri, where a man may have several adopted children from a wife’s previous marriage or from the death of close kin. Bugutu, like East Bauro, has approximately one adopted child per household, but only about one child born in every three households has been given in adoption to another family. Adoption of a child into the family frequently is a deliberate choice of the adopting family, designed to adjust the ratio of boys to girls among surviving children or to compensate for losses through death or outmigration. The practice tends to confirm the evidence of fertility patterns that large families generally are regarded by villagers as an aid to their development.

Dependency ratios

One of the factors with most immediate applicability to levels of development and capacity for improvement to the status quo is the ratio between productive and non-productive members of the community. Using the 15 to 44 year old age group as the most intensive period of adult production, E. Young (1977) classifies the dependent age-group in Papua New Guinea as those under 15 years and those over 44 years. For the study areas, calculation of dependency ratios on this basis showsthat the burden of non-productive members of the community on the producers is greater than unity in all areas and is heaviest in Kilimori. In Table 2.7

1. Calculations based on consumption and labour units (Frazier 1973:25) give a more realistic breakdown of the contribution and cost of dependants by age; but given the number of other variables (such as health status, life expectancy, cultural patterns, educational facilities and cash-earning opportunities) which influence labour and consumption patterns, the simpler method is more useful for purposes of comparison between disparate areas.
<table>
<thead>
<tr>
<th></th>
<th>BUGOTU</th>
<th>EAST BAURO</th>
<th>NINGIL</th>
<th>KILIMERI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children under 15 to adults 15 - 45</td>
<td>1.0:1</td>
<td>1.1:1</td>
<td>0.9:1</td>
<td>1.3:1</td>
</tr>
<tr>
<td>Adults over 45 to adults 15 - 45</td>
<td>0.3:1</td>
<td>0.2:1</td>
<td>0.3:1</td>
<td>0.2:1</td>
</tr>
<tr>
<td>Dependency ratio</td>
<td>1.3:1</td>
<td>1.4:1</td>
<td>1.2:1</td>
<td>1.5:1</td>
</tr>
<tr>
<td>adjusted for life expectancy 1</td>
<td>1.0:1</td>
<td>1.1:1</td>
<td>1.2:1</td>
<td>1.5:1</td>
</tr>
</tbody>
</table>


Source: field data 1975-77.
this is adjusted for life expectancy, which at 48.5 and
49.5 years for males and females respectively in West Sepik
rural areas (PNG:PHD 1974:App.3.3) is roughly 10 years less
than for the Solomons group. While a reasonable comparison
can be drawn across the study areas for youthful dependents,
this difference in life expectancy distorts the actual
dependency of the 45 years and over age-group. In Kilimeri
the active proportion of older people is very small, and
regular involvement in hunting drops off markedly from about
40 years of age. For the other areas the contribution of
older people to gardening and cash-cropping often continues
well beyond the limits of average life expectancy, so that
only the ill or senile are totally dependent. Adjusted for
life expectancy, the dependency ratios indicate that the
need to support non-productive members of the community is
not in general a serious constraint on development. The
burden of young dependents on Kilimeri producers, however,
is intensified by the chronic malnutrition and poor health
status of the area to a point where the release of productive
man-hours for development is increasingly difficult.

While the figures here are from populations too
small to allow wide generalizations, they tend to support
the evidence from other studies that, for low income families,
per capita income increases with the number of children in
the family (Hopper 1975:17). Most villages in the study
areas could support considerably larger populations under
their existing system of subsistence production, and in some
cases their ability to improve their levels of living is
constrained by the lack of surplus productive labour. In this
situation the argument that high fertility and rapid population
growth are inimical to development (Coale and Hoover 1958)
has dubious relevance. To date large families are not
perceived as a problem (van do Kaa 1971:22) but as an impor-
tant resource. This village viewpoint is borne out by the
better housing, diet, cash incomes and mobility generally
enjoyed within each of the study areas by larger family units.
Resistance to the use of Western contraceptive methods is
more often related to church dogma than to cultural practices
Western methods are occasionally used in addition to, or instead of, traditional contraceptive practices, but their use has no demonstrable relationship to changes in fertility patterns. In all study areas children are regarded as an insurance and an investment, which *certainly* few villagers can afford to curtail. At the same time, the rationale behind maintenance of large families has changed with the thrust towards development. The modern perspective was summed up by one West Sepik villager:

> In the old days we had to have large families to be sure that some children would survive. Now we have to have large families to be sure that we will have some children at home in our old age, while others go out to earn money.

**Marriage patterns as a factor in development**

In pre-contact Melanesian societies marriage arrangements frequently served the triple purpose of establishing political, economic and procreative bonds (Thurnwald 1916:259,320) whereby villagers attempted to improve the welfare of their nuclear family or clan group. In the post-contact period, the range of political and economic matters which could be tapped by judicious marital liaisons was greatly extended; and in some areas, such as the New Guinea Highlands and central Papua, cash became an important and inflationary element in the marriage compact. In other areas, such as Bugotu, early conversion to Christianity caused a decline in the number and amount of traditional brideprice exchanges (see also Bathgate 1975:239), but also inhibited the use of cash as a substitute for traditional wealth in marriage contracts. Ties of kinship and marriage often were the major determinant of a candidate's success in modern elections, of informal village access to political and economic power and, paradoxically, of village ability to do without them. In the 1970s villagers with wide-ranging ties frequently were able to substitute kinship obligations for cash to gain access to development opportunities outside their immediate vicinity.
On Santa Isabel, the existence of an island-wide chiefly hierarchy and strong Anglican church had a unifying effect which facilitated the expansion of traditional contact networks through marriage. Eleven per cent of marriages in the Bugotu area were contracted with partners from other parts of the island, and a further 6 per cent with partners from a different island (Table 2.8). For the other study areas marriage was almost entirely endogamous, and marriage-derived contacts were very closely constrained. Though the East Bauko group were relatively mobile, less than 3 per cent of marriages were contracted with people from other parts of San Cristobal. Ningil and Kilimeri marriages were almost entirely within their respective traditional boundaries and language groups. The Kilimeri language extended (with the exception of one village) through the entire census division, but over half the sample had taken partners from their natal village, and 90 per cent had gone no further afield than the next village. By the 1970s the privileges of one-talk hospitality and unlimited assistance usually were provided freely only to kinsmen; so that the West Sepik people in particular were 'traditionally' isolated by the narrow spread of their kinship and marriage ties, and were dependent on other avenues for access to the modern sector.

For the Kilimeri a significant constraint on the expansion of kinship contacts was the dominance of 'sister exchange' marital alliance. Under this system a man who wished to marry had to provide a female relative as wife for a male member of the family or clan from whom he sought his wife. A man with no sisters could marry on the understanding that a female child of the union would be returned to his wife's clan; or could use as sister-substitute the daughter of a close relative, whom he compensated with gifts of food and traditional valuables. The system was flexible enough to accommodate most eventualities, and in most cases obviated the need for compensatory 'bride-price' payments (see also Gell 1975:53-4). With the monetization of the economy, bride-price became a quasi-legitimate alternative to sister exchange, but the socially and economically disruptive
<table>
<thead>
<tr>
<th>Place</th>
<th>Never married</th>
<th>Married</th>
<th>Married more than once</th>
<th>Married own area</th>
<th>Married neighbouring area</th>
<th>Married other area, same SD or island</th>
<th>Married outside SD or island</th>
<th>Average marriages each married person No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% sample</td>
<td>No.</td>
<td>% sample</td>
<td>No.</td>
<td>% sample</td>
<td>%marriages</td>
<td>%marriages</td>
</tr>
<tr>
<td>BUGOTU</td>
<td>30</td>
<td>21.0</td>
<td>113</td>
<td>79.0</td>
<td>14</td>
<td>9.8</td>
<td>68.5</td>
<td>14.2</td>
</tr>
<tr>
<td>EAST BAURO</td>
<td>21</td>
<td>15.6</td>
<td>114</td>
<td>84.4</td>
<td>30</td>
<td>22.2</td>
<td>78.5</td>
<td>15.4</td>
</tr>
<tr>
<td>NINGIL</td>
<td>33</td>
<td>21.2</td>
<td>123</td>
<td>78.8</td>
<td>9</td>
<td>5.8</td>
<td>98.5</td>
<td>-</td>
</tr>
<tr>
<td>KILIMERI</td>
<td>19</td>
<td>13.2</td>
<td>125</td>
<td>86.8</td>
<td>24</td>
<td>16.7</td>
<td>100.0</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: field data 1975-77
potential of bride-price marriage was minimized by pegging the bride-price at $600. This was four times the amount paid by Ningil men from low-income families, and unattainable for most men in Kilimeri. Compensation prestations were also expected to be in cash which, due to the very low per capita cash incomes, deprived the system of much of its traditional flexibility.

As a result, the sister exchange system in the 1970s reinforced the dominance of older men, who were more likely to have daughters or additional sisters available to contract multiple marriages, and tended to drive young productive men out of the village. The resultant social structure was one of the older men married to one or more younger wives, and young men often married to women many years their senior, who had been widowed and not claimed by their previous husband’s kin. Marital cohesiveness was weak, especially where it was not sustained by economic interests. Wives frequently dissociated themselves from their husbands' concerns, and gave minimal support to the development projects of their kin by marriage. A large proportion of older men refused to educate their daughters, on the grounds that it would encourage resistance to sister exchange marriage. The spatial distribution of kinship networks in most cases was insufficient to give Kilimeri villagers informal access to development opportunities outside the cordon sanitaire or around the nearest government centre at Bwani, so that they were almost entirely dependent on development resources close at home.

Variations between the study areas in the age of first marriage (Table 2.9) and in arrangements for remarriage also affected, and were affected by, levels of development. In Bugotu most young men did not marry until they were 25 to 30 years old. Many spent the early years of adulthood away from the village on wage employment, from which they accumulated sufficient cash and, if possible, experience to start a cash-earning project at home after marriage. In East Bauro, young men married much earlier, and those who were not
<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Suir</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>75 &amp; over</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 19</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>82.6</td>
<td>28.0</td>
<td>-</td>
<td>100.0</td>
</tr>
<tr>
<td>20 to 24</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>63.6</td>
<td>36.4</td>
<td>-</td>
<td>71.4</td>
</tr>
<tr>
<td>25 to 29</td>
<td>80.0</td>
<td>20.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100.0</td>
<td>-</td>
</tr>
<tr>
<td>30 to 34</td>
<td>-</td>
<td>83.3</td>
<td>-</td>
<td>16.7</td>
<td>25.0</td>
<td>75.0</td>
<td>-</td>
<td>-</td>
</tr>
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<td>35 to 39</td>
<td>-</td>
<td>109.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>92.9</td>
<td>-</td>
</tr>
<tr>
<td>40 to 44</td>
<td>-</td>
<td>14.3</td>
<td>85.7</td>
<td>-</td>
<td>-</td>
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<td>109.0</td>
<td>-</td>
</tr>
<tr>
<td>45 to 49</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>50 to 54</td>
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<td>81.8</td>
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</tr>
<tr>
<td>60 to 64</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>65 to 69</td>
<td>-</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100.0</td>
<td>-</td>
</tr>
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<td>70 to 74</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>75 &amp; over</td>
<td>-</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Suir: field data 1975 - 77.
<table>
<thead>
<tr>
<th>AGE (years)</th>
<th>PORDON</th>
<th>BOYCE</th>
<th>EAST MAPO</th>
<th>SILOM</th>
<th>KILINERI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never married</td>
<td>Now married</td>
<td>Widowed</td>
<td>Never married</td>
<td>Now married</td>
</tr>
<tr>
<td>15 to 19</td>
<td>66.7</td>
<td>75.0</td>
<td>90.0</td>
<td>90.9</td>
<td>87.5</td>
</tr>
<tr>
<td>20 to 24</td>
<td>55.6</td>
<td>44.4</td>
<td>55.6</td>
<td>44.1</td>
<td>12.5</td>
</tr>
<tr>
<td>25 to 29</td>
<td>25.0</td>
<td>75.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>30 to 34</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>35 to 39</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>40 to 44</td>
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</tr>
<tr>
<td>45 to 49</td>
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<td>100.0</td>
<td>100.0</td>
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<td>55 to 59</td>
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<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>60 to 64</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>65 to 69</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>70 to 74</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>75 &amp; over</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: field data 1975 - 77
fortunate enough to gain a place at secondary school often had little, if any, contact with the modern sector before they settled down. The diffusion of information and cash from the modern sector to the village — which resulted from the continual circulation of Solomon Islanders between their home community and other villages, non-village centres and towns (Chapman 1969:132) — was thus notably reduced for East Bauro. In Kilimeri, where outside employment was scarce and the social incentives to return home once employed were few, it was almost non-existent.

In villages where the levels of living were low, the young people who married early and settled down to village-based development often were not those who had completed the modern 'rites of passage' to maturity but those who had failed to qualify. In addition, marginal levels of living and low population densities made breeding populations demographically precarious (Bulmer 1972:120). In Kilimeri one consequence was the 'recycling' of older widows for breeding purposes. This in turn contributed to the low life expectancy of females, which deprived Kilimeri of the development capacity provided in the other study areas by women who had ceased child-bearing.

Conclusion

Situational assessment for planning purposes usually emphasizes natural and human resources. Many of these are quantifiable, and tend as a result to take precedence over variables which cannot be weighed against them in numerical terms. As this chapter demonstrates, the major quantifiable variables often have limited predictive capacity, especially for small, isolated populations. The diversity which can

1. The procreative function in Kilimeri takes such precedence over other aspects of marriage that the Pidgin term 'mama' is used for both wife and mother, and married people refer to themselves as 'single' if they have no born, as opposed to adopted, children. (see also Thurnwald 1916:258-9).
appear even among populations produced under identical demo-
graphic conditions 'warns against any generalization whatso-
ever except that survival of the population hinges on the
birth and survival of suitable males and females' (McArthur
1980:2-3).

It also warns against the assumption that the
physical environment is static, and that the possession or
lack of particular physical resources is the primary deter-
minant of levels of development. Even where the same basic
parameters apply, minor differences can cause widely divergent
results. All areas are subject to natural hazards, for
example, but only in East Bauro does anticipation of disasters
regularly interfere with work schedules and production. All
areas have problems of communications and access, but they
cannot be fully explained in terms of locational disadvantage.
In fact, the least isolated study area in a socio-economic
sense is Bugotu, which has some of the greatest problems of
location and physical distance from centres of development.
None of the areas suffers from an acute lack of physical
resources, but village and outside perceptions of the value
of these resources vary, and have fluctuated over time. The
influence of ostensibly quantifiable variables such as
physical resources, distance, spatial distribution and
environmental factors is compounded or ameliorated so much
by other variables that in isolation they show little direct
relationship with levels of development. The 'other variables'
which have been most influential for the study areas fall
into two categories: cultural and areal idiosyncracies, and
contact patterns, which are examined in the following
chapters.
CHAPTER 3

DIVERSITY AND AFFINITY: THE CULTURAL PARAMETERS

Most national development plans and policy statements refer to 'the villages' or 'the rural areas' as if they were homogeneous units. The characteristics ascribed or implied for the hypothetical village unit usually are those of a stereotype known as the 'Melanesian Way' or, for broader coverage, the 'Pacific Way'. This concept postulates a comfortable level of non-monetary subsistence, and a 'primitive affluence' (Fisk 1966:23) which allows villagers to enter the monetary sector 'from a point a number of steps above the poverty line' (Fisk 1971:378). Social organization and land ownership are idealized as communal, cooperative and egalitarian. Decision-making for the society is attributed to a process of consensus, in which courtesy prevails and confrontations are minimized. Leadership status reputedly is acquired by individual merit, maintained by manipulation of a network of societal and familial obligations, and demonstrated by social responsibility and superior achievement. Wealth should be exhibited by gift exchanges and distribution of largesse. Accumulation for individual gain is considered anti-social. Care for the young, security for the aged and weak, and assistance when in need are theoretically guaranteed by the umu-talk system, which obliges members of a community or clan to respond to another's request for help. The dominant socio-economic unit is generally assumed to be an indefinitely extended family. Finally, and probably the most romanticized element of the stereotype, is the belief that money is not necessary.

The stereotype as a whole is quite adequate as a simplified model for non-specific national purposes such as political mobilization or development of national unity. Each attribute of the model has some relevance for some of the study areas. The main problem lies less in the actual premises of the stereotype than in its application. Its use for planning purposes is a simplification in overt conflict
with reality. As a factual representation of the 'cultural parameters' for any one area, which is the implicit conclusion from its use in the pragmatic field of development planning, it is dangerously misleading. It is argued here that underdevelopment is a common end-product of a complex range of apparently unrelated variables, the cultural elements of which show significant differences from the stereotype.

Language and communication

Among the factors which limit information flows, reinforce isolationism and inhibit development are language constraints and low levels of literacy. The communications problem is particularly acute for the Sepik area, where 28 per cent of all Papua New Guinea's listed languages is shared among 11 per cent of the country's population. Ningil is an isolated language group, linguistically different from but with some ties to nearby groups, and spoken by only about 500 people. In the Ningil sample the maximum proportion who could communicate in any one of the nearby languages was 3 per cent, while over 90 per cent knew no traditional language but their own. The Kilimere language is used by approximately 2000 people, which gives it considerably more spread than the average Sepik population to language ratio of 1300:1 or the ratio along the Papua New Guinea border of about 500:1 (Laycock 1973:54-5). The Kilimere sample had no knowledge of other traditional languages.

The average population to language ratio for Santa Isabel and San Cristobal is roughly the same as for the Sepik, but traditional language barriers have been largely overcome in Bugotu. In their own 'mental maps' (Gould and White 1974), the Bugotu sample reduced the ten language divisions identified by Capell (1962:179-84) to five major languages: Kia at the other end of the island and four in the Bugotu vicinity. Half the sample were familiar with at least one other language, and almost 20 per cent spoke Kia. The Bugotu language itself has been well-documented since it was first used in writing by Bishop Patteson in the mid
1800s (Ivens 1940). Forty-one per cent of the Bugotu sample could read their own language and 32 per cent could write it, in each case a higher percentage than could read or write English and Pidgin. San Cristobal, by comparison, has two major divisions, Arosi and the Bauro-related group (Fox 1925), but only 25 per cent of the East Bauro sample were aware of the similarities between the languages of the eastern half of the island. Another 25 per cent were convinced that they could not communicate with any other area. The ability to communicate with the more developed Arosi peoples in their own language was limited to 5 per cent of the East Bauro sample.

On the whole such expansion of communication horizons as has taken place has been towards the modern sector, with Pidgin and English. Papua New Guinea Pidgin, the rapidly expanding lingua franca for most parts of the country, was spoken by 85 per cent of the total West Sepik sample, and understood to some extent by more than two-thirds of the women (Table 3.1). Solomon Islands Pidgin, far more anglicized than the Papua New Guinea version, was used by less than 60 per cent of the Solomons sample and showed a slight correlation with education which was not evident in the West Sepik. The Bugotu sample had a distinct advantage for modern sector contact in the ability of almost 20 per cent to communicate to some extent in English. This was more than double the proportion in any other study area, where use of English was rare even when it was understood. Bugotu had the further advantage that English language skills were not confined to young school-leavers, but extended into the mature age group which had most power over patterns of development. In addition, the relatively high proportion who could read and write enabled Bugotu villagers to circumvent locational constraints and blockages of official information channels. In Kilimori, only 4 per cent of the sample

1. Capell (1962:179-84) identifies seven language divisions on San Cristobal, but the Bauro languages are sufficiently alike to allow communication between the divisions.
<table>
<thead>
<tr>
<th>Place and sex</th>
<th>ENGLISH</th>
<th></th>
<th></th>
<th>PIDGIN</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Speak</td>
<td>Read</td>
<td>Write</td>
<td>Speak</td>
<td>Read</td>
<td>Write</td>
</tr>
<tr>
<td>BUGOTU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>26.3</td>
<td>23.7</td>
<td>17.1</td>
<td>81.6</td>
<td>44.8</td>
<td>40.8</td>
</tr>
<tr>
<td>Females</td>
<td>9.0</td>
<td>7.5</td>
<td>7.5</td>
<td>28.4</td>
<td>19.4</td>
<td>13.4</td>
</tr>
<tr>
<td>Total</td>
<td>18.2</td>
<td>16.1</td>
<td>12.6</td>
<td>56.7</td>
<td>32.9</td>
<td>28.0</td>
</tr>
<tr>
<td>EAST BAURO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>7.7</td>
<td>10.2</td>
<td>7.7</td>
<td>83.3</td>
<td>24.4</td>
<td>20.5</td>
</tr>
<tr>
<td>Females</td>
<td>3.5</td>
<td>3.5</td>
<td>1.8</td>
<td>26.3</td>
<td>12.3</td>
<td>10.5</td>
</tr>
<tr>
<td>Total</td>
<td>5.9</td>
<td>7.4</td>
<td>5.2</td>
<td>59.2</td>
<td>19.2</td>
<td>17.8</td>
</tr>
<tr>
<td>NINGIL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>10.8</td>
<td>7.2</td>
<td>4.8</td>
<td>98.8</td>
<td>29.0</td>
<td>20.4</td>
</tr>
<tr>
<td>Females</td>
<td>5.5</td>
<td>4.1</td>
<td>1.4</td>
<td>68.5</td>
<td>24.7</td>
<td>15.0</td>
</tr>
<tr>
<td>Total</td>
<td>8.3</td>
<td>5.8</td>
<td>3.2</td>
<td>84.6</td>
<td>26.9</td>
<td>17.9</td>
</tr>
<tr>
<td>KILIMERI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>3.7</td>
<td>2.5</td>
<td>2.5</td>
<td>96.3</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Females</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>74.6</td>
<td>1.6</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2.1</td>
<td>1.4</td>
<td>1.4</td>
<td>86.8</td>
<td>4.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>

1. Includes partial ability to communicate.
Source: field data 1975-77
could read or write even at an elementary level. Effective communication required verbal intercourse, but such information flows were constrained by physical and cultural isolation, limited outside contact, and the paucity of government patrolling.

Leadership

The importance of leadership status and skills to community welfare, change and development, and to relations between villagers and government, was one of the pillars of British colonial administration. From a very early stage of contact history, leadership was one of the cultural patterns most affected by government intervention. The absence in much of Melanesia of clearly identifiable hereditary leaders whose palatial housing, ornamentation and luxury, finery and ceremony, in brief, conspicuous consumption...creates those invidious distinctions between rulers and ruled so conducive to a passive — hence quite economical! — acceptance of authority (Sahlins 1970:214)

led, first, to government appointment of 'leaders'; and second, to anthropological investigations which produced the 'Melanesian bigman' stereotype (e.g. Oliver 1955; Sahlins 1970). In areas which had a traditional chiefly system, such as Bugotu, the appointment of government headmen who lacked traditional authority often caused considerable disruption, and resulted eventually in a dual system of village leadership. In areas like Kilimeri, where the bigman model did not apply and where social organization was largely acephalous (see Sillitoe 1977), the appointment of government 'leaders' was equally disruptive, and even in the 1970s their modern equivalents hold an uneasy legitimacy. Increasing concern at national level during decolonization about the role of traditional leaders, especially in Solomon Islands, revived the status of traditional leaders vis-à-vis their modern political equivalents. Village authority was often
fragmented by conflicting claims on village support and by an accumulation of specialized leadership roles. These included (in addition to the traditional divisions of leadership) the local government councillor, the teacher, the catechist or pastor, the leading entrepreneur, and the chairmen or instigators of small 'clubs', development projects, and social welfare organizations — most of whom operated independently.

In Papua New Guinea the stereotype bigman did not have hereditary legitimacy, but acquired his status in a variety of ways (Brown 1963; Salisbury 1964; Parker 1969; Epstein 1972; Chowning 1973), which enabled him to mobilize his community for the purposes he directed. In the individualistic and fluid Kilimeri system, by comparison, status as a traditional or government-sponsored bigman conferred very little authority whereby leaders could direct or organize communal activities. Village leadership was the collective responsibility of the older men, who could advise and exhort, but could not compel obedience (Thurnwald 1916:283; Huber 1977:13-14). Though elders often used the mediation of an articulate younger man in dealings with representatives of the modern sector, traditional social controls such as sister exchange marriage and sangguma (death sorcery) ensured that ambitious younger men did not usurp their seniors' position. Councillors and ex-councillors in the Kilimeri sample claimed that one or two council terms were an aid to traditional status, but while in the position they had very little control of subsistence or development activities. Unless reinforced by traditional rights (with which the council role often clashed), the councillor's position was that of intermediary with outside authority and often became that of scapegoat.

In the other study areas adaptation to modern leadership requirements was more advanced, and traditional and modern leadership roles were at least partially integrated. Villagers had an established leadership hierarchy for most eventualities. In Ningil the traditional leadership clique
usually included a fight leader, a medicine man, the largest landowners and the owner of the greatest number of pigs and sago palms. Policy was decided by the leaders as a group—though not necessarily meeting in a group (PNG:LL AS/AR 12 of 69/70). Younger men with more modern education and experience were included to advise or liaise on 'modern' matters. Such positions became 'traditionalized' as modern avenues to status were incorporated into the village hierarchy of achievement. The councillor in Ningil was recognized as a bigman, partly perhaps because he was the only man in the village to maintain two wives and two families in defiance of the mission, but mainly for his modern economic achievements and political skills. The family of an established bigman had an hereditary advantage (see also Connell 1977a; Standish 1978a). From an early age his next of kin was groomed for succession, so that the leadership on the whole was conservative.

Minor and circumstantial variations in the way traditional and modern leadership roles were integrated caused marked differences in the developmental potency of village leadership. In East Bauru the relocation of inland peoples on the coast, the consequent social derangement, the imposition of rigid colonial concepts of land ownership over the traditionally flexible usufruct system, and the establishment of permanent settlements reduced the effectiveness of exclusively traditional leaders. This expanded the scope for acquisition of leadership status by unorthodox means. Traditionally East Bauru did not have the sophisticated chieftainship systems of other parts of the island (Fox 1925: 76, 297-300). In each of its small, frequently shifting settlements the first person to take up residence and work an unoccupied stretch of bushland could control subsequent settlement, and thus became the de facto leader and decision-maker. Due to the low population densities and fluidity of community membership, even the first 'settler' did not 'own' land in the Western sense (Campbell 1950), but his primary rights over its usage enabled him to accumulate around him a community which would conform with his wishes.
A main raison d'être behind this system, defence, disappeared after contact and pacification. Government headmen, village constables and others with modern sector qualifications joined the decision-making hierarchy, and the leadership was fairly constructively balanced.

When self-government and independence became a conceivable proposition this balance was disturbed by the national-level emphasis on land rights and the role of chiefs. Some East Bauro villagers, especially the families of early settlers, began to assign chiefly status to senior landowners. Disputes over the rights of different claimants to land-owning status caused village factionalism which inhibited attempts at community mobilization for development projects. The weakness of top leadership encouraged a proliferation of minor claims to authority through clan relationships, group projects, or non-traditional organizations. At the time of the survey approximately one-third of the total East Bauro sample, and about half the men, held one or more positions of 'authority' (Table 3.2) or leadership in their villages. Council or committee positions were heavily dominated by the families of landowners and government headmen. In at least one village the implicit threat of eviction was a strong disincentive to change council representation. Due to the uncertainty of their rights as relatively recent migrants to the coast, and to the low levels of resident education, East Bauro villagers were particularly susceptible to exploitation by their leaders.

The leadership structure in Bugotu, by comparison, was equally complex and often riven by rivalries, but was clearly defined. This clarity of definition and the specialization of leadership roles aided stability, but was often at variance with developmental needs. Traditionally secular leadership was divided into three major roles: the Vanagi or hereditary chief, the Warthaga or warrior, and the Thaba or wealthy man. These were supported by the

1. Vanagi in the Bugotu language also means 'a full-grown person' and is associated with wisdom. Thaba means 'great' (Ivens 1940:68,76) and is applied here in a quantitative sense.
### Table 3.2 — Adults with positions of authority within the village; and organizational membership

<table>
<thead>
<tr>
<th></th>
<th>BUGOTU No. % of sample</th>
<th>EAST BAURO No. % of sample</th>
<th>NINGIL No. % of sample</th>
<th>KILIMERI No. % of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold at least one position</td>
<td>31 21.7</td>
<td>43 31.9</td>
<td>9.0</td>
<td>9 6.2</td>
</tr>
<tr>
<td>Hold more than one position</td>
<td>10 7.0</td>
<td>15 11.1</td>
<td>2 1.3</td>
<td>0</td>
</tr>
<tr>
<td>Hold position previously but not now</td>
<td>13 9.1</td>
<td>7 5.2</td>
<td>12 7.7</td>
<td>16 11.1</td>
</tr>
<tr>
<td>Total present or previous office-holders</td>
<td>44 30.8</td>
<td>50 37.0</td>
<td>26 16.7</td>
<td>25 17.4</td>
</tr>
<tr>
<td>Associated with at least one club or organization</td>
<td>124 93.7</td>
<td>115 85.2</td>
<td>42 26.9</td>
<td>0</td>
</tr>
</tbody>
</table>

**Source:** field data 1975-77.
elders of the village. The chief priest was the 'man of the sacrifice' in offerings of first fruits (Bogesi 1948), and interceded with the spirits and deities, but greatest mana usually was associated with the vunagq. The concept of mana, widespread in Polynesia but rare in Melanesia, has been interpreted in a number of ways (Firth 1940:317). In general terms, it is an impersonal psychic force which influences prosperity, welfare and community achievement, and therefore is theoretically applicable to modern leadership and development. In fact, in Bugotu at least, modern political leadership often derived from factors which were antithetical to mana leadership. As a result, mana by the 1970s usually was dissociated from 'development'.

Traditionally women on Santa Isabel, unlike the other study areas, had access to leadership status. Pora, sister of a major nineteenth century chief, was a chief in her own right, held power of life and death, and took part in head-hunting expeditions (Bogesi 1948). Though Bugotu, women, like the male hereditary chiefs, rarely attempted the transition to the acquired status of modern politics, the matrilineal system of land inheritance gave the 'female vote' considerably more influence in Bugotu than in the other areas. This aided informal projects, although formal development matters were almost entirely under male leadership, and tended to follow orthodox patterns determined at council or national political level.

For Santa Isabel as a whole the strong ties between the powerful Anglican church and the secular leadership, instigated by Welchman and the Soga at the turn of the century (see Ch. 4) were consolidated in the 1970s by the choice of the island's bishop as paramount chief. This unified the decision-making hierarchy to an extent that was exceptional for the study areas. As a result, the diversification of positions of authority at village level, while only slightly less than in East Bauru, was far less disruptive, and conflicts were more easily adjudicated. Nonetheless, due to the amount of differentiation in leadership roles and the lack of
overlap between them, the absence of recognized leaders caused problems with village decision-making and frequently disrupted communal forward planning.

In the 1970s the ability to acquire cash wealth was the predominant characteristic of the most influential leaders, in all study areas. For many would-be leaders a successful development project provided the necessary income and consequent status. This, however, did not often involve broad-based community development. On the contrary, community development and an overall increase in per capita cash incomes tended to diminish the influence which wealthy leaders had by virtue of their cash-earning ability. Would-be leaders usually opted for individual or clan projects which emphasized the distinction between themselves and their communities, and gave them increased scope for traditional or quasi-traditional patronage. Modern politics was rarely seen as a direct route to power. More often it was regarded as one of the quickest ways to wealth (Standish 1977b:6) and, through wealth, to the influence which a parliamentary or council position per se did not guarantee. In this situation mobilization of village communities for the economic or welfare development of the community as a whole was largely a technique employed by established leaders and elected representatives to consolidate their position. It depended, first, on unequal development and the emergence of village elites.

Adaptation of subsistence production systems

Most development planning in Papua New Guinea and Solomon Islands has been based on the premise that their rural communities are shifting cultivators1 (with some minor differentiation of cultivation practices), living in permanent settlements and organizing many of their activities communally.

1. See Wattos (1960:65) for a useful classification of the major types of subsistence economy involving shifting cultivation.
Increasing awareness of the efficiency of such systems (as Lipton 1968; Clarke 1971) encouraged a long-standing belief among administrators that the subsistence base was a stable, if not static, form of agricultural production on which cash-crop development could be grafted without loss of subsistence efficiency. In the 1970s some officials expressed concern that 'food production has been undervalued, and cash incomes given too much prominence as a yardstick of development' (BSIP:CFS 1974:1). Evidence that cash-cropping endangered subsistence efficiency, and frequently competed with food production (Bathgate 1975; PNG:NPO 1978c; Harris 1978; Grossman 1979), polarized official perceptions of welfare and of economic development needs. The result was a dual emphasis on protection of traditional subsistence systems and on rapid expansion of village cash-earning activities, and a consequent dilemma for planners in the reconciliation of aims which were widely regarded as mutually exclusive.

All study areas deviate from the national stereotype of the subsistence economy to a greater or lesser extent, with enormous variation in the consequences for village welfare and economic development. The Kilimeri are essentially hunter-gatherers whose previously shifting patterns of residence have become semi-permanent, due to their dependence on their sago staple and to the dislike of government officials and missionaries for frequent village relocation. Ningil and East Bauro villagers are in the process of adjusting to fixed-residence shifting cultivation, the former from a hunter-gatherer and sago economy, the latter from an inland gardening economy with high residential mobility. The Bugotu sample are multi-local (see also Frazier 1978:4) both for residence and cultivation.

The hunter-gatherer system

Sahlins has argued that for the hunter-gatherer 'the food quest is intermittent, leisure abundant, and there is a greater amount of sleep in the daytime per capita per year than in cher conditions of society' (Sahlins 1974:14).
While this description is not inconsistent with the Kilimeri hunter-gatherer system, the marginal nature of Kilimeri subsistence in the 1970s contradicts his belief that 'there is nothing... to the convention that hunters and gatherers can enjoy little leisure from tasks of sheer survival' (1974: 35).

The Kilimeri subsist largely on sago, which at certain times of year may be the sole component of the diet; but the main focus of Kilimeri subsistence is feral pig. Though game is reasonably plentiful in the Kilimeri bush, the actual consumption of pigmeat is extremely variable. In terms of nutrition it rarely justifies the labour output. Over a six-week period only two pigs were caught between the four main villages of the survey, each of which involved 2 or 3 weeks hunting. Hunting is so bound into the social organization that domestic pigs are no substitute (cf. Bulmer 1968; Huber 1977:24), though its main significance in the 1970s is that of a useful pastime for young men who have been unable to find wage employment. Often it is a constraint on other forms of village development. Many Kilimeri men openly admit that while game is available the psychological satisfaction of the hunt will take precedence over cultivation and cash-crop development, though its food productivity is low.

This situation is exacerbated by government restrictions on the number of shotguns permitted near the sensitive border between Papua New Guinea and Indonesia (PNG:DDA Wowak

1. Sahlin's quotes estimates of labour-time on food production in other hunting and gathering communities as between 2 and 5 hours per day (1974:15,21,34-35). Due to the limited time available the author was unable to collect equivalent data for Kilimeri, and the irregularity of their subsistence activities made it difficult to estimate. Nonetheless, by comparison with the other study areas the Kilimeri spent less time each day at leisure in the village and, from observation of a full day's schedule with several villagers, the time spent in relaxation during chores away from the village was roughly the same.
67-3-7 of 5.4.65). Government officials for many years claimed that strict limits were necessary to prevent smuggling of shotguns across the border and, somewhat inconsistently, to prevent game being shot out, to the supposed detriment of local nutrition. The embargo on this most coveted possession, which to a hunting community is an incentive good on a par with the steel axe or spade to a gardening society, is a double handicap to Kilimeri development. First, it artificially maintains the social significance of traditional hunting methods, and inhibits nutritional improvement by more efficient hunting of feral pigs or by reallocation of labour-time to domestic pig husbandry. Second, it reduces the utility of money to Kilimeri communities, and encourages a preoccupation with shotguns to the exclusion of other issues.

The shotgun issue also affects cash-earning from hunting. Though crocodiles allegedly are plentiful, they rarely appear within convenient range, and the cash returns for skins are not considered an adequate incentive for the arduous and often risky traditional hunting methods. The inability of the area to commercialize traditional hunting skills sets a limit to the further development of its main specialization. Few villagers can afford the capital outlay for large quantities of salt to preserve crocodile skins and game; or the expenditure on cartridges at 25 toea (30 cents) apiece to 'hire' a shotgun hunter; or the purchase and maintenance of a hunting dog.

In more general terms, the social organization of the Kilimeri hunter-gatherers inhibits development in two important respects. First, it means that cash-cropping, the main element of Papua New Guinea development programmes, involves a double transition: a massive social transformation to permanent or semi-permanent subsistence cultivation, and a further adjustment to production for the monetary economy. Second, the existing system encourages a relatively high degree of individualism. Mobilization for a communal activity is difficult and infrequent, as pig hunts are the
only event for which villagers regularly unite (see also Reed 1943:42). The lack of rigid community bonds allows an individual to mobilize group support only on a short-term basis, as for a hunt or ceremony, and constrains long-term projects, where group coherence must be guaranteed for an indefinite time. Chores such as the construction of an aid-post or school, which in the other study areas are communal projects, in Kilimeri usually are delegated to one or two individuals. In some villages, especially those which operate on a very narrow survival margin, welfare matters such as care for the sick and elderly are a personal or familial rather than a communal responsibility, and those without immediate relatives may be left to fend for themselves. Due largely to low life expectancies, Kilimeri villagers exhibit a high rate of time preference in development projects. As a result of their system of social organization they tend to prefer projects which do not require village mobilization, over projects where the community as a whole has more control, but also more responsibility.

The unilocal cultivation system

The system of unilocal residence and shifting cultivation practised in Ningil and East Bauro, though relatively recent, is far more akin to the stereotype Melanesian system than that of Kilimeri or Bugotu. As a result, its developmental limitations are better known to administrators, and its *modus operandi* better suited to official development programmes. In both areas the nucleated village is the focus of daily activities. Food gardens and cash-crops are within tolerable range, and the specialized division of labour between the sexes has enabled cash-cropping and *bisnis* to replace warfare and hunting as the predominant male occupations, without major social disruption.

This transition from previous subsistence patterns is by no means complete. In Ningil a much higher proportion of labour-time is allocated to hunting and gathering than in East Bauro, and the prospect of a hunt or a 'small war' stili
draws most males from other pursuits. Cultivation and processing of sago, the dietary staple, is a more routine and sophisticated activity than in Kilimeri, but the range of root crops and other cultivars is not extensive. Whereas East Bauro villagers, with a strong gardening and food exchange tradition, have expanded the short-term crops suitable to their cyclone-prone environment into modern market gardening, cultivation in Ningil is primarily in coffee and other long-term export crops. Due to the paucity of government agricultural extension, the introduction of these exotics has not been accompanied by a general improvement in cultivation techniques. Foraged produce is still an important part of the diet. East Bauro villagers, by comparison, are handicapped by the difficulties of adjusting their cultivation practices to the indeterminant nature of their coastal land rights vis-à-vis the flexible but clearly defined traditional system which governed hinterland production. Many villagers are chary of land use techniques which could involve disputes over land and possible loss of their coastal privileges. In both areas the lag in adjustment to the societal demands of modern sector operation, and the persistence of residual practices from previous ecological organization, has meant that in the 1970s these villagers on the whole are not in a position to compete in the increasingly competitive field of post-independence development.

The multilocal cultivation system

Frazier has described the circular migration prevalent in many parts of Solomon Islands as living 'multi-locally'.

There are people residing at home who make intermittent trips outside...to visit and work; there is another group more or less

---

1. As in Kilimeri, sago processing in Ningil is a female task, but about every 2 weeks the men fell and prepare a new palm for processing. The amount produced per female is approximately the same for both areas. Unlike most other sago-growing people (J. Rhoads, pers. comm.) Ningil villagers refine their product by a simple process of fermentation.
securely established in wage employment, who live continuously outside... and make intermittent trips back home. A third category of people move back and forth between the other two, temporarily unsettled in either location (Frazier 1978:4).

While Frazier's description applies to many Solomon Islands communities in their relations with non-village centres, the stability of this pattern of multiple residence varies with its subsistence context. In Bugotu it is a well established pattern, and cultivation often involves an absence of days or weeks from the home village. Villagers with large holdings some distance away sometimes maintain a village residence and another full-size house on or near their main farm. A greater proportion of the Bugotu adult sample reside in their natal village than in East Bauro, where 88 per cent had moved from their place of birth. Compared with Ningil and Kilimeri, where 96 per cent and 71 per cent respectively still live in their natal village, mobility within the traditional environment is high. While subsistence crops usually are established fairly close to the main village, land holdings are rarely contiguous and coconut groves may be planted in small pockets of good soil over a wide radius. Brookfield with Hart (1971:227) report one case where Santa Isabel villagers regularly travelled 50 km along the coast to their coconut groves. Wide-ranging kinship ties and marital movements contribute to the fragmentation of land holdings, which makes it easier for villagers in Bugotu than in the other study areas to overcome locational disadvantages such as poor soils and natural hazards, but makes economies of scale difficult to achieve.

The combination of a matrilineal inheritance system and the dispersion of land holdings in Bugotu engages the female half of the workforce in development activities far more than in the other study areas. A few activities, such as hunting and diving, usually are a male province, but for most daily chores the male and female roles are interchangeable. On one day the wife may attend food gardens and prepare the meal, and on the next go out to tend the cash
crops while the husband stays in the village, cooks, and cares for the children. Women often make extended visits to parents or siblings to help with seasonal farm obligations, so that they are less dependent on their menfolk for information and cash than women in the other study areas.

The increasing urgency of cash needs and the encroachment of national government influence has eroded much of Bugotu's traditional adaptability. The development of an urban market in Honiara for root crops and garden produce accelerated the trend towards off-village residence. Whereas coconut groves could be tended spasmodically, the need for more intensive care in market gardening stimulated some producers to move their main residence to areas of officially recognized agricultural potential. Though in several instances such men continued to hold positions of village leadership, their actual contact with the home village was therefore irregular, to the detriment of its social organization. Government moves to regularize land tenure as a prerequisite for development assistance, and the general orientation of national government and local councils towards control rather than encouragement of informal sector activities, tended to polarize village options into either acceptance of the government development package or gradual stagnation. By the end of 1976, 22 per cent of the households recorded at Vlulavu village in 1970 (Groenewegen 1972:168) had established their main residence in areas with better agricultural potential and educational, transport, or cash earning utilities. Those who were unable or unwilling to do so faced the increasingly difficult task of 'self-help' development.

**Traditional contact and comparative advantage**

In some parts of Melanesia—notably the East Sepik with its world-renowned art forms, Malaita with its shell money, and the Papua New Guinea Highlands with its rich ceremonies—extension of traditional specializations into a modern framework has proved a viable alternative to export-
oriented agricultural development. In a number of areas this practice has been sufficient to overcome severe locational constraints, such as isolation from modern centres and facilities, which inhibit 'orthodox' development. For the study areas traditional patterns of contact and specialization ranged from very sophisticated in Bugotu to very poor in Kilimeri. Most have been lost, degraded, or superseded by quasi-modern economic activities. The result has been a general dependence on extra-village assistance to overcome locational disadvantages, and a general inability to use known traditional methods as the basis of a less dependent form of development.

Outside life-cycle events such as birth, marriage and death, the three main components of traditional interaction beyond the immediate clan or community were warfare, ceremonies, and trade in artifacts and produce. In all three respects the Kilimeri villagers were traditionally isolated. Armed conflict in pre-contact times occurred only outside linguistic boundaries, so that the occasional engagement with traditional enemy groups - the Imbo-Imbrinis to the south-east, the coastal villages near Vanimo, and the Niau Koffo Nomo to the west - involved a considerable distance. The inland West Sepik on the whole is notably lacking in elaborate ceremonial. The main surviving ceremony in Kilimeri is the Tumbuan, a Jobased version of the elaborate Tumbuan found in the New Guinea islands, from which it allegedly was imported during the plantation labour period. The Tumbuan is initiated primarily to counteract illness. Unlike many Papua New Guinea ceremonies, it has little or no economic significance. Kilimeri artifacts are almost entirely utilitarian. Manufacture of weapons has been modernized by the use of wire or old pieces of metal. The few traditional skills, such as production of the stone axe-heads and clay pots which reputedly were traded to the coast, have been superseded and lost. The traditional central place for inter-village trade at Kissa in northern Kilimeri, which had maintained a regular trade route to the Bawani mountains and facilitated the Malay trade in bird of paradise plumes (Chesman 1949:270-1), was
essentially monopsonistic and declined fairly early in the area's contact history.

In the Ningil hamlets, by comparison, warfare was endemic and allegiances fluid. Through the offer of land to members of other villages for their support when men were lost in warfare (TNG:DDA Lumi PR4 of 56/57) the Ningil maintained social and economic ties with the nearby groups whom they occasionally fought. Similarly, Santa Isabel villagers managed to operate trading links in slaves (Wilson 1932:209) and canoes concurrently with involvement in warfare, aided by their linguistic ties to the Western Solomons and, for Bugotu, to Guadalcanal and the Florida islands.

Mission and government influence in Solomon Islands caused a sharp decline in elaborate ceremonial. With it went much of the traditional application of delicately beautiful art forms to utilitarian objects (Coates 1970:90-1), and the unusual freedom of form (Codrington 1891:331) which characterized Santa Isabel work. Trade in the impressive Santa Isabel canoes declined as the island's trading partners learned to make dugouts (Bathgate 1978:18,27), and the skill was neglected until the council became involved in cultural preservation in the 1970s. A few craftsmen in East Bauro continued to produce the large, undecorated food bowls and the woven baskets and mats of the area, but they compared poorly with the ornamented artifacts produced by other areas for the export trade, and local trade was undermined by metal dishes and store goods. The leading craftsman in one East Bauro village sold only two axe handles at 70 cents each, in 1976. In Ningil, by comparison, the interest of expatriate mission personnel in traditional artifacts encouraged a revival of traditional skills and handicrafts in the 1970s, and provided a small market through the mission network. The independent trading ties which the area spasmodically used to maintain through expeditions to the Aitape coast by that time were defunct. Despite the advantages of mission transport and communication, improvement to the 'traditional' linkages with development outside the village was relatively slight.
In all areas the remaining ceremonial, such as the 'custom feast' cycles in East Bauro, the Wafanga competitive exchange in Ningil, and the quasi-modern church celebrations in Bugotu, have been affected by the scarcity of development opportunities. In some cases they have become symbolic of it. A Tumbuan 'outbreak' through the Lumi area in 1969, for example, was attributed to the presence in villages of men who some years earlier would have found employment as agreement labourers (PNG DDIA Lumi PR6 of 68/69) and who were at a loose end at home. An upsurge of 'custom feasts' and revival meetings through the East Bauro area in 1976-77 had similar ramifications. For many villagers, and for some politicians and modern leaders, revival of old customs and ceremonies was a protest against the lack of development opportunities, expressed as an assertion of the security of traditions which had lost much of their cohesion through modern contact. Cultural renaissance was rarely regarded by villagers as a viable alternative to modernization or compensation for the lack of it. The revival of traditional ceremonies and symbols in many cases was a gesture by members of the political or administrative elite, to legitimize modern leadership status.

The role of traditional social controls

Most societies have set codes of belief and behaviour which are designed to maintain social harmony, regulate change and protect their members. In Melanesia such codes often take the form of a complex network of beliefs in animistic and personalized supernatural forces, which govern the daily activities of individuals and the major decisions of the community. These fall into two categories. The first is concerned with ecological management and involves rituals, usually associated with ancestral or environmental spirits, to ensure the success of essential subsistence activities such as food production. As the pace of social change intensified after European settlement, many of these were transmuted into the 'development-oriented' rituals of cargo cult movements. Others, especially in Solomon Islands,
were superseded by conversion to Christianity, by Western education, and above all by changes in village economic concerns: the 'cardinal factor which determined the nature of native socio-political and intellectual life, both before and after European occupation' (Lawrence 1964:273). The second category is more closely related to human interaction and societal survival. Many of the beliefs in this group have also been eroded or replaced by Western mores, but some have shown a tenacity which affects modern development prospects.

The two aspects of the second category which were influential in the study areas were food tabus and death sorcery. These existed in different forms in all areas but, with the exception of Kilimeri and to a lesser extent Ningil, by the 1970s they could be classified as developmentally neutral. The residue of food tabus still observed in Bugotu and East Bauru was governed more by tradition than by the need to distribute scarce foodstuffs for the greatest community benefit — a function which continued in the West Sepik after much of its traditional rationale had vanished. For many West Sepik villagers the maintenance of food tabus created a vicious cycle. The embargo on 'growth' foods in certain circumstances prevented situations which in the past had endangered community survival, but generated further malnutrition and thereby perpetuated low levels of stamina, performance, and development potential. In Bugotu and East Bauru the varied and often highly sophisticated traditional forms of sorcery and capital punishment also have become largely obsolete. Though the fear of death sorcery remains, it is no longer widely regarded as a probable consequence of upward mobility. The Ningil variant of Sepik 'death-wish' sorcery (Reed 1943:68-70) was similarly contained by European contact and missionization. In addition, the Ningil system included provisions for threat, counter-threat, and release of the victim, so that traditionally villagers could risk a much higher level of innovative behaviour than could areas such as Kilimeri where death sorcery was irrevocable. In
Kilimeri, stern government imposition of the *Pax Australiana* on a system with relatively few and simple, but direct, social sanctions merely drove sorcery underground. Where it had been a 'last resort' method of social control, in the mid-1970s villagers claimed that 'we are afraid to talk strong, we are afraid to try anything new, it is sangguma that holds us back'.

**Food tabus as a development constraint**

For developmental purposes food tabus are only important when, as in the West Sepik, adequate levels of nutrition cannot be maintained on the permitted alternatives. An apparent solution to this situation is the education of villagers to discard traditional tabus. Health work in the West Sepik has resulted in many of the old tabus dying out (Salfeld 1973:53-9), but a considerable proportion of the extant tabus are extremely pragmatic and could be abandoned only at some social cost. Many pregnancy tabus, such as the embargo on large yams, taro, bananas and fish in the Au-Wapei area and on hunter-gatherer fauna in Kilimeri, are a community survival measure. Villagers deliberately apply them to restrain foetal growth in small, malnourished mothers and thus safeguard the life of mother and child during the birth. In areas where pre-natal maternal nutrition has improved rapidly, some medical workers report an increase in infant size and in the number of difficult births requiring specialized care. In many areas, such as Kilimeri, this is not readily available; and the woman who follows a modern pre-natal diet places herself, her child and her community at risk.

In societies where protein is a scarce dietary component, and especially where it derives mainly from hunting and gathering, protein sources overall are the most common of the food tabus. In Kilimeri the logic of protein tabus is in the maintenance of hunter-gatherer skills and the continuation of the protein supply. Boys are allowed such foods as game, eel and tortoise while children, but the youth who
does not abstain until he has proved himself by catching and trying the edible fauna one by one is considered effeminate. An equally practical tabu is placed on consumption of sweet potato, banana, *pitpit* (*Saccharum edule*) and coconut for huntsmen prior to a pig hunt, as these are thought to produce changes in body odour which would incite a feral pig to attack. A similar logic applies in Ningil, where sweet potato, banana and dry coconut, *inter alia*, are forbidden to menstruating women for reasons associated with odour and indirectly, through the odour of the menstrual blood, with male hunting prowess.

The cardinal rule in all study areas is that strange foods should be tried cautiously. If they are found to cause no harm, the society usually places no constraints on their consumption. Observance of established tabus may be relaxed, as is the case with mourning tabus in some Kilimeri villages, when they represent a threat to survival. The maintenance of most nutritionally and therefore developmentally negative food tabus in the West Sepik in fact has become as much a consequence of low levels of development as it is a cause.

**Sorcery as a development constraint**

Though sorcery has been almost universally condemned by European administrators and missionaries in Melanesia, traditionally it was an important aspect of social control and in some ways was not inconsonant with development. It was a significant factor in the acquisition and retention of leadership status, and in the limitation of the power of *bigmen* to levels that did not threaten community survival. It reinforced distributional mechanisms, and the 'sorcery trade' was itself a major element in some subsistence economies (e.g. Rai 1977). It was used to protect land rights or help advance land claims (Ward and Proctor 1980:55), and was often the 'court of last resort' for victims of injustice.
Where the effectiveness of sorcery in causing illness or death depended mainly on the supernatural (Hogbin 1934:326-8) or the power of 'traditionally sanctioned belief' (Ryan 1972:1029-30) its scope for malignant usage was limited. Most societies, like Ningil, had counteractive rituals. For some areas this changed with contact and economic development. In the Sepik the westward spread from the north-east coast of Papua New Guinea of poisons which ensured death from sorcery (see Allen 1976:176-80), and the importation of deadly techniques from other areas through labour trade contact, made 'death-wish' sorcery a more reliable weapon. After pacification, sorcery gained acceptance as a less officially detectable substitute for open warfare. Increasing social dislocation and tensions consequent on rapid change and unequal development provided a further reason for its use and — in some areas at least — increases in cash incomes provided the means.

Unlike most traditional forms of malignant magic in Melanesia, sangguma in Kilimeri involved direct physical assault. In pre-contact Kilimeri society it was usually ritualized execution by an anonymous group, which enforced communal responsibility and strengthened communal control. Within a village the group involvement provided a measure of security, in that the necessity to enlist peer group support for a sangguma killing theoretically ensured that personal quarrels did not lead to individual revenge and destructive vendettas.

In a traditional sangguma killing the victim is first rendered unconscious by a group of disguised men, who then insert fine barbed spears into his body, break them off inside, and cover the marks with smears of blood. The victim reputedly regains consciousness uncertain of what has happened, returns home apparently recovered, and dies some time later. In Kilimeri the awareness that one's neighbours could become a sangguma squad is a strong constraint on anti-social behaviour, but it also reduces societal cohesiveness, as no individual entirely trusts his fellows. In addition,
as orthodox sangguma did not require the publicity of ritual and counter-ritual to achieve its ends, it was easily replicated by individuals with a grudge when it became an illegal form of social control. Innovative and extra-normative development activities in Kilimeri thus involve the risk of communal condemnation for antisocial behaviour, and of personal resentments, either of which could lead to the mysterious and untimely death from which sangguma is deduced. While sangguma is often used as a blanket ex post rationalization for inactivity, its inhibitory effect on entrepreneurial activity, communal mobilization and response to external stimuli has become counteractive to most development options available to the area.

Land and water rights

Land

One of the most enduring problems in Melanesian development since contact has been the matching of development programmes to traditional and transitional man-land relationships. In Papua New Guinea and Solomon Islands most government attention in the period prior to Independence focussed on the emotive issue of land alienation by foreign individuals and firms. In the mid-1970s the Solomon Islands Government claimed that the 'major constraint to progress... has been the lack of a new land tenure policy' (SI:CPO 1977: ii). In the same period the Papua New Guinea Government introduced seven new land Acts to allow implementation of reforms proposed by its 1973 Commission of Enquiry into Land Matters (Larmour 1977:5), and the Solomon Islands Government set up a Special Select Committee on Lands and Mining to examine and report on policies relating to land (SI:NAL 1976: 3). Both countries began to move away from the concept of individual land title as security for development credit.

1. Only one of the deaths in the sample villages in the 12 months prior to the survey bore the signs of a true sangguma killing. Estimates of the strength of sangguma by government, mission and other long-term observers in 1976 ranged from 'very little' to attributed responsibility for about 80 per cent of deaths in the area.
towards policies which recognized communal ownership.

Though this represented a considerable advance on the colonial concept of legal rights, which separated ownership from use and created rights that were independent of traditional rights from clan membership or land usage (Zoloveke 1979:5-6), in practice it made little difference to rural development. It was administratively clumsy and, as with the Solomon Islands tenure conversion programme for the registration of customary land, often costly. It proved difficult to reconcile with established administrative practices, and often suffered from the demands of administrative convenience, so that it advanced only unequivocal projects on undisputed holdings. Finally, it imposed a concept of collective ownership and production which frequently was at variance with the individual rights and securities traditionally held by members of a clan or group. As with the earlier colonial policies, this rigidified systems of land management that under 'custom' were flexible (see also Allen 1976:38). It also inhibited the application of traditional rights in a developmental context, inculcated socially and developmentally negative disputes over land ownership, and discouraged participation in government development projects by villagers who were unable or unwilling to modify their traditional rights to accord with government policy.

For the study areas, as for much of Melanesia, traditional land tenure was

a combination of rights and powers exercised by groups and individuals at different levels depending on the need to assert those rights in a particular set of circumstances...actual exploitation...is carried out by individuals and familius (Vauicb 1978:5).

For most purposes the rights of the individual over clan land, in which theoretically he had usufructuary rights, were dominant (Reed 1943:42). Native timber and edible flora usually were the property of the group, but cultivated plants were the property of the individual who planted them. The power of direction and veto in clan land matters often
was vested in the senior male member of the group or a particular leader, not necessarily from the land-owning group (Scheffler 1971:275) but without the authorization of the group he could not dispose of the land or his authority over it.

Traditionally locational shifts could be achieved at little or no transfer cost, and movement within clan boundaries was fairly frequent. Individuals or groups often moved, especially in Solomon Islands, if illness or death struck a family or village, if crops failed, or if personal relationships between neighbours became difficult. Settlements within tribal or clan spatial parameters frequently acquired very different communal and organizational characteristics as people with similar attitudes agglomerated and moved away from those they found inharmonious. This practice reinforced, and was reinforced by, the personal element in usufruct arrangements, so that changes to customary land use could take place fairly quickly and fairly easily. Some aspects of this system persisted in the 1970s, as in Ningil, where each hamlet had its own distinctive characteristics, and where considerable rivalry at times existed between the groups; but the ossification of traditional land tenure and boundaries deprived the system of much of its effectiveness. Nonetheless, a considerable proportion of people, in the Solomons samples in particular, showed adaptive preferences in tenure and inheritance rights.

In East Bauro, and to a lesser extent in Ningil, the women most often nominated heirs who would not have inherited under the traditional system. In matrilineal Bugotu, by contrast, a considerably higher proportion of males than females opted for adaptive mechanisms of this kind. A few Solomons informants nominated extra-traditional heirs on the grounds that they were the best-educated or had achieved high status in modern sector employment. Though this was a rare occurrence, it demonstrated a general tendency to maximize development opportunities by strengthening informal links between the traditional and the modern sector. In Kilimori, where women took no initiative on land matters
and where control of land was more firmly held than in other areas by old men, 20 per cent of men expressed a preference for male or female heirs with a close blood relationship, over more distant claimants with stronger traditional rights. Most heirs were individually named. Though West Sepik villagers nominated 'all brothers' or 'all sons' more often than the Solomons sample, only in a few cases, in Bugotu and Kilimeri, was the lineage or clan perceived as the main heir. Government, on the other hand, recognized clan ownership over individual usufruct rights.

Adaptation of traditional systems to modern needs was facilitated in some parts of Solomon Islands, vis-à-vis the West Sepik, by clear definition of land rights. These included:

Ancestral land, owned by the clan group, where wealth from the land was the property of the entire group.
Land obtained by purchase by a family within the clan, and passed on to its descendants.
Land acquired by a clan in return for protection of another clan, and inherited through the clan.
Land acquired as compensation payment for an injury, which could be either family or ancestral land.
Land captured in warfare.¹
Land held as security for a debt, which was the property of the creditor until redeemed. (Koki 1979:197-8).

A similar range of land-holding options enabled Bugotu villagers to legitimize a set of quasi-traditional rules

¹. In the area of San Cristobal from which this breakdown was derived, land captured in warfare could be used by the winning clan, but was expected to be returned eventually to the survivors of the defeated clan. This applied in theory in a number of areas of Papua New Guinea and Solomon Islands, but the rights of conquest and possession frequently took precedence in practice, and the issue later became a recurrent source of land disputes.
whereby land could be transferred by a father to his male children. Land purchased by the father could be allocated as he wished. An increasing number of parents secured their cash-crop projects to their sons by traditional purchase, or bought land for them under the introduced system of registered title. Others used the traditional method of a custom feast on behalf of their sons, to ratify the transfer of lifetime rights over a tract of land controlled by a female relative. This then could be renewed or annulled on the death of the child. Adoption of a favoured male child by a relative from whom he could inherit was also used to ensure the child's economic, and thus political, position (see also Scheffler 1965:103-5).

In East Bauro the combination of matrilineal descent and patrilineal inheritance, only two clans but exogamous marriage, and low population densities with high mobility, produced an unusual degree of fluidity in traditional land rights. Coastal rights in particular fluctuated as early settlements died out or were abandoned (see also Frazer 1973:15). In general, when a family or group moved on to unoccupied territory, their land rights in the vacated area reverted to other residents, and they acquired rights where they established themselves. The coastal situation changed as a result of alienation of land in other parts of San Cristobal from a relatively early stage of contact, of the introduction and concept of value in the land itself rather than in its produce, and of government involvement in clear definition of boundaries and original title. 'Custom rights' came to be interpreted in ways which accorded with government criteria. These included an emphasis on genealogies and on ancestral ties as 'the focal institution in land tenure and individual identification with groups' (Scheffler 1971:281,287-8). Sophisticated villagers planted long-term crops such as coconuts which gave them de facto proprietorship (SD:DC Cristobal AR 1939) and began to sell or traditionally assign land to which their title even as 'first settlers' was dubious (SD:DC Eastern 1956).

1. As Scheffler also points out (1971:81) the emphasis on ancestral shrines is both 'complex' and unusual.
Many migrants from the East Bauro hinterland in the post-war period found that they had only uncertain permissive rights on the coast. Sixty-one per cent of the East Bauro sample were in this position with the land they used for subsistence purposes (Table 3.3), and were therefore limited in the extent to which they could engage in long-term development projects. One-third of the sample claimed ownership of land currently cultivated by hinterland residents (whose rights to the abandoned land under the traditional system would have been dominant), but a number of these people was not sure who was using it. Seventy per cent of those who claimed to have inherited land 'in the bush' from their parents could not identify the area from which their fathers had come, and 62 per cent did not know where either parent's rights had been established—by comparison with 3 per cent in Bugotu and nil in the West Sepik. An unusually high 20 per cent of adults regarded themselves as landless, or were uncertain where they had land, if at all (Table 3.4). For developmental purposes many of the East Bauro people were trapped. To safeguard their traditional hinterland rights involved residence in areas that were locationally disadvantaged; while their rights on the coast were tenuous, and maintained at the risk of becoming landless dependents on α τατία land for subsistence cultivation.

Both Sepik areas were patrilineal. All males had recognized land rights under the prevailing traditional system, so that emergence of a rural proletariat in the sense posited by Howlett (1977), and indicated in East Bauro, was not an immediate development issue. Nonetheless, subsistence land was finite and land suitable for modern agricultural development limited. In the Ningil area previous movement and the allocation of land in warfare liaisons caused considerable dispersion of holdings. This was crystallized by European contact, so that food gardens often were maintained some distance away from the village on land previously occupied, while cattle projects were sited for convenience and maximum returns near the village (see Brookfield 1968:424-5). Ninety-one per cent of the Kilimori
Table 3.3 — Usufruct land by area and type of right

<table>
<thead>
<tr>
<th></th>
<th>Bugotu (N = 143)</th>
<th>East Buro (N = 135)</th>
<th>Ningil (N = 156)</th>
<th>Kilimeri (N = 144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using land controlled by others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have lineage or marital rights in land used</td>
<td>57 39.9</td>
<td>83 61.5</td>
<td>6 3.8</td>
<td>4 2.8</td>
</tr>
<tr>
<td>Have no lineage or marital rights in land used</td>
<td>37 25.9</td>
<td>7 5.2</td>
<td>3 1.9</td>
<td>- -</td>
</tr>
<tr>
<td>Pay in cash or kind for use of land</td>
<td>20 14.0</td>
<td>76 56.3</td>
<td>3 1.9</td>
<td>4 2.8</td>
</tr>
<tr>
<td>Own land used by others</td>
<td>86 60.1</td>
<td>49 36.3</td>
<td>12.8</td>
<td>58* 40.3</td>
</tr>
<tr>
<td>Used by people with lineage or marital rights in the land</td>
<td>62 43.3</td>
<td>22 16.3</td>
<td>16 10.2</td>
<td>58 40.3</td>
</tr>
<tr>
<td>Used by people with no lineage or marital rights in the land</td>
<td>24 16.8</td>
<td>27 20.0</td>
<td>4 2.6</td>
<td>- -</td>
</tr>
<tr>
<td>Is paid in cash or kind for use of the land</td>
<td>1 0.7</td>
<td>1 0.7</td>
<td>- -</td>
<td>- -</td>
</tr>
</tbody>
</table>

* Excludes timber lease land

Source: field data 1975-77
Table 3.4 — Perceived land cultivation rights by area and sex (per cent of sample)

<table>
<thead>
<tr>
<th></th>
<th>BUGOTU</th>
<th>EAST BAURO</th>
<th>NINGIL</th>
<th>KILIMERI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of sample</td>
<td>% of sample</td>
<td>% of sample</td>
<td>% of sample</td>
</tr>
<tr>
<td>Has land rights</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>92.1</td>
<td>83.6</td>
<td>88.1</td>
<td>88.5</td>
</tr>
<tr>
<td>Claims land rights but does not know where</td>
<td>1.3</td>
<td>-</td>
<td>0.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Not sure if has land rights</td>
<td>-</td>
<td>3.0</td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Has no land rights</td>
<td>6.6</td>
<td>13.4</td>
<td>9.8</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Source: field data 1975-77
sample had land under government timber lease. Much of the
unleased land was marginal or unsuitable for cash crops, and
within the quarantine zone. According to the contract,
land under lease could be cleared only for traditional
subsistence use. Though pressure from the then Department
of District Administration in the early 1970s brought the
Department of Forests to agree to reloase such areas 'as will
not affect the timber', subject to inspection by a Forestry
officer (PNGDDA 33-2-16 of 2.2.72), the concession was
useless for cash-crop development.

A significant factor in the transition from sub-
sistence to modern land use was the disenfranchisement of
women in some areas. With the exception of Kilimeri, where
cultivation of foodstuffs was largely an introduced activity
with a cash-earning rationale (and therefore usually a male
province), subsistence land use was as much a female as a male
concern. Village agricultural and economic development
became almost exclusively a male activity, due in some cases
to village tradition and in some cases to government extension
practice. As a result, women's access to land was more
circumscribed than it had been traditionally. Many Sepik
women regarded themselves as landowners, but married Kilimeri
women claimed only vague land rights through their kin groups,
whereas Ningil women identified mainly with their husband's
rights. With the exception of Ningil, a considerable
proportion of women in all areas, including matrilineal Bugotu,
regarded themselves as landless (Table 3.4) and therefore
as excluded from agricultural development.

The availability of uncleared land in all areas
indicated that expansion of the area under cultivation for
subsistence or cash-crops was theoretically possible (Table
3.5). Twenty per cent of the Bugotu sample had planted all
the surplus land over their subsistence requirements with
coconuts, and had no land for expansion, but several of this
group were the wealthiest entrepreneurs in the area.

1. The figure of 13 per cent for Kilimeri women probably would
have been higher had the author been free to interview all
women without the presence of their men. Kilimeri men with-
out exception claimed land rights for their women and at
times prompted them to change a negative response.
Table 3.5 — Ownership of unused land

<table>
<thead>
<tr>
<th>Place</th>
<th>Have unused land</th>
<th>Have no unused land</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>% of sample</td>
</tr>
<tr>
<td>Bugotu</td>
<td>98</td>
<td>68.5</td>
</tr>
<tr>
<td>East Bauro</td>
<td>100</td>
<td>74.1</td>
</tr>
<tr>
<td>Ningil</td>
<td>151</td>
<td>96.8</td>
</tr>
<tr>
<td>Kilimiri</td>
<td>135</td>
<td>93.7</td>
</tr>
</tbody>
</table>

Source: field data 1975-77.
scatter of individuals in all study areas came from large kin groups with small land holdings, which inhibited their cash-earning capacity but had not affected subsistence production or traditional maintenance of land fertility. Fallow periods ranged from several years in Bugotu to a generation in the West Sepik. Though they showed considerable variation between individual farmers, this was generally a matter of opinion rather than necessity. At the same time, the dispersion of holdings, especially on Santa Isabel, set logistical limits to expansion even when other variables, such as accessibility, fertility and availability of manpower, were favourable. East Bauro villagers suffered in addition from the uncertainty of their tenure rights, and Kilimiri villagers from their location and lack of productive manpower.

In each case, the critical factors were the ease with which traditional systems of tenure and land use could be adapted, and the strength of the social mechanisms that maintained equity in adaptation. That such adaptation in some instances militates against communal welfare and general development prospects, as in East Bauro, is sometimes attributed to the exigencies of modern capitalist operation (Amarshi et al. 1979). Given the limited penetration of modern capitalist modes of production in most of the study this argument is debatable. The evidence suggests that the major causal factors were village attempts to respond to macro-level problem-solving which primarily addressed the needs of government as an institution. Any micro-level deviation from the norms and supposedly value-neutral indicators on which government policy was based handicapped interaction between macro and micro-level as a whole.

Water

Crocombe's point that a person or group in Melanesia did not own land, but held different rights over it which were adapted to the environment and social system (1975:1,3),
also applied to water rights. Like land rights, these changed with changing needs, and for domestic purposes presented few problems. For the East Bauru water rights generally were subsumed under land rights. As their inhospitable coastline was not regarded as a major subsistence or cash-earning resource, this arrangement required no major modification for coastal settlement. East Bauru villagers used their large rivers and streams for all domestic purposes, including sanitation, but low population densities and the scarcity of livestock projects prevented the pollution and consequent conflict over inland water rights which at times occurred on Santa Isabel. In Kilimeri water rights were defined, but did not apply to use of water for washing or drinking, though the shallow wells and soak-holes dug by individuals for personal use or for processing sago usually were respected. For Ningil and Bugotu the introduction of pumps, water tanks or gravity flow systems obviated the need for definition of rights over water for domestic purposes.

Such changes suggest that modernization has caused the diminution or disappearance of customary patterns of water rights (Crocombe 1971:3), but this halted abruptly when economic interests were concerned. The introduction of a cash component to water rights was particularly important in Bugotu and Kilimeri. In Kilimeri main rivers traditionally were shared by all, but the minor rivers and creeks were divided up, and villagers were only free to fish or hunt in their own section. Where a river formed a clan boundary both groups had access rights, but in courtesy both usually were represented when anything of food value was taken from the river. Observance of this custom became more strict as some produce acquired a cash value, and as other sources of income diminished. If a crocodile were caught on another land-owner’s territory, the money received for it had to be handed over to the land-owner, who then presented part of it to the hunter as compensation for his labour. In Bugotu concern over rights to water as a source of food was almost entirely subordinated to economic issues. By 1976
disputes between village groups over subsistence rights had given way to assertion of rights over reefs and fishing waters, as the basis for compensation from commercial firms for removal of baitfish (SI:MNR F/8/6 of 30.9.76; SI:PN 7/73 of 7.1.73).

Land and development

In the 1970s growing tensions over the lack of development opportunities resulted in an increasing preoccupation with ways to exploit traditional land and water assets that did not require complementary development inputs. Though the proportion of land alienated in the West Sepik and Solomon Islands was very small, as alienation became a national political issue and some groups received large sums in compensation payments, a number of villagers began to investigate the possibility that they could claim similar treatment. Ilup villagers in Kilimeri revived old claims to Bewani airstrip and, in Solomon Islands, the politically motivated emphasis on return of land to its original owners (SI:MAL 1976; SI:MDA 1979) led to a resurgence of village interest in genealogies and other standard proofs of original title. The Solomon Islands Government, faced with demands to return all government-held land to the original owners, was increasingly constrained in its ability to plan and mount development programmes, even on land ostensibly under government control. These village moves, though unconstructive and often anti-developmental from a macro-perspective, in most cases were the rational, resource-maximizing choice for the villagers concerned.

As Geertz (1963a) demonstrated in Indonesia, systems of shifting cultivation are delicately balanced and easily disturbed by ecological change. The transition to permanent settlement and long-term land use projects has already disrupted the ecological balance in the study areas, necessitating a reinterpretation of 'custom' (Scheffler 1971:287), the scope for which has been restricted by government codification of traditional rights, and package development requirements.
In the circumstances, the apparent inconsistency between village moves to secure additional land, and to ensure its exploitation in ways that separate it from traditional land use rights, is explicable in terms of the general thrust towards development and a stable modern ecosystem.

**Conclusion**

For the study areas the main generalization which emerges from consideration of areal similarities and differences in relation to development is that, with very few exceptions, generalization is not an optimizing technique for the planning of micro-level development. When cultural factors are added to basic resource assessment, the result is a 'planning matrix' of high areal or even village specificity. Very few variables are static, and the rate of change of each dynamic variable may vary from that of the others. For some cultural variables, the rate of change has been slowed to the point of negative returns by such factors as anthropological determinism, government intervention, and the national identity crisis associated with decolonization. These have vitiated traditional village mechanisms for adaptation and, as in the case of East Bauro land rights, have introduced a new set of problems. In some cases villagers are attempting, with reduced capacity for innovative problem-solving, to solve problems which have been caused by (and could be more easily addressed by) macro-level adjustment.

A further problem for planners is that roughly identical variables can produce totally different effects in apparently similar situations. All study areas have a set of beliefs and practices, for example, which are commonly subsumed under developmentally negative classifications. Sorcery is one of these, but only in Kilimeri does it seriously inhibit development activity. It could be argued that, even at the preliminary stage of situational assessment, the range and diversity of pertinent data are so great that
merely reducing them to a framework within which a bureaucracy can plan is sufficient to destroy the purpose of the exercise. The paucity of constants highlights one constant which often is neglected in Third World development theory: the intervention of macro-level government in the process of micro-level change. 'Government' often is assumed to mean government of a particular political colouration. It is argued in the next section that many of the problems for rural areas are with the institution rather than with its politics.
Part II

CHAPTER 4

CONTACT AND CHANGE: GOVERNMENT AS DEVELOPMENT INHIBITOR

One of the major differences between the development of Solomon Islands and West Sepik was the length of contact. Recorded contact history for Solomon Islands commenced with Mendana's Spanish expedition in 1568, whereas the inland West Sepik communities had spasmodic contact with the western world for less than a century, and relatively intensive contact for less than a generation. By the late 1950s to early 1960s, when the first mission stations were established in the vicinity of Ningil and Kilimeri, several generations of Solomon Islanders had received schooling of some kind, most were members of a Christian church, and some had travelled overseas. From the nineteenth century European utensils and gardening implements were standard subsistence equipment for many Solomons households, and most villagers possessed at least one article of European clothing. Nonetheless, contact experiences and, in particular, government policies had a cumulative effect on the socio-economic and cultural environment, which severely disadvantaged the study areas. By the 1970s the difference between the Solomons people and the inland West Sepik in terms of development opportunities was marginal, despite considerable differences in their ecologies and contact patterns.

It is argued here that village utilization of contact with the modern sector proceeded concurrently with, but

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1. It is customary in studies which cover the colonial and the post-colonial periods to use the term 'Administration' to refer to the non-political colonial government authority prior to Independence, and the term 'Public Service' for its post-Independence equivalent. The term 'government' usually covers the locally constituted political body of the time, plus the Administration or Public Service as the bureaucratic representative of the Parliament. In this chapter the distinction is extraneous to the argument. In accordance with village practice the term 'government' is used generally for the recognized macro-level authority, and is only differentiated as above when the context makes the distinction necessary.
largely separate from, the developmental activities of government. Many colonial policies were as 'developmental' as the policies later introduced under national governments, and often were basically the same. Their failure to improve village welfare and economic development significantly cannot be attributed wholly to metropolitan management. Many of the development problems popularly ascribed to the 'colonial heritage' were problems of macro-micro integration. These problems have been particularly acute in developing countries, where the concept of 'national government' often is not fully internalized. The evidence of this chapter suggests that a critical factor in the contact experience of the study areas was not the type of government, but the fact of government — a macro-level authority imposed on the micro-level organization of communities whose needs had not evolved to a proportionate level. This implies that the marginalization which occurred during the processes of colonization could continue through those of decolonization (see also Bulmer 1972:127).

The government perspective

For much of the early period after formal establishment of government — first by Germany for northern New Guinea and Santa Isabel, and Britain for San Cristobal, later by Australia and Britain respectively in New Guinea and Solomon Islands — it impinged only distantly on the study areas. Government policies caused considerable changes to previous contact relationships, as in the termination of the overseas labour trade, but to villagers 'government' was merely one among several categories of resident Europeans. In both countries the two main planks of official policy for approximately fifty years were protection of European settlers or natives, or both; and control. Government first penetrated village life in the study areas as an interventionist authority which made incomprehensible and apparently unjustified demands. Village stereotypes developed in which government

1. For a similar conclusion with a different emphasis and perspective see Huntington (1968).
was characterized most often as powerful but unreliable, rich but rapacious, clever but deceitful, vengeful, inconsistent and often inept. These stereotypes became so ingrained that they persisted despite vigorous attempts by government officials, especially after World War II, to prove them invalid.

From a very early stage the governments of both countries introduced a considerable number of policies designed to improve the economic and welfare status of rural villages. Many rural development policies, shelved as a result of previous problems, were revived with cyclic regularity. Self-reliance and crop diversification enjoyed periodic popularity at policy-making levels from the turn of the century. Policies directed at improvement of subsistence crops, either to serve welfare aims such as nutrition or economic aims such as import substitution and increased labour productivity, were in vogue in the 1930s (BSIP 1945:10; Bathgate 1975:79; McKillop 1976:14) and 1950s (UN 1959:16-18) and became a priority of the 1970s (BSIP: CPS 1974; Lopani 1978). Village marketing of food in urban centres was encouraged in New Guinea under the German governor Hahl (McKillop 1976:13), in Solomon Islands in the 1940s (Bathgate 1978:22), and in both countries during decolonization. As early as 1886 a German scientific expedition recommended rice, sugar cane and cattle for the inland Sepik River area, as 'it is in this region that it would be best to make the centre for future agricultural development' (Schrader, cited in Wittaker et al. 1975:253). The centre did not eventuate, but rice and cattle periodically received government support and, with mission assistance, spread through the West Sepik. Development of a Sepik River transport system for communication with the interior, also proposed by early explorers, was considered in relation to copper mining in the Star Mountains (Rendel et al. 1975) and eventually included in development proposals in 1976 (PNG:WSP 1976:30).

Government concern for native rights and welfare was exhibited in some of the earliest legislation, especially
with regard to conditions for plantation labour and alienation of land. Labour legislation was introduced in New Guinea in 1888 (Reed 1943:142-9), and in Solomon Islands in 1921. The Solomons government halted sale of customary land as freehold to non-Solomon Islanders in 1914, and established the first Lands Commission in 1919. By 1921 government grants of customary land as 'wasteland' had also ceased. Government enforcement of labour and land legislation in the native interest often conflicted with European plantation, mission and business concerns (e.g. Griffin et al. 1979:54-5, 65), and was carried out in the face of considerable pressure from resident white communities, at times supported by political influence in the metropole.

Countervailing political pressures, which eventually built up into global rejection of imperialism and by association colonial government, 1 touched Melanesia as early as the 1920s. In 1923, in a report to the League of Nations from which Australia held its mandate in New Guinea, government aims for the Territory were defined as

(1) to stop evils connected in the past with recruiting; and to encourage recruited men to take their wives with them;
(2) to improve the health of the native;
(3) to improve the physical and moral environment of village life;
(4) to encourage peasant proprietorship among the native population;
(5) to educate the native;
(6) to introduce healthy forms of amusement;
(7) to extend government influence through parts of the Territory not yet under control (Reed 1943:164).

Similar aims were expounded by government in Solomon Islands (BSIP 1945), though the British government, with its extensive experience as a colonial power, was in a better position than the Australian government to resist international trends. Inchoate signs that colonialism was losing ground conceptually were reflected in government attempts to become more involved in native welfare issues. These caused a gradual separation

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1. See Harries et al. (1979:313-29) for the development of a powerful political ideology in this.
of government interests from those of other European groups. In the process they stimulated government's long-standing rivalry with the missions, which for many years had pre-empted the role of spokesman for native concerns, frequently to the embarrassment of the government.

In 1924 the New Guinea Department of Agriculture drew up plans for the improvement of native agriculture. They included crop rotation with cotton, maize and peanuts, and development of small-holder copra and cocoa (McKillop 1976:14). A few years later W. C. Groves, subsequently first Director of Education, produced a series of radical proposals for a new education system. This he said should be widespread rather than elitist, rooted in indigenous needs and systems, and able to act as a developmental process which would facilitate application of modern ideas in village community life (Groves 1936:365). The Australian mandated government introduced an education tax on employers of native labour, to support government primary schools in each of the then nine districts, and central schools for the training of specialized personnel (Colebatch 1967:112). Health and sanitation supervision in villages became part of the regular duties of patrol officers, and in 1938 a major campaign was carried out against yaws. Though implementation was lumpy and often ineffective, over the colonial period all the 1923 aims received some government action. In the 1970s a number of the aims and some of the official prop sals, including those of Groves, were incorporated in the programmes of the new nationalist government. They were then promulgated as anti-colonial reforms.

In Solomon Islands the government in its early years was preoccupied mainly with the apparent decline in native populations (Hogbin 1939:125-4; Coates 1970:233), which had been hard hit by imported diseases. The economy was controlled predominantly by plantation interests. From an early stage the Solomons government, poorly staffed and financially constrained by British commitments in Africa and India (Colebatch 1967:104), depended heavily on plantation
and mission resources for assistance with indigenous development. Health and education were left almost entirely to the missions, though government erected a small hospital at Kirakira in 1921 and a public health administrator toured the San Cristobal area in 1921 and 1923. In 1922 a government training course for outstation medical workers started at Tulagi, then the capital. One of government's first projects after World War II was the coordination of mission and administration educational services (Laracy 1976:90,151). In 1947 a Native Administration Ordinance formally established a system of small councils, designed to involve villagers in the administration of their areas. As in Papua New Guinea, these moves frequently failed to achieve either their stated aims or the displacement of the missions from secular power. Most problems were financial, though the interdependence which circumstances forced on the members of the small, 'ill-assorted white community (see Reising and Corris 1980:28) militated against initiatives likely to upset the precarious equilibrium of European relationships.

In both countries World War II marked the end of the period in which government struggled to maintain a foothold. The mid-1940s brought the beginning of a decade in which 'administrative idealism' was high (Allan 1950:58) and 'a tremendous effort [was made] to make up the earlier years of neglect' (Toogood 1971:47). The British Parliament in 1945 allocated $A 300 million for colonial development over the next ten years. The Australian government increased its subsidy to Papua New Guinea from $425 000 in 1936-41 to $26 million in 1945-50 (Griffin et al. 1979:102). Though much of the money went into reconstruction, post-war buoyancy improved both local revenues and the aid situation. Staff problems decreased, especially in Solomon Islands, which benefitted from the decolonization of previously British territories in Africa and Asia. In both countries a strong governmental emphasis in the 1950s and 1960s on economic development, interspersed at intervals by budgetary concessions to welfare issues, led in the late 1960s to an upsurge of activity in preparation for self-government. By the time the
two colonial governments formally withdraw (the Australian in 1975 and the British in 1978) both countries had a per
capita Gross Domestic Product in excess of $A200 (Shand
1979:8-9), and development prospects 'of an entirely differ-
ent range and magnitude' (Ward and Proctor 1980:5) to the
limited prospects for most South Pacific nations.

The stages of contact

From the village perspective the relationship
between contact and change falls into four major stages.
Though the length of each stage shows wide variation between
the study areas, (Table 4.1) they follow a similar micro-
level sequence. The stages are not discrete units, but
represent periods in which certain features were dominant.
In this model, the emergence of progressively higher orders
of government would be a logical corollary to the expansion
of village needs and horizons, based on the recognition of
mutual advantage for village or regional units in amalgama-
tion. Instead, macro-level government and an abstract
macro-concept, the state, were superimposed by external
factors, at random, on the village developmental process.
As a macro-level institution government came with, and oper-
ated within, a set of entirely different parameters and
constraints from those which regulated village activity.
For the study areas government had a relatively short and
ineffective 'life' as a development agent (Fig. 4.1), but by
its presence and nature contributed more than any other single
factor to their socio-economic isolation.

Stage I. Stage I was a period in which essentially egalita-
tarian trading relationships between the village
and the outside world predominated. In this
stage the effects of contact were 'perhaps
not entirely detrimental...It is possible the
islanders were not beneficiaries' (Amarashi 1979:
5-6). Extra-traditional goods were absorbed into
the extant subsistence system as improved versions
of items already in use. While each partner to
Table 4.1 — Stages in development and approximate dates

<table>
<thead>
<tr>
<th></th>
<th>BUGOTU</th>
<th>EAST BLURO</th>
<th>NINGIL</th>
<th>KILIMERI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I.</td>
<td>1568-1869</td>
<td>1568-1860</td>
<td>1894-1932</td>
<td>1800-1921</td>
</tr>
<tr>
<td>Intensification</td>
<td>1769-1860</td>
<td>1820-1860</td>
<td>1897-1932</td>
<td>1910-1921</td>
</tr>
<tr>
<td>of Stage I.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage II.</td>
<td>1861-1895</td>
<td>1861-1930</td>
<td>1933-1958</td>
<td>1941-1963</td>
</tr>
<tr>
<td>Stage IV.</td>
<td>1939-</td>
<td>1945-</td>
<td>1968-</td>
<td>1969-</td>
</tr>
</tbody>
</table>
Figure 4.1 Comparative stages of contact and government penetration
the exchange regarded the trade as profitable, relations between them usually were amicable. Although some of the items acquired during this stage produced significant changes to subsistence organization (Salisbury 1962), the process was basically a substitution.

**Stage II.** The second stage marked the beginning of a closer relationship with the outside for villagers, and the addition and later dominance of labour as a unit of exchange value. For many villagers labour movement was the first experience of the modern sector, on its own ground. The village was still self-sufficient and in control of its environment, but village horizons widened dramatically.

**Stage III.** In the third stage, the subsistence base — the village itself — was engaged in the process of modernization. Villagers began to incorporate modern sector activities into their daily round. Cash-crops, schools, health services, missions and patrol posts were sought and welcomed. It was a period of experimentation in which for the first time the modern sector encroached on subsistence organization, bringing new needs, new norms and new problems to the entire community. This linkage, with its implicit requirement for reliable mechanisms for constructive interaction between the two sectors, marked the developmental apogee for the study areas.

**Stage IV.** The fourth period was a reaction stage, usually provoked by a breakdown in communications between the modern sector and the village. The result was lacunae in the development sequence, often associated with crises in village-government relations. This stage was characterized by village misgivings as to the relevance of development, by attempts to rationalize and reconcile
the perceived links between village and modern sector, and by efforts to re-establish village control over ecological change. These aims were pursued in a variety of ways. Among them were the rejection of the modern sector and its agents, millenarian movements, self-help projects and intensification of entrepreneurial activity, often at the expense of communal cohesion. The study areas have been trapped at this stage for a period ranging from 10 to 40 years. In all cases a strong distrust of, or disinterest in, government was intensified by its apparent inability to improve the situation. This further isolated villagers from development opportunities.

Though the study areas passed through the same general sequence in their 'development', the relative length of each stage, and the type and timing of influential events, gave each a unique experience. The result was significant variations in development capacity. In each area different periods of contact history stand out as peaks of major formative importance. For Bugotu these fell at the turn of the century, with a strong alliance between traditional and mission leadership; and in the late 1930s, with the Fallowes movement. For East Nauro the main event of developmental significance was Marching Rule, the allegedly cultist movement of the 1940s. In the West Sepik early development was abruptly curtailed by the transfer from German to Australian rule in 1914. The situation for Ningil villagers improved in the 1960s with their 'capture' of a Franciscan mission station, but for Kilimori deteriorated with the Indonesian takeover of the then Netherlands New Guinea. It is argued here that one consistent thread runs through all these apparently disparate events: the impact of government, in each case in which it was involved, was developmentally negative.
Stage I. Solomon Islands contact and trade

On Santa Isabel the first recorded contact experience changed, over a period of some months in 1568, from relatively amicable exchange to open violence. By the time Mendana’s reconnaissance vessels reached Thousand Ships Bay in the Bugotu area, their attempts to ensure a regular food supply often resulted in harsh methods, kidnapping and retaliation (Amherst and Thomson 1901; Horton 1965:7-8; Fox 1967:7-8). After clashes on other islands the Spanish departed, taking six San Cristobal villagers (who later died in Peru) to assist future evangelization (Amherst and Thomson 1901:1,180; Fox 1967:10; Laracy 1976:11). An attempt by Mendana to colonize the islands in 1595 failed, but recent archaeological evidence indicates that the crew of a ship lost from the second expedition established a short-lived settlement on the north coast of San Cristobal (Allen and Green 1972). For 200 years thereafter the Spanish kept the location of the islands so quiet that their existence was doubted (Amherst and Thomson 1901:1xxiii), but a few disjointed accounts of the experience survived in Santa Isabel oral history (Bogesi 1948).

Santa Isabel and San Cristobal were not rediscovered until the de Surville expedition of 1769. By the end of the century sections of the San Cristobal coast had been charted. Rapid expansion of casual contact prompted the Governor of New South Wales in 1805 to forbid recruitment of Solomon Islanders for long voyages without his written permission (Coates 1970:115). The growth of the whaling, bêche-de-mer and trochus shell trades in the Pacific was accompanied by rapid diffusion of European trade goods, especially around places such as Makira Bay on San Cristobal, which was a favoured anchorage and careenage for whaling ships of French, British and American origin (Corris 1973:7-10).

The village desire to expand trading contacts at first created a favourable climate for mission activity. In 1845 a Marist mission party under Bishop Jean-Baptiste Epalle
selected Makira Bay and Thousand Ships Bay as the two areas in the Solomons where, from its scanty knowledge, the party expected a welcome by villagers wanting to trade (Laracy 1976:15-17). The Marist incursion was brief. Four days after the party's arrival at the southern end of Thousand Ships Bay, Bishop Epalle crossed tribal frontiers, despite village warnings, in an attempt to contact a group of Mahaga people at Midoru. In a subsequent scuffle he was mortally wounded, and his party withdrew to Makira Bay. For two years the mission was beset by disease and caught up in village rivalries for its trade goods. Several missionaries died or were killed, and the station was abandoned in 1848 (Corris 1973:11; Laracy 1976:19-22).

For San Cristobal the mercantile pattern which had been grafted on to traditional existence reached a peak over the next decade. Whaling activity was considerable, and San Cristobal became the Solomons centre for beachcombers (Corris 1973:14), some of whom filled the role of military advisors and quasi-traditional leaders (Laracy 1976:21). An Arosi man returned from school with the Melanesian Mission in New Zealand (Armstrong 1900:14; Fox 1958:216) and a botanical expedition visited the island (Hansell and Wall 1976:74). The same period brought the first signs of diminishing returns to the villagers from such contact. Introduced diseases spread rapidly, and a pattern of conflict emerged which over the next half-century developed into a regular series of attacks and punitive expeditions. From the scanty reports of older East Bauro villagers, vague tribal memories of this contact experience percolated across the mountains to East Bauro in step migrations from the Haununu area on the south coast, and were reflected in village ambivalence towards subsequent contact.

1. A short distance along the coast from the present site of Vulavu. Several members of the Bugotu sample came from Mahaga families.
Stage I. Mission and government in the West Sepik

Though a series of European exploratory expeditions passed along the Sepik coast from the early sixteenth century, the only contact inland before German occupation in 1884 came from Southeast Asia. For possibly two centuries (Choesman 1938:36), bird of paradise hunters made occasional visits inland from Hanimo, used as an anchorage in the time of the Majapahit empire (Allen 1976:323). Malay hunters travelled through Kilimeri in the nineteenth century, when they introduced sweet potato, cassava, pumpkin, pawpaw and beans. Under German administration, when Malay labour was employed to work gutta percha (GIG 1911-12:26), Malay bird of paradise hunters operated inland from Aitape, facilitating the spread of steel, trade goods, cowrie shells and other traditional valuables, and now varieties of foods from the coast. Chinese traders were settled at Aitape by 1900 (Rowley 1958:60) and later recruited labour further inland (Allen 1976:60). A few expert hunters who worked for the bird of paradise expeditions acquired or learned to use shotguns, and the enormous prestige this brought in some cases lent quasi-modern bijmau status to their descendants. These benefits ceased when the Bird of Paradise (Exportation) Ordinance was passed in 1921, and government re-opened a patrol post at Hanimo to prevent smuggling of plumes across the border.

The nature of itinerant contacts began to change with government influence in the early 1900s. A number of scientific expeditions visited the inland under the German Imperial Government. In 1902 a German botanist visited the Torricelli Mountains (Allen 1976:57-8), and in 1907 a geological expedition followed the Tilo (Rainu) River (Wiltgen 1969:352) to within 15 km of Mingil. In 1910, when Hollandia was established, a Dutch-German Boundary Commission made a brief

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1. Some Kilimeri informants believed that these expeditions occurred at three-monthly intervals, but Choesman (1949: 270-1) quotes a contemporary witness who reported visits from a Malay hunter for only one month each year. Trade in the plumes was extensive in the early 1900s. The German Annual Reports record exports of over 27,000 skins between 1909 and 1913 (S. K and Clark 1979:315-68).
attempt to map the border. In 1903 trading with natives for shell, minerals, rubber or copra was regulated by government Ordinance (Rowley 1958:184), and in 1905 a native head tax was introduced (Aust.: PMD 1937:5-7). The German Imperial Government, pressed for funds, was unable to maintain the pace with which it had started, and from about 1908 government contact and programmes for expansion into the hinterland lapsed almost entirely (Sack 1973:97-8).

During the trading period one of the main centres of development in German New Guinea was the Aitape coast, with which villagers from the Ningil area had traditional trade links. In 1897 the Neu Guinea Kompagnie made Aitape the headquarters of an administrative subdistrict, and the Catholic Mission started to acquire the land which subsequently made it the most influential development agent in the West Sepik, especially for the Torricelli Mountains. By 1906 it had approximately 5,000 coconut plantings, the same number of rubber trees, 100 head of cattle, 20 horses and a German language school (Rowley 1958:249; Wiltgen 1969:350-7). Though the mission, like the German Imperial Government, did not have the staff to organize regular contact with the inland villages (Allen 1976:80), in 1909 it carried out a successful rice project up the Eilo River. In 1913, at mission instigation, a German parliamentarian proposed to start a 100,000 ha settlement scheme in the Torricelli Mountains (Sack 1973:104-5).

From about 1899, when the German Government moved its capital from the New Guinea mainland to Rabaul, government activity focussed on the New Guinea islands. Though the road

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1. The Neu Guinea Kompagnie spent about $1 million on opening Kaiser Wilhelm Island, but in 1899 when the German Imperial Government took control its exports were worth only about $12,000 (Sack 1973:95). From 1904 an imperial subsidy of at least one million marks (approximately $97,000) was required for maintenance of the colony (Roed 1943:84; Rowley 1958:9, 62).
network out of Aitape increased, several attempts to construct a breakwater and wharf on the exposed coast failed (GIG 1909-10, 1910-11, 1911-12). Aitape was dropped from the uneconomical route of the North German Lloyd steamer in 1904, and thereafter received a ship 'only once every three months' (Wiltgen 1969:346). This problem continued, off and on, for the next seventy-odd years. While the government under Nahl actively supported indigenous participation in the agricultural cash economy, and encouraged villagers by various sanctions and incentives to establish coconut groves and to collect minerals, rubber and gutta-percha (McKillop 1976:13), concurrent development of the plantation economy elsewhere made maintenance of the labour supply the major government concern (Hastings 1969:68-72). From this time until the inland West Sepik villages were drawn into the indentured labour system just prior to World War II, contacts for Ningil with Aitape, and Kilimori with Hollandia or Vanimo, were mainly a village initiative.

In September 1914 the Australian government proclaimed its military occupancy of German New Guinea. The Catholic Mission's development programmes ground to a halt as World War I disrupted supply lines from Europe. The westward spread of developmental demonstration effects from Aitape was aborted after the war when a government official removed German settlers between the centre and the border, to prevent illicit communication with their home country through Dutch contacts (Rowley 1958:42). In 1920 German properties were expropriated. Links to the parent country were now southward to Australia. The Sepik area became progressively more isolated from the main trade routes as the Australian Shipping Act 1921 forced foreign ships out of the Papua New Guinea trade (West 1968:189). Australian government moves in the 1920s to prevent depredations of birds of paradise, and proclamation of uncontrolled areas to prevent itinerant goldmining ventures in isolated country, severed most informal links between the inland Sepik and the outside. For about forty years thereafter the most significant government contact with the hinterland was punitive expeditions.
Stage II. Development and the labour trade in Solomon Islands

The use of labour as a unit of economic value was not new to Solomon Islands. Though the motives of the labour traders and the missions for their acquisition of Melanesian recruits were at variance, both followed an indigenous precedent in which labour was a negotiable commodity. A fairly sophisticated slavery system operated in the nineteenth century, and slaves often were traded between the islands. Wilson (1932:209) records one case of a man from Guadalcanal sold into Bugu by New Georgians, and Roviana raiders at times carried off Santa Isabel captives as slaves. A slavery system also existed in Bauro (Fox 1925:36). Though slaves could be used for sacrifice, the possession of useful skills usually was a reasonable safeguard for their lives (Tippett 1967:149-50), and on the whole they were kindly treated (Fox 1925:36). In addition, many Solomon Islanders prior to the 'blackbirding' excesses of the nineteenth century had worked as labour for ships or plantations. Solomon Islands adaptation to organized labour movement in consequence did not involve the drastic attitudinal adjustment which was associated with the labour exodus in the West Sepik.

In the mid 1800s the start of headhunting1 in Bugu initiated the preconditions for mission success and, indirectly, for more selective Bugu involvement in the overseas and plantation labour trade. Long-distance raids from the Western Solomons and, later, from the northern end of Santa Isabel concentrated the coastal dwellers southward and inland. Eventually they decimated the population on the southwest coast. The headhunting period facilitated the rise in Bugu of an entrepreneurial strongman, Bora, and united the previously fragmented villages into what eventually became an island-wide leadership hierarchy under a paramount chief.

1. Nineteenth century headhunting was not related to the cannibalistic practices reported in parts of Santa Isabel by Galberry in 1968 (Amherst and Thomson 1901:21,257). It followed the New Georgian pattern of raids for the express purpose of collecting heads (Cairington 1891:345; Shinnbury 1971:303-4; Jackson 1975:65), the number of which provided a linear measure of a chief's status (Penny 1888:47).
European penetration was slight in Bera's lifetime. Though he allowed Bishop Patteson to take Santa Isabel boys to school in New Zealand, his leadership inhibited evangelization of the island (Penny 1888:204). By judicious manipulation of trading contacts Bera established Bugotu as a central point, and was able to extend his influence to Savo and the Florida group. Though he was selective about recruitment (Wawn 1973:223), during Bera's reign Santa Isabel supplied more labour recruits than any other headhunting area (Jackson 1975:68).

The Melanesian mission gained a small foothold on Santa Isabel in Bera's time, under the supervision of a 'domineering' catechist. By the time he was removed in 1878 (Armstrong 1900:181-2,187) the mission had a school at Vulavu (Fox 1958:196). This provided an opening for subsequent mission activity, and served as a preparatory acculturation agency for prospective labour recruits. Head-hunting continued for some years, but at Vulavu the 'strong and gifted' church leader Hugo Garovaka organized village defence, assumed temporal leadership (Penny 1888:218-9; Jackson 1975:72) and made Christianity a powerful force. In doing so he inadvertently encouraged a strong village correlation between the Christian faith and secular advantage, which lasted for the next fifty years.

Bugotu growth as a local political and commercial force received a major setback with the Anglo-German demarcation agreement of 1886. Though no other parties to the international disarmament agreement seriously enforced it, the German government confiscated firearms on Santa Isabel (Coates 1970:224-5). This left the island defenceless against the firepower that the Samoan recruiting trade supplied to its opposition. Caught in an influenza epidemic, and harassed by raiders against whose sophisticated weaponry tree-houses and forts were no longer sufficient protection, Bera's son Soya formed an alliance with the Melanesian Mission.

Government moves elsewhere in the mid 1800s added a further problem, that of 'blackbirthing', to the increasingly
complex contact situation. In Australia the 1852 gold rush marked the end of transportation of British convicts to any part of the east coast (Gunther 1972:36), and initiated a labour shortage. The American Civil War in 1861 prompted the British government to consider Fiji and Queensland as possible alternative sources for cotton, and later for sugar (Gutch 1971:162-4). Within a few years the demand for Melanesian labour resulted in kidnapping, coercion and other abuses, which led finally to the imposition of macro-government in Solomon Islands.

Where the excesses of 'blackbirding' were controlled, a term of overseas employment for many villagers became a valued experience. In 1868 Queensland introduced a licence system for recruiting ships and established a scale for rations, clothing and wages. The wage was set at $12 per annum, twice the amount paid on Fiji plantations (Scarr 1967:140) and the same as the rate paid on Solomon's plantations more than 60 years later (Hogbin 1939:161; Bathgate 1975:96). Returnees gained considerable prestige, which later was reflected in the upward mobility of their children. Though the sons of overseas labourers represented only 13 per cent of the male sample in Bugotu and 6 per cent in East Buro in 1976-77, they held 30 per cent and 50 per cent respectively of the headman, councillor or parliamentarian positions. All, without exception, had at some stage held positions of authority in their villages.

Wainoni Bay on San Cristobal was also a main recruiting centre in the latter nineteenth century. Though trade copra was exported at this time, the decline in copra prices in the 1880s, which caused two major companies to collapse (Corris 1973:106), gave the labour trade the advantage over cash-cropping as a source of village income. At the same time, San Cristobal villagers exhibited increasing dissatisfaction with the activities of resident expatriates. Offences against British subjects were treated as 'acts of war' (Scarr 1967:167), and frequently drew retributive demonstrations of strength from British naval patrols. In 1881 H.M.S...
Cormorant was based at Ugi Island to supervise labour and trade relationships. In 1893 Britain reluctantly declared Solomon Islands a Protectorate.

Marist missionaries, told at Makira Bay that they were not wanted because 'death was striking wherever Europeans settled' (Laracy 1976:40), eventually established a base at Wainoni Bay in 1909. By that time, returned Catholic converts had broken the ground, and a South Seas Evangelical Mission (SSEC) had started a mission school in the area (Hilliard 1966:367; Corris 1973:135; Laracy 1976:46). Though Maniwiri-wiri village in the 1970s adhered to the SSEC, in most of East Bauro the Marists slowly gained the ascendancy, due largely to their greater involvement in developmental and social services.

In the early twentieth century moves by the British government to make Solomon Islands financially self-reliant began to narrow village horizons. Resident Commissioner Woodford encouraged foreign investment and plantation development, and pressed for an end to overseas recruiting. In 1907, in the erroneous belief that 'the financial position of the Protectorate is now assured', the High Commissioner agreed that recruiting should cease. In 1916 the Solomon (Labour) Regulation ended overseas employment for Solomon Islanders as of December 1911 (Corris 1973:148). Villagers had little positive experience of government to compensate for the loss of overseas contact. Solomon Islands was the only British colony of that time where regular administration in the villages hardly existed (West 1968:271).

East Bauro villagers became increasingly isolated from development elsewhere. In 1914 inter-island recruiting was officially restricted to stop the spread of dysentery (Laracy 1976:67). In 1915 a severe epidemic struck the Wainoni

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1. Until 1907 known as the Queensland Kanaka Mission, a fundamentalist evangelical group which had worked with Solomon Islanders on the Queensland sugar plantations since 1882.
area (Marist Mission 1909-). In the same year a police expedition, to arrest the murderer of a recruiter at the Ravo River near Maniwiwiwi, sparked a rumour that the government required everyone to become Christian (Hilliard 1966:384; Laracy 1976:79). These factors resulted in widespread conversions. While they lasted, mission requirements for converts, pupils and cheap labour drew much of the depleted workforce in the area away from plantation work. Though San Cristobal as a whole ranked relatively high as a source of indentured labour until about 1930 (BSIP: NLDAR 1914-31), many East Bauro villagers, fearful of disease, police action, and the harsh station management of the strong-minded curate at Wainoni Bay, scattered inland.

The period in which off-island labour dominated contact relationships came to an end for Bugotu with the alliance of its traditional leadership and the Melanesian Mission, and before official termination of the overseas labour trade. Though a number of plantations subsequently were developed on Santa Isabel, they formed more of an enclave than on San Cristobal and imported much of their labour from other islands. The growth of plantations on San Cristobal, on the other hand, was largely the work of F. M. Campbell, the police officer who visited the area in the Ravo River murder investigation and who later opened the district administrative station at Kirakira. Campbell built up several plantations along the north coast, which enabled East Bauro villagers to integrate short-term, casual employment with their seasonal subsistence obligations. Whereas Bugotu villagers moved into a period of vigorous mission development, for East Bauro wage employment was the major link with the modern sector until the 1930s.

1. San Cristobal suffered more than most areas from such epidemics. Laracy (1976:67) notes that between about 1912 and 1916 'fully one-third' of the population died from dysentery and chest complaints.
Stage II. Government penetration and the West Sepik labour exodus

In the 1930s the inland West Sepik villagers became involved in the movement to the plantations of the Bismarck archipelago, which had commenced for more accessible areas in German times (Brookfield 1960:239). The 'labour frontier' (Brookfield with Hart 1971:264) reached Ningil in 1933, when a thin trickle began to the Wau-Bulolo goldfields and later to the Gazelle. A few Kilimori men joined the exodus immediately prior to World War II, but for the majority the 1930s was a period in which government began to extend its influence and to limit unauthorized contact.

Initial government contact for purposes of pacification and control was made with Kilimori and the Aitape hinterland during this time. Several expeditions passed through other parts of the Sepik (Aust.:Cwlth Parl. 1928:91-118); McCarthy 1935; Ryan 1972:1035), but government contact with the study areas was not followed up until long after the war. In 1935 the Administrator informed the missions that no permits to enter 'uncontrolled' areas would be granted until the administration had made contact with the people (McNicholl 1968:116). Government's capacity to keep ahead with the limited staff of the Department of District Services and Native Affairs came under additional pressure as small prospectors and recruiters moved out from the goldfields into areas with little, if any, government supervision. Much of the West Sepik remained out of bounds after the controls were relaxed in other areas. The West Sepik study areas, on the fringe of the territory officially classified as under 'partial control' (Griffin et al. 1979:51), were beyond the range of effective government protection but within range of its punitive authority.

During the contact gap of the 1930s, the first of a long series of millenarian movements to disturb the Sepik region arose. These movements, which 'traditionally...were a mechanism of the culture to deal with disaster and change'
(Waiko 1973:428), intensified the friction between villagers and government. The range and speed of dissemination achieved by some of the movements far outstripped governmental capacity to contain them. Anti-European 'Black King' beliefs from the Aitape area had spread along the coast as far as Madang by 1935 (Worsley 1970:111-14). In 1942 one official reported on outbreak of what appeared to be 'Vailala Madness', a movement which originated on the Papuan coast, in the Wapei area near Ningil (PNG:DNA Aitape 4 of 43/44). A tendency developed among officials to reject as cultist any extra-subsistence activity which was not promoted by government. In one case a patrol officer was instructed to determine whether an 'unusual interest' in mission adult literacy classes was 'in any way related to cargo cult thinking' (PNG:DNA 67-5-2 of 12.7.67). Several instances of genuine or borderline development initiatives were aborted by the close surveillance and active discouragement of government officers and their local supporters. Government preoccupation with the apparent threat to its authority posed by the proliferation of cult movements in the Sepik severely inhibited macro-micro integration. By the time government turned to promotion of development projects, villagers had decided that the only significant difference between 'blackman's ritual' and 'whiteman's ritual' (Allen 1973) was the possession of power.

Despite the plans which were made and the goals which were drawn up, a positive 'native welfare' policy did not develop to any significant extent during the pre-war period in New Guinea (Stanner 1953:28). When the West Sepik was caught in World War II village attitudes to government, especially in Ningil, were distinctly ambivalent. The war reached the inland Sepik villages in 1944, when Allied landings at Hollandia and Aitape cut off the escape route of the Japanese Eighteenth Army and drove the fugitives into the hinterland. In some places the Japanese, skillfully trading on their skin colour, rural background and apparent strength, were welcomed (Worsley 1970:216; Foldt 1975:230-2; Allen 1976:87-8). Several Ningil men cooperated with both sides.
Village support for the Japanese was soon withdrawn. Refugees through Kilimeri and East Au, many of whom were ill and short of supplies, took over whole villages, killed game and domestic stock, ruined gardens and rendered houses uninhabitable. Rumours of Japanese cannibalism (see also Allen 1976:89) drove some villagers into hiding.

The end of the war was followed, especially for Kilimeri villagers, by an arduous process of reconstruction at home, and high outmigration for wage employment in reconstruction elsewhere. Most able-bodied men from Ningil and Kilimeri who had been caught away from home by the war spent the immediate post-war years on 'garbage' detail and town restoration. The high demand for labour encouraged others to join them. For those who remained, sago was often the only alternative to starvation. Houses and gardens had to be rebuilt, and in some cases whole villages relocated, by a reduced workforce. Pre-war nutritional standards declined, most notably in Kilimeri. Compensation payments for war damage and losses, if received at all, were too small and too late, and were easily swallowed up in the expansion of village cash needs which accompanied the post-war outmigration.

The net outflow of adult males from the Sepik region reached a peak of over 10,000 in the 1950s (TPNG 1970:31). Villages in the Lumi-Ningil area became dangerously depopulated (PNG:DNA Lumi PR 15 of 49/50). Government moves to ameliorate the situation, through closure of some villages to recruitment and through agreements with recruiters to restrict numbers to one-third of the male population, intensified village resentments. Many men simply moved to other recruiting centres and enlisted under fictitious names (PNG:DNA Lumi PR 9 of 62/63), while those who missed out blamed government for the loss of their one reliable source of income. Villagers who stayed at home laboured under an additional handicap, in that they subsidized the development of plantations elsewhere. Throughout the 1940s and 1950s the long-term economics of the situation demanded that the village as the supplier of labour be maintained on a basis of welfare...
adequate for it to continue the supply
...The evil lay not so much in the
contract, or even in the penal sanctions
for breach, but in the whole nature of a
system which takes the man away from family,
clan and village, and treats him as a
single man without dependents — as an
unattached "unit of labour", to be
carefully nurtured and fed, certainly,
but also to be denied for the term of
employment the status of a social being
...The village bore the costs of main-
taining the wife and mother; and the
wages was fixed in relation to the assumed
needs of the "unit of labour" only
(Rowley 1972:102-4).

Labourers rarely returned with much of their cash
earnings (PNG:DDA Lumi SR4 of 3.2.72; PNG:DDA Ambunti PR21
of 72/73), or with any skills applicable in the village. On
the other hand, most returned with trade goods which eased
subsistence living, enhanced their status and, in the case
of single men, improved their marital opportunities. This
generated a new hierarchy of needs in the villages, but they
were needs which could be satisfied, on the whole, by a term
of employment. As the outward flow of Sepik indentured labour
decayed in the late 1950s, Ningil and Kilimari villagers
began to seek alternative cash-earning opportunities. They
were not readily available. One official was told 'to
restrict economic development until communications and the
staff position are better' (PNG:SDO Lumi 51-3-1 of 1.11.60).
'Be extremely wary on the introduction of crops', the Newak-
based District Commissioner advised his subordinates: 'I
do not want these people to get a cash-crop idea, we will
never get the stuff out' (PNG:DDA Kewak 67-3-8 of 12.7.63).

Stage III. Solomon Islands: Development momentum and
government response

From the turn of the century until the 1930s, the
benign association of Bugotu traditional leadership with
the Melanesian Mission brought a period of extensive and
singularly untraumatic social change to Santa Isabel villages.
The Soga, advised at first by missionary Robert Turnbull (Fox 1958:196) and Hugo Garovaka from Vulavu, and later by Dr. Henry Welchman, began a programme of diplomatic and administrative consolidation. Between 1875 and his death in 1898, he obviated the threat of raids by judicious show of force and offers of peace (Corris 1973:65; Jackson 1975; White 1977), and united the island under Christian application of customary law (Tippett 1967:44). Welchman, a medical missionary who adopted the native lifestyle, was instrumental in continuation of the unifying position of 'paramount chief' after Soga's death when the villages, freed of the head-hunting threat, began to disperse (Hilliard 1966:119,188; Jackson 1975:77-9). After Welchman's death in 1908 the alliance of church and traditional leadership continued under a few outstanding Melanesian clergy.\(^1\) During this time mission education spread rapidly. Standards of education declined, but mission networks facilitated outward communications, and European missionaries provided a number of subsidiary social and economic services. Under the strong leadership coalition, Santa Isabel villagers developed an exceptional degree of social cohesion, and a sense of island-wide social responsibility which lasted long after government intervention caused mission influence to wane.

After the departure in 1914 of Charles Woodford, the exceptionally able Resident Commissioner of the Solomons for 18 years, colonial administration deteriorated (Coates 1970:236). The uneasy truce which had existed between government and mission in Woodford's time, despite Anglican missionary opinion that Woodford was 'unreasonably critical — even prejudiced' (Hilliard 1978:133) towards them, degenerated into rivalry and at times into bitter

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1. Those men effectively governed the island for 15 of the 22 years after Welchman's death, in the absence of a European priest, until the arrival of Fr. Richard Fallowes. Notable among them were Hugo Hembala, who was revered in Bugotu and attributed with minor miracles (Hilliard 1978:219), and Ben Ngeria.
resentments. In the 1920s government began to assert itself with legislation which for the first time fell heavily upon village life. A head tax was introduced in 1920, and domestic labour legislation in 1921. In 1922 the first Native Administration Regulation authorized the appointment of village headmen and village constables. Signs of unrest were exhibited in incidents on Guadalcanal (Laracy 1976:99-105) and Malaita, where a district officer and his party were killed during a tax patrol (Keeling and Corris 1980). These incidents drew an investigation from London. The inept administration of the Solomons government was publicized in the overseas press and later censured in the report of investigator H. C. Moorhouse. Government officials became acutely sensitive to criticism, especially from missionaries, who frequently supported (and often published) native grievances.

On Santa Isabel resentments over the head tax, which brought no noticeable benefits to the island, were aggravated by the appointment of Walter Notere,¹ a man of poor local repute, as the first district headman. The selection of Notere by government proved to be a critical factor in the subsequent rift between government and Santa Isabel villagers, in the decline of Melanesian Mission influence and, indirectly, in the retardation of the island's development.

In 1918 Notere, who had fallen out with the traditional leaders in Sepi, the home of the Soga, led a splinter group of Sepi villagers to settle on Furona Island. By 1930 he had been excommunicated from the church, and was vehemently opposed to the mission — the indigenous mission leaders in

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¹ Some confusion exists in the literature between Walter Notere, the first government headman, and Eric Notere, the uncle of the original Soga who was elected as 'paramount chief' at Welchman's instigation (Jackson 1975:77). Eric Notere was confirmed in the position by Woodford in the early 1900s (Wilson 1935:56-7). There is no evidence of a relationship between Walter Notere and the Soga line (NM records Santa Isabel 1931-34).
particular. The latter, many of whom were chiefs in their own right, castigated Notere and his supporters as 'mission outcasts, people of evil reputation or white men's pimps' (Fowler 1959:41). Though Notere was known to government as a rogue with a likeable approach (Fowler 1959:24), his leadership ambitions and fluency in Pidgin made him invaluable to the hard-pressed government officials, who were rarely stationed in one place long enough to learn the language (Coates 1970:236). In 1930 he attached himself to a young district officer whose goals, to assert government supremacy 'over every aspect of native life' and make it the recognized 'fount of progress' (Hilliard 1978:281), served Notere's personal interests. Notere's position as trusted government headman enabled him effectively to control most communications between government and the islanders. He extended his local influence by adroit manipulation of his government contacts, which gave him quasi-traditional bigman status in the early 1930s. At this stage the growing influence of a new, intensely dedicated and politically conscious European priest, Fr Richard Fallowes, posed a major threat to Notere.

In the Anglican tradition of Patteson and Welchman, Fallowes worked closely with the indigenous institutions, and lent mission prestige to the traditional leaders. To improve the daily supervision of school and church activities, he encouraged each village to appoint respected people as church deacons. In thirteen villages the government headmen became unpaid church deacons and a few, including the paramount chief, held the treble authority of hereditary chief, church deacon and government headman. Notere, particularly incensed by the extra-curricular activities of government headmen, who officially were subordinate to him, suggested to government that they be taken to court 'for not doing their work properly' (Notere 1933). The crisis came when one district officer told Notere that adultery cases were outside
government jurisdiction, and were to be left to the mission. In shrewd appeal to governmental sensitivity over the issue of mission secular influence, Notere reported to higher authorities that

the result of this is that the mission has grown in power and the government has accordingly lost grip...the only things dealt with by the Government are matters which are really serious. There is very little serious crime amongst my people and so the mission are practically running everything (Notere 1933).

Government officials in Tulagi, convinced that 'the Government has...almost handed over the Administration of the island to the Mission' (Sanders 1933:2), instigated moves to get rid of the influential priest. These failed. Fallowes, who repeatedly drove himself to the point of physical and mental collapse, left the Protectorate in 1935, but by then communications between government and villagers on the island had been reduced to functional essentials.

Local grievances received additional impetus from the depressed state of the world economy in the early 1930s. When a drop in copra prices threatened plantation survival, the minimum wage was cut by half (Hogbin 1939:161) and indigenous cash incomes declined dramatically. Mission salaries were cut, and stringent economies introduced which closed some schools and brought a reduction in overall school attendance (Hilliard 1966:205; Laracy 1976:95). Complaints

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1. At that time government only recognized as legal 'custom' marriages or marriages performed by a registered minister or 'civil celebrant'. It refused to register the native clergy who, since Santa Isabel had discarded brideprice, performed almost all marriages on the island. As very few on the island therefore were 'legally married', government officially could not sanction divorce or punish adultery (Hogbin 1939:213; Hilliard 1978:263). The district officer's instruction to Notere was therefore legally justified, though adultery cases previously had been considered part of the headman's responsibility on Santa Isabel as they were elsewhere.
that 'Government does little or nothing...in return for the tax which it collects' (SI:DO Santa Isabel 1939) grew into 'incidents'. Unrest in Nggela, the 'geographical, political and commercial centre' of the Protectorate (Beishaw 1947:189), began to spread through the labour network to other islands. In addition, a proliferation of Japanese vessels in the Pacific throughout the 1930s, and the German-Japanese pact of 1937, alerted the government to the danger of imminent war. Left with a reduced workforce as staff enlisted, and fearful of 'movements subversive to established Government' (Luke 1939:6), the Solomons government reverted to the repressive approach often associated with colonial administration in the depression years (Low 1977:28).

In 1938 Fallowes returned to the Solomons privately, despite vigorous opposition from Resident Commissioner Ashley and Bishop Baddeley, head of the Melanesian Mission. Fallowes' motives thereafter were under government suspicion and his movements under government scrutiny. After some months, expressions of native grievances convinced Fallowes that

some sort of forum for natives to discuss matters concerning their common interests is desirable and could be of value to the B.S.I.P. Govt in ascertaining general opinion upon matters which natives are... concerned with (Fallowes 1939).

The idea was taken up by Santa Isabel and Nggela leaders, and attracted representatives from Malaita, Savo, Guadalcanal, the Russell Islands and Marovo. From his initial role as catalyst, Fallowes withdrew into a consultative and support role as the movement rapidly gained momentum.

1. Baddeley, a 'leader by nature and an autocrat by inclination' (Hilliard 1966:205), a worldly cleric, and an administrator whose attitude to Melanesians was the antithesis of that of Fallowes, was relatively new in the job during Fallowes' earlier difficulties with government. By 1938, however, his friendship with Ashley had done much to heal the breach between mission and government at senior levels, and he readily supported Ashley's attempts to prevent Fallowes' return.
This movement, later known as the Fallowes or the 'Chair and Rule' movement (Worsley 1970:182), was a watershed in Solomons relations with its colonial power. In a period when inchoate nationalism usually was expressed in millenarian movements, rejection of Europeans, confrontation or violence, the 1939 'native parliaments' were remarkably rational and sophisticated. For the first time a sense of pan-Solomons political consciousness was exhibited, and a unity of purpose achieved between disparate island communities. The meetings were open to all, including government 'Observers', in the belief that government would approve (Fallowes 1939). As with many other movements, it accumulated a clutter of rumour and cultist belief, especially in areas on the periphery of the movement, but most did not emerge until after government took suppressive action. Of far greater significance was the fact that it was essentially a cooperative, not a confrontationist, movement. In suppression of the movement the Solomons government destroyed the only serious chance it had of a 'partnership' with the islanders, and fueled the anti-British, anti-government sentiment which emerged when the principles of the movement were refurbished as Marching Rule after World War II.

World War II was a transient event, of no great significance for the study areas. Though over 50 per cent

1. Later writers who have touched on the subject (Belshaw 1946; Allin 1950; Hilliard 1966; Worsley 1970; Hilliard 1974) almost to a man have perpetuated the official misunderstandings of the movement's aims, scope and operation. This is perhaps not surprising, as a number of the documents relating to the movement were not found until the 1970s; and Belshaw and Allin, both government officers during Marching Rule, were the nearest contemporary authorities. The Melanesian Mission, which lost considerable influence through its support of the government stance, made no comment on the affair in its publications, which Hilliard attributes partly to embarrassment (Hilliard 1978:285). The actual requests which triggered government suppression are given in Appendix E.
of males in the relevant age group had been involved in war-related activities, for the majority the experience was merely one in a series of employment experiences and little different from plantation labour. Almost all the war-time absences worked in the Russell Islands (87 per cent of Bugotu wartime labourers) or on the labour corps farms of Guadalcanal (54 per cent of East Bauro labourers). Only two men had active military experience. Neither island was occupied, but the loyalty of Santa Isabel islanders became suspect, as 'they had been known to show kindness to wounded Japanese and others shot down' (Fox 1958:94). The war brought San Cristobal only occasional military personnel on brief local leave, and a number of Chinese refugees from Tulagi, some of whom established businesses on the island after the war. The study areas saw little of the 'wonderland of ships, planes, roads, and jeeps' (Keesing 1977:72), and collected little of the war's jetsam which transformed other areas (Worsley 1970:183; Bathgate 1975:65). The important aspect of the war for the study villages was that it allowed a breathing space from government intervention, during which the lessons of the Fallowes movement for Solomons nationalism were absorbed and disseminated.

One of the major lessons the organizers of Marching Rule 1 learned from the previous movement was secrecy. By the time the movement surfaced in the Eastern District in 1946 it was firmly established, though the main leaders cautiously maintained their anonymity in official eyes for another year (Coates 1970:295). Other lessons were the avoidance of overt European participation, and the identification of cooperative co-existence with the colonial government as a culturally degenerative process. The movement was

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1. The main events and the significance of the Marching Rule movement have been documented by a number of writers, notably Allan (1950), Lavery (1971, 1976) and Keesing (1977).
socially and culturally reintegrative... A heavy and pervasive influence was placed on the dignity of Melanesians and on ensuring recognition of the islanders' own worth, an aim heightened by Christianity (Laracy 1976:125).

The involvement of Santa Isabel villagers in Marching Rule was largely a protest reaction to government's handling of their previous thrust. Marching Rule reached the island indirectly, via Vouza's subsidiary movement on Guadalcanal. Vouza's emissary presented the new movement as a continuation of the Fallowes precepts, but his use of millenarian Fallowes rumours (Allan 1950:60) from the fringe of the earlier movement gained little credence on the home island. Though some opportunists encouraged support for the new doctrine, Marching Rule never became the force it was elsewhere. Nonetheless, the Santa Isabel leaders were among the first to be arrested when government moved against Marching Rule in 1947.

For San Cristobal, by comparison, Marching Rule was the first major attempt by villagers to control the type and pace of modernization, and became primarily a developmental movement. The organization of the movement at its peak was exceptional. Villagers moved en masse into large settlements on the coast - a shift which, ironically, had been advocated unsuccessfully for years by missionaries and government officials. Daily chores were organized into specialities directed by minor 'chiefs' and, where it did not exist in traditional leadership, a hierarchical system of decision-making was introduced. The concern shown by the 1939 'native parliaments' for clarification of the relationship between 'custom' and the law was expanded into the codification of traditional systems, and 'custom' courts were set up to deal with breaches of Marching Rule laws (Allan 1950). Funds were collected to pay for a teacher, medical officer and agricultural adviser. Village horizons expanded rapidly. Liaisons were formed with old enemies, including Malaita and Ulawa, and long-distance canoe trips were made between San
Cristobal and South Malaita to learn more of the new doctrine (Belshaw 1947:191).

Though government at first attempted to absorb the energies of the movement into 'orthodox' programmes (Allan 1950:58), its tolerance was short-lived. In 1947 government officials, goaded by the discovery that the real leaders of Marching Rule had deceived them (Coates 1970:295), fearful that a proposed strike in support of wage claims would exacerbate the labour shortage (Laracy 1976:124), and disturbed by stories of misuse of funds, coercion and violence,1 began repressive measures. Somo 2 000 people were still in prison in 1949 (Worsley 1970:190). In the East Bauro area whole villages were denuded of able-bodied men. Nonetheless, Marching Rule survived underground on San Cristobal probably for longer than in any other area.2 Though confiscated funds were handed over to the new councils, villagers still complain that government stole their money; which, in effect, it did.

Government reconstructive activity after the movement was directed mainly at the source, Malaita. On San Cristobal its diversionary innovations, such as the introduction of small local councils, had little effect. Lacking the leadership, the manpower, and the access to turn them to developmental advantage, and with a suspicion born of previous neglect, villagers largely ignored government's conciliatory gestures. Government in its turn did not have the resources to mount the vigorous development programme on San Cristobal which it did on Malaita. On the assumption that quiescence on San Cristobal represented accord, it concentrated subsequent development activity in more cost-effective areas.

1. Koosin; (1977:41) attributes these stories to disgruntled loyalist headmen and paid informers.
2. Signs of Marching Rule organization were evident inland from Wainoni in 1964 (Koosin, pers. comm. 1976), and government's treatment of the movement was still a major topic of debate in East Bauro in 1977.
Stage III. Development in the West Sepik

The main development thrust for West Sepik villages was brief. It commenced for Ningil in 1959 with the establishment of a Franciscan mission station, at village request, on land purchased by the mission prior to World War II. For the Kilimeri it started a few years later, after the transfer of control over Netherlands New Guinea to Indonesia triggered Australian government action to upgrade its border supervision. Neither event brought the anticipated improvement to village development opportunities and, in particular, to village cash incomes. By the late 1960s the euphoria had turned to disillusionment.

Within about a decade after the establishment of the Franciscan station at Ningil, almost all the people of the village were baptized. At first the mission was deeply involved in secular development activities, which played an important part in its success. In 1961 it instituted the Ningil Industrial Society, primarily to counter cult activity in the area with economic opportunity (Elliott 1977: 26). The Society gained its major impetus from trade stores, which multiplied so rapidly that the supervision was stretched too thin, and gradually they began to collapse. At about the same time it started an extensive road-building programme. Villagers worked on the roads, and contributed land and an additional 13,000 man-days for the construction of an airstrip (FM Ningil n.d.), completed in 1962. Cattle were brought in through mission networks in 1963. In the same year the mission school was upgraded to a recognized primary school. The casual health care provided by the resident missionary grew into a vigorous health service and, with the arrival of a mission nursing sister, health work was carried off the station into the surrounding villages.

Concurrently with the mission’s activities, government became more involved in West Sepik development. In the 1950s and early 1960s the Department of Agriculture, Stock and Fisheries began to promote rice and coffee in parts of
the Sepik. Undeterred by the lack of access and by the active discouragement of government officials in their immediate vicinity, Ningil villagers experimented with cash crops. Most early plantings were communal, on individual or community land (PNG: DDA Lumi PR3 of 68/69), and did not last. Marketing, even with mission assistance, was difficult. Often the returns, for rice in particular, did not justify the freight costs or the labour. Government extension support was desultory, and village problems in organizing labour and distributing returns discouraged the cooperative approach which extension officials tried to foster. Many villagers, with their previous experiences of government intervention in mind, believed that government would punish them for innocent mistakes. The few who persisted with rice found that it deteriorated rapidly while stockpiled to await repairs to milling facilities, a recurrent situation in the 1960s and 1970s (WSP; DAC Minutes 11.5.71). Early returns from Robusta coffee were also low, and in 1965 the International Coffee Agreement resulted in a reduction of promotion activity (Shand and Straatmans 1974:105). Trees which had been planted earlier survived untended and unharvested (Elliott 1977:25). Government officials attempted to promote small-scale gold-mining and collection of marketable native products such as copal gum (PNG: DDA Lumi PR11 of 67/68), but most villagers regarded the returns as insufficient for the labour-time involved, and concluded with some justification that they were being fobbed off with a second-rate alternative. Faced with the logistic difficulties of maintaining extension work and outlets for hinterland production, government officials periodically decided that 'improvement of subsistence is our first requirement' (PNG: DNA 67-8-93 of 9.9.64). This proved an even more difficult task and was rarely followed through.

Problems with government development programmes also affected mission development activity. Government officials in the area strongly disapproved of mission involvement in the economic sphere. The Ningil mission was criticized for its encouragement of village trade stores; as failure, one official reported, undermined people's confidence in
economic ventures and added to the belief that Europeans would exploit them (PNG:DDA Lumi PR7 of 67/68). The Ningil mission cautiously withdrew into less controversial service activities. This widened the breach with Ningil villagers, who felt that the mission, their only hope, was failing them in the field where they most needed help.

By 1968 educational standards were rising. The first graduates from the Ningil primary school found that few could meet the entry requirements of the one high school in the district, and that wage employment was not readily available outside a few mission positions. The mission experimented with non-academic courses for primary leavers. Some Ningil students were sent for vocational training to mission centres elsewhere, only to find that what they had learned was almost impossible to apply within the socio-economic structure at home. Cattle which had been sold off after the decline of the Ningil Industrial Society were cornered by a few entrepreneurs and senior clansmen. Social constraints inhibited attempts by young vocational trainees to rival the big cattlemen, while government controls and supervision discouraged small livestock ventures. By the late 1960s many of the older generation of mission converts in Ningil had allowed their church allegiance to lapse, and were looking to the area's imminent membership of the Wapoi Local Government Council, and the 1968 national elections, to provide the developmental opportunities they sought.

For Kilimuri villagers development prospects seemed to improve dramatically in the early 1930s, when the government mounted a massive programme of expansion along the border with Indonasia. New patrol posts were opened, schools and health centres built, local government councils introduced, and an intense 'political education' programme started. Money was poured into the area to win the support of villagers who in some instances had expressed a decided preference for the material benefits of Hollandia under the Dutch. As a result, one patrol officer complained, the people afterwards expected to be paid for everything (PNG:DDA Wewak PR5 of 69/70). At
the same time, however, an instruction to border officials that 'border surveillance is to be maintained as a priority over all other activities' (PNG:DC Wewak A2/2/376 of 6.9.63) ensured that border development was effectively subordinated to political considerations.

When a survey of Pual River timber potential in 1963 found extensive tracts of merchantable forest, villagers were reported to be eager to sell the timber rights, to enable development of the area (PNG:Dept Forests 87-8-10 of 23.11.64). A firm of international consultants was retained to advise on the development of a large industrial complex. In 1966 government acquisition of the timber rights was regarded as urgent, 'so that the consultants' recommendations may be implemented on schedule as time becomes the essence of success in this project' (PNG:Dept Forests 88-0-5 of 31.10.66). Kilimeri villagers sold their rights in 1968, but refused reforestation in the hope that the cleared land could be used for cash crops.

In the next year an agricultural policy and development plan for the border area was drawn up, a Catholic priest arrived in Ossima, and the Kilimeri joined the new Pagei (later Bewani) local government council. An agricultural patrol, the first for many years, visited the area. Government officials distributed seeds of imported vegetables to most villages (PNG:DDA Vanimo PR7 of 64/65), and proposed the marketing of foodstuffs in Vanimo. Children began to attend mission schools and, later, the vocational centre opened at Ossima in 1967. Increased government and village attention was paid to sanitation and village maintenance. By the late 1960s the standard of house and garden maintenance was reported to excel that of the sophisticated Aitape villages (PNG:DDA Pagei PR12 of 69/70).

The anticipated timber development failed to materialize. Though frequent visits from survey teams for major timber companies and departmental analyses kept village hopes high for several years, government negotiations with
interested companies repeatedly fell through. Many villagers, unclear about the difference between the initial payment for the timber rights and the six-monthly interest on investment of the balance, felt tricked when returns dropped. As life expectancy was low, a number of the older men began to feel that they would never see the lump sum repayment on maturity of the investment in the years 2007 and 2008, and considered the token interest inadequate compensation for loss of use of their land. Inflation in trade store prices severely curtailed the purchasing power of the interest dollar, and its monetary value per head decreased with the growth of the population. Government field staff, who had been deeply involved in the preliminary assessments and local negotiations, lost face which they never entirely regained.

During this time the existence of the cordon sanitaire was a major development constraint. Due to the land tenure system, villagers within the zone were locationally bound into a situation from which they gained little advantage, but as a result of which they subsidized cash-crop and livestock development elsewhere. When the Indonesian takeover aborted moves to establish uniform quarantine regulations and procedures on both sides of the border (Hasluck 1976:360), controls on the Papua New Guinea side were tightened. The effects of the cordon sanitaire thus were most severe during the period when the border programme, and the accelerated pace of cash crop and pastoral development in other parts of Papua New Guinea, aroused widespread interest in development among border villagers. Responsibility for quarantine devolved largely on DASF, a specialist and semi-autonomous department which was singularly ill-attuned to the political needs of border management. Confusion in DASF for some time resulted in a series of conflicting directives as to what could and could not be encouraged within the zone, until villagers hesitated to accept field staff guidance. Many villagers came to regard the zone as a 'total development dead' (PNG:WSP

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1. When divided among each group the interest payment for the Kilimeri sample usually varied between 20 cents to $1 per capita.
Use of weak and inconsistent arguments to justify the government's stance on the timber and the cordon sanitaire severely damaged governmental credibility. When villagers pressed for immediate payment of the balance due on the timber, so that they could use it for other development projects, they were told that total payment before the timber was cut would cause difficulty with subsequent exploitation, and that the money would only be frittered away on ill-advised spending. Probably more decisive was the fact that the investment represented $250,000 in Reserve Bank bonds, and repayment would cause considerable loss to loan revenues (PNG:DA 67-3-11 of 2.3.73). When villagers, politicians and some West Sepik officials sought government relaxation of the quarantine zone restrictions, DASP, quoting international precedent, advised that it considered that 'twenty miles' was the 'minimum' acceptable for a cordon sanitaire and that preferably the zone should be widened (PNG:DASF 1-14-103 of 27.12.72). Such government intransigence again reflected adversely on village relations with West Sepik officials, in particular district administration field staff, who were forced to justify a government stance which many personally opposed.

In the late 1960s Kilineri villagers began to complain of their exclusion from border development and administrative attention. Official interest focussed on the small but politically sensitive community of Sekotchiou (later Skotiaho), the centre of most movement across border tribal lands. Direct benefits from the border development programme, such as education and health facilities, and flow-on benefits such as income-earning opportunities at the Bewani patrol post, accrued mainly to the 19 per cent of the administrative area in its immediate vicinity. Vanimo and the border posts were a poor substitute for Hollandia as a source of trade goods, and had insufficient attractions to overcome the distance constraint. At the same time, villagers became more sensitive to the inferiority of their catechist schools and unreliable aidposts vis-à-vis the new 'certificate'
primary schools and government health centres, and usage of the former declined. In 1968 cult activity, the general sign of village stress and disorientation, was reported in the area (PNG:DDA C.1-3 of 29.3.68).

Stage IV. Solomon Islands alternatives

By the end of the 1940s in Solomon Islands, and of the 1960s in the West Sepik, a period of relative stagnation had begun for the study areas. Villagers no longer resisted the encroachments of government into their micro domain, but neither did they encourage it. Macro and micro development initiatives occurred in unsynchronized tandem with little constructive contact between their sponsors. For the first time, villagers in the study areas began to regard themselves as developmentally disadvantaged by comparison with other parts of their respective countries, and they started to analyse their situation in terms of negative causality. Though villagers continued their attempts to engage in the modernization process, during this stage an element of desperation often characterized such efforts, many of which represented a tacit admission that the avenues for external development assistance were closing down. By the late 1960s and 1970s an increasing number of villagers regarded the possibility of patronage through the new political institutions as the only serious alternative to an arduous 'self-help' struggle which, at best, seemed unlikely to achieve more than inferior status within the modern sector.

Apart from the introduction of local councils, government's major developmental innovation for Santa Isabel after Marching Rule was an experimental package to promote 'better agricultural practices, higher standards of elementary education hygiene and elementary town planning' (BSIP 1955:12). This project was initiated in the 1950s on Santa Isabel and Malaita, the two foci for dissatisfaction with government over the previous decade. Shortly thereafter staff problems, other administrative obligations and the lack of local capacity to maintain the experiment without
assistance brought it to a premature end. It was the last multi-sectoral government initiative on Santa Isabel for over 20 years.

In the late 1950s, Santa Isabel islanders began to show more interest in welfare development activities and in the council as an independent development agent. In 1957 a group of men in Honiara founded the 'Isabel Society', to organize 'self-help' for islanders in town and to raise funds for schools and rural health clinics on Santa Isabel (Riley 1967). With council assistance the organization grew into the Santa Isabel Welfare Association, through which the island maintained close links with its urban workers. Such links later became the main development resource for Bugotu villagers.

Santa Isabel islanders in 1960 began to make plans for the expansion of the Santa Isabel education system, and the Isabel Education Committee was formed. In 1970 the council, which for some years had been dissatisfied with the Anglican mission's management of Santa Isabel schooling, took over the mission's junior primary schools. At about the same time it started a bold and, for the Solomons at the time, innovative experiment in rural education, designed to provide a pool of skills which primary leavers could apply in their villages. By 1973 the Santa Isabel council had the highest rate of council tax, the lowest proportion of tax defaulters and, at 49 per cent of its government grants, the highest expenditure on social services of any of the island councils (SI:MHA 1973).

On San Cristobal, by comparison, village acceptance of the council was slow, suspicious and half-hearted. From its inception in the early 1950s one of the main constraints on the Makira Council was fluctuating support, covert resistance, and a general belief that the council was merely a disguised arm of central government. After Marching Rule was officially over, climatic conditions on the coast, land problems, disruption of social mechanisms caused by amalgamation
into large units (see also Chapman et al. 1974: 2.40-8) and, above all, disease drove villagers once again back to the interior. In the East Bauro Marching Rule settlement at Maniwiwiwiri, which was struck in 1948 and 1951 by poliomyelitis epidemics and suffered severely from dysentery and malaria, villagers estimated that several hundred people died before the population dispersed.\(^1\) The council, like the central government, faced serious problems of communications and access with its scattered hinterland population. On a per capita basis the costs of improving infrastructural services were inflated by distance, low population densities and often difficult terrain, while the lack of such services held taxable incomes and council revenue at a very low level. Possibly more important was the fact that generally low levels of resident education and modern sector experience militated against council representation which could compete successfully for national resources or stimulate local development initiatives.

The imminence of self-government and independence in the 1970s revived fears that East Bauro would be left behind in future development, and brought an upsurge in 'custom' activity\(^2\) and religious revivals. Several of these escaped the label of 'cultist' only by virtue of their resemblance to recognized forms of traditional or church activity. Some villagers sought 'get-rich-quick' schemes which would give them a better chance when, as was often anticipated, independence made development assistance a zero-sum competition with the advantage to the more developed islands. Through all this, misunderstandings about government development programmes went largely uncorrected either by government or council. Some misconceptions were actually

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1. While these estimates are unconfirmed, the Marching Rule burial ground is by far the largest graveyard in the area.
2. The Wainoni Bay mission estimated that about $30,000 was circulated in the ten or twelve major feasts held in the area in 1976. In per capita terms this is roughly equivalent to three times the mean annual cash income for the area between the Ravo River and Star Harbour.
disseminated by council representatives, who tended to resent national government primacy. The strengthening of local government under the 1973-74 decentralization programme in these circumstances was as much a handicap as it was a help to East Sepik development.

Stage IV. West Sepik: hopes and disillusion

Ningil hopes were raised in 1968 when Jakob Talis, a young mission teacher from Ningil and, at the time, one of the best educated men in the area, was elected to the House of Assembly. They fell when villagers found that the position at that time entailed neither patronage nor significant influence over the distribution of government resources. An agricultural centre was opened at Yangkok, 6 km from Ningil, in the next year, and made into a patrol post in 1971; but by then the colonial government was engaged in preparations for its eventual withdrawal. The West Sepik became one of the first districts to have expatriate staff extensively replaced by Papua New Guineans, and the youth and inexperience of these early local officers made the Yangkok station relatively ineffective as a development node. Villagers from the Ningil area had more effective ties through their cash crop activities to the East Sepik agricultural centre at Bainyik, near Maprik. Moreover the long-promised road to connect Wewak to Lumi, through Maprik and Ningil, was creeping westward. Many villagers began to see their economic future in association with the rice and coffee processing facilities at Bainyik, and the outlets to the east.

The division of the Sepik District into East and West Districts, which occurred in 1968, proved antithetical to the ambitions of the Ningil area. The original site recommended for the capital of the new West Sepik District was Telototai, near Lumi, on the grounds that it was central to the bulk of the population and to outlets in the east would best serve the district's interests (N.S.D. 96/1-l of 1.9.66). The actual capital was Vanimo, (which best served the political and financial interests of the...
national government). Status considerations and rivalries between the Vanimo-based government officials and the large mission complex at Aitape, to which Ningil was linked, led to an increasingly parochial government approach towards either mission or East Sepik involvement in West Sepik development. In 1972 four of the five West Sepik parliamentarians, prompted by the widespread West Sepik fear that the district was not ready for Independence, aligned themselves with the opposition United Party. On several occasions their parliamentary gamesmanship antagonized members of the governing Pangu coalition, and reduced the government's scope for the concerted attack on underdevelopment which its early policies presaged. Stringent government economy measures after the 1974 depression in agricultural export prices fell heavily on the district. The Wapai local government council provided few benefits to its peripheral areas and became bankrupt in 1975. The number of tax defaulters in Ningil grew, and villagers once again began to express resentment against government.

In Kilimeri the main source of income by the 1970s was casual labour at Vanimo or Bewani. This source also diminished in the 1970s. New nationalistic regulations imposed by the government's National Investment and Development Authority (NIDA) drove Goldoro Timber Company, the West Sepik's largest private employer, out of the district. Increases in the basic wage made other employers more selective, and the localization of public service positions, followed by the financial stringencies, severely reduced the amount of money released to the casual labour force. A desperate attempt by the Bewani council to compensate for reduced revenues by increasing council tax for its ultra-low income population, simply caused more tax defaulters. Villagers who hoped to use timber money to invest in cattle at Ossima, outside the conom sanitaire, were advised by government

1. At the 1977 elections, representative turnover in Parliament for the West Sepik was 100 per cent. To a large extent this was due to the demonstration effect provided by development in the East Sepik, much of which was attributed to Somare's power and patronage, rather than to the Somare government.
officials to obtain the money gradually by work on Rural Improvement Programme (RIP) project, in the area, which were very few, poorly paid, and not intended to provide wage employment.

Kilimeri villagers tried a number of alternatives unsuccessfully. A brief flirtation by Awol village with the Seventh-Day Adventists (SDA), after the Catholic mission refused to open a school there, left the villagers with a new church, a teacher's house, a new range of food fables, and four students to support at the SDA school in the East Sepik. In 1972 they offered land for any available European businessman to start an enterprise of his choice in the area (PNG: DDA Pagai PR4 of 71/72). The same year brought an outbreak of chain letters, which originated in Rabaul and Australia and promised enormous returns for a tiny investment. With the failure of these 'last resort' measures, Kilimeri villagers resigned themselves to wait for the road, the timber and minerals development, the upgrading of Vanimo, and the new provincial government system, which they had been told would, someday, solve their development problems.

Conclusion

Many theories have been promulgated to explain the failure of apparently sapient development policies in Third World countries, and the growth of serious inequalities within those countries. Anti-colonialist and anti-imperialist arguments usually trace the problem to the essentially exploitative nature of the relationship between the governing and the governed country. Work in Africa has pointed to the cumulative load some areas received, in terms of access to development opportunities, from the geographical unevenness of development under colonialism (Ley's 1975:184,191). Many of

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1 These were so popular among low-income Papua New Guineans, despite their failure to produce the promised amounts, that they were declared a prohibited import shortly afterwards (PNG Government Gazette 93 of 26.10.72).
these theories are based on the hypothesis that a major consequence of development is underdevelopment elsewhere. This may be correct for a closed, competitive space-economy (either national or global) where progress in one area can only be made by diversion of resources from another, but does not necessarily apply to systems with excess development capacity or resources. The capacity to move fairly rapidly to more intensive production as the result of technological change, better health status, or more effective information flows, in Melanesia allowed some groups to progress without causing an absolute decline in the situation of others. For Papua New Guinea and Solomon Islands the backing of a colonial power, especially with regard to finance and manpower, was one such resource. The problem for the areas which became relatively disadvantaged usually was not colonial exploitation of their resources, but their inability to attract colonial investment (cf. Kay 1975:x).

A large number of the recurrent development problems certainly can be attributed to the lack of critical investigation by government into the mechanics of previous problems. In many cases this condemned government officials and villagers to a long series of discontinuous but repetitive experiments (McKillop 1976:3). A further difficulty was the lag element in government response to identification of previous weaknesses in its relationship with villagers and government inability to 'fine-tune' its response to the often unpredictable and highly idiosyncratic process of village change. Only in rare cases was this due to dereliction of duty or maladministration by government officials. At the interface with villages, a distinction is necessary between government as an individual officer, and government as an institution. The negative stereotypes which villagers associate with government are related almost entirely to their experiences with the institution. In a socio-economic and developmental sense, this institution has been a 'distancing' factor for all study areas, and has affected their development in much the same way that spatial distance has been shown to influence core-periphery relation-
ships and flows (Brookfield 1972; Hansen 1972a; Friedmann 1973; Lipton 1976). The macro-level pressures, constraints and responsibilities which caused this situation apply equally to government development planning and to implement-
ation of government plans.
CHAPTER 5

PLANS AND PLANNING: GOVERNMENT AS DEVELOPMENT AGENT

For much of the 1970s radical analysis has tended to treat Third World governments as voluntary or involuntary pawns of foreign interests (e.g. Frank 1972), each a 'bureaucratic bourgeoisie' (Shivji, cited in Higgott 1980b: 39) which perpetuated colonial forms of intervention, exploitation and control. The evidence of contact experiences in the study areas superficially seems to support this hypothesis, as does the evidence of continuity in development planning outlined below. On the other hand, it can be argued from the 'logic of problem-solving' approach that in the study areas the consequences of previous encounters with the modern sector were neither inevitable nor so constrained that the probability of a different sequence was low. At the macro-level the continuation of specialized government planning through decolonization, and through the pendulum swings in development theory and administration, also represented a consistent problem-solving device; albeit one which usually addressed problems other than those expressed in the stated objectives of development plans.

From this perspective a distinction can be made between the documents, processes and institutions officially designated as 'plans' or 'planning', and the forms of policymaking and priority determination which, though identical with the former in many respects, were not given the same official status. Both focussed on delineated or subliminal problems of macro management, but the use of the term 'plan' was tacit recognition of a need for reinforcement of the normative policy-making process. Though little connection can be identified in Melanesia between the stated objectives of rural development plans and actual development in rural areas,¹ such plans often were conspicuously successful in the

¹. See Van Arkadie (1972:90) for some of the conceptual difficulties involved in evaluation of plan performance.
attainment of their unstated goals. The achievements of the formal planning system with regard to these goals, often in fact the "raison d'etre" for production of a plan, showed that planning has played an important role in development.

One of the major problems with evaluation of plans or planning processes is that their stated aims and objectives frequently disguise their real functions. In Papua New Guinea and Solomon Islands formal planning was directly or indirectly a 'crisis response', employed in circumstances for which the established routine seemed unsatisfactory. In some cases the promise of future action, integral to a plan, enabled a difficult situation to be postponed and eased the pressures of conflicting claims on scarce government resources. In others, preparation of the plan document was sufficient to abort the crisis. At the same time, all plans redirected some resources away from other activities to a specific problem or to the planning process itself. All were additive rather than substitutive in their net functional impact. This served to consolidate and reinforce administrative institutional authority (Fisk 1975:3) and, by increasing the complexity of government access networks (see Schaffer 1975), to provide it with a measure of protection from subsequent challenge. Finally, all plans have been a legitimizing device and a valuable survival mechanism for macro-level government.

Even in the earliest plans it is possible to identify the 'crisis' pressures as political or financial, or both. For most of the colonial period the political pressures usually were of external origin, and the financial problem was shortage of funds. At a later stage internal political pressures emerged, coupled with the problem of inadequate capacity to utilize available funds. Despite these causal differences, development plans displayed marked similarities, notably in their stated objectives and in their iteration of government concern for economic self-reliance and refinement of the data base. That such resemblances persisted across the broad range of macro-governmental
circumstances which prevailed in Melanesia suggests that plans served purposes which were related to the role of the state, rather than to its personalities or colonial antecedents. Here it is argued that plans consistently addressed the main problems faced by successive governments in Melanesia; namely, uncertain legitimacy and constraints on their capacity to govern.

Chronologically and structurally, planning in Papua New Guinea and Solomon Islands can be divided into three stages: the first when it was a normative element of administrative decision-making, the second transitional, and the third when 'Planning' became a specialized function which in itself made competitive demands on national resources. The institutionalization of planning in the late 1960s and early 1970s brought several macro-level changes, which often are assumed to mark the introduction of the process (Fairbairn 1970; Brookfield with Hart 1971:308; Grey 1974; Conyers 1975). New positions were created in the bureaucracy, outside the established departmental structure. Though supposedly distinct from departmental planning responsibilities, these often replicated or expanded duties still undertaken through the departmental hierarchy. The establishment of a separate planning organization for the first time challenged departmental autonomy at policy-making levels. One consequence was that, while it theoretically coordinated bureaucratic and political government, it tended to accentuate the gap between them. Its quasi-political status enabled the planning organization to compete for resources from a position of relative strength. It developed its own set of institutional needs and problems, many of which were unrelated to the development questions it was ostensibly created to answer.

Functionally the dividing line is less clear-cut, and the continuity more evident. The difference between plans produced before and after the 1960s was largely a matter of degree. All identified a problem and an explicit or implicit goal, provided some assessment of available resources, and formulated strategies or programmes which allied these variables in a specific time-frame. Whether or not the
plans were implemented, monitored or associated with the other factors considered intrinsic to a plan (e.g. Lewis 1966: 13, 23; Grey 1974: 29-35; Fisk 1975: 12; Conyers 1975: 47-52) was often due to circumstances external to the plan or the planning process.

The first stage: early plans and colonial problem-solving

The preparation of 'development' plans commenced for Papua New Guinea in the nineteenth century and for Solomon Islands at about World War II. In both countries the accelerated pace of change in the late 1960s was accompanied by a rapid upgrading of planning capacity. This occurred at a time when a coherent plan was often the sine qua non for aid from international development agencies, but when the era of 'economic growth' planning was drawing to a close. Nonetheless, the main precedents for the 'new planning' were those which had been established by previous administrations. Though their motives and constraints varied, the early administrators faced many of the same problems which affected post-colonial planners, and often reacted in basically the same way.

Papua New Guinea: The Neu Guinea Kommpagnie to the Papuan Pati

The first 'plan' to be submitted for the development

1. As some interaction took place between the administrators of the two neighbouring colonies, especially in the period when the transfer of Solomon Islands to Australian governance was considered a possibility (Amherst and Thomson 1901: lxiii; Scarr 1967: 295; Hasluck 1976: 364), the two countries cannot be considered entirely in isolation. The chronological 'problem-solving' framework of Chapter 3 is therefore continued here but, due to Papua New Guinea's earlier involvement in formal planning, the order of presentation in the previous chapter is reversed.
of New Guinea was that of A. von Hansemann and the syndicate of German banks which provided the genesis of the Neu Guinea Kompagnie. As summarized by Sack (1973:79), it contained similar tenets to the majority of plans drawn up by the nine succeeding — and very different — forms of government authority. These included the collection of comprehensive data on natural resources and indigenous customs, agricultural experimentation, and the encouragement of native production. The main aim, nonetheless, was the attraction of European investment.

Hansemann's Company failed to implement his vision (see Moses 1969:49-53). New Guinea, an outpost of little consequence to the Reichstag, developed slowly by comparison with other German colonies (Firth 1980:2-3). Shortly before World War I, demands from Germany that the colony contribute more towards its own support, a recurrent problem for the

1. As Nelson (1980) and others have pointed out, the Australian mandated administration and the white community in New Guinea prior to World War II were in a very different situation from their counterparts in Papua. As a result, New Guinea reflected the German heritage far more than it did the more protective attitudes of MacGregor and Murray in Papua. Murray's policies, later known as the 'Murray plan', had negligible influence for the study areas, and are excluded from this chapter. Further details can be found in West (1968), Guise (1969), Joyce (1969), Nelson (1969, 1972, 1976), Stuart (1970), Jinks (1975), and Griffin et al. (1979).

2. After the Neu Guinea Kompagnie (a private enterprise 'government') came the German Imperial Government, the Australian military administration of 1914-21, the Australian mandated government under the nominal supervision of the League of Nations, the Japanese and ANGAU regimes of World War II, the post-war provisional government of Papua and New Guinea as one administrative Territory, the United Nations trusteeship under Australian control from 1945 until 1972, the pre-independence Somare government of 1972-75, and the full national governments of 1975-80.
governments of Melanesia, were reinforced by a reduction of the colonial grant (Sack 1973:97-9). This stimulated Governor Hahl to draw up a three-year development programme which would attract Imperial Government funding. Hahl's government of the Imperial colony provided the model for the Australian administration after World War I (Reed 1943:159), and the Hahl plan became the prototype for government plans over the next fifty years.

Hahl's plan was basically a 'pump-priming' exercise on an administrative base, and related development to the expansion of government influence in Kaiser Wilhelmsland, the establishment of new stations, and an increase in administrative staff and services. Angoram station in the present East Sepik province was opened as a staging post for recruitment in 1913 (Hempenstall 1978:195), and earlier recommendations for stations at Vanimo and Newak were revived (Rowley 1958:43). Hahl envisaged an agricultural and a medical officer on every government station, supported by agricultural research stations (McKillop 1976:9), medical field research, and maternal and child health training for native nurses (Reed 1943:151-2). He also proposed a government education scheme, which commenced in 1913 with a school at Rabaul for boys, selected from all areas on the recommendation of their district officers (Reed 1943:150). The plan, for which an initial grant of $A500 000 had been approved by the German Imperial Government, was into its second stage when World War I intervened.

Though Hahl's plan was never fully realized, after World War I the Australian government adopted some of its recommendations. Extensive and on occasion innovative plans for agriculture, health and education were drawn up, but in reality the business-oriented report of a royal commission in 1919 was the dominant influence on New Guinea development.

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1. Kaiser Wilhelmsland at that time comprised the present New Guinea mainland from Morobe to the West Sepik, the islands of the Bismarck Archipelago, and Bougainville.
2. Sack (1973:99) estimates that it would have cost the Imperial Treasury almost $A750 000 over the 3 years of its proposed life.
The Australian government, guided by Burns Philp interests and a desire that the Territory should pay for itself (Griffin et al. 1979:49-50), concentrated on the development of a plantation economy. For political reasons, notably the White Australia policy (West, cited in Scarr 1967:296), the mandated administration was unable to follow up proposals by Hansemann and Hahl for the importation of Asian labour into New Guinea (Firth 1980:2), and became deeply involved in the provision of an indigenous labour force for the plantations and mines. Two problems faced by the administration were the inexperience of the ex-servicemen who had been given preference in the acquisition of German plantations, and the ignorance or recklessness of non-government personnel who pressed beyond the boundaries of full administrative control. In this situation, government plans for native welfare and peaceful penetration often served the native population only as a secondary effect of the government need to protect the expatriate community and to secure Australian economic interests.

World War II almost entirely destroyed the New Guinea economy, and post-war gratitude and guilts triggered a major re-appraisal of Australia's role in Papua and New Guinea. The dramatic increase in the direct subsidy initiated by the Labor governments of 1945-49 (Amarshi 1977:78) was accompanied by the formulation of wide-ranging plans, some of which were drawn up in Canberra, for the advancement of Papua New Guineans. In 1946 a 'proposed policy and working plan for the Department of Agriculture, Stock and Fisheries [DASF], in respect of native agriculture' (Cottrell-Dormer 1946) was produced by the Territory administration in response to the change of Australian direction. Similar statements of intent were prepared in other departments. A regional planning division was established in the Australian Department of Post-War Reconstruction, and in 1950 the Commonwealth Regional Development Division published a resource study which it claimed 'would form a basis for planning the economic development in the Territory' (Aust.:CRDD 1950:ii). Due largely to the momentum created by these moves, the Liberal governments of the 1950s continued to increase the annual
grants to Papua New Guinea (Griffin et al. 1979:102). Spending on welfare services was stepped up, but eventually, as after World War I, the need to revitalize the economy took precedence over plans to improve indigenous levels of living.

In the 1950s a series of visiting United Nations missions, 'accustomed to a world in which everyone had published a plan and moved on stepping-stones of expired plans to an ever-receding millennium described in a new plan' (Hasluck 1976:284), regularly recommended five or ten-year development plans for the Territory. These proposals usually emphasized political and educational advancement, decentralization and district development (UN 1959:15-18; Ryan 1970:136), all of which carried over as priorities into the post-colonial period. The Territory administration displayed a sensitivity to United Nations' opinion which was far less evident in Canberra, where Hasluck and Warwick Smith maintained a firm hold on the government of the Territory (Ballard 1976a:1; Baldwin et al. 1978:21). Hasluck, the Minister for External Territories under Menzies, was very sceptical of 'development by drawing board' and 'grand plans', and argued convincingly that forward planning should be adequately covered in the normal course of administrative responsibility (Hasluck 1976:284-5). The Papua and New Guinea administration compromised by announcing proposals to coordinate departmental and district planning functions, which succeeded to the extent that the visiting mission in 1959 commended 'the degree of inter-departmental cooperation and local planning that is envisaged' (UN 1959:18).

1. This at times encouraged an official tendency to stress bureaucratic risk-minimization rather than practical results. One of the main reasons was articulated by a senior official in the Sepik, who warned staff against use of the term 'sale of labour' in connection with employment. 'With the visiting Mission due next year, such statements could be readily misunderstood, especially with the Afro-Asian block and an upheaval in that august chamber of the United Nations could take place. Just think of the explaining you and I would have to do' (PNG:DO Nwak 67-3-18 of 18.8.64).
In fact only desultory attempts were made to coordinate departmental planning and development activities within the districts through the 1950s and 1960s. Most of the programmes produced were functionally specialized and limited to what could be achieved without conceding departmental autonomy. DASF, the body then most concerned with the indigenous economy, outlined its plans in considerable detail. Several land resource and agricultural studies were made in support of its all-encompassing proposals to improve subsistence nutrition, to provide an economic basis for higher indigenous levels of living, to maximize use of agricultural resources and to increase production (PNG: DASF 1947:4-15; UN 1959:16; McKillop 1976:19-21). Studies by other departments were carried out independently. Coordination between departments was essentially a matter of standardized procedures within the public service, and national priorities were implicit in the annual allocation of funds.

In the early 1950s the financial scale of Australian involvement in the Territory trebled, and in 1954 an attempt was made to overcome the constraints imposed by annual budgeting by the introduction of three-year public expenditure plans and annual reviews (Langmore 1972:12; Hasluck 1976:196, 284). The next year the PNG Department of the Government Secretary, which had provided limited coordination of departmental activities, was abolished. Its role was taken over by committees of senior officials (Oram 1973:6), which included a Central Planning and Policy Committee. These were answerable to Hasluck, a man of far greater vision and public service experience than most of the Papua and New Guinea administration, but one who provided his subordinates with little latitude for initiative (UN 1968:para.157).

In the late 1950s and early 1960s events within the Territory and elsewhere, such as the burgeoning confrontation between the Netherlands and Indonesia over Netherlands New Guinea, drew Australian government attention to eventual decolonization. In 1961 Hasluck predicted (1961:20) that
Territory economic activity would have to grow to three times its present size in order to sustain about the present level of government services — and, of course, the present level is far below the needs...this [rate of growth] would appear unlikely under twenty years...growth of population which would result from present policies and the extension of government services...would push the date for self-sufficiency to anything up to fifty years.

These considerations resulted in intensified concern for economic development, but also for social change. In 1961 the life of the public expenditure plan was extended to cover a five-year period (Langmore 1972:12). The International Bank for Reconstruction and Development (IBRD) was commissioned to assist in planning for a viable economy which would raise indigenous standards of living (McCasker 1970:3). In 1963, in line with development strategies elsewhere, the IBRD reiterated earlier United Nations recommendations for a more comprehensive approach to planning.

The IBRD response to the economic weakness of the Territory was a five-year development programme, with 'concentration of effort...on areas which are the most promising and already the most developed' (IBRD 1965:295). This aimed at concurrent financial and political independence. It suggested the appointment of an economic advisor to the Administrator, a small staff to control and coordinate the IBRD recommendations, and the preparation of a national plan. Nonetheless, the detailed business of planning was to be undertaken by the usual government departments and agencies, though the report suggested some sectoral reallocation and, as a low priority, simplification of procedures and localization of staff positions. This approach, the Economic Advisor later claimed, 'effectively precluded the "ivory tower" approach which has characterized planning in some countries. In this sense, then, planning is to be "decentralized"' (McCasker 1970:3). In the event it had neither effect, but the ability to employ cost-benefit analysis techniques became a significant advantage to departments seeking IBRD aid.
By the mid 1960s the coordination problem had become serious. The proliferation of plans placed a heavy burden on administrative staff, whose responsibilities included national plans, departmental plans, rural development plans (involving government expenditure of over $6000 apiece) and community development plans (for small projects with at least 50 per cent non-government contributions). In 1965-66 the District Economic Development Committees (DEDCs), set up a few years earlier, were expanded to include more district-level departmental heads and, in the customary bureaucratic pattern, were renamed. The committees were allied uneasily with the centrally-oriented departmental hierarchies and usually overridden by central priorities and constraints. In the Sepik, where the DEDC had proposed a district development plan in 1962 (PNG:SDO Lumi 25-1-1 of 5.4.62), an earnest attempt was made to assess and amalgamate development activity, but the variability of inter-personal relationships in committee membership severely inhibited consistent district planning.

The 1965 United Nations mission again expressed concern at institutional centralization, and proposed the formation of intermediate assemblies to link villages with the central structure. The Administrator responded to the buildup of internal and external pressures with a move to regularize, coordinate and upgrade district planning, and introduced a modified form of the Malaysian 'Red Book' planning technique. His Office issued detailed instructions to District Development Committees for an exercise which included decentralization, coordination of all district resources, and preparation of a district plan (Herlihy 1974; Conyers 1975:20).

The 'Red Book' plans succeeded only in demonstrating administrative responsiveness to political issues, and in complicating district administration. Originally designed to

1. See Ryan (1970:127-35) for a terse description of this mission's visit.
2. The expanded DEDCs, shortly thereafter again renamed, to District Coordinating Committees (DCCs).
cover six stages, they were later simplified to three: projects approved, projects on hand, and projects completed. These were recorded in loose-leaf form, so that they could be amended regularly. In fact they represented only a rolling report on administrative activities, of more use to the central administration as a data base than to the districts. In the Sepik, preparation of the plan diverted staff from other activities for approximately two years, and the completed document was an unwieldy collection of largely extraneous and outdated data which, in some instances, dated back 30 years. The 'Red Book' plans marked the end of a period in which senior district officials were able, by formal or informal means, effectively to control government policy and practice in their areas. Planning for rural development increasingly became the modern substitute for detailed district statistics and reports to departmental headquarters, a source of information which fell into disrepute as the country moved towards decolonization.

Following the IBRD report, the Australian Government announced that it would make more money available to the Territory for the next few years, to reduce the time required for it to achieve financial self-reliance (TPNG 1967:28; McCasker 1968). This, and the appointment of the Economic Advisor, prompted preparation of a 'Blue Book', tabled in the House of Assembly in 1967. The 'Blue Book' extended the recommendations of the IBRD mission in the light of more recent developments, outlined government policy, and provided a brief but relatively comprehensive summary of the sectoral status quo, with projected activity in some areas up to 1974-75. Though oriented towards the national economy it also touched on manpower policy, development of domestic markets and indigenous participation, issues which reflected the changing times. The difficulties involved in planning for matters which traditionally were not part of governmental responsibility were tacitly recognized in a modest claim which subsequently became almost a sine qua non for development plans: 'although not in any sense presenting a final programme, this paper itself contains some of the elements necessary for an integrated
programme of development, and represents a progress report on planning' (TPNG 1967:33).

The 'Blue Book' was succeeded in 1968 by what has become known as Papua New Guinea's first development plan (Conyers 1975:8), a five-year programme based on departmental and agency plans (McCasker 1970:3). This again reflected external concern over the country's financially dependent status, in an emphasis on the need to 'increase productivity; to marshall labour resources; build domestic markets; ensure that increases in incomes do not outstrip increases in productivity; encourage saving; stimulate investment; and speed up the rate of indigenization of the economy' (TPNG 1968:120). Reaction to the plan typified the developmental paradigm shift of the late 1960s. It aroused a heated academic debate (Curtin 1968; Arndt 1969; Crocombe 1969b; Epstein 1969; Fisk 1969; Shand 1969), in which one critic claimed that it would increase expatriate control of the economy (Crocombe 1969a:57), and blamed the 'circularity of elite communication' for insufficient attention to indigenous participation (Crocombe 1969b:54). The Australian Government, caught up in a debate which centred largely on political values, accepted the plan cautiously as 'a basis for planning, subject to a similar endorsement by the House of Assembly' (McCasker 1970:5).

By the late 1960s administrative enthusiasm for planned development was widespread, but planning itself was centralized and the main role for district personnel was the provision of supportive data. This commenced in the Sepik in 1968 with a 'survey of economic activity' (PNG:DDA 1968) by Department of District Administration (DDA) staff. In the centre, the 1968 plan was disaggregated over 1969 and 1970 into 'Draft Economic Development Programmes' prepared by central planning staff on the basis of information supplied by the departments (PNG:OEA 1969) and very brief visits to each district.

The dependence on departmental channels at this time produced recommendations which differed very little from those
later derived, at least in theory, from the 'grass-roots' and the councils. Several proposals for the West Sepik, notably for improvement of nutrition and encouragement of high value, low bulk cash crops in isolated areas (PNG:WSD 1968), echoed earlier government priorities and were repeated in the majority of subsequent programmes and areal analyses. The draft district programmes, like most 'plans' before and afterwards, anticipated implementation difficulties by a statement that ‘as foresight is never perfect, the programme cannot be regarded as hard and fast...there must be scope for flexibility' (PNG:OEA 1970:1).¹ Though most of their projections and targets were quantified, they claimed to be 'general guidelines only'. This recurrent evasion of responsibility served several purposes. First, it was a tacit admission of the social and political complexity of the place and the time, and of the inability of a plan to control many diverse and rapidly changing situations. Second, it enabled the planners to continue the pragmatic task of managing the national economy, the task for which their training, experience and overseas linkages best fitted them, and to avoid futile expenditure of scarce resources on matters over which they had no authority. Third, it minimized the increasing risk of political challenge.

In the 1960s the colonial administration was subjected to internal political pressures. The influential report of the 1962 United Nations mission under the chairmanship of Sir Hugh Foot, which had stressed political development, was followed in 1964 by the first national elections. In 1966 the 'Committee of Thirteen', a group of young nationalists, confronted the Select Committee on Constitutional Development with a series of demands for political reforms (Hastings 1969: 148-50). In January 1968 they proposed 'nothing less than

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¹ This type of statement, apparently inconsistent with the definitional determinism of planning, is equivalent to the Popperian contention that 'our attempts to solve our problems involve, among other unpredictables, imagination, choice and luck. Of these we are responsible for our choices' (Mayo 1975:99).
limited self-government in 1968' (Stephen 1972:65). Five months later most of the group allied themselves with the new Pangu Pati.

Pangu's small parliamentary wing announced its dissatisfaction with the five-year plan in the new 1968 House, and asked that the plan be reviewed. Doubts were expressed on both sides of the House, but the debate turned on the promise of $A1000 million in Australian aid for the life of the plan (HAD 1968:776) and on the 'Pangophobia' which, regardless of the issue, united most government and independent members in opposition to the new party. The plan was adopted by a vote of 68 to 12 in November 1968.

During the life of the 1968 House the new radicals gradually gained public support. Though Pangu moves were consistently blocked in parliament, its policies were taken up by academics at the new University of Papua New Guinea and to a certain extent by the administrative system. The growth-oriented approach of the 1968 plan was subjected to intensified criticism with the imminence of decolonization, the decline of colonial authority, and the upsurge of Papua New Guinean nationalism. The discovery of large copper deposits on Bougainville drew much government attention away from the arduous task of rural development, and within a year the plan had become unofficially passé. Before the term of the plan had officially expired Pangu had formed a government.

**Solomon Islands: end of an empire, continuation of a tradition**

As a British Protectorate, Solomon Islands was less exposed than New Guinea to direct United Nations' pressure (Laracy 1969:340), and more strongly influenced by the British imperial tradition. Small size, remoteness from its metropole and from other decolonized nations, and relative isolation even within the Pacific meant that at self-government in 1978 Solomon Islanders as a whole had little knowledge of the theories and models employed by other new nations. As a
result, the lessons of experience transferred to Solomon Islands were primarily those of its colonial power. From an early stage Solomon Islanders were encouraged to emulate the British respect for careful financial management and administrative integrity, whereas for Papua New Guinea the Afro-Asian input in the United Nations and later the University of Papua New Guinea induced a certain bias towards the perspective of the colonized.

Though comprehensive schemes for the development of Solomon Islands were formulated by the colonial government in 1940 in the aftermath of the Fallowes movement, the first major stimulus for national planning came with World War II. In 1945 the British Parliament, faced with the costly task of post-war reconstruction, allocated $A300 million through the Colonial Development and Welfare (CDW) Act for development in its colonial empire during the 10 years to 1956. To justify their proposed share of the allocation to the office of the Secretary for State, most British colonies, including Solomon Islands, prepared ten-year development plans.

As in Papua New Guinea, post-war idealism aimed at a 'new deal' for Solomon Islanders. The 1945 plan was formulated on the principle that 'the needs of the indigenous population must be accepted as of primary importance' (BSIP 1945:1). Though it conceded the important part which expatriates had played and could continue to play in the development of the Protectorate, it argued — with a marked lack of the usual colonial paternalism — that 'it must be anticipated that the day will dawn when their exclusive leadership and their skill will be challenged and matched' (BSIP 1945:18). As a result, the plan paid negligible attention to rehabilitation of the copra-based estate economy, which had suffered a series of setbacks from the 1930s depression, the war, and the British Government decision to reject war damage claims (IBRD 1969:9). It proposed instead a decentralized model of development around local councils, on simpler but similar lines to the programme introduced 30 years later. Recommendations for government intervention were
directed mainly towards improvement in health and educational services, which had come under attack in the early 1930s (Hillard 1978:281) and during the Fallowes movement; towards food crop research; and towards improvement of inter-island communications. Although these were essentially low-level proposals, they amounted to a considerable increase in expenditure on staff and staff facilities1 for the impetuous post-war government, with little demonstrable effect on national revenues. Though a number of the plan's objectives had been presaged in policy directives in 1939 (Bathgate 1975:79-81), it failed to win formal approval from London (BSIP 1955:2). Instead, development schemes for the next decade were submitted and approved on an ad hoc basis and credited against a share of the CDW funds fixed in London at $A1 687 500, one-third of the amount which the Solomons Resident Commissioner had regarded as the absolute minimum for the re-establishment of British colonial legitimacy and for constructive future government (BSIP 1945:20).

In 1953 the Secretary for State advised colonial governments of a proposed extension to the CDW Act, and asked them to revise their previous ten-year plans and to provide estimates of financial requirements for development projects from 1956 to 1960 (BSIP 1955:1). By that time the euphoria of the immediate post-war years had given way to considerations of economic viability, and welfare issues to those of economic growth. For Solomon Islands, which had no previously approved plan on which to base its next programme, the instruction from London involved a major planning exercise. Inexperienced in such activities, the administration produced the first of a series of 'national development plans' which briefly summarized estimated public expenditure by sector.

1. The plan estimated that aid totalling $A4.5 million would be required over 10 years (BSIP 1945:19), an amount which on an estimated annual $A400 000 basis was not significantly different from the amount actually spent by the Australian Government in Papua New Guinea in the early post-war years.
Unlike the first development plan, the 1955-60 plan (BSIP 1955), was supported by the British Treasury with a grant-in-aid in 1956 which doubled that of the previous year. With the cooperation and financial assistance of Lever's Pacific interests, the administration embarked on a programme of large-scale enclave development based on plantation agriculture. By 1959 British aid had more than doubled again, to $A850,000.

In 1961 the High Commissioner proposed to formalize development activities through an Economic Development Committee, supported by two inter-departmental committees. In line with the conventional wisdom of the time, their role was to advise the High Commissioner on 'the best methods of developing and coordinating the Protectorate's natural resources and manpower in the interests of the Protectorate as a whole; and the merits of specific schemes of agricultural, industrial and commercial development' (MPHC P215/2/8 of July 1961). As in Papua New Guinea, such 'coordination' in fact meant centralization of decision-making, and reduced the degree of independence which regional officials previously had enjoyed, at least in theory, in definition of their areas' interests.

For almost a decade plans followed the basic model of the 1955-60 plan, with incremental refinements to the sectoral analysis of estimated revenue and expenditure. Though the objectives became

to develop the natural and human resources
of the Protectorate with the object of
strengthening the economy to enable the
standards of living in all sectors of the
community to be raised (BSIP 1963, 1965, 1968),

the proviso that 'the continuing need to achieve a better balance between ordinary revenue and expenditure must be borne in mind' (BSIP 1963:1) rapidly became the main aim. In 1965 the widespread concern that independence should entail freedom from financial obligations resulted in a supplementary but in fact overriding aim
to avoid the establishment of institutions or services which are unlikely to be balanced in due course by revenue accruing from increases in productivity stimulated and encouraged by other schemes (BSIP 1965:3).

Unlike Papua New Guinea, where in the late 1960s and early 1970s Australian largesse gradually allowed political pressures to gain the ascendancy over financial constraints, Solomon Islands based its development policies up to and after Independence in 1978 on the criteria laid down in this series of plans. In the long-term this simple administrative approach, which in the short-term was politically insensitive, acted to the Solomons advantage. The main strength of the series was that it confined itself almost exclusively to what government could achieve through public expenditure management, and made no attempt to expand into 'grand plans' which required community or individual decisions that the planners could not control (see also Sundrum 1976:10-12). In this respect it closely resembled the type of public expenditure planning revived by Papua New Guinea in 1977. Intervention in private sector economic activity was restricted to the provision of subsidies, loan capital and infrastructural services. Projections or 'guesstimates' of production targets extrapolated from administrative inputs, which were attempted for cocoa in the Second Development Plan with what proved to be disastrous inaccuracy (BSIP 1960:3-4; BSIP:SO 1971:137), were dropped from subsequent plans.

On the other hand, as the plans from 1955 to 1970 were essentially administrative budgetary exercises, a large number of the projects were incremental and perpetuated previously selected goals. One of the most ubiquitous of these was research, which over the period became highly specialized and largely isolated from administrative extension. By the Fifth Development Plan (1968-70), 54 per cent of estimated expenditure on agricultural and forestry projects was directed towards expansion of the central data bank. The ratio of planned investment in agricultural research to that for agricultural extension was 3:1 (BSIP 1968:17-21).
In effect a primary if unstated purpose of the series was improvement of administrative capacity and, thereby, maintenance of a working accord with the source of aid funds in London. Health and education together claimed only 13 per cent of the allocation in 1955 and at best, in the period of 1963-68, 32 per cent (BSIP 1955, 1963, 1965). In 1968 an attempt was made to differentiate administrative costs from other sectoral expenditure. Though the new categories for administrative expenditure totalled a modest 6 per cent of planned expenditure, in fact they represented 6 per cent in addition to an already heavy bias in other sectors towards administratively expansion and centralization. Thirty per cent of expenditure in the 'Social' sector was taken up by one item, 'development housing' for staff (BSIP 1968:33). Forty-four per cent of all expenditure was specifically allocated to further development of Honiara, where the administrative headquarters had been relocated and reconstructed at considerable expense after the World War II.

As in Papua New Guinea and elsewhere in the 1960s, the continuing Solomon's dependence on external aid, despite a concerted 'economic growth' thrust, aroused increasing concern among the colonial powers and external aid agencies. With British aid to Protectorate expenditure running at 39 to 60 per cent, the British Government commissioned several studies of the Solomon's economy (Inman 1965; Wilton et al. 1965; WPHC 1965; Pepper 1968; IBRD 1969), and two major changes to the financial arrangements were announced in the Fifth Development Plan. First, recurrent projects were excluded from CDW funding, which was tied to capital projects and comprised 62 per cent of the planning budget. Funding for recurrent programmes was to be derived from such sources as other forms of aid (13 per cent of the planning budget), bank loans (20 per cent) and the tiny Protectorate contribution (4 per cent). Second, expenditure was no longer controlled for the life of the plan but was subject to an annual ceiling approved in London, which in effect limited planning, as a commitment to action, to one year. Nonetheless, 3 months after the introduction of the plan an IBRD
mission to Solomon Islands reported, as a fellow mission had for Papua New Guinea a few years earlier, that 'more sophisticated planning will be essential' (IBRD 1969:25).

Like Papua New Guinea, the Solomon Islands government regarded poor coordination of development activity at district level as a major problem for the implementation of government policies and plans. In both cases attempts within the districts to engage in 'bottom-up' planning, such as the 1952 plan for Talise on Guadalcanal (Chapman et al. 1974:6.44-6) and the 1959 'Town Plan' produced by Kia village on Santa Isabel, were evidence of early and pervasive support for the planning ethic, but were not regarded as instrumental to the purposes of central planning. These centred increasingly on administrative capacity. In 1966, on the hegemonic grounds that 'inclusion of private persons in the station committee made it unsuitable as a substitute for a district team' (DO(E) ADM8/2 of 4.6.66), administrative 'District Team' meetings were introduced. Though ostensibly developmental, the teams operated mainly for inter-departmental convenience within the district. On San Cristobal, where District Development Teams with increased representation were established in 1970, the continuation of the old-style District Team Meetings and Departmental Heads conferences resulted in a multiplicity of time-consuming committees, mostly composed of the same people, which diverted administrative attention from the field to the centre. The District Development Teams were given responsibility for preparation of plans in their areas, for implementation of central government policies, and for coordination of extension services (BSIP:CS BS/70 of 17.8.70), but had little room to manoeuvre. This merely intensified the conflict of administrative and political interests, and

1. These comprised district officials from the 'development departments' (normally the heads of Health, Education and Agriculture with representation from Works, Forests, Lands and Cooperatives where appropriate) plus the presidents of larger councils and, as honorary members, the elected members of the Governing Council. Much the same representation — with much the same administrative dominance — was used in the equivalent 'Combined Councils Conferences' in Papua New Guinea.
in most cases the team members were united only by their common resentment of central autocracy.

By the late 1960s the centralization of the economy and its weak distributive mechanisms were arousing the same concern in Solomon Islands as among international aid agencies and the new nationalists in Papua New Guinea. Some officials and Solomons politicians proposed the revitalization of local government, and claimed that

the plight of the district administration epitomizes the anachronisms restraints and lack of vigour which can afflict remote colonial governments in their later years... The framework of the district administration preserves — indeed requires — attitudes to people and ideas which can have little place in this country (Hughes 1969:1)

In retrospect, the 1950s and 1960s was a period when the governments of both countries had considerable motivation to pursue rural development, but when their ability to do so depended largely on their metropolitan authorities. Pressures which threatened the precarious legitimacy of the colonial administrations came primarily from changes in political and economic conditions elsewhere. Planning until the late 1960s was mainly an administrative technique to protect the colony from these fluctuations, and to maintain the stability of relationships on which the job effectiveness and often the careers of colonial officials depended. As the final accountability lay outside their work environment, colonial administrators often had to find a developmental compromise between the needs of their rural communities, the needs of government as an institution, and the objectives (overt or covert) of metropolitan authorities to whom the Pacific territories were more of a liability than an asset.
This became increasingly obvious after the formation of the United Nations Special Committee on Decolonization, the 'Committee of Twenty-four' set up in response to an Afro-Asian motion in 1960 to secure the 'immediate freedom' of all colonial territories (Ryan 1970:137). The development options open to colonial administrators in these circumstances were very limited. One consequence, as a senior official in Solomon Islands commented, was that

where Government has met a lack of response or poor results to a development project it has often reacted by pouring in more money and effort to achieve its ends (DC(E) AER1/1 of 29.12.70).

The second stage: transition to specialization

One of the most marked effects of the accelerating pace of decolonization in both countries was a rapid increase in the complexity of the planning process and its product. Resource and situational analyses were carried out in far more detail, and the input of statistical data escalated. The simple revenue and expenditure statements which had been the basis of earlier plans were first elaborated qualitatively and later expanded into comprehensive macro-economic analysis. In keeping with the omnipotent role assigned to planning in international aid circles, government planning horizons were extended beyond manipulation of the public sector to include intervention in and projections for, private sector activity. Though this had relatively little effect on rural response to development plans, it strengthened the position of macro-level government enormously. The planning process became progressively more centralized as formerly departmental planning functions were amalgamated in the one organization, then disaggregated within it into functional specialities.
Papua New Guinea: new priorities, old constraints

In 1969 Papua New Guinea again came under pressure from the Commonwealth Treasury to increase its contribution to internal revenue (Ballard and Garnaut 1973:10). The counterpart organization in Papua New Guinea, the Department of Treasury (later Finance), began to prepare for self-government. In the belief that the Office of the Economic Adviser had outlived its usefulness (Garnaut 1978:12), Commonwealth officials encouraged the Department of Treasury to form its own economic planning unit, the General Financial and Economic Policy (GFEP) Division, which was eventually set up in 1971. By that time other countries had begun to question the role of economic planning in development (Faber and Seers 1972), though they saw a need for planning and plans (Helleiner 1972:333-4) outside the traditional field of financial management. The then Administrator institutionalized the separation of planning and budgeting functions by a reorganization and expansion of the Office of the Economic Adviser, which became the Office of Programming and Coordination (OPAC). 1 To give the new Office the political legitimacy it needed, it was made responsible to the Finance and Planning Committee of the Administrator's Executive Council. 2 In fact the move gave OPAC little advantage, and its image as a highly centralized vehicle for colonial purposes made it suspect to many parliamentarians.

Internal political pressures, and the swing in international opinion away from growth-oriented development towards social welfare, participation, egalitarianism and income distribution (Seers 1969; McNamara 1973), were reflected in the early 1970s in attitudinal changes at decision-making levels. OPAC, which combined the previous Project

1. For an excellent review of the political and economic background in this period see Ballard and Garnaut (1973).
2. This body was the equivalent of a Cabinet in the 1968-72 House of Assembly.
Planning Unit, Major Projects Division, Manpower Planning Unit and Bureau of Statistics, was given the responsibility for a five-year plan which took account of these changes (Conyers 1975:9). Structurally and methodologically it was ill-equipped for the broad micro-level planning that was envisaged. Though the 1968 programme was amended to accord with the changes which had taken place, especially in constitutional and mining development (PNG:OPAC 1971:1-2) and in Australian support for indigenization (Ballard and Garnaut 1973:12), the new objectives were little more than a rhetorical compromise.

Shortly before the 1972 elections, Papuan demands in the House of Assembly provoked the Australian Government to commission a study of Papua New Guinea's 'less developed' areas and their relative inequality. The study team reported that the West Sepik and other backward areas had a severe disadvantage in resource endowment which had been increased by government neglect (BIU 1972:19). In support of its theory it included a detailed breakdown by sub-district of selected administrative services, which later, with modifications, was used extensively to indicate comparative levels of development (Apthorpe 1975, 1977; Wilson 1975:71-87; PNG:NPO 1977a). Though the study was very limited in concept, design and recommendations, it represented the first serious attempt to respond at national level to the problems of internal underdevelopment. Even more significant was the fact that, as field contact and expertise declined with decolonization, the type of indicators it employed became increasingly important to central decision-making and allocative processes. This later became a major problem. Though the indicators used were at best only approximations, and at worst grossly misleading, the choice for central officials often was the use of available indicators or uninformed and undefensible decision-making.

In line with the current political thinking, OPAC towards the end of its term attempted to engage the districts more closely in the planning process, and to integrate plans with the socio-economic environment. In 1972 Sepik administrative staff once again were diverted from their normal
duties to prepare data and submissions, first for a UNDP team (which did not propose to visit the Sepik) and later for OPAC (PNG: OPAC OPC 10 of 27.7.72). In two districts OPAC and the DDCs cooperated on more detailed studies, which led in 1973 to the publication of district programmes which added social objectives to the customary economic targets (PNG:OPAC 1973).

With the unexpected accession to power of the first Somare government in April 1972, the planning parameters for Papua New Guinea changed abruptly. The need to 'sensitize departmental heads to the political reality' (Voutas 1978:9) became an immediate priority. The UNDP team under Michael Faber, which had been commissioned by the Australian Government to advise on a development strategy for the next five years (IBRD 1973), outlined several recommendations which reinforced the new nationalism and were incorporated into policy guidelines (Conyers 1975:9; Garnaut 1978). These included replacement of expatriates with Papua New Guineans in the public service and private sector, which Somare several years earlier had announced to be 'our prime aim' (HAD 1968:715). The draft report also stressed encouragement of small-scale informal sector activities, 'regional development and rural revitalization', and renegotiation of the politically sensitive Bougainville Copper Agreement (IBRD 1973:101-2).

In Papua New Guinea, as in Solomon Islands, plans of this type enabled the government to reconcile conflicting goals, moral values and real world exigencies, and to avoid public controversy over the choices it actually made between them. Less publicized, but in fact the main thrust of the UNDP report, was its concern that 'steady growth of product will be a necessary prerequisite for the attainment of the other objectives', and that the economy should become 'less dependent on foreign grants-in-aid and, ultimately, upon foreign investment capital' (IBRD 1973:41; my italics). Its priorities therefore included a wider tax base, release of land for industrial use, and improvement of government capacity for project and policy appraisal, all of which
implied an urban-industrial bias at odds with rural concerns. 'An important target of central government', it stated, should be 'to increase its total internal revenues at a rate of at least 12 per cent a year, although...the practicability of doing this will depend on Australian financial assistance approaching 10 per cent' (IBRD 1973:18). Given the eclecticism and often the incoherence of such internationally-approved goals and targets, internal development planning was necessarily selective. For Papua New Guinea the continuation of 'economic growth' planning was the least-risk choice.

Whereas the UNDP report received widespread acclaim, an OPAC White Paper which made a more realistic attempt to grapple with conflicting priorities was by-passed, largely for political reasons. This 'remarkable document...went closer than other official documents to specifying inter-relationships between the various policy instruments that affect inter-regional, inter-racial and inter-personal income distribution' (Ballard and Garnaut 1973:17, 21-2), and sought parliamentary guidance for developmental decision-making (Somare 1972b). The House 'took note' of the Paper but added an amendment, part of which echoed the objectives OPAC itself had drawn up before the 1972 elections (HAD 1972:551; PNG:OPAC 1971:2). Most of the questions posed by the White Paper were unanswered or were answered ad hoc in governmental problem-solving over the next few years. One such 'answer' was symbolic of the new government's need to distance itself from the colonial regime: in late 1972 OPAC was abolished, and the Somare Government announced the formation of a new Central Planning Office.

Solomon Islands: new constraints, old priorities

A significant feature of the decolonization period was that the changes which in Papua New Guinea were attributed to the increasing influence of anticolonial radicals, in Solomon Islands were initiated by a colonial administration which suppressed or absorbed its radicals. Many of the changes occurred at approximately the same time in both
countries, despite considerable differences in the background, speed and style of colonial withdrawal. A number of them, such as the changes in relative values assigned to economic efficiency, coordination, decentralization, grass-roots participation and, in particular, central planning, were conventional wisdoms disseminated to colonial and post-colonial governments alike through international networks and aid agencies. The result in Melanesia was that the colonial governments and anticolonial nationalists often promulgated the same goals, so that undefined opposition to colonial policies had limited advantage for the nationalists.

One consequence of the difficulty in the use of anticolonialism as a political problem-solving technique was a tendency in both countries to equate racist behaviour patterns with colonial policy, and the colonial administrative process with the governmental process. This led to a confused period in which pragmatic considerations of development administration were subordinated to macro-level problems of relations between bureaucratic and legislative authority, and between internal and international pressures. During the adjustment from colonial status to independent nationhood, the development of planning capacity proved to be a valuable multi-purpose tool for macro-level problem-solving, and played a central part in decolonization and the establishment of legislative legitimacy.

The British Government created a Regional Development Planning Unit to service its Pacific colonies in 1969. As the Unit worked with the Overseas Development Administration (ODA) section of the British Foreign and Commonwealth Office, and through the Western Pacific High Commission (BSIP 1971a:4), areal differentiation was slight and British priorities paramount. By that time United Nations organizations were also involved in Pacific development (Fairbairn 1970:54-5), and had begun to influence Solomon Islands decision-making.

In 1970 senior government officials in Solomon Islands reported that the 'top-down' approach of previous development plans had resulted in poor coordination and a
general lack of development relevant to village life. Central District officials responded by setting up a Planning Committee, which identified three main areas of concern: village health, village income-earning opportunities, and education which isolated children from village life (SI:DC Central 10.2.70). Unlike Papua New Guinea, where government officials concentrated on refinement of the planning process and production of more 'relevant' plans, Solomon Islands officials saw the lack of control over implementation as a major problem.

In 1971 the central administration established a small Planning Unit with two expatriate members: an Assistant Secretary (designated 'plan implementation officer') and an economist (BSIP 1972a). In the same year the Sixth Development Plan, based on the work of the Regional Development Planning Unit, was released. The Finance Committee of the Governing Council announced changes to the District Development Teams that were formally responsible for plan implementation, on the grounds that they were dominated by government officials and not sufficiently representative of all district interests (Govco 16/71 of September 1971). 'Development Committees' with political, church, private sector and community representation were set up. These had little real power, and acted primarily as a communications link between the centre, through the Planning Unit, and district interests. While responsible for initiation and implementation of locally-financed development projects, they could only 'advise and assist' in the implementation of the Sixth Development Plan (BSIP 1972a).

Publicized as 'the first plan to be prepared with economic advice and to make a detailed evaluation of integrated

1. Solomon Islands at this time was experimenting with a committee system of government. For the details of the system and its place in Solomons constitutional development see Russell (1970), Woodford (n.d.) and Paia (1975). In retrospect, the 4 years of experimentation with the committee system disadvantaged the Solomons legislature, by comparison with that of Papua New Guinea, in its ability to handle a Westminster system during decolonization.
development needs' (BSIP 1971b:3), the Sixth Plan provided a far more elaborate study of the macro-economy than previously had been undertaken. As in Papua New Guinea plans, its stated objectives fell into two categories. The first and dominant group focussed on an increase in export income, as the 'overall objective' was 'to lay the basis for substantially reduced dependence in this decade' (BSIP 1971a:6). The second or 'native welfare' group of objectives included localization of expatriate-held posts, greater indigenous participation in the economy and stronger local government, priorities which were linked in the plan to educational advancement and explicitly to the maintenance of high levels of aid (BSIP 1971a:6,188). The Sixth Plan, like the OPAC plans of the transition period, made little more than a rhetorical attempt to grapple with the problem of antithetical priorities. In Solomon Islands, however, the primacy of the financial constraint and the relative impuissance of local political forces, prevented the administrative disorientation which in Papua New Guinea was exacerbated by internally inconsistent plans.

The planning process itself, which in Papua New Guinea was relatively neglected at this stage, received very detailed attention in the Sixth Development Plan. Procedural and administrative mechanisms were delineated with particular care (BSIP 1971c), and for the first time a formal system of monitoring and review was included. In 1972 the resultant workload for the Planning Unit required the addition of two new planners, and by 1973 'the need to handle increasing flows of British and international capital aid and technical assistance' necessitated further expansion (BSIP 1973a:63).

By the end of 1973 a total of 264 projects had been submitted to London, 258 had been approved, and over $A10 million of the $A16 million approved had been spent (BSIP 1974a:11). The second annual review of the plan reported 'conspicuous and encouraging progress' in several directions, notably large-scale projects with little village input. On the other hand, 'disappointing or no progress'
was registered in the more catholic objectives, and in the primary aim of reduction in the budgetary deficit. The output of high-level manpower lagged, and proposals for administrative decentralization were postponed.

Though a number of weaknesses in the Sixth Plan were identified during its life, the need for continuity in the planning process, to maintain and regularize the inflow of external resources, militated against persistence on difficult objectives. While the responsibilities of foreign aid administrators usually required plans which made some concession to village development and to a reduction in dependence on aid, they rarely included supervision of the former and often were inconsistent with the latter.

Less than 12 months after publication of the Sixth Plan, preparations commenced for its successor. From early 1973 departmental and district staff were required to supply detailed reports and project proposals for the Seventh Development Plan (Govco 6/73 of September 1973). Increasing criticism of 'top-down' planning by politicians and public servants led to a central government attempt to present the new plan as 'the People's Plan', to which end greater responsibility was assigned to the district Development Committees. The Committees, severely handicapped by the fact that the Sixth Plan was not then fully operative, responded with 'shopping list' submissions which replicated the previous model. Preparations continued for almost two years, when they were aborted by British moves for rapid decolonization.

Until the early 1970s the conceptual approach of many government officials to the planning of development centred on a belief that successful implementation of a plan was contingent on 'disciplined adherence to agreed priorities and efficient centralized coordination in the processing of project applications and the control of development expenditure' (BSIP 1972a:1). As the pace of decolonization increased, this theme was temporarily subordinated to political pressures and to the exigencies of rapid socio-economic change. The need for flexibility and political responsiveness militated
against long-term planning, and against the interests of village communities, whose needs were relatively constant and whose relationship with government was often determined by its adherence, or non-adherence, to agreed priorities and plans. The pressures for decentralization, local participation and rurally-relevant development, which were articulated in Papua New Guinea by a growing cadre of nationalists and in Solomon Islands by colonial and national administrators, were primarily macro-level political problems. Rural development plans were in reality a by-product of decolonization processes in which the capacity of the national governments for future rural development depended on their ability to exploit the developed world, and to maintain an inward flow of the resources they lacked internally.

The third stage: institutionalization

In both countries the establishment of a central planning office, which completed the formal separation of planning from budget management, coincided with a stage in political development when a national legislature became the official decision-making body and when self-government was imminent. It also coincided with the putative separation of political and administrative government, and the retreat of colonial patterns of authority from the overtly political sphere to the bureaucracy. For the new national legislatures, capture of the established power structure and control of the bureaucracy was a primary objective (e.g. Lewis 1966:149; Voutas 1978), both for electoral legitimacy and for national stability.

The basic objectives of post-colonial development were specified for Papua New Guinea and Solomon Islands respectively in the Eight National Aims (HAD 1973:1411, 1491-2) and the Eight Principles (LAD 4-17.10.74:1). Both documents were drafted largely by expatriate advisors to the new national governments. Both included the by then well-worn goals of national self-reliance, local participation, decentralization and improved distribution of benefits. In
both countries a rhetorical change of direction was symbolized by the rejection, within a few months of the election of the first national Chief Ministers, of the plans then in preparation.

The new governments placed a high priority on their planning capacity. Papua New Guinea in particular was unwilling to risk dominance of the planning function by political parties, individual ministers or the public service (Voutas 1978:8-9), and compromised with a National Planning Committee of leading politicians and officials. In Solomon Islands planning was retained in the Chief Minister's portfolio, but also administered by a senior committee. The central planning offices in both cases were assigned new heads, dynamic and experienced expatriates who had demonstrated their sympathy for the nationalist goals. Both offices rapidly acquired a quasi-political patina which set them apart from, and at times in opposition to, the administrative mainstream.

The new offices at first were wary of the massive reorganization of the economy which their formation appeared to portend, and saw their role as consultative and coordinative. Papua New Guinea decided against preparation of the customary national development plan. Instead, the Department of Finance and remaining OPAC staff prepared an interim 'Improvement Plan for 1973-1974' (PNG:CPO 1973a) and Districts Supplement (PNG:CPO 1973b). As these were designed to 'ensure coordination of the 1973-74 budget with development plans and projects underway or being prepared' (PNG:CPO 1973a:1), their main function was not change but continuity. A parallel situation developed in Solomon Islands after the return to a Westminster system, the election of the first Chief Minister, and the repudiation of the Seventh Development Plan. The

1. The International Documentation Company, AG, Switzerland, lists 1387 Social and Economic Development Plans from various countries, one-quarter of which were from Africa alone. The first comprehensive national planning document for a developing country was produced by India in 1951 (Mehmet 1978:35).
planning office hastily convened meetings with the departments to identify and clear urgent projects and to coordinate extant plans for the new national plan, due 15 weeks later (SI:CPO 774/7/2 of 16.12.74). Permanent Secretaries were instructed to summarize draft chapters of the Seventh Plan they had received from the Ministry of Finance and, where necessary, to adjust them to accord with the new policy (SI:CPO 774/7/2 of 27.12.74). The result in both countries was a preponderant input of projects and policies carried over from discarded plans and .rom established departmental practices, with a veneer of new policy and a different format. This was a significant factor in the survival of the new national governments. While the visible changes to the central planning machinery demonstrated their responsiveness to nationalistic demands for immediate reforms, the continuity quietened the widespread fears that governmental and economic instability would follow, and gave the inexperienced Cabinets much-needed time to adjust to their new responsibilities.

Papua New Guinea: crisis management and rural commitment

The first Somare Government came to power on a reformist platform, but Somare after a few weeks in office admitted that 'when I was outside, when I was not in the government, it was a different story. But now I can see the problems ahead of me' (1972a). For some time after its establishment in 1973 the Central Planning Office (CPO) was hampered by the uncertainty and differences of opinion at policy-making levels over priorities, means and ultimate goals. In 1974 and 1975 its staff were occupied largely with institutional problems. The annual costs of the office increased from $A142 000 in 1973-74 to a planned expenditure of approximately $A780 000 in 1976-77 (PNG:CPO 1974a, 1976a), though the original intention had been for a small office to coordinate plans prepared by departments and districts. From its inception the new office was structurally biased
towards centralized macro-planning and, despite its continued attempts to grapple with social and areal development problems, its main achievements were in the macro-field for which it was best equipped.

In the early years of the first Somare government the potential for conflict between the Central Planning Office and other powerful bodies, notably the Office of the Chief Minister, the Department of Finance and the Public Service Board (Ballard and Garnaut 1973:11-14) was largely subjugated by nationalist euphoria and by the unifying demands of crisis management. During this period the Director and senior staff were deeply involved in the maintenance of national equilibrium. Much of their time was spent in renegotiation of the Bougainville Copper Agreement and subsequent arrangements for the Ok Tedi mining prospects; in setting up regulatory mechanisms for foreign investment; in preparations for Independence; and in defusing the threat to national stability posed by Bougainvillean regionalism, Papua Bena and other dissident groups, and by the growing tensions between the government and the Constitutional Planning Committee.

By late 1973 the 'impetus for large scale reform of structures' (Ballard and Garnaut 1973:27) had been lost, and the CPO had adapted to the systemic administrative constraints. Direct involvement of the CPO in rural development was slight, though a few area studies were carried out (PNG:CPO 1974b:10; Swanzger and Meister 1974; PNG:CPO 1975a) and a series

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1. As originally set up it consisted of two sectoral planning branches (Resources and Industry Planning and Social Planning), a macro-planning branch and an area planning branch (PNG:CPO 1974a:40-6). Later a National Co-ordination Unit was added and, in a subsequent reorganization, functions were divided between General Planning, Programmes and Policy Analysis, Manpower Planning and Area Planning. After the formation of a Department of Provincial Affairs (later Decentralization) in May 1976, the Area Planning Branch (APB) was transferred to the new department, where it rapidly became moribund. Three years later it was taken back into the CPO.
of 'growth centre' studies, commissioned under OPAC, was completed under CPO auspices. The Departments of Public Health and Education engaged in massive planning exercises (PNG:PHD 1974; PNG:Dept Ed. 1973, 1974, 1975) whose recommendations were widely invoked but proved too expensive to implement (Garnaut 1978:24). The Bougainville Constituent Assembly prepared a simple budgetary development plan (Mamak et al. 1974:83-6), which became the basis for central funding of the island's provincial government (PNG:CPO 1974b:10) but which conceded nothing to the CPO's supposedly supervisory status. Though coordination of such plans was the indisputable domain of the CPO, in practice its coordinative functions outside very senior levels of government were so inconspicuous that it appeared that 'there do not exist institutions or procedures for knitting these [government agencies] into a coherent governmental view' (Colebatch 1977b:8).

In September 1973 a contingent from Papua New Guinea toured Malaysia and was briefed on the operation of the Malaysian 'Ops Room' planning technique (Herlihy 1974:10-11), which provided the model for the CPO's National Coordination Unit. The Unit was used extensively to brief parliamentarians, senior officials, visiting missions and other groups (PNG: CPO 1975b:68) on projects and issues of national concern. Largely at the instigation of the Director of the CPO, the system was refined into a daily 'crisis calendar' meeting of 'core operators' for the Coalition Government. This aided high-level coordination (Voutas 1978:13-14) and tended to disguise the deleterious effects which the rapid policy changes had produced in lower-level productivity, coordination and field services (Ballard 1976a:21-2).

1974 was a difficult year for the Coalition Government, and brought in its wake a renewed emphasis on economic planning. Politically the Government was shaky, and Somare and senior staff often had to divert their efforts to maintenance of their Coalition. When the considerable achievements of the new government at macro-level brought no significant rural development, the Eight Aims became widely
known as the 'Eight Point Myth'. New radicals condemned the government for not 'improving government officers to be accessible to village communities' (Samana 1974a). Towards the end of the year internal economic issues for the first time posed a serious threat to political stability. Vacillation in Australia over a long-term aid commitment revived concern for economic self-reliance, which intensified as the 1973-74 boom year drew to a close and commodity prices declined. Financial and managerial factors became a planning priority.

During this period the CPO prepared a two-volume 'macro-plan' which, though considerably more detailed than previous inventories of government current and projected activities, served essentially the same purposes. As did earlier plans, the first volume tacitly conceded the inability of central planners to direct, coordinate or predict development activities which they could not control. It was therefore presented as 'a management document which complements a number of other planning volumes' through which 'the planning efforts of the Government and public service can be more effectively decentralized, in the sense that the bulk of planning will take place within the operative departments and agencies' (PNG:CPO 1974a:iii). This interpretation of decentralization, which echoed that of Hasluck and OPAC and was later repeated for the National Public Expenditure Plan system, was a crucial concession to the continuity of established administrative procedures, and allowed the Department of Finance the real control over economic policy. The volumes also reaffirmed the institutional belief, that 'planning depends heavily on the systematic collection and analysis of social data in the form of statistics...[and]...much more needs to be done in development of statistical systems' (PNG:CPO 1974a:10-11), which was one of the most persistent characteristics of the planning process. Again, it was an admission of a constraint on central planning which became more serious over subsequent years. Though the CPO steadily improved its capacity for statistical analysis, the collection and accuracy of its data base declined markedly with the deterioration of the government
field service. At the macro level, however, the two volumes were a definite asset. Their preparation involved a wide range of elite opinion, thereby reducing the potential for conflict with different elite groups, and the increased visibility they gave government policy to some extent countered criticism of its performance.

In 1974 the GFEFP, which was responsible for most planning initiatives in the Department of Finance, was re-staffed and prepared for a more decisive role. This it saw as, first, to provide a stable flow of public expenditure; second, to balance aid, expenditure, wages and prices in real and monetary terms; third, to increase government revenue; and fourth, to coordinate all decisions relating to allocation of government's financial resources (Garnaut 1978:16-19). In October the Budget Priorities Committee (BPC), a group of senior officials chaired by the Secretary of Finance, was formed. This Committee, which with the National Planning Committee became the most powerful decision-making body outside Cabinet, evolved a system of priority ranking for departmental activities. The system regularized central decision-making and impressed aid donors, but was 'not as watertight as had been expected' (Lepani 1976:40). The grading of departments by an ideal rather than by their record (Hinchcliffe 1978a:8), and the resumption of funds when results were not forthcoming, created confusion in some departments. The bureaucratic ability to circumvent such priorities and restrictions (Garnaut 1978:29-30; McKillop 1978) soon required stronger use of financial controls.

1. The author personally checked a number of simplified reports used as data base in several departments in 1975-76. Even in the most simplified form they proved to be so inaccurate that any resemblance to the villages checked was coincidental.

2. The 'Priority Review Rating'. In this system departmental activities were graded according to their relevance to national priorities and therefore to their claim on government funds.
Internal political pressure for provincial government increased the need for more efficient macro-economic management. The CPO and the Department of Finance, in particular, took the brunt of the practical and financial considerations involved in the massive restructuring that the provincial government proposals of the Constitutional Planning Committee (CPC) and the Bougainville regionalists presaged. Though idealistic in concept and presentation, these proposals were cynically political in their 'implications and potentially disastrous for the government's capacity to pursue its egalitarian and developmental goals (see Standish 1977a, 1978b; Berry 1977; Hinchliffe 1978b; Ballard 1979). For the CPO, preparations for provincial government included several area development studies (Mundrau 1976; PNG:CPO 1976b, 1976c; Harris 1976), and the acquisition of two overseas consultants to develop training courses for provincial planners (Barnett and Hinchliffe 1976). In an attempt to prepare for the dramatic expansion of demand for skilled manpower, positions of provincial planner were created under the APB, and several young national graduates were attached to the CPO to prepare for provincial roles. The APB organized workshops and planning seminars in several provinces.

While these moves stimulated provincial interest in planning, they added to its specialized mystique. In the West Sepik, already suffering from a 'total absence of internal political mobilization' (Ballard and Colobatch 1976:2) and a very high turnover of senior administrative staff (PNG:WSP 1976:39), councils and inexperienced middle-level were unwilling to accept the responsibility for planning, and were unresponsive to APB exhortations for 'bottom-up' initiatives. When Indonesian moves on the border brought renewed concern for the area's development, the preparation of 'Border Development Proposals' was left to a senior expatriate official, despite a Primo Ministerial directive that 'the [combined local government] Council is the political body responsible for planning in its area' (PNG:RIP Wewak 10-1-9 of 24.7.74).
For about 2 years the APB, on the principle that it was 'essential for the province to not only state the kind of development it wants but also to indicate its own priorities' (PNG: CPO 13-7-10 of 16.1.76) took a relatively passive part in national planning activities. In 1975 the CPO was restructured to service the Budget Priorities Committee more effectively (Garnaut 1978:22), and was firmly tied to the macro-economic parameters — revenue, aid, borrowing and total expenditure — laid down by the Department of Finance (PNG: CPO 1975b:3). In late 1975 the APB was accused publicly by one of its officers (Post-Corner 2.12.75) and privately by others of neglect of rural areas. By 1976-77 the CPO had lost a number of experienced officers, several of whom moved to Finance and the orthodox administrative stream.

In 1976 the CPO, under a new Director, issued a reaffirmation of the Eight Aims entitled the 'Post Independence National Development Strategy' (PNG: CPO 1976d). This document identified the 'lack of development in rural areas, the increasingly serious inequalities and the gradually mounting pressure of population on available resources' (1976d:15) as urgent problems. Though the CPO retained a continuing and valuable role in the identification and analysis of previously neglected development priorities, it had little financial power to back the Strategy. The Organic Law committed the centre to 1976-77 levels of provincial funding, the deployment of which was the prerogative of provincial authorities. The maximum estimated increase in government revenue for the immediate future, which the CPO could use, was approximately $12 million, one-tenth of the amount to be unconditionally distributed to the provinces (see PNG: CPO 1977a:22) and less than 3 per cent of the proposed appropriation for 1978 (Holloway 1978). This rate of growth for expenditure represented

the maximum possible and the minimum desirable; with the rate of growth of the population also approaching 3% per annum, any lower rate of growth of government spending would necessarily involve a real decline in the provision of basic services per capita (Lopani 1978:3).
The central role which the NPO had played during decolonization proved to be a transitional phenomenon. With the increasing sophistication of other areas of government, it became a minor agency for the provision of advice and the negotiation of aid requirements, with little influence on internal development. This was reflected in a move away from the broad interventionist approach of the 'grand plan' era, towards the budgetary coordination of a stabilized system of government. In 1978 the NPO introduced a 'new' form of planning and budgeting, which confined itself to project planning of the estimated growth in public sector expenditure, extended in a 'rolling plan' format over a four-year period. In principle this system, the National Public Expenditure Plan (NPEP), highlighted the areas in which we have deviated from target. In particular our reassessment is concerned with the relative lack of development in rural areas...We now call for a still higher proportion of our nation's resources to be directed to rural Papua New Guinea (Somare, NPD 1978:582-3).

In actuality government capacity to achieve this goal through the NPEP was at best very limited. It was constrained as much by the failure of departments and agencies to put forward suitable projects as by the shortage of resources (Holloway 1978:21), and as much by the relative insignificance of NPEP funds in provincial budgets as by departmental shortcomings. Some of the initiatives then emerging from the provinces demonstrated that provincial preferences could conflict with, if not undermine, national planning processes and priorities (see Standish 1977a). Somare warned the House that the NPEP and the National Fiscal Commission could represent 'the only means of financial control the National Government will have to ensure that resources are spent wisely and are spread evenly' (NPD 1978:585).

The NPO turned to preparation for the time when growth in national revenue would allow it to administer

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1. The CPO was renamed the National Planning Office (NPO) in September 1976.
national goals more effectively. In early 1977 departments, statutory bodies and provincial authorities were asked for detailed submissions for NPEP projects, which once again involved a 'substantial workload' for departmental and provincial staff (PNG:CFO 1976:49; PNG:CFO circular of 25.1.77). This was followed by 'guideline' instructions for the collection of a comprehensive body of provincial data, which included a census in considerably more detail than the national census had been able to achieve (Simpson 1977). These moves frequently were unfavourably received by provincial staff, who saw them as an attempt to subjugate provincial plans to a central model which involved much work for a proportionately minor return. In fact, as projects were to be in accordance with national priorities, were evaluated in the centre, and represented a competitive 'bid' for resources allocated by the centre, the NPEP system was one of the few consistent central attempts to contain a situation that was rapidly getting out of control. In 1978 problems with the provincial government system had reached the stage where even its principal architect admitted that 'we may have slipped even further from [the kind of society planned] than we were in 1975' (Momis 1978:18).

The poor response to NPEP from the anticipated beneficiaries resulted in only a small proportion of the approved projects in 1978 being addressed to the aims outlined by the Prime Minister. 'Helping less developed areas' rated only 9 per cent of proposed NPEP expenditure and 'rural welfare' 20 per cent, in terms of 'their importance and likely impact on the economy', as opposed to 11 per cent for 'effective administration' and 35 per cent for 'economic production' (O'Leary 1980:9). The NPE was forced to seek additional submissions from departments and provinces that had demonstrated their capacity to employ the correct procedure. Later it sought other means, such as external expertise and integrated rural development programmes, to overcome the shortage of skills in less developed areas. Later still the severe mismanagement of public funds in some provinces led the government to tighten its controls over untied provincial...
grants and loans. In 1980 it announced an end to 'handouts' and the return to close Department of Finance scrutiny of provincial expenditures — in effect, a return to the financial realities of responsible government, which marked the real end of the decolonization period and of anti-colonial Utopianism.

**Solomon Islands: decolonization planning at micro-scale**

A few months after the return to a Westminster system in Solomon Islands, the Governor informed the Legislative Assembly that 'your Government' (then still the British Government) proposed to set up a central planning unit. Its priorities for the next national plan were to be development of rural marketing services, devolution of administrative responsibility from central to local government, expansion and diversification of agricultural activity, improvement of communications and 'development of existing forms of wealth' (LAD 4-17.10.74: 7). The new Chief Minister, on the other hand, for some years had considered localization of expatriate-held posts, internal self-government and political decentralization the major priorities (Mamaloni 1971).

By the time Mamaloni became Chief Minister in late 1974, administrative decentralization had been planned in detail and partially implemented (Campbell 1973; SI:MHA 1973; SI:MHA 1974). Localization of public service positions had increased steadily in the 1970s and was the subject of a detailed review in 1973-74 (BSIP 1974b). Constitutional development was well-advanced, but economic development had lagged. Foreign aid in the early 1970s comprised almost 98 per cent of the capital budget and 24 per cent of the recurrent budget. Ninety-four per cent of aid was supplied by the United Kingdom (SI:OCM 1975, 1:7,9), where the effects of the oil crisis and world inflation implied possible limitations to British capacity to support dependent territories (LAD 4-17.10.74:2).
The tight control which London maintained over management of its aid contribution placed a heavy burden on the staff of the new Central Planning Office, but allowed it little discretion in the final selection of projects or the distribution of aid funds between them. Of approximately $A12 million British aid for 1975, the first year of operation for the CPO, about 60 per cent was financial support and about 40 per cent manpower aid (SI: OCM 1975, II: App. C). Whereas the Finance Department in Papua New Guinea theoretically took second place to the CPO in economic policy-making in the early stages of institutionalized planning, the Ministry of Finance in Solomon Islands retained the major role and the management of British aid funds. Submissions for the then 8 per cent of aid supplied by other donors were made through the CPO (CPO 774/7/2 of 16.12.74). In consequence, the main allocative mechanisms during the transition to Independence were in the Ministry of Finance and the budget, while the CPO provided technocratic support and London officials held the strongest directive power over the economy. This set the pattern for subsequent CPO activity, and it never became the powerful management tool for the political arm that it was for the first Somare government.

Originally staffed with four generalist administrators (of whom three were Solomon Islanders), the CPO in its early days was ill-equipped to supply the type of economic appraisal required by project-specific aid donors. Nonetheless, it was in an excellent position to articulate the pre-Independence nationalism which was expressed with increasing vehemence in the Legislative Assembly and among senior public servants. The new approach was epitomized in the National Development Plan (NDP) released in April 1975 (SI: OCM 1975). Though weak on the economic and financial aspects of forward planning, the new plan offered strong support to the new government by clear formulation of general aims and guiding principles (SI: CPO 29.10.75), and by rationalization of the planning and review procedures to be employed within departments. The new Chief Minister, however, suspicious of the bureaucratic propensity to ignore or manipulate political decision-making
and chafed by the firm British hold on central aspects of government, often neglected the potentialities of the CPO.

The new office, deprived of the political role which was central to the success of its counterpart organization in Papua New Guinea, turned to administrative preparations for decolonization. This entailed, first, the improvement of its capacity for the type of planning required by Britain and other aid donors. The planning process envisaged by the CPO entailed a matrix of considerable complexity (Table 5.1) and demanded a level of specialized skills not readily obtainable from among a population of 200,000. This had the effect within the country of increasing the mystique and the relative status of the function, adding to the dependence of development programmes on the existing administrative structure, and limiting interference from uninitiated politicians. It also meant that linkages with the village micro-level became progressively more tenuous.

The National Development Plan was less comprehensive than originally intended. A major omission was the proposed section on regional plans, designed to parallel implementation of the 1973 decentralization programme. These plans were not available from councils at that early stage and, like Papua New Guinea, Solomons officials regarded their central preparation as politically unwise. As a result of the omission, NDP was left with basically the same administrative and sectoral structure of its predecessor. The additional plans produced later for 'key sectors of concern' such as cattle development, forestry and transport drew heavily on expatriate expertise and previous studies and, in default of alternatives, perpetuated the earlier large-scale, export-oriented model for development. Though this produced considerable political disaffection during the decolonization period, the Solomons deliberate use of enclave development was conspicuously successful in attracting the foreign investment for a high rate of economic growth (Ward 1979:11–12; Ward and Proctor 1980:407) and, indirectly, in the legitimation of central government.
<table>
<thead>
<tr>
<th>Category</th>
<th>Function</th>
<th>Prepared by</th>
</tr>
</thead>
<tbody>
<tr>
<td>National development plan</td>
<td>Define overall policies and targets and allocate revenue</td>
<td>Central planning office for Council of Ministers and Legislative Assembly</td>
</tr>
<tr>
<td>Annual review of national plan</td>
<td>Update, record progress, adjust targets</td>
<td>Central planning office for Council of Ministers and Legislative Assembly</td>
</tr>
<tr>
<td>Ministry operational plans</td>
<td>Detailed programmes and resources management for individual ministries under national planning guidelines</td>
<td>Individual Ministries for Council of Ministers</td>
</tr>
<tr>
<td>Local Council operational plans</td>
<td>Detailed work programmes and resource allocation for each council area, under national planning guidelines</td>
<td>Council staff for Local Government Councils and Ministry of Home Affairs</td>
</tr>
<tr>
<td>Other operational plans</td>
<td>Programmes for statutory corporations and non-government bodies</td>
<td>Statutory corporations, commercial firms, churches, etc.</td>
</tr>
<tr>
<td>Area perspective plans</td>
<td>Long-range indicative plans for settlement, land use and transport in each council area</td>
<td>Delegated representative/s for Council of Ministers</td>
</tr>
<tr>
<td>Annual manpower plan</td>
<td>Annual rolling plan for education output, training, employment and localization</td>
<td>Manpower committee for Central planning office and Council</td>
</tr>
<tr>
<td>Key sector plans</td>
<td>Define objectives and policies and allocate resources to remove constraints in any sector causing particular concern</td>
<td>Delegated representative/s for Council of Ministers</td>
</tr>
<tr>
<td>Annual government estimates</td>
<td>Allocate finance and manpower to work programmes and convey approval for expenditure</td>
<td>Individual ministries for Council of Ministers and Legislative Assembly</td>
</tr>
<tr>
<td>Annual local council estimates</td>
<td>Allocate finance and manpower to annual work programmes of individual councils</td>
<td>Council staff for Local Government Councils and Ministry of Home Affairs</td>
</tr>
<tr>
<td>Physical plans</td>
<td>Provide for the planned and orderly development of land in specific areas</td>
<td>Planning authority as designated by law, for relevant ministry.</td>
</tr>
</tbody>
</table>

As in Papua New Guinea, concern in the CPO with the procedural aspects of project evaluation, monitoring and review dominated the planning process in the early institutional period. With the addition of an economist to its staff, the office was able to take a more decisive part in project appraisal. This made little difference to the relationship with the ODA in London, which continued to demand detailed information that at times was almost impossible to supply. Despite CPO attempts to convince its main donor that 'no foreign country, including Britain, should be heard to say that such-and-such a policy or programme is "wrong", or even that it is a misuse of resources' as 'only the Solomon Islands Government is accountable to the Solomon Islands people, and thus has the right to make the value judgements on their behalf' (SI: CPO 29.10.75), London's intransigent stance remained a major constraint and source of internal tension.

As the relative importance of other aid donors increased, the CPO became almost exclusively preoccupied with their requirements. Implementation and feedback about current projects was left largely to the orthodox administrative channels.

One of the major projects then being implemented was the administrative decentralization programme (SI: MHA 1973). Decentralization of the planning process, as with many other elements of the programme, was achieved by fiat. Council staff, already overburdened with the delegation of centrally-conceived responsibilities, were instructed to take over the detailed (and most difficult) part of the process, the preparation of operational projects and programmes which accorded with NDP policy guidelines. As in Papua New Guinea at an earlier stage, firm central control over finance and skilled manpower severely constrained regional planning capacity, and the diseconomies of small-scale operation in many instances raised the costs of maintaining the status quo. Some councils were allocated expatriate ex-district officers as planners, which reduced the scope for major change. Others were dependent on such advice as they could find locally. Unlike Papua New Guinea, where trained provincial planners found innumerable extraneous duties grafted on to their formal
role, in Solomon Islands planning was grafted on to the normal responsibilities of generalist administrators.

Council staff complained that 'the methodology of project evaluation, monitoring and review seems to have a leviathan orientation, often leaving the councils' development problems unnoticed' (MC F 1/7/3 of 27.4.76), and that the councils could decide only 'where the development should take place rather than what nature the development should be' (SI:SIC 1976:1). As a result, most of the plans eventually produced closely paralleled earlier central models. By early 1975 the suspicion that council plans reflected priorities that were centrally-imposed and often irrelevant to villagers had magnified political tensions between the councils and central government. Councils began to complain that they had lost their autonomy under the local government reforms, and were merely agents of central government (MGA F 1/7/3 of 30.6.75).

One consequence of the introduction of council plans in Solomon Islands, as with provincial plans in Papua New Guinea, was that central agencies were able to pass difficult or politically controversial issues down the line. They also allowed central officials to stifle or postpone low-level initiatives to suit central convenience. In one such case, before the NDP was officially released or council plans prepared, one agency responded to an unexceptionable request for conventional assistance, made through the senior government representative on San Cristobal, with a statement that its Board would not be prepared to consider 'ad hoc applications' unless it knew the 'developments proposed' in the Council plan (AILB 10.2.75).

As the CPO initially had been staffed by internal transfer, the needs of the office often were overridden by the pressures of public service manpower organization. By 1976-77 the CPO in Solomon Islands, like that in Papua New Guinea, had lost a large proportion of its staff, and by 1978 the Head of Planning had been changed four times. The original Head by that time had become Permanent Secretary in the powerful Ministry of Finance, an organization hold in high favour
by London officials for its probity and because 'they run a tight ship' (Allan 1978). Staff who had been trained, in some cases overseas, for planning posts spent very little if any time in their anticipated positions. For some time the office was unable to fill vacancies in its establishment.

The movement of CPO staff to senior governmental positions elsewhere had little effect on departmental planning, which usually was at lower levels of the hierarchy, but brought a relative decline in the CPO's internal influence and a concentration of its activities on negotiations with external interests. As in Papua New Guinea, the high staff turnover and heavy expatriate recruitment constrained the CPO to a repetitive learning process, and accentuated its need for reliable indicators. Council plans, like area planning in Papua New Guinea during the same period, were primarily the responsibility of the ministry which controlled decentralization. The councils, with their limited planning capacity, were in no position to compete with departmental plans and priorities, which by default remained the predominant input in national plans. The main effect of the institutionalization and decentralization of planning, in both countries, was that it enabled the central governments to consolidate their position during the difficult transition period, and to ride out a period of strong anti-colonialist and anti-centralist feeling with minimal discontinuity.

From development plans to development: the forgotten link

One of the most ubiquitous misconceptions in the analysis or practice of Third World development planning is the assumption that rural development plans are, or should be, directly productive of rural development. In fact most plans which ostensibly addressed problems of village change rarely progressed far beyond the assessment and preparation stage. In Melanesia this has not been for lack of governmental commitment to rural development, but because such plans had served their purpose. In one way or another they strengthened governmental capacity, most significantly by
securing major transfers of resources from the developed world, even at times when the explicit objective of the donor country was a reduction in its financial support. For many villagers in Papua New Guinea and Solomon Islands, where private enterprise was a relatively minor element of colonial demonstration effects, government has had almost monopoly control over the economy.¹ In this situation the improvement of governmental capacity for effective government indubitably has important implications for rural development.

One of the major problems in the translation of stated planning goals into rural development, by the indirect means of improved governmental capacity, was that often they implied a need for major reorganization of administrative structures. This either was not considered a viable option at that stage or, as in Papua New Guinea during decolonization, foounder on the problems involved. A further problem was a government tendency, exacerbated by international and internal political factors, to dissipate resources on areas which government could not control and to neglect matters it could control.

Implementation of stated objectives, by virtue of its temporal and often spatial distance from the events which initiated the plans, has been insulated from the planning environment, but the interventionist nature of the process (Fisk 1975:11-15) has allowed its costs to be dispersed to rural communities. This in turn has rebounded on government capacity for rural improvement, especially in peripheral areas. For villages in the study areas development plans were in fact the 'confidence trick' described by the first Head of Planning in Solomon Islands:

¹. For a recent analysis of this situation in Melanesia, from a radical perspective, see Connell (1980). Connell concludes, significantly in the context of his paper, that 'conclusive comments on the applicability of particular paradigms in a Melanesian context are quite impossible' (1980:92).
It is just plausible, it just could be true. It plays on the frustrated aspirations, or the sheer greed, of the sucker. The person who thinks he is gaining something, doesn't; he loses, often a lot. It involves a placing of trust, an expression of faith, in the trickster, who is assumed to have the power to pull off the deal, but he hasn't and he doesn't (Hughes 1978:44).
Part III

CHAPTER 6

'WELFARE' DEVELOPMENT AND THE CASH CONSTRAINT

Three aspects of village life were regarded by villagers in all study areas as crucial development issues. All three — housing, health and education — had received government attention at various times. Health and education had alternated with economic matters as foci for government development programmes since the earliest years of macro-government, though prior to World War II the responsibility for them, outside government centres, was left largely to the missions. In both countries village housing received desultory supervision from field staff as part of the preventive health care measures authorized by government legislation or common practice and, in some cases, as part of the official's organization of his administrative area into manageable or aesthetic units. The results, at least in terms of national statistics, were a marked improvement to village health and a gradual spread of educational opportunities. The prevalence of such diseases as yaws, leprosy, tuberculosis and malaria declined, and the mortality rate from epidemics of influenza, poliomyelitis and measles was checked. More children learned to read and write.

By the 1960s a new variable had begun to influence the allocation of government resources. The colonial governments, aware from experiences elsewhere that decolonization set a time limit to their control over development patterns, concentrated administrative attention and resources on the most politically sensitive issues. In the process, improvement to the quality and spread of welfare services was subordinated to the immediate need to replace expatriate officials with an indigenous cadre and to replace foreign economic dominance by local control. One of the casualties of the moves towards decolonization in Melanesia was the administrative field service. With it went the coordinative link between villagers and the specialist departments that controlled
health and education services. Macro-government lost its only body of administrative expertise equipped to assess village needs and aspirations, without political distortion, in the generalist terms that most closely approximated village holism. In its place came a multiplicity of advisory, consultative, supervisory and political bodies with varied and often conflicting responsibilities. In a deliberate rejection of the authoritarianism and paternalism which frequently had characterized colonial field administration, these bodies tended to place the onus on villagers to initiate development proposals and to seek government assistance. Financial constraints and anxiety at national level to avoid the growth of dependency by villagers on government, again partly a reaction against the colonial relationship, led to an emphasis on 'self-help' development.

For many villagers, especially in the areas which had been poorly integrated into the colonial system, the result was some confusion, and a perceptible decline in their access to services they regarded as essential. One Kilimeri leader illustrated the problem with an unfashionable but apposite comment on paternalism:

The government people told us that government would be a father to us, but it does not act like a father. Does a father forget his children? A father teaches his son to walk, he carries him when he is weak, he tells him when he is wrong and helps him become a man. They [government officials] don't come to instruct us and then call us lazy. If a child is lazy his father will fikapim, not leave him no good.

Housing and subsistence problem-solving

For the average villager in Melanesia, his native-material house serves as home, place of business and recreation centre. Despite the consequent importance of housing to the rural quality of life, and the developmental opportunity cost

1. This Papua New Guinea Pidgin term has multiple meanings. In the statement quoted in part here the speaker combined the meaning of 'wake him up, get him going' with arousing interest and vigour and, if necessary, using compulsion.
of time and labour expended on it, village housing has been one of the most neglected aspects of rural development.

Government attitudes to rural housing largely reflect patterns established under colonial administration, when supervision of village housing standards was a minor duty of field staff on patrol. In the West Sepik some field officers still exercise their powers to order demolition of houses that they regard as unsafe or a health risk, to insist on changes to design or usage patterns that they consider in the community's best interests, and to punish villagers who do not comply. This supervision on occasion causes greater hardship than officials realize. One such case was the situation of widows who had married into Ningil and who had no resident male kin. Normally they were permitted to occupy their late husband's house until it collapsed, which often saved them from having to return to their natal village in their old age. Strict official insistence on safety or health regulations upset such traditional forms of social security, and frequently penalized the aged or infirm who were unable to command familial assistance for construction of a new house.

The intervention of government officers resulted in a few lasting changes, notably the use of windows, verandahs and raised flooring in some areas. Other imposed innovations, such as the use and maintenance of pit latrines and external fireplaces, were dropped as the authority and visibility of the field service declined. Where the supervisory role was taken over with more vigour by local government councils, as in Solomon Islands, the erosion of colonial standards was less marked. At the same time, residual resentment of government controls was transferred to a greater extent to the councils, and caused tensions between villagers and the local government. These were exacerbated by strict central controls over council activities.

The erratic and often authoritarian supervision of rural housing standards by field staff, and the poor record of government as a development agent in the study areas, made
most villagers reluctant to seek government assistance with housing problems. At macro-level, the lack of attention to rural housing was due largely to a popular administrative belief that rural communities were 'housed adequately by their own traditional standards' (Fisk 1966:23). Government tended to regard rural housing as a 'free' good, constructed easily and quickly from abundant bush materials, with only a small cost in labour and possibly in hospitality for a few assistants. The central lack of data 'in useable [sic] form', and of indicators of the quality of rural housing (Apthorpe 1975:9), perpetuated this misconception. The result was a strong urban bias in the investigations of housing authorities into low-cost housing (see Russell 1958:14; Chapman 1969: 133-4; Hughes 1969; Woolard 1973).

By the 1970s, government neglect of rural housing was increasingly difficult to justify. In some areas social change, competing demands for labour-time, increases in cash and labour costs, and uneven availability of resources were reflected in a decline in housing standards, and a growing village concern over the spiralling costs. In Kilimeri the quality of dwellings was inferior to that in the other areas and the average life of a house was shorter by several years (Tables 6.1 and 6.2), but the pattern of social organization gave housing a higher labour cost. Villagers saw their housing as a major problem, and complained in 1975 that 'we sleep like pigs or dogs'.

Social change was reflected so frequently in adaptive housing that changes to housing patterns now provide a valuable indicator of general social trends. An early and outstanding example of such an adaptive response was the construction of tree-houses and lofts by the Bugotu people for defence during the head-hunting period (Montgomery 1896:224; Armstrong 1900:86-7), and their abandonment shortly after the threat terminated. A more lasting change was the re-
Table 6.1  Status of current housing (excluding West Sepik male dormitories)

<table>
<thead>
<tr>
<th>TYPE:</th>
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<tr>
<td>Bush material</td>
<td>60</td>
<td>92.3</td>
<td>66</td>
<td>100.0</td>
<td>90</td>
<td>98.9</td>
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<tr>
<td>Mixed bush and permanent material</td>
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<td>7.7</td>
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<tr>
<td>Permanent material</td>
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<td></td>
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</tr>
<tr>
<td>CONDITION (respondent assessment)</td>
<td>75.4</td>
<td>3%</td>
<td>53.0</td>
<td>89</td>
<td>97.8</td>
<td>97</td>
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<tr>
<td>Satisfactory</td>
<td>49</td>
<td>24.6</td>
<td>11</td>
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<tr>
<td>Due for replacement</td>
<td>16</td>
<td>24.6</td>
<td>11</td>
<td>47.0</td>
<td>2</td>
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<td>AGE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to and including 1 year</td>
<td>18</td>
<td>27.7</td>
<td>18</td>
<td>27.3</td>
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<td>2 to 3 years</td>
<td>24</td>
<td>36.9</td>
<td>12</td>
<td>18.2</td>
<td>13</td>
<td>14.3</td>
</tr>
<tr>
<td>4 to 5 years</td>
<td>16</td>
<td>24.6</td>
<td>12</td>
<td>18.2</td>
<td>10</td>
<td>11.0</td>
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<td>6 to 7 years</td>
<td>7</td>
<td>10.8</td>
<td>10</td>
<td>15.2</td>
<td>14</td>
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<td>8 to 9 years</td>
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<td>9</td>
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<td>10 years and over</td>
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<td>4</td>
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<td>19</td>
<td>20.9</td>
</tr>
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</tr>
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</table>

Source: Field data 1975-77
<table>
<thead>
<tr>
<th></th>
<th>BUGOTU (N=65)</th>
<th>EAST BAURO (N=66)</th>
<th>NINGIL (N=91)</th>
<th>KILIMERI (N=66)</th>
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<tbody>
<tr>
<td>No previous house</td>
<td>10</td>
<td>22</td>
<td>12</td>
<td>15</td>
</tr>
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<td>Previous house</td>
<td></td>
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<td>still standing</td>
<td>15.4</td>
<td>33.3</td>
<td>13.2</td>
<td>22.7</td>
</tr>
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<td>10</td>
<td>15.4</td>
<td>3</td>
<td>1.5</td>
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<tr>
<td>destroyed</td>
<td></td>
<td></td>
<td>4.5</td>
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</tr>
<tr>
<td>prematurely</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(cyclone, fire,</td>
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<td>1</td>
<td></td>
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<tr>
<td>earthquake,</td>
<td></td>
<td></td>
<td>1.5</td>
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<tr>
<td>landslide, flood) 1</td>
<td>11</td>
<td>16.9</td>
<td>7</td>
<td>1.5</td>
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<td>LIFE IN PREVIOUS</td>
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<td>FULL-TERM HOUSE:</td>
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<tr>
<td>Up to and including</td>
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<td>2 years</td>
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<td>15.1</td>
<td>3</td>
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<td>15 years and over</td>
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<tr>
<td>Unknown</td>
<td>1</td>
<td>1.5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Mean average life</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>(Including houses</td>
<td>6.9</td>
<td>6.4</td>
<td>9.1</td>
<td>3.6</td>
</tr>
<tr>
<td>destroyed</td>
<td></td>
<td></td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>prematurely) (yrs)</td>
<td></td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Median life (yrs)</td>
<td>2-20</td>
<td>1-10</td>
<td>3-18</td>
<td>2-9</td>
</tr>
</tbody>
</table>

1. Houses which had to be fully rebuilt as a result of the disaster, not - as was usually the case - merely re-thatched

Source: field data 1975-77
distribution of labour-time associated with the declining importance of elaborate constructions such as the Solomons canoe houses and the steeply-gabled haus tamburan of the Torricelli Ranges (see Marshall 1938:31). The surviving functions of the ceremonial houses usually were distributed over several buildings. Combined with structural simplifications such as reduced roof pitch, this altered the distribution of labour-time from one intensive period at long intervals to several less intensive periods at shorter intervals.

Similar changes occurred in the construction of dwellings. In addition, returned wage-labourers brought innovations from other areas, such as the woven wall panelling in the inland West Sepik. A few, who had worked as carpenters or builders, introduced new construction techniques. Some houses, as in Ningil where the mission station provided an accessible model, showed the influence of European design. Most changes eased the labour burden of house construction and made extra time available for other activities; but some changes, such as the lower roof angle and wider-spaced thatch, accelerated the process of deterioration and the drain on building materials. Scarcity brought a need for more stringent allocative mechanisms and for economies in resource use. The former was provided by the introduction of a cash charge on materials. The latter resulted in short-term expedients, such as the use of inferior or less material, which reduced durability and aggravated the long-term problems of resource depletion and limited labour-time. This was complicated in Bugotu, where traditionally the average house was superior to those of eastern Melanesia (Codrington 1891:299-300), by the custom of premature rebuilding and the propensity to maintain a residence in more than one place.
None of the study areas lacked the stretches of forest from which most housing materials were obtained, but the traditional freedom of access to them had changed with monetization of the village economy. This was particularly noticeable in places where cash-earning opportunities were rare. In 1976 the East Bauro councillor proposed that the sago palm, a natural bush plant previously unrestricted for village domestic use, should be considered 'a local resource which can be bought and sold'. Some councillors objected — reasonably in the circumstances — that the proposed prices of $2.50 per palm or $0.50 per leaf were too high, but the motion was carried (MC Minutes 3-4/76). Bugotu and Ningil villagers also had begun to impose minor charges, such as $0.50 for one log, on native materials for housing. Kilimeri villagers were constrained in this respect only by the government's lease rights over most of their timber, and by a confused belief that government would punish them if they demanded money for a traditionally free good.

While the substitution of monetary for the more complicated non-monetary units of value was an inevitable concomitant of the modernization process, in this instance it frequently impinged most severely on villagers who, due to their relatively meagre land holdings, were among the poorest by traditional standards and could gain little from sale of building supplies. The trend to replace reciprocal obligation with paid casual labour had a similar effect. The result was a decline in housing standards, especially among low-income villagers. Many compensated for increased costs by postponing replacement of house or thatch, and by reducing the quantity of material used. This resulted in intra-village polarization, demonstrated by increasingly conspicuous

1. A 1948 estimate of the amount of pole timber in Solomon Islands housing came to 2 cubic metres per house (Walker 1948:21). Thatching requirements vary. In 1930 Rev. R. P. Fallowes estimated usage in Vula at about 2000 leaves. Ogan (1972:131) reported about 40 strips of leaf thatch for similar housing in the Nasioi area of the North Solomons (PNG), and the author counted 320 strips in one medium size house in East Bauro. Even very low charges on the basis of units of building material could thus represent an enormous expenditure, proportionate to income, on shelter.
differences in the size and quality of village housing, but offset by the expansion of village sources of cash income.

The need for cash became a vicious cycle. The first and predominant influence was the additional demands on village man-hours made by cash-cropping and other introduced activities. Contrary to the belief of many government officials, these did not only fill time previously spent on defence or on the so-called 'leisure' activities. Frequently they competed with basic subsistence activities such as house construction. In Ningil, a man whose house was overdue for replacement when his crops needed attention (and when prices were high) often would construct a shoddy 'temporary' dwelling; then would continue to live in it until it in turn became uninhabitable, before he engaged in the more complex arrangements for an orthodox house. The need for extra time, the consequent hasty and at times casual workmanship and, in some areas, the growing scarcity of good quality building materials, made improved durability a major requirement. This in turn required time and, in the majority of cases, an increase in cash income.

Though most villagers aspired to a permanent house, their options were limited. Very few could afford the cheapest permanent material house offered by the government housing authorities.\(^1\) In addition, such houses usually were of iron and cement or fibro construction, and excessively uncomfortable by comparison with native material dwellings. A few wealthier villagers in the study areas had purchased roofing iron, but mainly as a status item. It was used more often for a storage area or an irregularly occupied house than for the main residence.

\(^1\) In Solomon Islands such housing was even beyond the means of 90 per cent of employed Solomon Islanders (BSIP 1973a: 60). A similar situation prevailed in Papua New Guinea. Recent studies have shown that the majority of urban Papua New Guineans cannot afford to rent the cheapest of the currently constructed Housing Commission homes (Jackson 1978:172; Connell and Curtain 1980:26).
A further difficulty was the frequency of natural disasters. Cyclones, earthquakes, fires and landslips added to the costs of native material housing (see Table 6.2), but also added to the risk that labour or cash invested in more durable housing would be wasted. On San Cristobal, in 1971-72 and again in 1979, severe cyclonic activity not only destroyed houses but wiped out reserves of building materials. This forced villagers to economize even more on their use of materials.

The main problem for all areas was the roofing thatch, where improved durability was particularly labour and resource intensive, and where susceptibility to damage from causes other than those related to quality of construction was highest. The time until replacement of thatch normally varied with climatic conditions, fineness of manufacture, roof pitch, pest infestation, type of leaf, and the amount of smoking the thatch received from indoor cooking fires. The preferred sago thatch was expected to last 5 years, though some West Sepik respondents reported much longer periods between thatching. Closely woven sago thatch has been known to last 10 to 20 years in Solomon Islands, but this had become rare. Costs were increased considerably for areas where houses were sprayed with DDT (Dichlorodiphenyltrichloroethane) for malaria control. The spray killed the hymenoptera predator that controlled caterpillar infestation (D. Turner, MEP, pers. comm. 1976) and, villagers claimed, poisoned cats. The result was an upsurge in insect and rodent depredations in the thatch. Some villagers also objected to the spray on aesthetic grounds, and replaced affected panels even when they had not deteriorated.

As a result of such complications, actual time and labour inputs into housing varied widely within and between study areas. In Solomon Islands, estimated average time for

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1. This accords with Kiew's (1976:4) estimate of over 7 years for *metrosideros sago* Rottb.
basic construction approximated Bathgate's findings on Guadalacanal (1975:188) and fell within Fisk's range of 5 to 10 days per adult per annum (1974:23). Nonetheless, as Bogesi (1948) reported, a good Bugotu house could take 6 to 8 months to complete. Figures for the West Sepik matched Clarke's (1971:175) estimate for the New Guinea Highlands of 2 to 3 days for three or four men if women helped with collection of roofing materials, but only for houses in the low to medium durability and size range. Actual building usually was spread over several months. A small Ningil house could be finished in 3 or 4 weeks and a large house in about 4 months if many helpers were available. The average house took about 3 months to complete.

The village effort expended on 'quality of life' factors such as housing showed significant micro-differences between the study areas. In the West Sepik, a house usually was occupied until deterioration made its replacement essential. Village estimates of the timespan involved showed a high correlation with the mean and median life of previous houses (Table 6.2). In Bugotu and East Bauro, by comparison, many villagers regarded themselves as 'slaves to housebuilding' (Kia AC Minutes 4.1.75), yet voluntarily constructed new houses long before they were needed. Approximately 90 per cent of households in the Solomons samples occupied dwellings which had not reached the mean half-life, were rebuilding, or were preparing to rebuild. Extrapolation from the proportion of relatively new houses and houses under construction indicated that 75 per cent (Bugotu), 82 per cent (East Bauro), and 74 per cent (Kilimeri) of households were likely to be rehoused within 3 years, compared to only 31 per cent in Ningil. This meant major differences in the amount of labour-time which theoretically was available for other developmental

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1. This brings these areas close to Brown and Brookfield's (1967:130) estimate from Chimbu of a little less than 4 years until replacement, but as it is due in Kilimari to poor quality housing and in Solomon Islands to high population mobility, the similarity must be treated with caution.
activities. Ningil and Kilimeri villagers extended house life as long as possible, but differed considerably in the advantage they gained. The Solomons group, had they wished, could have gained extra time by rebuilding less frequently; but placed a higher value than West Sepik villagers on mobility and on the quality of their housing.

Villagers in all study areas had reached a developmental plateau with regard to housing improvements. Their ability to make minor modifications, such as the use of metal hinges, padlocks and nails, was circumscribed by low cash incomes. In addition, money was becoming an increasingly important element in traditional construction costs. Adaptation to housing patterns, largely to compensate for the rising costs in cash and labour-time, tended towards short-term economies which, by reducing quality and durability, aggravated long-term costs. At the same time, monetary wealth frequently was exhibited by large and elaborate dwellings. By the 1970s, in fact, village housing had left the purely subsistence sphere, and was becoming progressively more enmeshed in the cash economy. In addition, the time spent in construction and maintenance of housing had a significant opportunity cost in relation to other developmental activities. Government neglect of rural housing thus acted as a constraint on village capacity for the cash-earning activities regarded by government as 'developmental'.

Health care and health services

Health services and status were also a major factor in the achieved and achievable levels of village development, but for reasons which differed in different areas. In the West Sepik the most serious health problem was widespread malnutrition, which reduced the capacity for developmental responsiveness and self-help. This was not a village-perceived problem, though one of the consequences -- the need for more accessible health services -- was a recurrent concern. Similarly, the problem for both Solomon Islands areas was unreliable access to health services. There it resulted in marked under-
utilization of services officially regarded as adequate. Only Mingil, by virtue of its mission station, was directly linked into the hierarchy of medical services necessary to ensure treatment of any illness or emergency.

Prior to, and to a lesser extent after, the introduction of Western medicine, all areas employed a range of health care techniques which varied from sophisticated to superstition but which covered most situations common to the locality (see, e.g., Powell 1976:135-47; Maenu'u 1979: 3-4). These techniques fell into three main categories: physiological therapy, religico-ritual measures for prevention and treatment of disease, and home or folk remedies and charms. The first group, which included homeopathic and herbal remedies, traditional midwifery, and massage and similar manipulative skills, usually was the province of a specialist who was paid for his services. On the whole such techniques were not antipathetic to Western medical practice, though often denigrated by Western practitioners. The second category, the esoteric details of which frequently were combined with the first set of skills in the person of one specialist, could be applied communally as in the Kilimeri Tumuan, or invoked individually, with or without the assistance of the resident expert. It included prophylactic and therapeutic techniques which, unlike the first group, had no identifiable equivalence with Western methodology and which often appeared to achieve their successes by 'faith healing'. The third group was a collection of maxims and methods known generally throughout the area and employed, often with no great faith in their efficacy, as personal preference dictated.

The number and variety of traditional health care techniques still used or still known varied considerably between the study areas, with significant effect on health status and development capacity. Until World War II government
involvement in health services tended to be capricious and concerned primarily with major campaigns against such diseases as yaws and malaria. Regular Western health care, the time-honoured supplement to evangelical work, entailed, for many villagers in the study areas, rejection of 'pagan' practices. Many traditional techniques were discarded, regardless of merit, at the active or passive instigation of missionaries or government health officials. A more severe blow to traditional health care came with the introduction of penicillin and the other 'miracle' drugs. Though some indomitable practitioners attempted to incorporate penicillin into their repertoire, the majority of villagers became convinced of the superiority of Western medicine. Their problem then became access to it. While their various missions provided a reasonable service, the decline in usage of traditional techniques was relatively unimportant. When the missions began to withdraw from extra-theological activities in the 1970s, village capacity for home treatment of minor ailments became correspondingly more important to general health.

Part of the problem was the inability of government or local councils in both countries to replace mission services. Though indigenous health personnel theoretically were available, many were unwilling to work in isolated areas under difficult conditions. In 1976 the Makira Council had serious staffing problems in its takeover of the Marist health centre at Wainoni Bay, which East Bauro villagers preferred to the Kira-Kira government hospital for the greater reliability of its service. Similar problems existed in the other study areas though Ningil, with its resident outpost for the large Franciscan mission, was able to maintain the standard of its service. Only in Bugotu, where use of a considerable number of traditional

1. The author has known many cases in Papua New Guinea where penicillin was stolen for this purpose. Sometimes it was actually injected, and sometimes the 'injection' was ritualized with a thorn. In one area a flourishing black market existed, mainly for the soluble form of the drug, to cater to this demand.
techniques from the first category above was complemented by aidpost treatment from a conscientious (though elderly and poorly-qualified) dresser, were villagers themselves able to cope reasonably well with minor ailments. For Kilimeri, the paucity of traditional techniques, the decline in their usage and a widespread fatalism towards death and disease made the standard of aidpost care critical to general health.

A second element in the problem of inadequate health services was the hierarchical nature of government facilities which, to be effective, needed reliable linkages from aidpost through to central hospital. Attempts were made in both countries in the 1970s to fill the village level health vacuum by provision of village first aid boxes and by fostering purchase by villagers of elementary Western medications. These foundered on the low incomes, scarcity of health funding and lack of village familiarity with Western types of diagnosis and treatment. The alternative, village aidposts, had very variable value, and in most cases was poorly integrated into the service hierarchy. The limited capacity of those in the study areas meant that they were used by relatively few villagers outside the village or hamlet in which they were located. Even in Bugotu, where both the general population and the clinic staff were reasonably mobile, approximately half the Vulavu clinic treatments over 12 months were for Vulavu villagers alone. The proportion was relatively high for minor or chronic complaints, but was markedly higher for the 'emergency' group, such as injuries and gastro-intestinal illness (Table 6.3). Tolerable distance for frequent usage of low-level health services was often below the United Nations estimate of 30 minutes walking time (A. Bridger, pers. comm. 1977), and considerably less than the 60 minutes assumed in Papua New Guinea to represent reasonable access (PNG:PHD 1974:App.5.5).

The use of youthful, poorly trained and inexperienced aidpost staff, as in Kilimeri, or superannuated personnel, as in Bugotu, perpetuated the image of village-level health care as a professional backwater, separate from rather than integrated with the health mainstream. Villagers rarely relied
### Table 6.3 - Usage of Vulauv Council Clinic, September 1975 to August 1976

<table>
<thead>
<tr>
<th>Treated for</th>
<th>Total new treatments (No.)</th>
<th>New treatments as % of total treatments</th>
<th>New treatments to Vulauv residents (No.)</th>
<th>New treatments to Vulauv residents as % of treatments in clinic catchment area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>557</td>
<td>41.3</td>
<td>211</td>
<td>37.9</td>
</tr>
<tr>
<td>Minor and chronic skin complaints (sores, insect bites, rash, scabies, fungal infections)</td>
<td>247</td>
<td>18.3</td>
<td>132</td>
<td>53.4</td>
</tr>
<tr>
<td>Muscular and unspecified pain</td>
<td>125</td>
<td>9.3</td>
<td>47</td>
<td>37.6</td>
</tr>
<tr>
<td>Boils</td>
<td>77</td>
<td>5.7</td>
<td>29</td>
<td>37.7</td>
</tr>
<tr>
<td>Injuries (cuts, burns, fractures, snake-bite, bleeding)</td>
<td>74</td>
<td>5.5</td>
<td>45</td>
<td>60.8</td>
</tr>
<tr>
<td>Headache</td>
<td>74</td>
<td>5.5</td>
<td>44</td>
<td>55.5</td>
</tr>
<tr>
<td>Gastro-intestinal complaints (stomach-ache, stomatitis, diarrhoea, vomiting)</td>
<td>67</td>
<td>5.0</td>
<td>58</td>
<td>86.6</td>
</tr>
<tr>
<td>Respiratory complaints (cough, bronchitis, asthma, chest pains)</td>
<td>54</td>
<td>4.0</td>
<td>26</td>
<td>48.1</td>
</tr>
<tr>
<td>Chickenpox</td>
<td>41</td>
<td>3.0</td>
<td>11</td>
<td>26.8</td>
</tr>
<tr>
<td>Anaemia</td>
<td>8</td>
<td>0.6</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>Eye and ear infections</td>
<td>8</td>
<td>0.6</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>Toothache</td>
<td>4</td>
<td>0.5</td>
<td>4</td>
<td>57.1</td>
</tr>
<tr>
<td>Pyrexia of unknown origin</td>
<td>2</td>
<td>0.3</td>
<td>1</td>
<td>25.0</td>
</tr>
<tr>
<td>Urinary infections</td>
<td>1</td>
<td>0.1</td>
<td>2</td>
<td>100.0</td>
</tr>
<tr>
<td>Constipation</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td>Oedema</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td>Elephantias</td>
<td>1</td>
<td>0.1</td>
<td>1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1. The Vulauv Clinic was the only one in the study areas which kept records suitable for this purpose, but they had not been kept between August 1976 and the author's visit in the following December.
2. Excludes subsequent treatments for the complaint, where it required further attention.
3. The actual prevalence of influenza is uncertain, as it was a "catch-all" diagnosis and, most importantly, treated with penicillin.

Source: field data 1975-77
on their aidpost representative for referral upwards, and frequently, circumvented him for other than very minor ailments. Sub-utilization of aidpost facilities also resulted from social tensions, which often centred on village perceptions of the orderly or dresser as a well-paid government employee (Frankel 1979:2). Villages in individualistic Kilmeri, in particular, strongly resented demands by sponsoring organizations that the community supply a house, assistance with food gardens, and maintenance of buildings for young bachelor appointees. Such conditions in effect meant that they had to subsidize young men, whose wages were many times the average for the area, at a level of living that few bigmen or elders could reach. Aidpost staff in turn resented the lack of facilities and village cooperation they had been led to expect, and often neglected their work or left their post.

Added to the irregular presence of the aidpost functionary was the spasmodic availability of basic medical supplies. In the West Sepik supplies usually had to be obtained by the aidpost orderly from the nearest health centre, which in turn had to apply to the main hospital, supplied by the regional medical store. Shortages in basic items at any node — often caused by transport problems, a sudden upsurge in usage at some point in the chain, inadequate comprehension of the ordering process, or arbitrary determination in the centre of quantities needed — almost invariably affected the village level service. In Solomon Islands a similar problem arose from a different cause. At one stage in the transfer of control over health services from central government to local councils, only central government’s centres could use the central supply network. Councils had to make private supply arrangements for the council-sponsored health centres. Due to their perennial financial difficulties and the higher costs involved in small-scale purchases, this had a doubly deleterious effect on council health services.

Patrols by higher-echelon health staff, which were designed to extend the range of central facilities, supervise
general standards of health care, and maintain hierarchical linkages, had two distinct levels of effectiveness. For preventive work, such as maternal and child health (MCH) vaccinations, patrols were a valuable service which compensated to some extent for inadequate or non-existent village health facilities. They also had some value in the diagnosis of cases which needed hospital treatment. As a substitute for an accessible higher-level service centre, or for treatment of problems other than chronic illness, by comparison, patrols were a relatively nugatory gesture.

Health patrols often removed the only medical practitioner or, for a health centre, qualified member of staff for long and irregular periods of time. This acted as a disincentive for villagers to travel to the hospital or centre at times of emergency or serious illness. Further, it frequently extended the length of absenteeism which villagers who sought treatment had to weigh against their home obligations. In all areas except Ningil, villagers reported cases where anticipation of a lengthy absence, with consequent problems of food supply while away and neglected duties at home, outweighed even serious illness and direct referral by medical staff on patrol. The low population densities and large areas to be covered by health staff, who usually were allocated on a per caput basis, meant that only rarely was a medical patrol in the right place at the right time to treat urgent cases. As a result, its skills were expended mainly on minor ailments. Even those treatments frequently were wasted, as was the case when villagers who were unable or unwilling to follow instructions for follow-up care left dressings they had received unintended until they fell off or were changed by the next patrol.

The poor articulation between rural health status and health services was shown in 1978 by Papua New Guinea's National Public Expenditure Plan. The West Sepik Province ranked lowest on its Health Status Index (calculated from rural life expectancy, rural child mortality, and malnutrition as recorded at clinics), but was among the highest one-third on the Health
Service Index. Health status in the relatively well-off Central Province (Apthorpe 1975:80)\(^1\) fell into the upper 25 per cent, yet on the Health Service Index it ranked at the lower end of the scale (PNG:NPO 1978e:50). These discrepancies were described by one planning officer as 'surprising' exceptions to the alleged rule that 'it is safe to assume that the provision of basic health services will improve the general health status' (Lynch 1979:9). For the West Sepik at least it was equally possible to conclude that the assumption was fallacious.

In fact, the gap for the West Sepik probably was larger than it appeared. Comparison of village data with clinic records in 1975-76, for example, indicated that the latter underestimated the degree of malnutrition. Similar discrepancies were found with child mortality, largely because the births of children who died at or soon after birth often were not reported (cf. Chap. 2; PNG:PHD 1974:App. 3.2). The Health Service Index, which was based on the number of extension officials per 1000 people, the population per aidpost, and the travelling time to the aidpost (PNG:NPO 1978e:50), was particularly vulnerable to differences in population densities. It was also distorted by problems of sub-utilization. In addition, most higher order health services in the West Sepik were clustered in the heavily missionized areas, where usage at times was constrained by religious rivalries. For villagers peripheral to or outside a mission's sphere of influence, as were some Kilimeri communities, access to higher order health facilities was often difficult and irregular.

Differences in accountability by the various organizations involved in provision of health services further

\(^1\) Apthorpe's index is distorted for Central Province by its inclusion of the national capital, which later became a separate entity: the National Capital District. It is used here, in preference to an index which excludes Port Moresby, because access to the facilities of the capital enables many Central Province people to compensate for the apparent inadequacy of services now classified under Central Province.
inhibited an even spread of reliable health care. Mission workers in the study areas usually saw their responsibility as being to the people of their area, but were accountable to their mission superiors. Staff of the Wainoni Bay health centre which served East Bauro were thus deeply concerned, like many villagers, about the probable decline of the service, due to staffing problems, on its transfer to council control. At the same time, they accepted the principle, that 'we do not see the need for a private health service operating side by side with Government and Councils' (OIC Wainoni Bay 26.3.76), which caused the problem. Councils, reflecting their electoral accountability, in general were concerned with the breadth of health facilities. 'A new sickness from central government has reached our area councils', commented the President of Makira-Ulawa Council. 'Projects are not decided on need, but on the number of people they will serve. Establishing a clinic where it will serve the most people is silly, if they are healthy and another area has only a few people, but they are sick.'

This perspective often conflicted with that of central health authorities, which were only indirectly responsible to the electorate through their Minister. The main constraints on central staff were those imposed by the Ministry of Finance and by health field staff, on whose performance the reputation of the government service depended. Such dichotomies in accountability often resulted in lack of central support for council initiatives. One such case was the Santa Isabel Council's plans in 1976 for additional health clinics. They were opposed by central government on the grounds that Santa Isabel had a 'favourable ratio' of clinics to population 'compared with the rest of the country' (SI:CFO 1978:59). The council was advised that

It has been found from considerable experience in numerous areas, that staff must have a reasonable workload to maintain their efficiency, and the approved Rural Health Clinics have been positioned with these factors in mind and that transport should be available for these properly trained persons to visit their surrounding areas.
It would be preferable to improve the efficiency of these established clinics by providing proper facilities and a living wage, than encouraging the proliferation of inefficient, underworked but expensive clinics in intervening areas. It is certainly agreed that some places are inaccessible, but it is Ministerial policy to encourage families or villages to purchase first aid supplies, which can be kept in the house and do not require a trained person to dispense them (SI:PMO Central 1/1/4 of 11.3.76).

This meant that inaccessible communities, which usually were disadvantaged monetarily by virtue of their isolation, had to pay more for less, and thereby to subsidize facilities for those in more advantageous locations. It also became a self-fulfilling prophecy, as the council alone did not have the financial capacity to establish health facilities on a par with the centrally-sponsored service, much less to spread them more widely than central government itself could afford to do. A further problem for the council was the standards set by the protectionist attitude of the central bureaucracy towards its staff. These standards were essential for the maintenance of a contented central field service, but almost impossible for the council to match in its supplementary services. The result was a dual health service, with inevitable disaffection among the lower-paid council employees.

For a number of so-called 'inaccessible' communities the only choice was between an inferior health service, or none at all. The crucial factor in other cases was the dependability of the service. To many East Bauro and Bugotu villagers, for example, an inferior service to which they had access at all times was preferable to total reliance on the higher order services in their vicinity, from which they often were cut off by weather conditions, transport difficulties, and financial or other constraints.

Village health care initiatives, funded irregularly by village donation and usually staffed by any village resident who had acquired some modern health care skills, were perforce tied to the levels of cash income, resident education, and
previous employment experience. On one occasion Vulavu village, which ranked highest of the study areas on the latter indicators, wished to add a midwifery service to its clinic to assist women unable to travel to the nearest health centre. The best-qualified candidate it could find for the job was a trainee nurse who had left the course after two years. The village proposal was rejected by health officials on the grounds that 'in the present time when great strides are being made in the nursing services, this seems a retrograde step' (GKHMCT Central minutes 25.2.76). Unable to employ the only available resident with any modern midwifery skills, the village was forced by this decision to rely on its 'custom' midwife (whose skills were even more suspect to many health officials) when weather conditions, emergencies or other factors precluded use of the nearest 'approved' clinic.

Levels of cash income, resident education and outside experience also affected usage of higher order health services. For Ningil villagers the cash costs of hospital attention were minimized by the availability of free or subsidized mission transport, but for villagers in the other study areas the cash costs could be considerable. In addition to transport costs, cash was often required for the general expenses of living away from home, either as a direct expenditure on board and lodging or as the monetary contribution increasingly expected from visiting kinsmen who request one-talk hospitality. By comparison with these expenses, the small charges imposed for actual medical care were insignificant. The knowledge that they could be revoked in cases of hardship made little if any difference to patterns of utilization.

Far more significant were the levels of village familiarity with Western health care and with the rituals of access and queueing (Schaffer 1975) which governed higher-order health services. Both were a function of education and experience. In Kilimeri, the most disadvantaged of the study areas in these as well as in health status, the result was a tendency to avoid hospitalization even or especially, when seriously ill. 'I went to the hospital six years ago when I
had this sickness’, said one man who had a severe bronchial infection. ‘They kept me there a long time and said I was cured, but they tricked me. They did not cure my illness properly. It has come back. This time I will stay here.’ Communication problems of this kind, a common occurrence in health work due to the esoteric nature of much of its subject matter, were intensified for the Kilimeri by the dearth of villagers with the education or the experience of the modern health care system to ‘demythify’ its pronouncements or to correct misunderstandings. In all study areas this difficulty was exacerbated by the ambiguous communal and professional status of many indigenous health workers, who had a vested interest in preserving the mysterious aspects of Western health care.

The overall effect of the various combinations of these factors was that villagers were disinclined actively to seek treatment from centres located outside their normative diurnal range for other than serious complaints. The consequent neglect of minor ailments often left them physically unable to seek help when the need arose. For Kilimeri the cut-off point usually came when a villager was unable to walk by himself to the centre at Ossima or Bewani, as low population densities, widespread malnutrition, individualistic social organization and hunter-gatherer dispersion made mobilization of the requisite number of carriers a difficult and uncertain task. For Bugotu and East Bauro the crucial variable was climatic conditions, which could prevent egress and ingress for long periods. Ningil had more reliable access to hospital services, but the distances involved to reach them reduced their utility and made village use of them dependent on external assistance. All study areas were limited in the extent to which they could rely on government health services. Most were even more limited, in the extent to which they could depend on the alternatives. Whereas some types of government extension could be maintained at adequate levels by patrols and periodic contact, health care,

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more than any other government service, required a well-integrated hierarchy of reliable small centres. The net effect of government involvement in the provision of health services was improvement to the standard of some services; but at the expense of areas which, due to their location, population distribution or inability to provide 'proper facilities and a living wage', often were the most in need of outside assistance.

The nutritional constraint: problems of causality

Nutrition is a double problem for development planners. First, it is closely intertwined with social and economic systems (Shaw 1980:1), which in Melanesia are many and various. As a result, one of the most difficult problems in treating malnutrition is identification of causal factors. For many years government officials and international agencies concentrated on isolation of the particular nutrients lacking in the diet of malnourished groups. One instance was the emphasis on protein deficiency, which dominated research into malnutrition for many years (McLaren 1974:1). In some cases, such as iodine or trace mineral deficiency, the introduction of minute quantities of the deficient substance into the normal diet was sufficient to correct the problem. Where treatment involved major alteration to the customary diet, the results were less spectacular and, in some cases, the problem continued unabated. It is argued here that, even where the type of nutritional deficiency is known, the causes of the deficiency often are obscure. These basic social and economic causes may be highly specific and difficult to treat even when identified.

The second major problem is that where malnutrition is a serious development constraint, it is usually the norm for a community. In Kiriwina and, to a lesser extent, in Rendille, low normative levels of nutrition militated against village identification of the problem unless or until it reached a noticeably acute stage. Some villagers regarded active, well-fed infants as abnormal. Where government or mission staff pressed nutritional issues, parents often hid
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malnourished children to avoid criticism or interference. This resulted in poor or irregular clinic attendance, which in turn caused under-enumeration in national statistics.

The critical age for measurable nutritional deficiencies in the study areas was from 6 months to 2 years (Fig. 6.1). In the West Sepik, where infant mortality in the period from birth to 6 months was relatively high, malnutrition was also evident in younger children. Though Shaw (1979:19) suggests that a malnourished mother maintains the milk supply while breast-feeding but becomes more malnourished, the concurrent evidence of a 'strong positive correlation' between infant mortality and maternal under-nutrition poses a major dilemma for West Sepik development. In the circumstances, the lead time for maximization of nutritionally-sensitive development programmes is effectively one generation.

To a large extent, as Venkatachalam (1962:13-14) found in the Papua New Guinea Highlands, nutritional deficiencies for the under-2-year-old group in the study areas were related to the transition from breast-feeding to a starch diet. This was complicated by other factors. In the Solomons samples, nutritional deficiencies were mainly a problem of inadequate feeding practices for young children, but were also a problem of occasional interruption to food supplies due to natural hazards or residential relocation.

1. The Mid Upper Arm Circumference Test was used to test the nutritional status of children between birth and approximately 10 years old. The results were compared with aid post and clinic records, where available, for each study area. Estimates of the adequacy of adult diets were made by comparison of sample meals, for one week in each area, with the dietary allowances recommended by the PNG Nutrition Section (PNG:PHD 1975a:183) and Platt's (1962) tables of representative food values. In most cases they proved physiologically adequate, though the intake in Kilimeri exceeded the basic requirements by only a small margin. In both West Sepik areas the caloric and protein intake fell short for pregnant or lactating women, and children.
In one area a flourishing black market existed, mainly for the soluble form of the drug, to cater to this demand.

Figure 6.1  Undernutrition in 6 months to 2 years age-group, as percentage of age-group
In Kilimeri, the hunter-gatherer social organization and taste preferences, locational factors, and poor articulation with the modern sector inhibited improvement of communal levels of nutrition. The most pervasive influence on nutrition, however, was the scarcity of, and consequent preoccupation with, cash-earning opportunities. Associated with it was the move away from arduous and time-consuming traditional dietary practices, towards foods that were easier to cultivate and prepare.

In some parts of Melanesia, nutritional problems have resulted from the replacement of a traditionally balanced diet with nutritionally deficient packaged foods and imported vegetables (McGee 1975; Bathgate 1975; PNG:PHD 1975a; Shaw 1980). In recognition of the deleterious effects of this trend, especially on the national food supply and balance of payments, Melanesian governments instituted programmes to re-educate their people in the nutritional advantages of traditional foods (BSIP:CFS 1974; Densley 1975; PNG:NPA 1978a). For the study areas, which made relatively little use of rice, biscuit and other store-bought foods, the dietary changes in response to increasing demands on village labour-time were within the subsistence system, and less obvious. As with the trend in other areas to a 'rice and biscuit' diet, these changes followed the general principle that, to be acceptable to villagers, an innovation must make subsistence life easier, not harder, for the community or individual.

The variations which can occur in the operation of this principle can be illustrated by two notable examples: the introduction of sweet potato and, in Kilimeri, the growth of 'sago dependency'. Sweet potato was a relatively recent addition to the diet for the study areas. Brought from New Zealand via Norfolk Island by the Melanesian Mission (Fox 1958:62) and from overseas plantations by returned labourers, it reached Solomon Islands about the turn of the century. Through it probably reached the Papua New Guinea Highlands several centuries earlier, it did not diffuse as far as the inland Sepik until approximately the same time (Aust.:Cwlth Parl. 1928:111).
Sweet potato is roughly equivalent in appearance and composition to some varieties of the taro staple then used (Jardin and Crosnier 1975:454-5), and Solomon Islands gardeners found it easier to cultivate and store than taro. Nonetheless, the East Bauro hinterland people continued to use taro as the staple. The altitude was within Brookfield's (1964a:24) range of about 3,000 metres for sweet potato cultivation, and taro was often less successful that sweet potato at high altitudes (Brookfield and White 1968:49), but where taste preferences alone governed the choice of staple taro was the major food crop. The main incentive to change came with the need for additional man-hours for cash-earning. The inland people in the 1970s had little opportunity to engage in the cash economy. The coastal East Bauro people, by comparison, were involved in a variety of cash-earning activities, and sweet potato had become the main if not the sole component of most meals. This was more than the substitution of one staple for another. Sweet potato often substituted for a considerable range of dietary supplements.

For the hunter-gatherers of the West Sepik, a different scale of values applied. First, the introduction of sweet potato required the social adjustment to an unfamiliar system of cultivation. Second, in terms of the labour input — especially the male labour input — it compared badly with their sago staple. Nutritionists for some time had recognized that a major cause of malnutrition in the Sepik area was insufficient staple food production (see also WHO 1976), but government and mission attempts to promote sweet potato failed. Even in the 1970s sweet potato was 'not a highly successful' crop (PNG:PHD 1975b:23), though some villagers regarded it as a luxury food, nutritionally equivalent to moat.

Whereas some areas with a sago staple, such as Mingil, were able to maintain a reasonable level of nutrition by diversification of dietary supplements, Kilimeri villagers in the 1970s reported an increasing dependence on sago. The most common morning and evening meal consisted of boiled sago and tulip, the flavoursome and relatively nutritious (for a leaf)
*Gnetum gnetoid* tips. Consumption of cultivated plants was spasmodic and apparently was decreasing (Table 6.4).

**Table 6.4 — Availability and use of cultivars grown in Kilimeri**

<table>
<thead>
<tr>
<th>English name</th>
<th>Botanical name</th>
<th>Constant or seasonal</th>
<th>Supply during survey:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweet potato</td>
<td><em>Ipomea batatas</em></td>
<td>C</td>
<td>plentiful</td>
<td>X</td>
</tr>
<tr>
<td>Yam</td>
<td><em>Dioscorea spp</em></td>
<td>S</td>
<td>scarce</td>
<td>X</td>
</tr>
<tr>
<td>Yam mami</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taro</td>
<td><em>Colocasia sp.</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cooking banana</td>
<td><em>Musa paradisiaca</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Eating banana</td>
<td><em>Musa sapientis</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td><em>Zea mays</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cucumber</td>
<td><em>Cucumis sativus</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pumpkin</td>
<td><em>Cucurbita maxima</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spring onion</td>
<td><em>Allium sp.</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Tomato</td>
<td><em>Lycopersicum esculentum</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Native spinach [aiibika]</td>
<td><em>Abelmoscus manihot</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Breadfruit</td>
<td><em>Arxocarpus altulus</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Coconut</td>
<td><em>Cocos nucifera</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pawpaw</td>
<td><em>Carica papaya</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pineapple</td>
<td><em>Ananas comosus</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cabbage</td>
<td><em>Brassica spp.</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Peanuts</td>
<td><em>Arachis hypogea</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Beans</td>
<td>unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citrus fruit</td>
<td><em>Citrus spp.</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Chilli</td>
<td><em>Capsicum frutescens</em></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sugarcane</td>
<td><em>Saccharum officinarum</em></td>
<td>C</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>


**Source:** Field data 1975-77
The gradual growth of 'sago dependency' in Kilimeri derived from a wide variety of factors. The existence of large natural stands of sago provided a degree of security almost impossible to replace on economically competitive terms. Few villagers had replanted stands established by the previous generation. The experience of World War II, when sago enabled villagers to survive after the despoliation of other food supplies by retreating Japanese, enhanced its worth vis-à-vis cultivars. The post-war outflow of males, on whom much of the hunter-gatherer and cultivated component of the diet depended, increased the relative importance of sago, predominantly a female contribution. Permanency of settlement and the restrictions on shotguns, both the result of arbitrary governmental problem-solving, limited village hunting. The conservationists added their mite in the 1970s by the promotion of council by-laws to protect certain species of fauna, which had been a source of scarce protein in Kilimeri. Lack of a gardening tradition inhibited adaptation to a cultivar-based diet. Despite government promotion of food crops, 21 per cent of the Kilimeri sample in 1976 did not maintain even the usual miniature plot of spring onions and other favoured additives. 'They will do nothing to improve their diet while sago is so plentiful and easy to use', commented one long-term missionary: 'those stands of sago are possibly the greatest obstacle of any to their development'.

An equal obstacle was the lack of cash-earning opportunities. For the West Sepik, improved economic opportunities had become a prerequisite for improved nutrition. For some time one Kilimeri village, with a cash incentive, cultivated garden produce for sale to a nearby school, and consumed the surplus. Use of the introduced crops ceased almost entirely when the market collapsed. The same village approached the Seventh-Day Adventist (SDA) mission for help. The mission was unable to convince its converts to revolutionize their subsistence system, but left them, a few years later, with a new range of food tabus that included the bulk of their hunter-gatherer protein sources. In the fear that any contact with pig, possum, sago grubs and similar 'unclean'
food sources would cause a wasting disease and eventual death, some SDA converts refused to assist in village hunting. This marginalized their own diet and altered the communal balance. In addition, with the decline in cash-earning opportunities after the 1974-75 slump, saleable foodstuffs such as game and wildfowl eggs were more often replaced in the diet by sago and less marketable foods. The few domesticated creatures — chickens and one or two feral pigs which had been snared — were too valuable for home consumption. Absolute and relative increases in tradestore prices by comparison with cash incomes almost entirely curtailed purchase of dietary supplements. Rather than return to arduous traditional methods of manufacture for items such as salt, many Kilimeri villagers simply discontinued their use.¹

The deterioration of Kilimeri nutrition occurred over a period of 20 or 30 years, during which government officials in the West Sepik repeatedly stressed the primacy of improvement to subsistence agriculture. A nutrition survey of several areas of Papua New Guinea in 1947 (Hipsley and Clements 1950) resulted, for a few years, in a national emphasis on food crops in DASF extension, but from about 1951 the emphasis changed to economic development and plantation crops² (Mckillop 1976:20-2). With the increasing specialization of the administrative structure, nutrition became a minor responsibility of the Department of Public Health (PHD).

¹ Low sodium intakes are fairly common in Papua New Guinea. McArthur (1977:21) found that villagers appear to have adapted to them.

² Hipsley and Clements (1950:17, 25-6, 150-2) found that protein intakes were very low by comparison with the then recommended allowances, but did not produce signs of gross protein deficiency. Nonetheless, they recommended encouragement of protein-rich foods, especially for children. Later work has shown that the recommended protein intakes were in fact much higher than necessary for good health (McLaren 1974). Such ambiguities at times have caused a tendency to underestimate nutritional deficiencies, especially in Melanesia with its reputation for 'subsistence affluence'.
Health officials had neither the resources nor the influence over other departments to do much more than expose the problem. Other government officials were often unsympathetic. 'If there is malnutrition in the area it is the result of laziness on the part of the people' reported one DDA patrol through the Torricelli ranges (PNG:DDA Lumi PR2 of 60/61).

Subsequent investigations showed that the nutrition problem in the West Sepik was more serious than at first appeared. One study (McLennan n.d., circa 1962) reported that the nutritional deficiencies in the Bewani area were more severe than those of the Wosera and other known problem areas of Papua New Guinea. Later studies, based primarily on clinic records, found problems of malnutrition in the majority of inland West Sepik communities. For the province as a whole an average of 63 children per 100 attending clinics were clinically malnourished. In some areas up to 80 or 90 per cent of children under 2 years old were found to suffer nutritional deficiencies (Salfield 1973:25; Korte 1974; Korte and Kankilikai 1975).

In the 1970s the government mounted a major national campaign against malnutrition. A PhD proposal in 1974 for an interdepartmental Food and Nutrition Committee and a Nutrition Action Programme (PNG:PHD 1974:234-7) led in 1978 to the preparation of a National Food and Nutrition Policy (PNG:NPO 1978a, 1978b). The campaign concentrated mainly on nutrition education (Shaw 1980:2). The result for the study areas was the inclusion of nutrition in the curricula of schools (which were poorly attended by children from malnourished areas), the distribution of exhortative posters (which few could read), and a glib village familiarity with the disadvantages of a 'rubbish diet' (to which most nonetheless adhered). Village response to the programme clearly showed that the amount of social change involved to improve nutrition was underestimated by field officers and unwelcome to most villagers. The impact of the government's nutrition programme as a result was strongest not where the need was greatest, but where conditions most closely approximated those in which government was geared to operate.
The areal specificity of causal factors in malnutrition meant that a large part of the government campaign was ineffective in the West Sepik study areas. The problem of imitative bottle-feeding of young infants and consequent neglect of breast-feeding, often evident in urban or peri-urban areas, did not arise. The national campaign to encourage breast-feeding therefore had little effect on West Sepik nutrition. Programmes designed to familiarize villagers with the deficiencies of a 'rice and biscuit' diet, also a peri-urban phenomenon, were similarly ineffective. The slogans and sketchy generalized information provided in nutrition education frequently were not appropriate to the particular village context, and at times did as much harm as good. The campaign to encourage use of the iron-rich, native leafy vegetables instead of nutritionally-inferior European cabbage, for example, led some villagers to believe they were superior to meat protein.

Though malnutrition is as much a macro-level as a micro-level problem in terms of development, one of its major costs to date has been borne primarily by malnourished villagers. This is the increased cost of access to services for areas with low normative levels of nutrition. Malnutrition compounds problems of isolation and access by its effect on tolerable distance. Services which would be within reasonable range for people on an adequate diet frequently are outside the acceptable range for malnourished communities. Kilimeri villagers often were reluctant to travel beyond the next village, usually about half an hour's walk, even when the incentive was considerable. Tolerable distance for minor or recurrent matters was proportionately reduced. Awol villagers to the east of the Kilimeri study area regarded Owsima, approximately 3 km or one hour away, as 'too far' for their children to walk to and from school daily, though within range for occasional visits to the store or health centre. This posited a need for a much greater concentration of services in these areas, and further inflated administrative costs that were already high, in per capita terms, as a result of low population densities and difficult terrain.
Education: opportunity and access

Western education, with the improved opportunities for cash-earning that it represented, was one of the few components of the modernization package that villagers in all areas regarded as central to their development. Periodically this was demonstrated by vigorous village attempts to capture a sponsoring organization and to bring educational facilities within tolerable distance for village children. Government schooling was outside the range for most study areas. Informal boarding arrangements for children in the vicinity of government schools usually were difficult or impractical and, even where possible, were regarded by the majority of villagers as a decidedly inferior option. Rarely, and then only after the unequivocal failure of attempts to bring schooling within village range, did individual families seek to improve their access to educational facilities by residential relocation. In most cases such movement, due to the system of land tenure, was not feasible.

Schooling for Bugotu and East Bauro was introduced by missions at the turn of the century, ahead of demand. Though the acculturation patterns encouraged by the missions were confined within a narrow religious spectrum (Hilliard 1966:188,400,409; Ogan 1972:54), and the quality of mission education usually was poor (Laracy 1976:93), while villagers knew of none better mission schooling was prized. When mission primary education no longer guaranteed reliable access to the expanding range of modern opportunities, the Solomon Islands people turned to secular 'self-help' alternatives. In the inland West Sepik, by comparison, significant mission penetration did not take place until the 1950s and 1960s, but at that time the missions were the only reliable source of external assistance. West Sepik 'self-help' initiatives as a result were directed almost exclusively towards the acquisition of a mission school. The effectiveness of these moves was largely a matter of chance. Wngil was fortunate enough to attract the education-oriented Fransican Mission. Awol villagers in Kilimeri approached the nearby Passionist
Mission, but when their overtures were rejected could only secure the disputable benefits of a low-level and short-lived Seventh-Day Adventist school.

With education, as with other forms of self-help development, villagers were severely constrained by low levels of cash income and manpower skills, by mediocre access to information and external assistance and, except for Ningil, by the low population densities and dispersed settlement patterns. Kilimeri villagers were additionally disadvantaged by their poor nutritional status, consequent susceptibility to disease and lack of strength for protracted effort (PNG:DDA Vanimo PR8 of 62/63). These factors made their self-help initiatives a low priority for government assistance, even in official programmes designed to promote self-help. To attract government assistance under the PNG Village Economic Development Fund, the village self-help component had to entail a 'meaningful contribution' in terms of land, labour, cash or other assets, or management and planning (Post-Courier 28.7.78).

A major problem for the study areas in their attempts to 'catch up' was the changes which occurred in government education policy during the decolonization period. The change in both countries from boarding to day primary schools was a serious constraint for most villages. This move was designed originally to improve community involvement in education and to reduce the dissonance between Western schooling and the traditional environment, but the main impetus for early implementation was national budgetary considerations. Kilimeri villagers with few one-talk ties at the nearest primary school were unable to meet the charges imposed by opportunistic landowners for students' food gardens. Villagers near a school, as in East Bauro, often were unwilling or unable to extend one-talk hospitality for the duration of the school year to children from the surrounding area. Teachers complained that proximity to parents and seasonal family obligations increased truancy and decreased student response to instruction.
Students from Ningil faced the same problem at a different level. In 1963 the mission school had achieved official status as a primary school, but shortly after the first students graduated the arrangements for secondary education were changed. In the early 1970s Ningil students, who previously had boarded at the Mission high school in Aitape and travelled to and from by the mission's air network, were zoned into the catchment area of the newly-completed day high school at Lumi. This was closer than Aitape, but for Ningil students involved a journey by foot of approximately 25 km over difficult terrain. As Kilimeri villagers found at their government primary school, villagers with land near the Lumi school treated their location as an exploitable resource. The change to a closer school in fact decreased Ningil access to education.

For the Solomons samples several other government policies promoted educational marginalization. The abolition of primary school fees increased enthusiasm for primary schooling at first, but also increased the financial burden on the Ministry of Education and Cultural Affairs (MECA). This resulted in supply and staffing difficulties. Concurrent and rapid expansion of the primary system led to greater usage of untrained teachers (SIG 1975:14). Financial problems put a de facto ceiling on teachers' wages, and MECA was unable to attract better calibre graduates to a bush teaching career.

Decentralization, with the transfer of responsibility for primary education to councils, also caused problems. The Santa Isabel and Makira Councils, with their limited resources, had even greater trouble than MECA in attracting teachers. The low teaching standards were reflected in the relatively small proportion of their primary leavers who passed the requirements in 1976 for national secondary school (Table 6.5). The division of secondary facilities into academic 'national' and quasi-vocational 'new' secondary schools further disadvantaged the two council areas. In the national statistics the shortfall of national secondary entrants was disguised by quota allocation of 'new secondary' places. The new secondary schools offered only a two-year course, which was designed to