

The Australian National University
Development Studies Centre

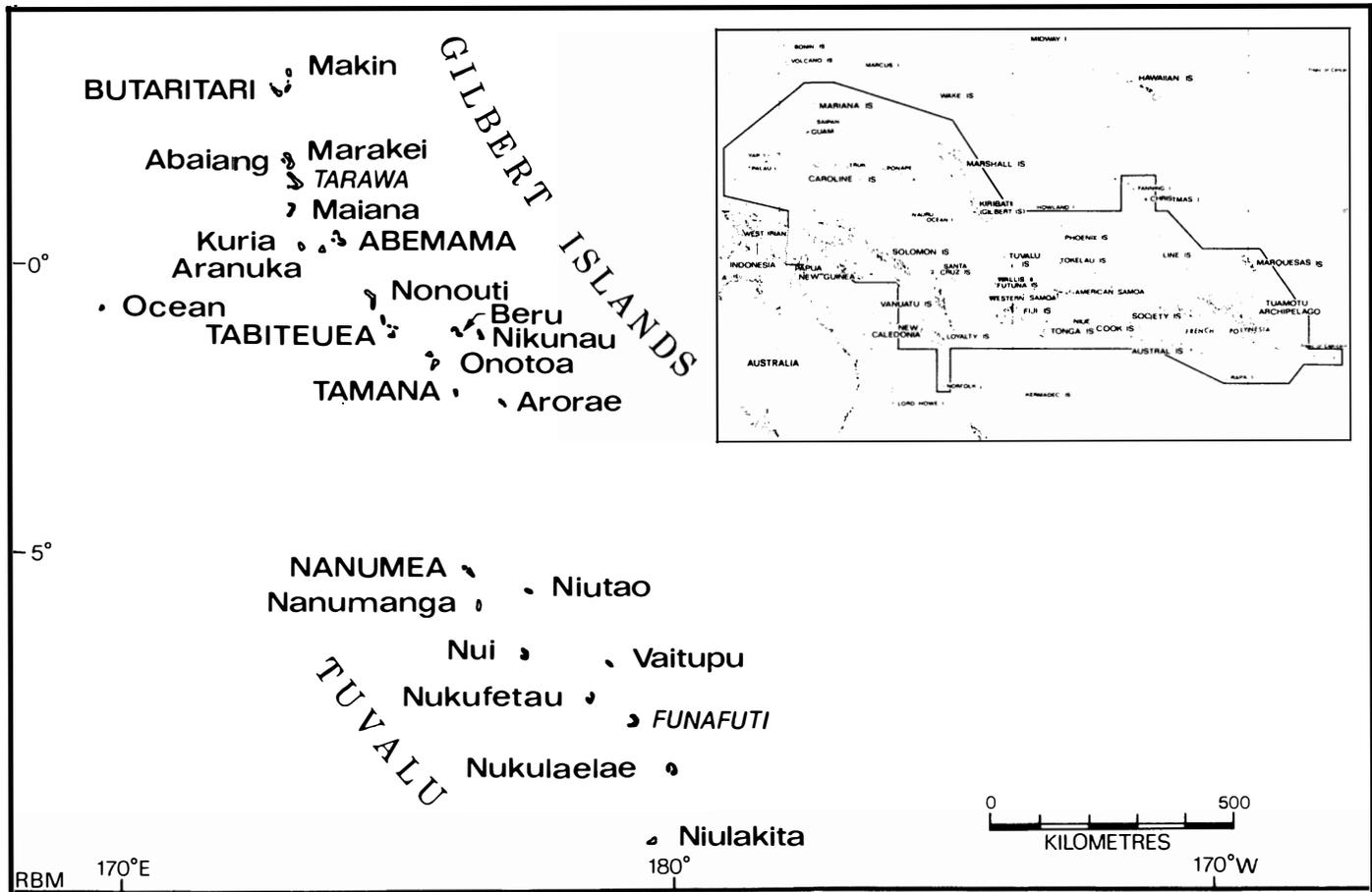
Atoll Economy:
Social Change in Kiribati and Tuvalu

no.1

Islands on the Line:
Team Report



Islands on the Line: Team Report



Gilbert Islands and Tuvalu. The 5 islands studied in this series are set in capitals. Tarawa is the administrative centre for the Gilbert Islands and Funafuti for Tuvalu.

no.1

**Atoll Economy:
Social Change in Kiribati and Tuvalu**

**Islands on the Line:
Team Report**

**W. H. Geddes
Anne Chambers
Betsy Sewell
Roger Lawrence
Ray Watters**

The Australian National University
Canberra, Australia
and in Miami, Florida, USA 1982

© Republic of Kiribati and Government of Tuvalu 1982
First edition 1979

This work is copyright. Apart from any fair dealing for the purpose of study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without written permission. Inquiries should be made to the publisher.

National Library of Australia
Cataloguing-in-publication entry

Islands on the line.

Bibliography.
ISBN 0 909150 75 3.

1. Kiribati — Economic conditions. 2. Tuvalu —
Economic conditions. 3. Kiribati — Social conditions.

I. Watters, R.F. (Raymond Frederick).

II. Australian National University. Development
Studies Centre. (Series: Atoll economy : social
change in Kiribati and Tuvalu; no. 1).

330.996'81

Library of Congress Catalog Card no. 82-70983

Distributed by ANU Press
The Australian National University
PO Box 4 Canberra ACT 2600, Australia

Introductory note by Development Studies Centre

The Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands was undertaken by geographers and anthropologists in a 5-person team during the period 1971-74. It aimed at the systematic collection of data on 4 Gilbert Islands (Kiribati) and 1 Tuvalu (Ellice) Island in order to describe the way of life and dynamics of the present day economic and social systems and the changes occurring or likely to occur in response to internal or external forces. This project was funded as the result of an agreement between the United Kingdom Ministry of Overseas Development and the Victoria University of Wellington Geography and Anthropology Departments, with the guidance and administration of the head of the Department of Agriculture, the Central Planning Office and other government officers in Tarawa (United Kingdom Aid Research Scheme no.R.2625 A & B).

The project came about as a result of government realization of three factors affecting the future of the colony: the likelihood that phosphate deposits on Ocean Island would be exhausted in the near future, the extension of development planning in the colony, and a planned increase in coconut planting and copra production in the 1980s. The phosphate deposits had offered a mode of employment that was the source of a steady flow of cash to the Kiribati families of the workers, but how this cash fitted into the local economy needed to be established before the effects of its exhaustion about 1980 could be evaluated. Government schemes to provide alternative employment opportunities for both Kiribati and Tuvalu islanders, such as work with overseas shipping lines, needed assessing in terms of the possible effects of recruiting persons from the village sector. How people spent their time was a largely unknown factor, as was the degree to which people felt the need to acquire cash. Little was known about the nature of the subsistence economy or its relationship to the cash sector. There was much uncertainty as to the motivations that lay behind copra production, particularly as these may be affected by climate or other local factors, as well as by changes in price. In short, the team was given the task of providing social, economic and population data to help in the more detailed planning towards improving village life.

Any adequate study of a village economy must view economic forces in the context of the whole social and cultural setting of outer island life, including an appreciation of Kiribati and Tuvalu values, attitudes and aspirations. Thus it was decided that each team member should devote his or her attention to one atoll in order to obtain as complete a picture as possible: Butaritari, Abemama, Tabiteuea North and Tamana in Kiribati, and Nanumea in Tuvalu were the final choices made in consultation with various government officials.

The planning, training of team members, initiation of the study, coordination of fieldwork and supervision of the writing-up phase were the responsibility of the directors of the project, Ray Watters and Nancy J. Pollock. Ray Watters has taken overall responsibility for publication. Roger Lawrence also assisted substantially at the team report stage.

The reports were published 1975-79 with the approval of the governments of the Gilbert and Ellice Islands:

W.H. Geddes, North Tabiteuea Report
 Anne Chambers, Nanumea Report
 Betsy Sewell, Butaritari Report
 Roger Lawrence, Tamana Report
 Ray Watters with Kabiritaake Banibati, Abemama Report
 Team Report.

Because of the importance of the project and the significant quality of the contributions, and because they are one of the few examples of analysis in depth of village social and economic organization in Oceania, the Development Studies Centre of the Australian National University is publishing the reports in a new series, 'Atoll Economy: Social Change in Kiribati and Tuvalu'. This series has the approval of the governments of Kiribati and Tuvalu.

Although events subsequent to the fieldwork and publication have overtaken them, it was decided not to update the material except for minor comments. Some editing and consolidation of material has been done.

The area which was the subject of this study was called the Gilbert and Ellice Islands Colony (GEIC) up to 1 January 1976; from that date the Ellice Islands became separate as Tuvalu, and Tuvalu achieved independence from Britain in October 1978. The Gilbert Islands Colony became the independent country of Kiribati in July 1979.

Each monograph in the series stands alone but the glossary of Kiribati words and the bibliography containing references for

all 6 reports will be found in the summary volume no.1, 'Islands on the Line', which is the report, conclusions and recommendations by the survey team. The glossary of Tuvalu words is in the Nanumea volume.

An outline of the research project is appended to volume no.1.

Abbreviations used in all texts for sources of material in island reports are:

A.R.	Abemama Report
B.R.	Butaritari Report
I.L.	Islands on the Line: Team Report
N.R.	Nanumea Report
T.R.	Tamana Report
TN.R.	Tabiteuea North Report.

The mixture of Imperial and metric measures in these reports reflects the fact that at the time of the study local GEIC usage was Imperial measures. In recent years Australia and New Zealand have adopted the metric system. In some cases metric equivalents have been shown.

Amounts of money are given in Australian dollars and cents, the official currency of the GEIC.

Readers should appreciate that the reports do not always contain obvious or well-known factual information about coral atolls or the Gilbert and Tuvalu Islands: such information was not included in these reports to government as it was already well known by government officers and local people. For such information readers should consult Catala (1957) and Colony Annual Reports.

Financial assistance towards publication has been provided by the Overseas Development Administration, London, Victoria University of Wellington, and the New Zealand Ministry of Foreign Affairs.

Preface

This report brings together the ideas presented separately in the 5 reports of the Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice (later Tuvalu) Islands.

The project was originally designed to begin in 1971 and it was hoped to have this report completed in 1974-75. Roger Lawrence, a lecturer in the Geography Department, Victoria University of Wellington, was the first team member into the field, in December 1971. He began his research on Tamana, for the first of 3 short periods all between December and May in 3 consecutive years. Bill Geddes of the Anthropology Department, Victoria University of Wellington, and Betsy Sewell of the Anthropology Department, Otago University, left for Tabiteuea North and Butaritari respectively in April 1972, each to spend an 18-month period in the field. Ray Watters, Associate Professor of Geography at the Victoria University of Wellington, spent his sabbatical period of December 1971 to December 1972 on Abemama. Anne Chambers, who joined the team from California, went into the field in May 1973 to spend 20 months in field research, mainly on Nanumea in Tuvalu.

The islands on which the team members worked were selected in consultation with agricultural officers and other administrators in Tarawa in order to represent some of the selected significant differences between the various atolls of the Gilbert and Ellice Islands. Some important factors were high or low rainfall, degree of copra productivity, population density and factors of social organization. Since only 4 of the 16 islands in the Gilbert group and 1 of the 9 Ellice Islands were selected, inevitably there are aspects in these reports which do not apply with as much relevance to the omitted islands. The dangers of over-generalization from these 5 island examples in speaking of economic and social possibilities for the Gilberts and Tuvalu as a whole are obvious. Nevertheless the major contribution of this project lies in the close comparisons which have been drawn, thus providing the individual island picture in the framework of its contribution to the nation state.

It should be noted that when the team refers in this report to the Gilbert and Ellice Islands Colony (GEIC) or Gilbert Islands Colony and either Ellice Islands or Tuvalu we refer to all the islands as listed in Table 1.1. However since the Phoenix Islands and Line Islands had no permanent indigenous population and are now used only for plantation agriculture, generalizations in the text referring to 'the Gilberts' are largely confined to the 16 islands in Table 1.1 from Makin to Arorae plus Ocean Island. Likewise for Tuvalu, generalizations refer to Table 1.1 for the 9 islands from Nanumea to Niulakita.

While guidelines were laid down and there were constant cross checks between team members in the survey, each report in the series represents the interests, interpretations and individuality of the writer, as well as the differences between the islands. These factors have made the task of producing a joint report even more difficult.

The team report was designed to be read in conjunction with the detail given in the island reports. Of necessity this report contains generalizations which need to be substantiated and reviewed in terms of the facts given in the island reports. Relevant 'Sources in island reports' are listed at the ends of Chapters 3-13. It is not possible to include cross-references to precise pages of the island reports but sectional references have been given.

For the 4 graduate students this project was their first commitment to collecting data to be used for development planning. At the time the project was initiated the future of the Gilbert Islands and the Ellice Islands in relation to their other Pacific neighbours looked very uncertain. The questions of when the phosphate on Ocean Island would run out, eliminating this major source of revenue and wage labour, and when independent government would be set up were crucial dates toward which research was aimed and which lay behind the project brief. In 1971 these were both dates well in the future, not likely to be encountered within the team's fieldwork and write-up period. But independence came to Tuvalu in October 1978 and is set down for July 1979 for Kiribati. Thus the original brief has taken an unexpectedly quick turn towards independence - what can be calculated in development planning?

Development planning as an exercise in the Pacific region has changed direction drastically in the 8 years this project has been under way. The pace of change has increased markedly, with population increase, employment, and balance of trade looming as large issues. But it has also produced some deeply committed Pacific Islanders who are expressing their concerns about the

nature of development, namely 'development for whom', rather than 'development of what'.

Thus social processes loom large within the future thinking of those living in their Pacific environment and fashioning the Pacific Way. But the economic support mechanisms that are needed are still being assessed. They emerge as fears: fear of rural/urban or outer island/main island dichotomies with their discrepant sources and uses of cash income; the fear of unequal shares of the 'good life', and on a larger scale the fear of what John Samy has labelled 'the octopus analogy' to reflect the impact of large overseas corporations and their financial backing on local systems; finally fear of a new stranglehold of dependence. How to cope, how to choose between the many alternatives of consumer goods, sources of aid etc., and how many outer islanders' expectations be reflected 5 or 6 years after the team members heard them expressed? On such issues this report offers some sincere suggestions.

The 5 team members were fortunate to have the chance to live in and share part of these changing times and to endeavour to understand and express, through the inevitable distorting process of English conceptualizations, their ideas about the future of the Gilbert Islands and Tuvalu.

Ideally this Preface should have been written by a Gilbertese or Tuvaluan who is living in the midst of the questions and attempted solutions for their future. But since the report is already so late and must not be further outdated, we can but note this as an omission. To all the people of Abemama, Butaritari, Tabiteuea North and Tamana, and those of Nanumea, the last and longest tribute is to you. Thank you.

The authors would like to thank Ko Groenewegen, Demographer, South Pacific Commission, for his valuable comments on Chapter 3. Our thanks are also due to Bob Bryden and David Wimblett of the Department of Agriculture, Tarawa and Mike Walsh of the Planning Office, Tarawa, for their unfailing assistance to us all. Aerial survey, aerial photographic interpretation and cartographic design for the first editions of the reports in this series were by Robin Mita and David Winchester.

Nancy J. Pollock
Joint Director, Victoria University of
Wellington Rural Socio-economic Survey
of the Gilbert and Ellice Islands

April 1979

Cover design for volumes in the second edition is by Australian National University Graphic Design and David Winchester of Victoria

University of Wellington Cartographic Laboratories.

The team are most appreciative of the high quality of editing provided by Ann Neale for the Development Studies Centre.

Contents

Introductory note by Development Studies Centre	v	
Preface	ix	
Figures	xviii	
Tables	xviii	
Chapter 1	THE GILBERT ISLANDS AND TUVALU: GENERAL SETTING	1
	Geographical considerations	1
	Population and employment	3
	The economy	4
	1979 and the loss of phosphate earnings	4
Chapter 2	MEANING OF DEVELOPMENT	6
	European or 'outside' viewpoint	7
	'Inside view': attitudes of villagers	10
	Tamana	10
	Tabiteuea North	12
	Butaritari	12
	Abemama	13
	Tuvalu: Nanumea	15
	Recent official views of development and development planning	16
	Tuvalu	19
	Development and government	21
Chapter 3	POPULATION	22
	Population change 1931-73	22
	Age and sex distributions	27
	Fertility	27
	Workers and dependants	29
	Socio-economic implications	31

Chapter 4	LANDS AND LAND TENURE	34
	<i>Babai</i> and taro landholdings	37
Chapter 5	SUBSISTENCE ECONOMY	38
	Butaritari	38
	Tamana	39
	Tabiteuea North	41
	Abemama	41
	Nanumea	42
	Market for subsistence production	44
Chapter 6	COPRA PRODUCTION	46
	The national picture 1953-74	47
	Difference in mean production levels between islands	48
	Results	51
	Mean annual production per km ²	51
	Mean annual production per capita	51
	Other factors in mean production levels	55
	Year to year fluctuations on individual islands	56
	Rainfall and production	56
	Price and production	59
	Present situation and policy implications	60
	Copra resources and the future	62
	Improving the resource base and its utilization	64
	Land reform	64
	Absentee ownership	65
	Coconut Improvement and Replanting Schemes	65
Chapter 7	INCOME AND CONSUMPTION	68
	Income	68
	Sources of income	68
	Remittance income	68
	Local wage employment	72
	Copra	73
	Sales of local produce	73
	Handicrafts	74

	Expenditure	74
	Household budgets	76
	Foodstuffs	76
	Other expenditure	76
	Saving	77
	Income and diet	78
	Determinants of economic activity	80
	Economic circumstance	81
	Rates of return	81
	Household size and structure	82
	Social position	83
	Value systems and attitudes towards wealth	84
	Utility of money	85
Chapter 8	USE OF TIME	87
	Time allocation at individual level	87
	Division of labour	87
	Time allocation at household level	89
	Role of household composition and size	90
	Role of economic circumstance	90
	Planning implications	91
Chapter 9	EMPLOYMENT	92
Chapter 10	ENTERPRISE	97
	Values and enterprise	97
	Patterns of Nanumean enterprise	98
	<i>Mronron</i>	99
	Monetary and economic functions of <i>mronron</i>	100
	An investment	100
	Short-term benefits or deferred rewards	101
	Source of loans	101
	Credit	101
	Retail function	102
	Organization	102
	Constraints on enterprise	102
	Future policy on indigenous enterprise	104
	Danger of 'bureaucratization'	106

Chapter 11	COOPERATIVES	108
	Abemama	111
	Tabiteuea North	112
	Tamana	112
	Nanumea	113
	Cooperatives in future	113
	Epilogue	115
Chapter 12	POLITICS AND GOVERNMENT	117
	Role of government at village level	117
	View of Europeans in government	118
	Abemama	118
	Nanumea	118
	Services	119
	Extension programs	119
	Local government and politics	120
	Tabiteuea North	122
	Tamana	122
	Butaritari	123
	Abemama	123
	Nanumea	124
	The way forward	125
	Legislative Council member	126
Chapter 13	EDUCATION	127
	Recommendations for an alternative school curriculum	130
Chapter 14	SOCIAL AND CULTURAL ASPECTS	132
	Leisure time	132
	Radio	133
	Newspapers	134
Chapter 15	FUTURE OF THE GILBERT ISLANDS AND TUVALU	135
	Uniform western mode of development: a model to avoid	137
	Applicability of model to the Gilberts and Tuvalu	139
	'Primrose paths'	142
	Option of tourism	142

	Possibility of limited tourism	146
	Option of foreign 'experts' and overseas aid	147
	'Bureaucratization' of development: square pegs in round holes	149
	What is really involved in development?	149
	Danger of overseas aid	152
	The way forward?	153
	Grand solutions?	156
Chapter 16	SUMMARIES OF CONCLUSIONS AND RECOMMENDATIONS	158
	Chapter 2: Meaning of development	158
	Chapter 3: Population	160
	Chapter 4: Lands and land tenure	161
	Chapter 5: Subsistence economy	162
	Chapter 6: Copra production	164
	Chapter 7: Income and consumption	167
	Chapter 8: Use of time	170
	Chapter 9: Employment	171
	Chapter 10: Enterprise	173
	Chapter 11: Cooperatives	175
	Chapter 12: Politics and government	178
	Chapter 13: Education	181
	Chapter 14: Social and cultural aspects	182
	Chapter 15: Future of the Gilbert Islands and Tuvalu	183
Appendix 1	Research project on problems of economic development and social response in the Gilbert and Ellice Islands Colony	188
Bibliography		193
Glossary of Gilbertese words		207
Notes on the authors		215

Figures

Gilbert Islands and Tuvalu

frontispiece

Tables

1.1	Land area, population 1973 and population density, Gilbert and Ellice Islands	2
3.1	Changes in enumerated island populations, 1931-73	23
3.2	Absentee populations 1973	25
3.3	Island population densities based on various estimates of 1973 populations	26
3.4	Age and sex distributions of 5 island populations	26
3.5	Child/woman ratios for resident populations	28
3.6	Comparison of factors influencing fertility reduction	29
3.7	Estimate of productive and dependent populations on 5 islands in 1973	30
4.1	Landholdings and land use on islands of the survey	35
5.1	Percentage frequency of major subsistence foods consumed on 5 Gilbert and Tuvalu Islands	40
6.1	Copra income as a percentage of total and locally derived annual incomes	46
6.2	Annual copra production in the GEIC 1953-74 (in tonnes)	47
6.3	Mean annual copra production 1947-74	49
6.4	Results of simple and partial correlations between mean annual production per km ² , population density, mean annual rainfall and island size and results of simple and partial correlations between mean annual production per capita, population density, mean annual rainfall and island size	52/53
6.5	Copra production in tonnes 1963-74	57
6.6	Correlation coefficients for correlation analysis between production, rainfall and price on individual islands 1963-74	58
6.7	Palm resources on study islands	63
7.1	Annual income per household by source	69
7.2	Percentage of sample households receiving specified proportions of income from remittances and gifts during survey weeks	70

7.3	Mean monthly value of telmos received by private individuals (wages excluded)	71
7.4	Estimated annual household expenditure	75
7.5	Weekly expenditure by mean sample household on selected food items	76
7.6	Percentage frequency of particular food types in meals taken	79
8.1	Percentage time allocation by sector by mean household in islands studied	88
9.1	Importance of overseas employment (percentage of all employment sources for 5 islands of survey)	93
9.2	Percentage of cash income attributed to remittances, local wage labour	94
9.3	Percentage of households owning capital items usually financed through overseas employment	94

Chapter 1

The Gilbert Islands and Tuvalu: general setting

GEOGRAPHICAL CONSIDERATIONS

The 42 atolls and reef islands of the Gilbert Islands and Tuvalu present one of the most limited resource bases for human existence in the Pacific. They rarely rise more than 5 m above sea level and are composed entirely of coral debris and calcareous structures. The atolls of Tuvalu are smaller than those of the Gilberts, both in lagoon and land area. The total land area of inhabited islands in both island groups amounts to only 717 km² (for individual island areas and populations see Table 1.1) spread over more than 5 million km² of ocean. Distance, both between islands and from major world markets, creates enormous problems of communication and trade.

The islands experience a maritime equatorial to tropical climate with high, uniform temperatures. Annual rainfall totals vary considerably between islands and also from year to year. The northern Gilberts and Tuvalu experience higher and less variable rainfalls while periodic severe droughts are a fact of life in the southern Gilberts, Phoenix and Christmas Islands. The mean annual rainfall for Butaritari in the north is 3,115 mm; for Tabiteuea North in the southern Gilberts 1,125 mm, and 793 mm for Christmas Island. Butaritari is south of the recognized northern hurricane belt and while Tuvalu is north of the southern belt, severe cyclones have struck twice in recent times, in 1894 and 1972. Because infiltration is so rapid surface fresh water is rarely present and domestic water supplies must be obtained from roof catchments, or wells in the water lenses which underlie most islands. The combined effect of isolation, the low nutrient status of the parent material and low and variable rainfalls means that contemporary flora and land fauna are of low diversity and adapted to the prevailing rigorous physical conditions. Coconuts and pandanus are the only plants at present providing a basis for export activities. The physical conditions severely limit possibilities for introducing new crops.

Table 1.1
Land area, population 1973 and population density,
Gilbert and Ellice Islands (now Kiribati and Tuvalu)

Island	Approximate area in km ²	Population 1973	Persons per km ²
Ocean Island	6.3	2,314	370
Gilbert Islands			
Makin	6.7	1,445	216
Butaritari	13.6	2,971	220
Marakei	13.5	2,212	165
Abaiang	16.0	3,296	207
Rural Tarawa	14.7	2,268	154
South Tarawa (Urban Tarawa and Betio)	8.5	14,861	1,748
Maiana	15.9	1,413	89
Abemama	27.8	2,300	83
Kuria	12.3	821	67
Aranuka	15.5	781	50
Nonouti	29.2	2,223	76
Tabiteuea North	38.0	2,850	104
Tabiteuea South		1,092	
Beru	14.7	2,318	158
Nikunau	18.2	1,845	102
Onotoa	13.5	1,997	148
Tamana	4.8	1,392	290
Arorae	9.5	1,626	172
Phoenix Islands	28.7	-	-
Line Islands			
Fanning	34.6	340	10
Washington	14.2	458	32
Christmas	363.4	674	2
Total Kiribati	690.9 ^a	51,497	75 ^a
Tuvalu			
Nanumea	3.9	977	252
Nanumanga	2.8	587	211
Niutao	2.6	907	359
Nui	2.9	569	202
Vaitupu	5.6	948	169
Nukufetau	3.0	620	208
Funafuti	2.8	871	313
Nukulaelae	1.9	343	190
Niulakita	0.5	65	155
Total Tuvalu	26.0	5,887	226
Ships	-	429	-
Total	716.9 ^a	57,813	81 ^a

Source: Report on the 1973 Census of Population.

^aExcludes uninhabited islands (Phoenix and Southern Line Islands).

POPULATION AND EMPLOYMENT

The Gilbertese are people of Micronesian stock while the Tuvaluans are almost entirely of Polynesian stock, having ties with Samoa and the Tokelaus to the south and east. Table 1.1 shows that, apart from the urban centres of South Tarawa and Funafuti, populations are not large and that the larger islands do not have significantly larger populations than do the small islands. Hence population densities in Tuvalu and the small reef islands of the Gilberts are often higher than those of bigger islands. On most islands population totals are still below estimated levels at the time of European contact and show the impact of blackbirding, introduced diseases, severe droughts in the southern Gilberts during the 1870s, and more recently, migration to Tarawa and other employment centres. In recent years the rate of natural increase has been substantial (1.9 per cent per annum from 1963 to 1968), but in the 1968-73 period the rate of increase declined to 1.6 per cent per annum, probably as a result of the intensive family planning campaign during the period.

The urban centre has absorbed most of the natural increase. Between 1968 and 1973 the population of the colony rose by 4,296; in the same period the urban centre at South Tarawa grew by 4,245. Thus rural-urban migration dominates inter-island movement. It reflects growing inequalities between rural and urban areas and if it continues at present, or even greater, levels the viability of the rural areas may be in jeopardy.

Employment is dominated by village agriculture. Of the 18,148 persons classified as being economically active in the 1973 census, 11,745 were dependent upon the village economy and only 6,403 were active in the cash sector. In the latter the government is of overriding importance as an employer. Employment by the government or statutory authorities and their subsidiaries accounts for over 50 per cent of employment in the cash sector. Employment in the private sector is dominated by the churches and missions and phosphate mining with the plantations and Cooperative Federation being of lesser importance. A further 1,000 or more people are employed overseas at Nauru and as seamen on overseas ships. The emphasis of private employment is very much in the service sector, with very few individuals being employed in commercial agriculture or fishing or in processing or manufacturing which indicates the very undeveloped nature of these sectors. Employment opportunities are very unevenly distributed. Over 60 per cent of the cash employment available is concentrated in South Tarawa thus fuelling the process of rural-urban migration. Expatriates still occupy key positions of responsibility in professional and technical fields.

THE ECONOMY

The economy remains very much a simple, primary production and extractive industry oriented one, overwhelmingly dependent on the income generated by the phosphate mining activities on Ocean Island. The healthy balance of visible trade surpluses experienced in the past is due entirely to the phosphate-winning activities. In 1975 the Gross Domestic Product stood at \$42.1 million and exports realized \$27.7 million. Phosphate accounted for 96.4 per cent of export earnings. 1975 was a peak year for phosphate earnings, but in recent years it has never accounted for less than 79 per cent of export earnings. The phosphate tax is also a major source of government revenue. In 1975 the tax netted \$22.7 million or 86 per cent of central government revenue. This level of income has enabled sums to be diverted into the Revenue Equalization Reserve Fund (RERF) which will provide a source of revenue for government expenditure when the phosphate reserves are exhausted. Remittances sent by phosphate employees to relatives in outer islands are also an important supplement to rural incomes.

Copra is the only other sizeable source of export income, and compared with phosphate is insignificant. Export income from copra fluctuates considerably from year to year. On the average it accounts for about 10 per cent of export income. 1974 was a peak year for copra production and then it accounted for 20 per cent of export receipts. The importance of copra lies in the fact that it is the only important source of cash income for rural areas and must become increasingly so in the future. It is the intention of the Coconut Replanting and Improvement Schemes to boost copra earnings by up to \$31,500 per annum once plantings have reached full production. Handicrafts are, at present, a small and insignificant source of export income.

1979 AND THE LOSS OF PHOSPHATE EARNINGS

The phosphate reserves on Ocean Island are expected to be exhausted by the end of 1979. It is estimated that export revenue will fall from around \$16 million in 1979 to less than \$3 million in 1980 when the Gilberts will move from a trading surplus of \$3 million to a deficit of almost \$11 million and the deficit is expected to increase in the future. Over the same period government revenue is expected to fall from a surplus of \$1 million to a deficit of \$6.5 million as a direct result of the loss of phosphate tax. It is estimated that the RERF will be dissipated in 8 years. The end of mining will also mean the loss of 350 jobs, calling for the repatriation to their home islands of at least some of these employees and the loss to outer islands of at least \$100,000 in remittance income. The net result of this must be a lowering of rural living standards and increasing pressure on local resources.

The economic prospects for the Gilbert Islands and Tuvalu are not promising. No new major economic resource other than the sea is likely to present itself and while potential may exist for tuna fishing, baitfish and possibly brine shrimp production, these resources still have to be proved and the islands' remoteness from markets will always create difficulties. Progress to date has been slow and it is clear that even from the most favourable projects revenues will not match those presently enjoyed from phosphate. The future appears to lie in maximizing returns from existing resources, the export of labour, import substitution, the careful control of government spending and, for the Gilberts, the development of the resources of the islands without indigenous populations.

Against this background of the imminent loss of its major source of income and the growing imbalance in income and employment opportunities between urban and rural areas, the priority attached to rural development in the Development Plans is of critical importance and it is to this problem that this report addresses itself, drawing at the same time on the large body of primary and fundamental data on the rural economies presented in the individual island reports.

Chapter 2

Meaning of development

'Development' means different things to different people. The European view of economic development is quite different from that held by many Gilbertese and it is important that the actual goals sought, whether by outer islanders or by European planners, be identified and that people's understanding of the development process be clarified. Unless a major dialogue ensues to produce agreement and reconciliation serious contradictions evident in the early 1970s are likely to persist long after the attainment of independence in Tuvalu in 1978 and in the Gilberts in mid 1979. In part the contradictions arise from the following:

- (a) Different goals and different types of development are often envisaged by Gilbertese and Tuvalu villagers on the one hand, and by European government officers or advisers on the other.
- (b) Different aspects of the same reality are emphasized by different groups, while other aspects are either under-emphasized or ignored.
- (c) The kinds of social and economic benefits and costs that accrue from the type of development not only vary considerably but are perceived quite differently.
- (d) It logically follows that the order and set of priorities aimed at and the consequent development strategy to be adopted also diverge to a marked extent.

The wider, underlying assumptions, methods and goals of Europeans (termed the 'western model of development') are put together in the form of a generalized model in Chapter 15. This is an attempt to point up the implications that are likely to flow from this pattern of development, modified as it is by special local circumstances in both groups. In most other chapters in this report (and especially in Chapter 12 on politics and government) the Gilbertese and Tuvalu values, goals and understandings are presented with respect to a number of social, economic or political matters. Here we will summarize the meaning of development in general terms.

EUROPEAN OR 'OUTSIDE' VIEWPOINT

Essentially the notions and goals of Europeans spring from assumptions and principles originating from outside, the result of a European approach to economics that evolved in a monetized, urban industrial setting. This viewpoint stresses increasing monetary income by growth in goods and services and especially of exports which earn overseas exchange. Only by achieving economic growth can economic development occur, with the resulting improvement in health, education and other social services. 'Growth in goods and services' or 'increasing the stock of wealth' are seen however largely in monetary terms, implying an expansion of the monetary and commercial sector.

Fisk (1974:52) has explained European planning in the South Pacific in the colonial era in these terms:

Historically ... the planning of economic development has tended to be in the hands of people who are specialists in finance, or in modern technology, or in modern business or production methods, or in modern methods of Western agriculture. Most of these people have been sincere, able, professionally competent, and dedicated to enhancing the welfare of the countries they have been chosen to serve. They have, however, been people with knowledge about an exotic type of rural economy and situation which they have sought to reproduce in the Pacific in the course of development, rather than people who have made a special study and gained special understanding of the indigenous social, economic and agricultural processes which they proposed to change. There was a perfectly natural tendency for them to see the latter as an inferior set of factors to be abolished and changed in favour of the exotic system as quickly as possible.

Before World War II, as Fisk points out:

... the less developed countries were expected to be financially responsible for their own development, and to finance it from their own productivity or the prospects of it. To do this, especially in a country whose economic activity was largely non-monetary and whose international earnings were minimal, required the inflow of foreign capital and skills and the monetisation of a major sector of the economy. Only thus could the resources be made available to establish a flow of income in foreign currencies to pay for teachers, administrators, and technical specialists, and to establish markets ... [etc.]. The quickest and often the only immediate way in which to get development started was thus to introduce the foreign system ... which the developers, and those that could be

induced to bring in the necessary capital and know-how, understood and knew to be productively effective.

In many instances this strategy worked, but it had serious disadvantages that have since become apparent to many observers:

It was effective in getting development started by providing the internal resources on which the basic steps depended, but it also led to dualism, elitism and other forms of inequality that tended to be cumulative, or at least self-sustaining, and which were incompatible with the rapid development of a workable form of democratically based self-government and political independence ...

A more detailed account and explanation of the consequences of this 'western mode of development' are given in Chapter 15.

Fisk suggests that this was a 'perfectly natural and understandable process in the context of pre-World War II political economy, but it is clearly far from an ideal course of development from the point of view of the indigenous peoples concerned'. Of course, if one considers an economy purely in *monetary* terms, one cannot fault the impeccable logic of the European view that genuine economic development can only derive from economic growth for how else can improvements be paid for? Seen in this light the task in the Gilberts and Tuvalu is to lift copra production (the main export apart from phosphate) and other forms of production and since lack of motivation appeared to be a major obstacle preventing this, the 'crux of the problem ... was to change the character and custom of the people' as a District Commissioner stated at the Colonial Conference of 1956.¹ The record of many dedicated, determined Englishmen who struggled throughout the colonial era in lonely outposts to achieve this task makes interesting reading in the Western Pacific Archives, for it is the story of Englishmen battling often against great odds and almost impossible physical constraints to implant the Protestant ethic and to graft the western way of life on to local society. Of course many changes that society now deems to be good and desirable were introduced by such men but, prisoners of their own time and culture, they were blithely unconscious of their Eurocentric approach and the cultural imperialism of their message. Instead of the indigenous social organization and agricultural system being made the foundation upon which the building was to be constructed they were often considered in many South Pacific

¹In Tarawa in 1972 the late Dr Joan Tully ran a conference on achieving increases in output through cultural change.

countries to be 'rubble to be cleared away before the construction can start'.²

It has become increasingly obvious to many students of developing countries over the last decade that the European approach is not only inadequate but positively harmful. It either ignored, bypassed or undercut (usually indirectly rather than deliberately) the traditional socio-political system and the subsistence agricultural system, without usually achieving great gains in per capita output. Brookfield, Fisk, Hart, Clarke and a number of others have criticized the alarming deficiencies and dubious goals of such policies in several countries and called for a basic change of tactical objectives in development. One should be trying not to introduce some new and foreign productive system but rather to improve and adapt the agricultural system and resources that are already there. A policy of making this the basis of development will inevitably lead to a slower growth in the national income and in internal government revenues, 'but it will almost certainly be a faster process in the development of a viable and self-dependent indigenous controlled economy - which in the absence of extreme poverty, is ... the more important objective' (Fisk, 1974:53).

Clearly different goals, requiring different approaches, are needed with respect to government policy, and also a greater awareness of the indigenous or 'inside view' of development. However, insofar as these islands are intrinsically part of an interdependent system and are committed to a monetary economy, there are aspects of this 'outside view' that are completely sound and must be learnt and understood by the villagers.

²This criticism does not of course apply to all. A considerable number of District Officers admired the skills of *babai* cultivation, fishing and toddy cutting etc. and villagers were meant under communal regulations to work in their *babai* pits for example on one day each week. Under indirect rule aspects of the *maneaba* system and rule by the old men (*unimane*) were supported at least selectively or tacitly. But the loss of the magico-religious qualities of the *maneaba* struck a grievous blow at the traditional politico-ceremonial system (Maude, 1963). All real power clearly lay with the European. And the main economic influences up to World War II were on-the-beach traders, small stores and trading companies. Government clearly favoured capitalistic enterprise, though after the war when the companies did not return it adopted a protective role, initiated the Colony Wholesale Society (later succeeded by the Gilbert and Ellice Islands Development Authority or GEIDA) and strongly backed the cooperative movement. Very little was done to strengthen the subsistence economy.

'INSIDE VIEW': ATTITUDES OF VILLAGERS

The greatest difference in the meaning of development and the nature of the actual process is probably illustrated in the Tamana Report although all islands illustrate marked divergences from the European understanding.

Tamana

To some extent there was a tendency, especially on Tamana and Tabiteuea North, to treat the subsistence and cash sectors as separate entities. People who were well endowed with resources in the traditional sector often did not participate very much in the cash sector and vice versa. Thus one could be rich in money (*kaumane*) or rich in things (*kaubai*), although riches in land could lead through the copra trade to money and possession of many imported items.

Since the potential for economic growth on Tamana was obviously very limited even by Gilbert Island standards, things were seen as being essentially controlled from the outside. *Tibanga* (luck or fate) was a concept of critical importance, indicating something over which the individual has no control, but which defines his lot in life. It may well reflect the lack of any substantial economic enterprise on the island and the legacy of paternalism from mission and government, a situation in which all major decisions were made from above and outside. Since improvements in one's living standards depend essentially on outside factors (success in gaining entry into one of the colony's two high schools, or success in being given a job by the phosphate company on either Ocean Island or Nauru), the concept of *tibanga* accurately sums up the real life chances of a Gilbertese from Tamana. Intense jealousy would be felt against people who were believed to have amassed an excessive number of *babai* pits, pigs or other forms of wealth. The emphasis on equality or conformity (*boraoi*) was perhaps the paramount feature of economic life, and it was believed that no one should attempt to rise above his normal station or living standard, for to attempt to do so might prejudice another's right to obtain a livelihood. This emphasis on equality was evident in all Gilbert Islands studied and was also pronounced in Tabiteuea North.

Islanders' understanding of economic development has naturally changed as the potential for cash earning grew with the copra trade, and as money acquired great utility over recent decades with the establishment of cooperative societies, larger and more efficiently run stores and an improved shipping service which enabled stocks to be more regularly supplied. The differences between people in money-earning experience are reflected in the way in which money is treated as belonging to distinct

'funds' depending on method of earning, size of sums and goals sought. Thus on Tamana *kabirongorongo* ('money that you spend') denotes small sums of money that can be earned at any time from the sale of copra or handicrafts and which are spent on everyday needs. *Karinimane*, on the other hand, is 'money that you keep'. This involves larger sums of money which are banked or held to pay taxes, school fees, or for major expenses. Significantly *karinimane* is associated with work off the island and is not to be had on Tamana. Thus it is capital in the form of a nest egg and is not productive capital, being simply money in the bank kept for future needs. It is interesting to note that the distinction between the two types of money is not recognized by many households which operate entirely within a *kabirongorongo* context, and have no prospects of *karinimane*. While households receiving remittances may well regard them as *karinimane* this is not necessarily so, and they may be used for everyday expenses including purchases of food (T.R.: ch.8, Attitudes towards cash and cash earning). Thus when the development plan calls for an 'increase in savings' in the community it should be realized that the form of those savings and how they are used depend very much on local perceptions and categorization of money and different sources of income for different purposes (see also A.R.: ch.7, Savings).

On all islands studied there appear to be two basic conceptions of development: innovations that come from government, and a greater opportunity to pursue Gilbertese ends. Since there was no expectation of economic growth in traditional society the question of innovation did not arise. The idea of development is thus wholly associated with 'Tarawa' (synonymous with government), what government does and institutes from outside. Most directly it is seen in visible results in the form of airfields, roads, shipping services, medical dispensaries and services, Island Council Schools, coconut replanting and improvement subsidies and the like. Since such infrastructure clearly leads to economic or social development, this view of development is sound enough. But it also sees development as a response to lobbying or manipulation of government where this is feasible. The greatest goal in politics to be sought by the Island Council and a member of the Legislative Council is to induce government to start projects involving government expenditure on the island, and to find out 'what can be got out of Tarawa'. But the other goal, of enabling people to pursue Gilbertese ends, becomes easier to achieve if new opportunities arise to make money. In a very real sense this is associated with the idea of security and of freedom (in the northern class-stratified islands *inaomata*, and on Tamana *oinibai*, being self-sufficient or free to control one's own activities). In spite of a well-established system of redistribution and reciprocity people preferred to be *oinibai* or *inaomata*, for with adequate resources one would not have to worry about the future. Then one would be above the need to *bubuti* (borrow or request) which is an admission of dependence and is somewhat shameful.

This traditional concept does indeed relate most directly to a fundamental aspect of true economic development,³ seeking freedom from need and achieving self-sustaining independence. Thus while the 'good life' means different things in the subsistence and cash sectors there is an important common thread – to be *oinibai* or *inaomata*. A goal on Tamana was to have plenty of fish and a house that is 'alive' – the possession of coconut lands – and to work hard. This would ensure prestige and in this sense work does not imply drudgery. But in recent times Tarawa has entered the pattern of expectations. To have children going to Tarawa for their education (with the prospect of salaried employment to follow) is to achieve freedom. The whole situation is now altered: seen in this context subsistence work becomes 'drudgery' and 'cash' and 'freedom' become almost identical. It would appear that these ideas are fundamental in effecting economic change on the outer islands, creating a situation of 'pre-urbanization' and influencing migration to South Tarawa.

Tabiteuea North

On Tabiteuea North cash has been fitted into the economy as another resource: basically the economy here is still subsistence based with very little cash appended. Cash is not necessary except for some capital items (bicycles, nets etc.) and most households have limited targets for income. The island is well known for its individualism and competitiveness, with jealousy and the ideal of equality enforcing conformity through various levelling mechanisms. The desire for individual enterprise is there but must take the form of group effort through *mronron* to escape social sanctions. Innovation from within is very difficult because of these social pressures and competitiveness, for someone will always point out why a new development cannot work. Thus all innovation comes from government and from the outside, and in this way the external nature of the new impetus is most important in breaking the impasse. Things that people cannot do for themselves become very definitely a government responsibility. In spite of a strong interest in economic enterprise therefore, people seek money mainly through employment off the island, remittances are often *bubutied*, and in view of local constraints people seek development on the island to only a limited extent. One of the main goals is more free time, and people look for opportunities to cut down the time spent working in *babai* pits.

Butaritari

On Butaritari the concepts of being rich in subsistence or rich in money were completely intertwined. For although the traditional concept was still uppermost – that real wealth came

³See the basic goals of any policy of development suggested in Chapter 15, Grand solutions?.

from the possession of lands – it was quickly acknowledged that the number of bearing palms on a land was of critical importance. And prestige and respectability are very closely associated with the capacity to 'live well'. 'To live well' means 'to eat well' as the Butaritari Report (ch.3, Economic goals) illustrates, and the complementary relationship between the cash and subsistence sectors is indicated in the equally high status accorded to *babai* and store foods. It is inconceivable that a feast would be held now without supplies of both foods and it is an interesting commentary on social change that the importance of one was often explained in terms of the other.

The idea of development is not only closely associated with the concept of 'living well', stressing consumption, but also with 'keeping up'. Here again people conform to an ideal minimum acceptable standard of receiving (or earning) 'enough' money. Conformity may be either a positive advantage or disadvantage in development, for an innovation such as banana growing has been widely accepted by most households in 3 villages on Butaritari but is still uncommon elsewhere. The importance of 'target income' or the 'drudgery of labour' where excessive amounts of time and energy must be spent to earn extra income should be noted, for people will only seek more than 'enough' in money income where it can be earned easily and with comparatively little effort. In view of the few money-earning opportunities that exist on most islands it is scarcely surprising that the preference for leisure is quite pronounced. However this also illustrated the high value placed on *kakakibotu* (resting) and other forms of leisure, emphasized in the Tabiteuea North Report (ch.4, Attitudes to rest). Apart from enabling one to live well and to keep up, money has limited use however on Butaritari, for goods other than food have no prestige but are valued purely for their utility. Three categories of goods are recognized: necessary items (soap, kerosene, matches and tobacco); food; and 'big things' (utensils, cloth, large capital items such as bicycles, *babai* pits etc.). Apart from these three kinds of purchases money is needed for only one other general purpose – taxes, school fees, donations and fund raising.

Abemama

While the above situation generally applies to Abemama where people on the whole have access to more lands and often to higher incomes, there are some on that island who are beginning to see cash as a definite substitute for subsistence production (A.R.: ch.7, Effects of unearned income on copra production; Consumption) and so replacing traditional items of diet with purchased foods. Again there appears to be a disturbing trend among some people receiving regular remittances to be less concerned with maintaining coconut plantings or *babai* pits.

The ideal of economic development on Abemama closely parallels the findings on Butaritari, but here higher incomes and a wide range in levels of sophistication in understanding European approaches affected attitudes. Although it is widely believed that Gilbertese live unto the day and do not understand the need for planning for the future, the reports point out that most families were aware, with the growth of their children, of likely future requirements. The planting of *babai*, which takes 7 years to mature, is one indication involving the projection of needs into the future, and parents are conscious of the value of education gained now to qualify children to secure paid employment in the years ahead. But most notions were vague and thrust responsibility wholly on the government, which should 'find us an island', 'get more lands for the people' and permit migration. The frequency with which many Abemamans visited Tarawa made them keenly aware of the large volume of aid moneys that had been spent in recent years. It was felt that almost all this money had been spent on Tarawa and little in the outer islands. There were signs that a feeling of relative deprivation might be beginning and this relatively sophisticated outer island was highly active in lobbying government for a decentralization of government activities and for more official projects on the island.

A shrewd observation was made that it was important for the European to have a development plan. In general the *imatang* did not appreciate the geographic difference between the Gilbert and Ellice Islands and other countries 'where bananas grow'. It was believed rather cynically (and with some accuracy) that development plans often tended to be somewhat alike, irrespective of the country. The development plan had become something of a new gospel, the mark of legitimacy for some of the European officers in government, justifying their presence. But this cynicism did not lead the old men to reject totally the idea of planning. It was important for families to plan for the future, and especially to plant more coconut palms and limit the size of their families. People were very conscious in 1972 of the family planning campaign which had been largely successful up to that date. And when asked to write an essay in 1972 on life in 10 years' time, the senior pupils at the Island Council School projected a future of hardship, insecurity, land shortage and overpopulation, exorbitant store prices and lack of wage employment. At that time, when phosphates are exhausted, 'people will not live well'. Since few will be able to obtain jobs, how will they be able to 'support the family'? 'Coconut, *babai* and fish are not enough for the people.' Pessimism was expressed as to the likely future copra price, yet 'copra is our only means of existence'. Sombrely it was declared that in the years ahead 'it is not ... known whether the Europeans will continue to care for the Gilbertese and Ellice people'.

Tuvalu: Nanumea

Up to a point the considerable similarity of the meaning of development in a different culture, that of Tuvalu as revealed in the Nanumea Report, reflects not only a similar missionized colonial legacy but also the importance of a situation's influencing the perception of development by outer islanders in a far flung island archipelago. The Nanumean view of development is based on many of the distinctions and views described above for the Gilbert islanders. There is the same association between 'living well' and development, both in terms of individual consumption and in terms of community access to such services as education, health, communication. There is a valuing of both traditional and cash sources of wealth, a view that neither alone is yet sufficient to provide the 'good life' for a family, together with a wariness about becoming too dependent on imported items for subsistence. The Nanumean term for development is *fakatuumea* (literally, to build things) and the development changes that Nanumeans advocate are primarily in this vein: the construction of metal roofs to catch water (and to eliminate thatch making), an airstrip which would allow seamen and other overseas workers to return home for vacations and would generally increase outside contact and opportunities, a wider reef passage which would allow the island's sheltered lagoon to serve as a base for a commercial fishing industry. Small-scale projects, those requiring only a couple of thousand dollars and local labour skills to achieve, are seen as appropriate development projects for the community itself to undertake. Large-scale projects, such as the air services and an improved reef passage, are seen to depend on government assistance. Most Nanumeans view employment, particularly overseas employment, as the normal source of cash and of manufactured goods. The fact that most men between 20 and 45 work overseas at some time, that they are employed on short-term contracts and return home periodically, and that they regularly remit money to family members on Nanumea have all made overseas employment an important part of the life cycle as well as a vital part of the economy. Nanumeans would like to have greater opportunities for wage employment locally. In the meantime they also want easier access to the island so that those overseas can maintain close contact with their home.

One outstanding component of the Nanumea view of development is its corporate character. Community unity and competent local government enable local development planning to have the welfare of the whole community as an ostensible goal. When benefits to certain individuals are incompatible with benefits to the whole community, policy decisions usually favour the latter though efforts are always made to protect any individuals who seem likely to suffer disproportionate negative effects. There is little class, religious or family factionalism to contend with. As in the Gilberts, there is a strong norm of conformity and equality but the difference is that this is seen as being achieved

through *interdependence*: the sharing of goods and services through reciprocity, the rotation of leadership positions among many members of the community, the recruitment of skilled individuals to fill service positions, the contribution of money to the island development fund by those employed. Perhaps it is this corporate orientation that leads Nanumeans to see the national government and themselves as partners in development and to expect that the benefits and opportunities that are available will be distributed equally through the group so that all Tuvaluans will benefit.

RECENT OFFICIAL VIEWS OF DEVELOPMENT AND
DEVELOPMENT PLANNING

In the late 1960s and 1970s there were signs of some modification in the European views on development and on the future of the two groups: with political and constitutional development, the impending end of phosphates and the failure of efforts to discover new sources of income, new objectives in development began to appear while past failures in policy were frankly admitted.

In part this might result from the role of some European planners in the Gilbert and Ellice Islands⁴ who were more indigenously orientated than most of their predecessors; in part from the changing climate of opinion in developing countries generally that was becoming more sceptical of the usual kind of indicative development plan.⁵ Increasingly such plans are seen to be technocratic documents produced largely by European officials working in a political vacuum. In the absence of political will and finesse, the government lacks real power to effectively control the economy and the forces governing it. In such a situation a lot of faith is often placed in a development plan to achieve

⁴Hughes (1973) believes that the interplay of six main influences largely determines the nature of a plan in many South Pacific countries: (1) the preceding plan and collection of on-going projects, (2) presumed attitudes of potential investors, (3) policies of major aid donors and lending institutions, (4) attitudes of planning staff, (5) character of political government (usually the plan is not highly politicized, reflecting a *laissez-faire* ideology), (6) the so-called elite or 'enclave clientele'.

⁵Undoubtedly a milestone in encouraging genuine indigenous economic planning in the South Pacific was Crocombe's trenchant criticism of the World Bank plan for Papua New Guinea as being ethnocentric, inappropriate and developing a type of economy that would be substantially owned and controlled by Europeans and outsiders. Similar criticisms could be levelled at several other South Pacific development plans. See Crocombe and the ensuing debate (1968-69). See also Hughes (1972) and Hughes (1973) which are directly relevant to the Gilberts and Tuvalu.

major goals; without political power, commitment and machinery these hopes will be illusory. Yet development has become something of a cult in itself and development planning a very modish or fashionable method of ostensibly achieving targets. As Hughes (1973) and others have noted, development planning is usually characterized by many illusions and delusions: the people, politicians and even the planners themselves are often deluded or carried away by the propaganda or euphoria of the planning process. The cult aspect of development and many of the illusions and delusions of planners are nourished by the booming aid industry. Plans of course are often window dressing to justify a government's policies, are produced for political purposes to gain more foreign aid, or represent little more than a set of estimates or shopping lists designed to take to overseas donors.

The other extreme from the technocratic plan, passed off with the aid of much quantification by sophisticated expatriates on unsuspecting locals, is the plan which spuriously attempts to 'involve the people in the planning process'. This approach, which involves what Hughes calls the 'grassroots mirage', may become populist or demagogic unless a sound and representative system of local government exists to enable genuine in-depth discussions to occur between central government and outer islands. Illusions that may be produced by quantification both dazzle and bemuse local readers and appear to lend truth or authenticity to the analysis of the economy or the argument that is presented, even although no national income accounts might exist or their accuracy is highly suspect.

Yet shorn of its all too common illusions and delusions, development planning remains a most important exercise. If a sober, hard-headed and clear-eyed view of their situation can be attained by planners and politicians, it can lead to serious analysis of the economy, society and culture and closer understanding of the benefits and costs of different objectives and of the conflicts between goals that will have to be faced in the future. Planning, being simply a 'technique of arranging activities towards objectives', cannot be objected to since it is not an end in itself but a means of demystifying the process, even although choosing between conflicting, alternative goals may be an unpalatable task. At its best, development planning involves 'a collection of ideas, techniques of measurement and analysis, habits of logical and rigorous argument, and systems of operational research and control, which together should be of the greatest value to the public and private sectors in Pacific countries' (Hughes, 1973:8).

Undoubtedly, with political and constitutional development as self-government and independence approached, development planning might have led to some coming together of the divergent viewpoints of Europeans and islanders. But clearly some serious differences do remain and the prospect of a neo-colonial

situation emerging means that Eurocentric views and solutions of local problems are likely to continue to be held by some Gilbertese and Tuvalu leaders.⁶

In 1970 the first sentence of the Development Plan 1970-72 bluntly warned that a major, if unwanted, transformation of the economy of the Gilbert and Ellice Islands would occur later in the decade when the phosphates were exhausted. Concern was expressed at the rapid rate of population growth likely to occur during the decade and the fact that heavy investment had occurred in the 1960s in social fields and other areas that were not income producing (para. 1.3). Unease was expressed at the uneven pattern of development that had led to rapid expansion of social and infrastructural services on Tarawa which encouraged in-migration from outer islands, while agricultural development in the outer islands had languished.

The Development Plan of 1973-76 went even further in revising earlier goals of development and in emphasizing local self-reliance:

The long-term aim is sufficient economic strength to support political self-reliance. Though regional alliances and continued access to international aid have an important part in the long-term plan, the development objective is to attain a degree of economic independence which will enable the government to make its decisions according to the needs of its own people, without undue foreign influence (para. 10.12).

How was this to be achieved?

Even a moderate level of self-sufficiency, after phosphates are exhausted, can only come from the fullest exploitation of the resources of the sea, the greatest possible development of agricultural production; extending the early gains of family planning into a lasting reduction in family size; and more determined efforts to control consumption, personal and national, so as to increase savings and investment (para. 10.13).

The standard of living expected by the people has to be held (or brought up) to the minimum level for a reasonably healthy family life. At the same time there was growing concern at the effects of economic disparities, in class or regional terms, that had become glaringly obvious:

⁶It is interesting to read comments on the development plans and development issues as indicated in reports of debates in the Legislative Council; e.g. see *Atoll Pioneer*, 13, 30 Nov. 1972 and 40, 7 June 1973.

The distribution of incomes ... as well as their gross increase must be managed in accordance with national objectives. The continued enrichment of an urban elite, at the expense of the rural areas, is an obvious danger; but it will occur unless it is deliberately avoided.

A number of policies were suggested to counter these undesirable trends (para. 10.16).

By the time of the Third Development Plan in 1977 the government had to report that 'progress towards strategic economic goals has been negligible', despite advance on particular projects. Island development plans were now included in the overall plan. In spite of solid progress on new coconut planting programs and protection of rural incomes after phosphates expire, 'no major new resource other than the sea has been identified nor is one likely to be'. The situation was assessed in sombre terms:

Overshadowing all Plan activity and achievement is the continued failure of the production sector to establish new sources of national income necessary to maintain living standards in the post-phosphate era. Despite a good deal of talk, planning, expense and hard (though too often uncoordinated) effort the fundamental problems facing the economy are no nearer solution today than they were in 1973. Nor are the inherent constraints on development in a small, scattered and isolated atoll territory any less severe (p.5, para. 2).

In the short term, the Gilbert Islands had 'never had it so good', with a doubling of per capita income since 1973 due to a dramatic boom in the price of phosphate and continued foreign aid. Reserves increased greatly but there was little conscious restraint in government or personal consumption and the range of imported goods increased. In spite of the earlier warnings, the concentration of investment and employment on South Tarawa continued and the urban-rural gap widened further: 'No practicable solution to the increasing drift of population to South Tarawa has yet been found' (p.6, para. 17).

Tuvalu

The first development plan of Tuvalu, which achieved independence in 1978, was issued in that year to cover 1978-80. It was largely the work of European technical assistance provided by UNDP. The plan concentrated 'on the special problems and issues arising from independence, in particular the need to forge a new nation out of part of a former colony ...' (Tuvalu Development Plan 1978-80, p.1). The immediate objectives were:

- . the attainment of full independence for Tuvalu within the British Commonwealth

- . the development of a sense of national identity and commonness of purpose amongst all the people of Tuvalu
- . the strengthening and diversification of the Tuvalu economy as a means towards achieving ultimate self-reliance.

To achieve these objectives, priority was to be given to:

- . improving both internal and external air and sea communications
- . expanding agricultural and fisheries production for the local and export markets
- . creating employment opportunities in Tuvalu and overseas
- . providing Island Councils a wider role in determining priorities and projects in the islands
- . achieving balanced development of all islands
- . completing the development of Funafuti as the administrative capital of Tuvalu
- . continuing to reduce the rate of population growth through a comprehensive family planning program
- . expanding health and education services consistent with resource availability and the needs of the country and, in the case of education, the job opportunities available.

Tuvalu views are included in the plan as a result of meetings held by the UN Planning Adviser with the people on every island in the group except for Niulakita. These discussions 'formed the basis of Island Development Programmes which are in some ways sub-plans within the overall plan' (see Appendix C, pp.145-53).

Although the plan is a practical attempt to institute planning and establishes machinery for implementation, it remains largely the approach of outsiders, to which island development programs have been tacked on. No coherent set of objectives representing the views of the Tuvalu people are presented, although the main goal is said to be the creation of a nation out of 9 scattered islands.⁷ Basically it is purely an economic document

⁷Of course full participation of islanders in discussing the goals of development must be a two-way and educative process. Carried to an extreme, it can lead to an abdication of planning for a 'lolly scramble' - a preference for parochial and short-term goals at the expense of strategy or less visible national and long-term goals. Islanders need to understand the price paid for neglecting the latter. As Hughes (1973) notes, the 'grassroots mirage' of involving the people can lead to unrealistically long shopping lists of development goals for each island. This leads to government advising the people to be patient and wait. Then the people see through this tactic and demand 'bribes' for further support

or list of estimates and it ignores social and cultural realities or the likely human consequences of future policies.⁸

DEVELOPMENT AND GOVERNMENT

Gilbertese attitudes to development are intimately bound up with their attitudes to government (see Chapter 12). Even when government provides the funds to build some community asset such as a medical dispensary, it remains a 'government' building and people think maintenance costs should be met by it. Although such an asset is welcomed it is often felt that wages should be paid for work on government projects rather than relying on the use of voluntary labour. The apathy of the people to government plans and projects reflects a history of paternalism and non-involvement of islanders. Similarly the purpose of taxes is widely misunderstood as contributing more to the wealth of government rather than significantly affecting the welfare of the islands. Because of the huge gulf between government and the outer islands, there is an urgent need for islanders to consider in depth the role of and need for modern services so that as their commitment to them becomes more explicit the purposes of taxation will be more fully understood and accepted. As Betsy Sewell points out: 'the local concept of government is frightening, government is nothing less than an arbitrary, external and thoroughly dictatorial power whose purpose is to force the people into obeying its command' (B.R.: ch.3, Summary). The greatest weakness of all, she suggests, is a real lack of sophistication in understanding the feasibility of planning from a western point of view. Self-government and independence mean little at the national level if islanders do not participate in planning for their own island and are not involved fully in new projects. Such involvement is not only a moral right and practical proposition but is also, she suggests, a political necessity.

Footnote 7 continued

of the plan. It appears this situation might well occur in Tuvalu in 1980. The best way, of course, to involve the people is through an effective representative system of local government.

⁸In terms of Anne Chambers's three alternative development options it is a 'hodgepodge' though depending primarily on a western model of development. For her thoughtful comments on development options see N.R.: ch.14, Alternatives; Summary, suggestions and opinions.

Chapter 3

Population

Demographic facts such as age structure, sex ratio, population density and total population size affect all aspects of island social and economic organization. As the individual island reports have made plain, they also influence local assessments of the quality of life as well as future aspirations. With the land areas and resources of the Gilbert and Tuvalu atolls being so limited, it is not surprising to find that the effects of demography are a concern both to the local residents and to the administration.

POPULATION CHANGE 1931-73

As Table 3.1 indicates, there has been a steady increase in population in both the Gilbert and Tuvalu groups since 1931. Overall the average annual rate of growth in the last 25 years has been just under a steady 2 per cent. On individual islands, however, the rate of population change has been much more erratic, reflecting changes in overseas employment opportunities and migration as well as basic demographic influences. Thus it is not surprising that none of the Gilbert Islands surveyed has experienced any consistent pattern of population change since 1931.

On the other hand, the mean annual growth rate for Nanumea has been steadily declining since 1947. Though the survey islands which experienced a decline in resident population between 1968 and 1973 (Tabiteuea North, Tamana and Nanumea) also show evidence of some decline in fertility, increased rates of out-migration are probably mainly responsible. It is clear that for both groups population growth continues at reasonably high rates. The small decrease in the annual growth rate between 1968 and 1973 is encouraging but it also shows that a vigorous population control program must be continued.

Any realistic assessment of island population must take account of the people who temporarily reside elsewhere but who nonetheless retain, as will their descendants, the right to share in island resources. Table 3.2 presents an estimate of these

Table 3.1

Changes in enumerated island populations, 1931-73

Island	Total enumerated population (official government censuses)					Percentage of annual change between censuses			
	1931	1947	1963	1968	1973	1931-47	1947-63	1963-68	1968-73
Butaritari	1,673	1,824	2,611	2,714	2,971	0.5	2.3	0.8	1.8
Abemama	893	1,174	2,060	2,126	2,300	1.7	3.6	0.6	1.6
Tabiteuea North	-	2,814	3,022	3,303	2,850	1.0	0.4	1.8	2.9
Tamana	989	883	1,254	1,422	1,392	-0.7	2.6	2.7	-0.4
All Gilberts ^a	26,416	27,824	37,973	44,206	47,711	0.3	2.0	3.1	1.6
Nanumea	770	746	1,051	1,076	977	-0.2	2.6	0.5	-1.9
All Tuvalu	3,994	4,487	5,444	5,782	5,887	0.7	1.2	1.2	0.4
Colony total	33,745	36,000	48,780	53,517	57,813	0.4	1.9	1.9	1.6

Source: 1973 totals from *Report on the 1973 Census of Population*. Figures and growth rates for earlier censuses from *Population Census 1973 Provisional Report*.

^aExcludes Ocean Island and Line Islands.

absentee populations for the 5 survey islands. It appears that in 1973 in the Gilbert Islands studied, from 28 to 40 per cent of all potential residents were away from their home islands, while more than 40 per cent of all Nanumeans (including conservative estimates of those in Nauru and other islands not included in the colony census) were similarly absent. The reasons for such residence away are of course varied and include temporary visits to kinsmen on other islands in the group as well as absences to obtain education and medical care. However, employment (or the search for it) constitutes *the* overwhelming reason for residence away from home and explains the large numbers of outer islanders in the capitals of Tarawa and Funafuti, on Ocean Island and in the Line Islands.

On all the islands studied, circular migration has been thoroughly incorporated into the local life-style. Periodic employment off their home islands has become part of the expectations of most males. Most of these overseas absences are temporary and constitute but a segment of the individual's life cycle rather than a permanent alternative to life on his home island. The incentive to such temporary migration is definitely economic. The lure of bright lights and a desire to see new islands seem to play a relatively small part in motivating it. People on all the islands surveyed favoured employment on the phosphate islands of Nauru and Ocean or on ships because of the security of contract employment, the low living expenses and the availability of useful items to purchase. These benefits allow workers to realize a major goal of their employment: to return home with savings and with large items like bicycles, sewing machines, motors, motor-cycles that are difficult or impossible to purchase at home. Partly because of the higher salaries on the phosphate islands, and because it is difficult to realize these goals on Tarawa and also because the lack of contract employment makes work there more of a career choice than a life cycle segment, employment on Tarawa is less favoured. However, on all islands surveyed, people would prefer to stay home if equivalent opportunity were available there. The situation on Butaritari indicates that this preference is a real one. Butaritari offers relatively numerous opportunities for obtaining cash locally through employment and the sale of local foodstuffs. Significantly, it has the lowest percentage of absentees of any island studied.

The population densities shown in Table 3.3 illustrate the severe strain on island resources that could eventually occur if employment opportunities should seriously decline in the future. In that event, those presently employed temporarily overseas would have to return home en masse and the money they now remit to relatives would necessarily cease. Not only would there be more mouths to feed from island resources but there would also be a greater, less flexible dependence on the purely subsistence sector of the economy. This would be particularly serious on islands like Tamana and Nanumea which are already densely populated and which, because of low rainfall and/or periodic droughts, have little possibility of consistently increasing subsistence production.

Table 3.2

Absentee populations, 1973

Island	Total indigenous population	Resident indigenous population regarding island as home island	Indigenous population regarding island as home island enumerated on							Total census population claiming island as home island	Percentage of population claiming island as home island not resident on island	Estimates of additional absentees ^b
			Tarawa	Other Gilbert Islands	Funafuti	Other Tuvalu Islands	Ocean Island	Miscellaneous and others ^a	Total			
Butaritari	2,966	2,646	716	169	5	5	93	16	1,004	3,650	27.51	
Abemama	2,289	1,586	483	120	8	10	52	23	696	2,282	30.50	
Tabiteuea North and South	3,938	3,756	1,477	423	3	5	132	427	2,467	6,223	39.64	
Tamana	1,390	1,301	303	94	0	3	149	42	591	1,892	31.24	c.120
Nanumea	975	927	244	40	66	95	123	14	582	1,509	38.57	c.160

Source: Report on the 1973 Census of Population.

^aIncludes Line Islands, colony ships, and individuals outside GEIC in training or government associated business.

^bSee T.R.: ch.1, Population, N.R.: Table 8.2. Estimates for other islands not available.

Table 3.3
Island population densities based on various estimates of 1973 populations

Island	Area in km ²	Indigenous population regarding island as usual place of residence	Density (persons per km ²)	Resident indigenous population regarding island as home island	Density (persons per km ²)	Total known indigenous population regarding island as home island	Density (persons per km ²)	Total known indigenous population regarding island as home island plus indigenous outsiders resident there	Density (persons per km ²)
Butaritari	13.6	2,941	216	2,646	195	3,650	268	3,970	292
Abemama	27.8	2,320	83	1,586	57	2,282	82	2,985	107
Tabiteuea North and South	38.0	3,964	104	3,756	99	6,223	164	6,405	169
Tamana	4.8	1,437	299	1,301	271	1,892	394	1,981	412 ^a
Nanumea	3.9	994	255	927	238	1,509	387	1,557	399 ^a

Source: Report on the 1973 Census of Population.

^aDoes not include estimates of additional absentees referred to in Table 3.2.

Table 3.4
Age and sex distributions of 5 island populations

Island	Percentage of total population in 1973															Population total													
	0-4		5-9		10-14		15-19		20-24		25-29		30-34		35-39		40-44		45-49		50-54		55-59		60-64		65+		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M		F	M	F	M	F	M	F	M	F	M	F	M	F
Butaritari	8.3	7.5	9.1	8.4	8.7	7.2	4.4	5.0	2.8	3.8	3.1	2.9	2.9	2.5	1.7	2.8	2.2	1.9	1.9	2.3	1.6	1.5	0.9	1.3	1.3	0.8	1.6	1.8	2,971
Abemama	7.8	7.7	8.1	8.3	7.3	7.9	4.7	5.7	3.3	4.2	2.4	3.0	2.2	3.0	2.1	2.3	1.8	1.9	2.2	2.1	1.2	2.5	1.0	1.2	1.5	1.7	1.6	2.0	2,300
Tabiteuea North	6.9	6.9	8.7	8.1	6.9	7.4	3.8	4.2	3.2	3.4	2.3	3.0	3.2	3.4	1.8	2.5	2.6	2.2	1.3	1.9	1.6	2.1	1.6	2.0	1.4	1.3	2.6	3.9	2,850
Tamana	6.4	6.7	8.5	8.2	7.1	6.5	3.9	4.6	4.1	4.8	3.2	3.4	2.0	2.5	1.3	2.2	1.9	3.7	2.1	2.3	1.4	3.4	0.7	1.5	0.9	1.8	1.9	3.2	1,392
Nanumea	5.3	3.4	8.8	5.7	8.4	8.4	4.6	5.6	3.5	3.8	1.8	3.5	1.4	2.6	1.1	3.0	1.4	3.0	2.7	2.9	2.4	2.6	1.0	2.4	1.0	2.3	3.1	4.4	977

Source: Report on the 1973 Census of Population.

AGE AND SEX DISTRIBUTIONS

One of the more important ways that population impinges on island life is in terms of the relative numbers of the various ages and sexes on each island. Table 3.4 tabulates these figures for the 5 islands studied. On all the islands there are generally more women than men in the productive age ranges of 25-44. The main exception to this is Butaritari where men aged 25-34 actually outnumber women of the same ages. In spite of the fact that overseas employment opportunities are almost exclusively male dominated, on the 4 Gilbert Islands studied sex imbalances prove to be not as severe as are often feared. Furthermore, there is no strict correspondence on different islands as to the age groups within which the sex imbalances are most marked. On Abemama, the age range 20-34 shows the most marked preponderance of females while on Tamana this is found between ages 35 and 44. However, on the Tuvalu island of Nanumea, sex imbalances are both much greater in magnitude and consistently spread over the critical productive age range of 25-44. Within these ages there are approximately twice as many women residents on Nanumea as there are men.

The most marked feature of age distribution is the large number of children on all 5 islands. Children under 15 years of age account for 49 per cent of the population on Butaritari, 47 per cent on Abemama, 44 per cent on Tabiteuea North, 43 per cent on Tamana and 40 per cent on Nanumea. It is particularly interesting that the islands with the lower proportions of children in their populations also have a reduced percentage of children in the 0-4 age range, suggesting that there has been a recent decrease in the birth rate. However, as the individual island reports warn, this disparity is partly produced by the fact that it is usually a family's younger children who accompany a worker overseas. Older children are frequently left with relatives, thus increasing their relative proportion in the population. There is also a general correspondence between the number of absentees from each island and the comparative decrease in the number of children in the youngest age group, suggesting that the absence of a large number of males may depress the birth rate. The family planning program can certainly take substantial credit for this reduction in numbers of young children, however, especially on Tamana and Nanumea.

FERTILITY

Another means of assessing recent changes in fertility is provided by the child/woman ratio - the number of children under 5 years of age per thousand women in the reproductive age group (15-44 years). Table 3.5 itemizes these for each of the 5 islands studied. Lowering of child mortality due to improved health care is mainly responsible for increases between 1947 and 1968. The

dramatic decrease apparent especially on the islands of Tamana and Nanumea is mainly attributable to the successful family planning campaign.

Table 3.5
Child/woman ratios for resident populations

Island	Ratio of children less than 5 years per thousand and women aged 15-44 ^a				Percentage of decrease between 1968 and 1973 ratio	Child/woman ratio calculated on basis of all individuals claiming each island as home ^b
	1947	1963	1968	1973		
Butaritari	1,037	1,038	833		-20	769
Abemama	964	941	786		-18	849
Tabiteuea North and South	883	926	759		-18	672
Tamana	466	748	908	615	-32	614
All Gilberts	893	878	691		-21	714
Nanumea	858	763	412		-46	450
All Tuvalu	842	722	484		-33	475
Colony average	608	914	884	676	-24	678

^aSource: Official censuses.

^bUnpublished census tabulations supplied by K. Groenewegen, South Pacific Commission.

As the figures in Table 3.5 suggest, the impact of this campaign has probably varied greatly on different islands. Sewell reported that its effect on Butaritari had been 'almost negligible' in spite of genuine local concern that the island's population has outstripped its resources or soon will do so. By contrast, Geddes, Lawrence and Chambers have noted that on Tabiteuea North, Tamana and Nanumea the use of contraceptives is well established. Nonetheless the actual impact of the family planning program seems to have been much greater on Nanumea than it has been on any of the Gilbertese islands studied, and has been greater in Tuvalu overall than it has been in the Gilberts overall. The child/woman ratio (based on resident population figures) for Nanumea decreased by 46 per cent between 1968 and 1973, while the islands of Butaritari, Tabiteuea North and Abemama experienced only an 18-20 per cent decline. Tamana, in an intermediate position, showed a 32 per cent reduction. However, these figures must be viewed as indicating only the most general trends because they do not take account of the differences in the extent to which women and children are presently absent from their home islands. The last column of Table 3.5 is thus helpful in providing a cross check on the accuracy of the fertility figures for the resident population of each island. It presents the child/woman ratios calculated on the basis of all individuals claiming each island as home and thus is probably more accurate. (Comparative figures from earlier censuses are unfortunately not available.) These data essentially confirm the generalizations set out above regarding the fertility patterns of the islands studied.

It would appear that fertility decline (as measured by child/woman ratios) has been greatest where two important

conditions coincide: the islanders are Protestants and population density is high (see Table 3.6). Both Nanumea and Tamana meet these conditions and both islands show much greater decreases in the child/woman ratio between 1968 and 1973 than hold for their respective island groups on average. The effect of Butaritari's relatively high population density is tempered by its fertile environment and by the reluctance of the majority of its population 'to cross the stand of the Catholic church'. On Tabiteuea North and Abemama, Catholic adherence and relatively low population density clearly contribute to their lower than average reductions in the child/woman ratio. One additional factor must be mentioned for its explanatory relationship to the numbers of very young children found in individual island populations: the numbers of people resident off their home atolls. Though religious adherence and the population/resource balance (as expressed crudely in population density) are clearly crucial, overseas workers can sometimes take some of their children (usually the youngest) with them. This will have an obvious influence on the percentage of children aged 0-4 in the island population. This factor helps explain why the population of Tamana, with its lower proportion of absentees, contains a higher percentage of young children than its greatly reduced child/woman ratio would otherwise lead us to expect.

Table 3.6
Comparison of factors influencing fertility reduction

Island	Percentage of child/woman ratio change 1968-73	Population density per km ² (1973)	Percentage Protestant (1973)	Children aged 0-4 as percentage of total population resident (1973)	Percentage of absentees
Butaritari	-20	220	17	15.8	27.5
Abemama	-18	83	31	15.5	30.5
Tabiteuea North	-18	104	33	13.8	39.6
Tamana	-32	290	99	13.1	31.2
Nanumea	-46	252	96	8.8	39.7

Source: Colony censuses, 1968 and 1973.

WORKERS AND DEPENDANTS

The long-established pattern of circular migration, in which active male adults predominate, and the more recent apparent declines in fertility both affect the quality of outer island socio-economic life. One useful measure of their effects is to compare the sizes of the 'dependent' and 'productive' sectors of the population. The figures set out in Table 3.7 provide a crude assessment of the extent to which the productive members of each island society are burdened by providing for their dependent members.

Table 3.7

Estimate of productive and dependent populations on 5 islands in 1973

Island	Dependent sector as percentage of total population						Productive sector as percentage of total population						Ratio of consumers to producers		
	Children				Persons aged 60 or more	Total		Men aged 15-59	Women aged 15-59	Total ^a					
	Aged 0-4		Aged 5-14												
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
Butaritari	469	15.8	994	33.5	157	5.3	1,620	54.5	637	21.4	714	24.0	1,351	45.5	1.20
Abemama	356	15.5	728	31.7	153	6.7	1,237	53.8	478	20.8	585	25.4	1,063	46.2	1.16
Tabiteuea North	394	13.8	886	31.1	261	9.2	1,541	54.3	605	21.2	704	24.7	1,309	45.9	1.18
Tamana	182	13.1	421	30.2	108	7.8	711	51.1	285	20.5	396	28.4	681	48.9	1.04
Nanumea	86	8.8	306	31.3	105	10.7	497	50.9	195	20.0	285	29.2	480	49.1	1.04

Source: 1973 census.

^aTotals within each line may slightly exceed 100 per cent due to rounding.

All islands generally enjoy a favourable ratio of consumers to producers, with an overall range of between 1.04 and 1.20 dependent consumers per producer. This situation seems to be a fairly favourable one compared with other Pacific countries with high migration rates. The authors of all team reports noted that in the island communities they studied, the supply of labour was generally adequate to meet household needs. While a small number of individual households on each island do suffer some shortage of toddy or (to a lesser extent) fish, the overall situation is satisfactory. Fortunately the effects of any existing shortages of male labour are offset to a large extent by flexible assignments of productive roles to either sex or by obligations to share such scarce items as fish and toddy. It is particularly interesting that although relative numbers of elderly persons, young children, and productive men and women may vary greatly between individual islands, there is marked uniformity in the balance between the productive and dependent sectors of each island population. Furthermore, in those islands where the overall consumer/producer ratio is the most favourable (i.e. Tamana and Nanumea) the critical percentage of productive males is slightly lower.

SOCIO-ECONOMIC IMPLICATIONS

In spite of recent declines in resident populations on some islands, the overall population of both island groups continues to increase. Land resources are a constant and overseas employment opportunities are either stable or declining. Consequently, population growth is probably the most serious issue facing all island communities. Many local people are aware of this but in spite of their genuine concern, population growth often remains an abstract issue that is not fully tied to personal decision making by individuals.

The balance between present population levels and available resources seems adequate on all the islands studied. Residents of more densely populated islands, such as Tamana, Nanumea and Butaritari, make more intensive use of resources than do those on the land-abundant islands of Abemama or Tabiteuea North, but on all islands resources were sufficient to meet local subsistence needs and to provide some cash income through the sale of copra and/or local foodstuffs.

Temporary overseas employment has become as accepted and usual as remittances have become economically necessary. Fortunately, on none of the islands studied has the absence of active men inflicted hardship on their dependants at home. Though some lack of toddy and fish was noted, this can usually be avoided as long as strong social ties exist between kinsmen and neighbours. In general, it is inevitably social factors rather than a lack of

labour that create the few cases of real poverty encountered. On only 1 island, Nanumea, was the sex ratio found to be seriously out of balance. The potentially disruptive social consequences of this appeared to be mitigated by the vigorous women's clubs, whose activities are particularly important to the island's single women.

These generally favourable economic conditions would be drastically reversed if residents presently employed overseas were forced to return home en masse. At present, the land of absentees provides a pool of resources which flexible use rules make available to those remaining. The possibility of a drop in overseas employment (and thus remittance income) poses a threat to the favourable population/resource balance that exists at present. Overseas employment does not provide an adequate safety valve for future increases in population, though it has done so thus far due to generally favourable economic circumstances.

A vigorous family planning campaign is vital to the future welfare of both Gilbert and Tuvalu islanders. Given the geometric nature of population growth, it is particularly important that growth rates be kept as low as possible.

There should be two main foci for the present family planning program. On the islands where contraception has come to be well accepted, priority should be given to follow-up services so that present gains do not evaporate. Especially with the increasing use of Depo-Provera injections, thorough follow-up is vital. With a marked reduction already apparent in the numbers of young children, care must be taken to avoid a fertility backlash. The best way to do this is probably to emphasize the benefits of spacing children rather than simply the need to limit family size. On the other hand, on islands like Butaritari, where the impact thus far of the family planning program has been negligible, renewed attempts must be made to convince islanders of the need to reduce population growth. Sewell feels that for Butaritari this can best be done by a two-pronged campaign to:

- (a) attack the misconception that Catholic policy allows no means of population control whatsoever and
- (b) convince people that the purchase of land overseas to accommodate increasing population is no longer a feasible alternative.

The best method appears to be one of reasoned public discussion, where the detailed arguments can be run through repeatedly until acceptance results. For this to succeed the benefits of limiting family size must be shown to apply to individual families as well as to the whole island or community.

With fewer children, women may find that they increasingly have time on their hands. Women should be encouraged to use this

time to benefit both their individual families and their communities. Women's organizations should be given all possible encouragement and adult courses of interest to women should be expanded.

SOURCES IN ISLAND REPORTS

- A.R.: ch.1, Population; Historical development; ch.9, Employment.
- B.R.: ch.1, The people; ch.2, The household; ch.10, Role of education; Employment; ch.13, The future.
- N.R.: ch.1, General description of Nanumea; ch.2, Households as social and economic entities; Constant change as characteristic of households; ch.8, Population density; Adequacy of land resources; ch.9, Human resources and labour export; ch.11, Coconut consumption; App.8, Specific.
- T.R.: ch.1, The climate; Population; Optimum population and overpopulation; ch.3, Goals of individuals; ch.4, Household size and composition; Households classified; ch.5, Capital goods and employment; ch.7, Coconuts in subsistence; Summary; ch.10; ch.12, Medical Department; ch.13, Population; Land; Palm resources; Land reform; Employment off the island; Development and the future.
- TN.R.: ch.1, Population; Effect of migration; In-and-out migration and employment; ch.3, Discrepancies between islanders' evaluations of land quality and investigator's evaluation; Problems of land use; ch.9, Family planning.

Chapter 4

Lands and land tenure

Two main forms of land tenure are represented in the islands of the survey. On the islands of Butaritari and Abemama a traditional form of aristocratic-commoner landholding pertained while in the southern islands individual landholdings were the basis for membership in various units of social organization.

While, superficially, the 2 northern islands appear to have a common base for land tenure, this is more apparent than real. On Abemama the hierarchical political structures were less entrenched than those on Butaritari so that the system of land tenure since the role of the high chiefly family has declined in importance has rapidly become individualized. On Butaritari, in contrast, the movement away from hierarchically shared rights in land toward individualization has in many cases produced forms of joint ownership and utilization of landholdings.

As land tenure patterns on Abemama have become individualized the importance of landholdings in establishing position within social groupings has diminished. In consequence Abemama has become the 1 island in the survey group where lands may be bought and sold with relative freedom, considerations in determining land value being more economic than social or political.

In contrast, the 3 southern islands share a common form of land tenure and rather similar forms of land utilization. The system described for Nanumea provides a formal pattern of utilization for similar arrangements on both Tabiteuea and Tamana islands. Lands are individually owned but jointly used by the owner and his (or her) household, including children who have married and established households of their own. On the death of the landowner the lands are shared out, usually on the basis of utilization patterns well established prior to the owner's death, and a new cycle of individual ownership-joint utilization develops.

Problems of land fragmentation appear more severe in the southern than in the northern islands. Where ownership of particular *kainga* lands has been an important determinant of social group membership this has provided a compelling reason

for inheriting lands on as many *kainga* as possible. As a result, individual lands have been subdivided between the heirs rather than the total number simply being allotted amongst them. Table 4.1 gives an indication of range in number of lands inherited by individuals on each island. As can be seen, the actual area of land available to each individual is fairly similar for 3 islands though the numbers of land plots owned varies. It should be noted that in this table figures are only generally comparable as sample sizes varied significantly between islands; no account has been taken of caretaker lands available to households except for Nanumea (see N.R.: Table 8.4).

Table 4.1
Landholdings and land use on islands of the survey

Island	Mean no. land plots owned per h/hold	Mean no. plots used regularly per h/hold ^a	Mean size of individual plots (ha)	Total owned land per h/hold (ha)
Butaritari	-	-	-	-
Abemama	6.8	3.1	7.75	-
Tabiteuea North	20	5.5	0.15	3.0
Tamana	10	6	0.24	2.4
Nanumea	-	17.5	0.26	4.5

^a Comparisons of amount of land per household in regular use are difficult, as criteria for 'regular use' varied between islands.

It appears that as traditional social organizational forms become less important the subdivision of lands might be more easily discouraged. However, on many islands previous reasons for subdivision are being displaced by new justifications for old practices. Instead of subdivision to ensure wide-ranging political alliances the same subdivision may now be justified as an assurance that no one heir gains an economic advantage through inheriting more 'good' land than other heirs. If land subdivision is to be discouraged such restatements of old practices must be countered. One possibility for such counteraction may be through the development of courses in land management at the new community colleges. It may well be in the long-term interests of the country to provide some incentive for the attendance of adults at such classes, where problems of land tenure and utilization could be dealt with through discussion and the suggestion of alternative forms.

On none of the investigated islands was land in short supply, though it has been noted in all reports that should all absentee owners return, land pressures would increase dramatically. To the present time, however, most households on all islands have access to more lands than they utilize. On the islands of Abemama and Tabiteuea it appears that less than half the land owned by households is used on a regular basis, much only being utilized in periods when copra commands a high price. This lack of recognized

land scarcity has, on all islands other than Nanumea, resulted in islanders failing to maintain a systematic replanting schedule so that fewer than half the total coconut palms on some islands are bearing regularly, while self-sown palms make up the most common replacements of senile trees.

One of the major disincentives to land improvement is to be found in the facility with which islanders can alter their cash income sources. On all the surveyed islands a flexible cash supply base is maintained. Shortfalls in copra earnings can be made up through remittances from relatives working elsewhere and islanders therefore see no urgency to improve the cash-earning capacity of lands. When copra prices are high individuals utilize coconut resources but when prices are low, rather than being forced into increased utilization of resources, islanders may simply curtail cash purchases or rely more heavily on remittance income. This ability to shift the cash income source serves to obscure the long-term importance of copra income to households and undermines government arguments of the importance to both households and islands in developing land resources. So long as the income base remains flexible in this way it appears unlikely that islanders will recognize the cash income importance of land improvement schemes.

Absentee ownership of lands occurs on all the surveyed islands, with estimates of absenteeism ranging from 15 to 35 per cent of total land owned. In the southern islands it appears usual for family members who previously shared use of the land under a since deceased, older relative to gain access to the lands of absentee owners. On Abemama, where individualization of ownership is less traditional, it seems that lands of absentee owners are less often worked, or worked on a de facto basis. On the island of Butaritari, where joint land utilization is common, the problems of absentee ownership do not arise in the same way. On all other islands problems of improvement on these lands are serious since those who have access to them are unlikely to improve the lands when the owner may return at any time and reclaim them.

It has already been noted that only on the island of Abemama may lands be bought and sold with any degree of freedom. Conversely, only on the island of Tabiteuea are lands not seen as saleable. This would suggest that islanders are becoming increasingly aware of the possibilities of land exchange, whether for cash or some other possession, and that in the future the possibilities of alienation from the land of a section of the population may increase. Although it may appear superficially reasonable to encourage the alienation of lands of absentee owners this may in fact be detrimental to the long-term interests of individual islands. It has been shown that most of those who obtain employment away from their home islands eventually return and settle down. Should such returnees be unable to support themselves

through access to their own lands a new class of 'subsistence poor' may be created. Attempts to provide for land consolidation through encouraging the sale of landholdings, or through developing a more effective land alienation policy dealing with the problems of absentee ownership, should therefore take account of the possibility of creating a new landless class. This, in a largely subsistence based economic setting, may create more problems than those solved.

On all islands the problems of Lands Court backlogs were noted. It would seem that, despite the backlog in cases, the problem is not as serious as it appears. With little real pressure on land there are relatively few individuals in dire need of Lands Court rulings, and those in such a position are able to obtain early hearings. Since the inheritance of lands on southern islands is usually based on well-established utilization patterns, official recognition of title is not of great importance. Recognition of this fact may be one of the factors contributing to the development of such backlogs.

BABAI AND TARO LANDHOLDINGS

The difference between the numbers of pits owned and used is significant on all islands. The ceremonial use of the tubers has become less frequent and this reason for cultivating the plant has therefore become less important. On some islands there is evidence to suggest that, as ceremonial use has become more restricted, sanctions have developed against production above a certain socially approved level. This may well be one of the factors involved in the underuse of pit holdings on all islands in the survey. Many pits have fallen into a state of disrepair and with the exception of Nanumea there seems to be no felt need to upgrade or improve pit holdings, though individual pits may from time to time be renovated. Only on the island of Butaritari does *babai* appear to be a major subsistence food.

SOURCES IN ISLAND REPORTS

- A.R.: ch.3, Land categories and ownership; Range of lands; Land tenure; ch.4, Recognition of quality of lands; ch.6, Utilization of lands; Production and tenure; Unused lands; Applicability of model; ch.14, Resources.
- B.R.: ch.5, The meaning of land; Traditional land tenure; Land registration and commissions; King's quarters of land; Bikati lands; *Babai* pits; Contemporary tenure; Caretaker lands; Sale and leasing of lands; ch.14, Land.
- N.R.: ch.8, Land tenure and inheritance; Size, quality and distribution of privately owned lands; Adequacy of land resources.
- T.R.: ch.2, *Kainga*; Land tenure, Land exchanges, sales and inheritance; ch.7, Exploitation of land resources; Working the land; Clearing and planting; ch.13, Land; Palm resources; Land reform.
- TN.R.: ch.3; ch.4, Land; ch.10, Land.

Chapter 5

Subsistence economy

The 5 islands investigated by the team differ markedly in their physical characteristics, and the pattern of subsistence on each varies accordingly. The comparatively high rainfall of the north and the frequently extreme dryness experienced in the southern Gilbert Islands are the overriding factors, but the character of the lagoon and the surrounding ocean are also important. This chapter will summarize conditions and the prevailing pattern of subsistence on each of the islands, before drawing some general conclusions pertinent to the two groups as a whole.

BUTARITARI

Butaritari's mean annual rainfall of 3,115 mm is quite exceptional in the Gilbert Islands, and provides conditions that are highly favourable for the production of *babai* and breadfruit. *Babai* is a food of deep cultural significance throughout the group, and is a quite indispensable component of all events of social significance. This fact has not been altered with the increasing availability of imported foods. Two major classes of *babai* are recognized: the smaller *katutu* varieties that, once established, grow and multiply around a parent tuber without attention, and the larger, cultivated *ikaraoi* varieties. On Butaritari, *katutu* is a major component of daily diet, while *ikaraoi* is normally reserved for feasts and public occasions. *Ikaraoi* production is a major preoccupation with many households, particularly those with adult children and the subsequent certainty of marriage and other major feasts. *Katutu* and *ikaraoi* are preferably grown in separate pits, with *ikaraoi* given priority where pit space is scarce.

Large tracts in the central part of the island are naturally swampy and are used for *babai* production, and with the exception of two small areas, the large numbers of pits dug all over the island are not subject to the brackishness that renders some pits unusable on other islands. But there are major inequalities in the ownership of pits, and many households feel that their resources are inadequate for current needs. Despite this, only

two-thirds of pits investigated were planted to maximum density. Some of these under-used pits were owned by people away from the island, ownership of others is in dispute. The most common reason, however, is a failure to replant after harvesting. Many of those rich in *babai* are willing to sell some of their reserves, and it is inevitable that a secure opportunity to sell *babai* to Tarawa and other parts of the country would produce a strong incentive to more fully stock some of these under-utilized pits.

Fish is also a major component of the daily diet, and successful fishermen do receive a measure of respect, but success in fishing has never commanded the attention of the people to the extent of success in *babai* cultivation. Most fishing is done in the lagoon, for there is no canoe access to the ocean along almost all of the main southern islet. On the southern tip of the island at Ukiangang there is no true reef, and ocean fishing is possible at any time. Some households in that village now derive a large part of their income from selling fish to households in Butaritari village. Almost any household that has fish in excess of immediate subsistence needs will readily sell the surplus. Many fishermen regularly supply a parent or a relative in need with fish, but generally speaking gifts of fish to neighbours and relatives are quite rare. Reef blasting along the southern islet could greatly expand opportunities for fishing, and is recognized by the people as a potentially invaluable form of aid.

Breadfruit in season is normally abundant, and since almost every household has access to at least 1 tree, it can almost entirely replace *babai* in the diet for the duration of the season. Virtually every household regularly cuts toddy, but few endeavour to cut the surplus necessary for making toddy molasses. Other uncultivated foods, such as pandanus, are sometimes eaten, but they are generally scorned, and a household that relies on these resources on a regular basis is ridiculed indeed.

TAMANA

Conditions on this island provide a stark contrast to Butaritari. It is periodically afflicted by severe droughts, and in an average year the rainfall is only 1,141 mm. It is a reef island, slightly higher above sea level, and without a lagoon. *Babai* cultivation is extremely difficult, and it is rarely consumed at an ordinary household meal. Even as a feast food, bowls of grated *babai* or prepared puddings made from either *katutu* or *ikaraoi* are acceptable in place of the large *ikaraoi* tubers mandatory on Butaritari.

For the people of Tamana the sea is their life-line: when land resources have failed them in times of drought they have

lived on fish and toddy, and fish is regarded as much the most important element of subsistence at any time. Men are expected to give much of their attention to fishing, and a good measure of esteem accrues to a successful fisherman. Deep-sea fishing is the preferred and most common method employed, accounting for almost three-quarters of all fishing expeditions. Because Tamana has no lagoon to provide the kinds of bait often used on other islands, flying fish are caught specifically to use as bait. There is a general understanding among the people of Tamana that flying fish stocks are not limitless, and several measures have been taken to ensure that the flying fish population is maintained. It is quite clear that if a commercial fishing venture is established at Tamana using flying fish as bait, a thorough investigation of the likely consequences for flying fish populations must first be made.

Fish are rarely sold on Tamana – in the cases recorded the fish were sold in an anonymous fashion through the cooperative society store. The surplus catch is normally given to neighbours or kinsmen, particularly those without canoes or able-bodied men. It is normally only these households that regularly exploit the reef fishing zones.

Table 5.1

Percentage frequency of major subsistence foods
consumed on 5 Gilbert and Tuvalu Islands

	Butaritari	Abemama	Tabiteuea North	Tamana	Nanumea
Local protein ^a	40.6	61	20.7	19.7	55.6
<i>Babai</i>	36.6	5.8	1.8	1	15.6 ^c
Breadfruit	17.2	2	- ^b	5.9	27.4
Pandanus	0.4	6.4	20.8	4	3.2

Source: Island reports.

This table excludes coconut, the main subsistence food on all 5 islands.

^aOn all islands this is overwhelmingly fish and other marine life.

^bA figure of 5 per cent is quoted for all fruits, only a small part of which is breadfruit.

^cAn additional 3.4 per cent of all meals include taro.

Despite the enormous emphasis placed on fishing in the economy, fish is actually consumed less frequently than on Butaritari (Table 5.1). Deep-sea fishing, further, either yields the preferred fish in ample quantities – 1 tuna is a lot of

fish — or nothing at all. It was estimated that 40 per cent of all deep-sea fishing expeditions returned with no fish. Fishermen using other methods are virtually assured of catching something.

Households generally cut more toddy than on Butaritari, with a small surplus collected each day to produce toddy molasses. The importance of breadfruit and pandanus is demonstrated in Table 5.1.

TABITEUEA NORTH

The very harsh conditions on Tabiteuea North mean that *babai* is very rarely used for everyday consumption. However, the production of large *ikaraoi* tubers is of major importance and a range of specialized fertilizers and techniques, rarely employed on Butaritari, is widely used to produce tubers of enormous size.

Most fishing from Tabiteuea is conducted in two main areas: trawling for tuna in the strait separating Tabiteuea North and Nonouti is done by sailing canoes, and tuna and other large fish may also be caught in the ocean to the west of the island. These are the popular areas — the resources of the lagoon are utilized when wind conditions are unfavourable, or by men who wish to fish for a short time only. The resources of the lagoon flat are usually exploited by women, children and men too old to regularly fish in the ocean — a pattern that is general throughout the Gilbert Islands. This zone provides a wide range of bait suitable for ocean fishing.

Pandanus plays a much more important role in the economy of Tabiteuea than other islands investigated (see Table 5.1). Pandanus can be preserved in a number of ways, and on Tabiteuea it is prepared according to a wide variety of recipes.

ABEMAMA

The cash economy has made a more significant impact at Abemama than on other islands investigated, yet even here *babai* remains an utterly indispensable and integral part of any occasion with social significance. It is clear however that *babai* has been partially supplanted by imported foods for ordinary household consumption, and large numbers of the island's pits are allowed to lie empty or are poorly attended. *Ikaraoi* supplies are rare in some households.

The cash economy has intruded into fishing as well, with some Abemaman fishermen salting fish caught to sell through relatives to the comparatively lucrative South Tarawa market.

The potential for fishing appears to be considerable in regard to fish resources in the lagoon, but as a major cash-earning activity it is limited by the substantial capital cost of equipment involved if a fisherman is to catch a worthwhile number of fish. Even without this, any potential for a large-scale fishing venture is limited by the nature of Gilbertese society itself. For a man to employ another and thereby assume the role of master is quite impossible. It is possible for members of a single *utu* to work together, albeit reluctantly, but 2 men working together and sharing the catch is certainly the preferred way of doing things. In most cases of households selling salt fish, any fish over and above the household's subsistence needs is salted, and selling is consequently spasmodic.

Abemama's large and rich lagoon is much the most popular area for fishing, and few men venture to the more dangerous ocean grounds unless the lagoon becomes too rough during a westerly. The most important method is by net put down from a canoe. A typical household owns a variety of nets, but ownership of a canoe is not essential, for men can be asked to join a neighbour's canoe, or less typically can borrow a canoe.

A few households on Abemama have now abandoned toddy cutting in favour of drinking sugar and water. Some households produce toddy molasses, but generally not in the quantities produced on Tamana or Tabiteuea.

NANUMEA

Pulaka (babai) has an important ceremonial role in Nanumean life as well, and in a prepared form it is an indispensable component of wedding feasts. For other occasions, taro is equally acceptable, and men normally specialize in the cultivation of one or the other. To successfully cultivate either crop does confer a measure of prestige, particularly at the annual presentation to the pastor, when tubers are publicly weighed to ascertain the heaviest. However the recognition accorded a successful cultivator seems generally greater in the Gilbert Islands. Taro does not grow as well as *pulaka* in an atoll environment, and is less important as a subsistence crop. Both *pulaka* and taro are cultivated only on Lakena Islet, 5 km across the lagoon from the main village.

The most important fish in Nanumean diet is flying fish, usually caught on the south-west side of the island. Fishing for flying fish can only be conducted at night; and in the westerly season, rough weather or moonlight nights prohibit effective fishing. Deep-sea fishing is carried out chiefly for island and family feasts. These fish are generally regarded as delicacies, and any surplus is normally shared with relatives and

neighbours. Fishing with a net or hook and line in the lagoon is less popular, and is normally carried out by old men or those not very adept at ocean fishing methods. Lagoon and reef fish appear at only 30 per cent of meals that contain some fish, indicating a distinct preference for ocean fish.

Gift giving is a dominant feature of Nanumean social life; and fish accounts for the largest proportion of all gifts given. A deliberate effort is made to share fish with relatives or neighbours, particularly if they are without.

Toddy is consumed much less frequently than on any of the Gilbert Islands investigated, appearing in less than one-third of all meals compared with a range of 60-90 per cent for the Gilbert Islands. Rainwater is drunk at meals about as frequently as toddy, but its consumption in the Gilbert Islands is taken as a sign that the household is too lazy to cut toddy. Water is collected in cement cisterns that provide adequate storage under normal conditions, but do not provide enough fresh water during exceptionally dry years. There are several buildings suitable for water collection that could be equipped with cisterns to increase the water supply.

Table 5.1 summarizes the frequency with which the principal subsistence foods are components of household diet on the 5 islands, and is thus one measure of their comparative importance.

The figures for local protein demonstrate differences in fishing methods: the deep-sea fishing of Tabiteuea and Tamana is both less reliable and more subject to the vagaries of the weather than fishing in the lagoon or close to the ocean shore.

To live well in Gilbertese terms means above all to be able to eat well; to be worthy of respect means to provide one's household with a good range of the preferred foods. The distinction often drawn between the cash and subsistence economies is a quite artificial one in the Gilbertese context, for one is not an alternative to the other. Store foods such as rice and flour can largely supplant *babai* and other locally produced starch foods in the daily diet of some households, as has occurred to a considerable extent on Abemama, but a man who cannot adequately cater for the household's requirements in fish or toddy, or who cannot supply *babai* - and store foods - to mark social events is despised indeed. The prestige associated with different spheres of food production varies according to the resources of each island: to pursue ocean fishing is regarded as the most important activity on Tamana, and to succeed implies the highest measure of esteem. *Babai* cultivation and cash earning are carried out with equal vigour on Butaritari; Abemama recognizes cash earning as the most prestigious of economic endeavours, and on Tabiteuea all forms of subsistence and cash enterprise are followed with equal emphasis. The situation on Nanumea is

a little different, for there prestige derives overridingly from contribution to the community in a social sense.

MARKET FOR SUBSISTENCE PRODUCTION

The steadily growing population of South Tarawa represents a potentially important market for various subsistence foodstuffs produced on outer islands. Salt fish from Abemama, *babai* and breadfruit from Butaritari and even preserved foods and salt fish from more distant islands could at once provide an alternative source of cash for people on outer islands and save the use of scarce overseas funds on imported alternatives. Undoubtedly people will buy locally produced food when it is available. Abemama's fish is readily sold and the few Butaritari people who have tried it have found a ready market for *babai*. Clearly a price structure must be established that is competitive with the prices people can obtain in private sales. The chief problem is likely to be the regulation of supply. On Abemama, the availability of fish for sale is spasmodic at the household level, but with a reliable marketing outlet on the island and transport facilities to take produce from the village to this outlet, salting fish would inevitably become more worthwhile. Distance assumes a tremendous importance when transport is limited to a bicycle, and salting the surplus fish caught is a much larger operation if people must also take their small quantities to a distant marketing point. A wind dryer at the marketing outlet could also prove worthwhile.

The marketing of *babai* is likely to produce a different set of problems. On Butaritari only people who considered that they had more than adequate *babai* reserves indicated their readiness to sell, yet there is a real risk of people selling *babai* needed for subsistence purposes when there is an urgent need for cash, perhaps to pay taxes or school fees. Perhaps the best system would involve allocating turns to all those prepared to sell, in groups, to supply a stipulated quantity of *babai*, at once reducing the risk of selling inadvisedly and producing a reasonably constant supply. Given the value of *babai* on Butaritari, it is unlikely that those not rich in *babai* would be tempted by this system unless the price was set at an especially high level. A similar system could well be applied to the marketing of other products, such as preserved pandanus from Tabiteuea. Whatever the produce, incentive is easily killed when prepared and harvested foodstuffs cannot be sold, and it is imperative that any unavoidable delays or cancellations in marketing services be announced as soon as possible.

The prospects for a substantial expansion of the cash economy on any Gilbert or Tuvalu atoll seem at best grim, and under these circumstances it seems absurd that planning for the

rural sector should focus so heavily upon the purely cash economy. A marketing system would inevitably give subsistence resources a greater emphasis and expand their utilization, but there is considerable scope for giving more direct attention to the development of the subsistence economy. Attempts to establish new breadfruit trees on Tamana and Tabiteuea, for instance, are almost constantly thwarted by dry conditions. New planting methods or the provision of well-rooted young plants could well increase the success rate. Reef blasting on Butaritari could vastly expand opportunities for fishing provided undesirable ecological consequences are not likely to occur; and diseases afflicting domestic animals or breadfruit and other subsistence crops certainly warrant much more attention. Nor must efforts to create an exchange network between outer island subsistence producers and consumers in the capitals be limited to market exchange forms. Especially in Tuvalu where reciprocal exchange is so extensive, shipping assistance could be given to families who wish to supply their capital-dwelling relatives with the subsistence foods they hunger for.

SOURCES IN ISLAND REPORTS

- A.R.: ch.3, Land categories and ownership; Range of lands; Resources available on household land; Coconut resources; *Babai* resources; Sea resources; Lands as resource complexes; Variations in household resource complexes; Resources of Baikia; Ienimoa; Nawaia; Roriki; Perception of resources; ch.5; ch.8, Subsistence; ch.14, Subsistence economy.
- B.R.: ch.4; ch.5, The meaning of land; *Babai* pits; Contemporary tenure; Care-taker lands; ch.9, Methodology; Island pattern of activity; Diets; Role of household structure; Role of economic circumstance; Role of social position; Summary; ch.13, Cash and subsistence; Role of subsistence.
- N.R.: ch.8, Land tenure and inheritance; Size, quality and distribution of privately owned lands; Resource use and land maintenance techniques; Adequacy of land resources; Fresh water resources; Land animal resources; Sea resources; Ocean resources; Lagoon and reef resources; ch.9, Traditional skills; Skills in agriculture and fishing; Medicinal skills; Canoe making and building skills; Home and handicraft skills; ch.10, General characteristics; General household lifestyle; Activity pattern details; Sustenance activities; Activity pattern variations; Summary; ch.11; ch.13.
- T.R.: ch.3; ch.5, Access to land; *Babai* pits; Livestock; ch.6; ch.7; ch.9; ch.10; ch.13, Environment; Population; Land; Palm resources; Land reform; The economy; Subsistence sector.
- TN.R.: ch.2, Activity patterns of *mwenga* members; Age group activities within the *mwenga*; ch.3; ch.4; ch.5; ch.10, Copra; Food consumption; Land.

Chapter 6

Copra production

While the coconut palm is clearly the single most important plant in the subsistence economy of the islanders and their only commercial 'crop', the importance of copra in the outer island economy varies considerably, as Table 6.1 shows. The variation reflects in part differences in the relationship between population, resources, and environmental factors, but also differing levels of participation in the cash economy and access to alternative sources of income. All such factors must be taken into account in interpreting the various responses of different islands to external forces such as price changes and government-sponsored incentive programs.

Table 6.1

Copra income as a percentage of total and locally derived annual incomes

Island	Mean household annual income	Derived from local sources	Derived from copra sales ^a	Copra as a percentage of total income	Copra as a percentage of locally derived income
Nanumea	738.00	258.00	245.53	33.27	95.16
Abemama	424.06	156.18	59.67	14.07	38.20
Butaritari	303.16	211.09	92.55	30.53	43.84
Tamana	146.52	27.40	10.33	7.05	37.70
Tabiteuea North	58.00	23.14	18.95	32.67	81.89

Source: Island reports.

^aFigures based on survey period 1971-74. Nanumea figures probably somewhat overemphasize the importance of copra because they include 1974, a year when copra production was nearly seven times the mean 1947-73 figure. Similarly Abemama and Tabiteuea North probably underestimate the importance of copra because depressed production during 1972 dominates data.

THE NATIONAL PICTURE 1953-74

Table 6.2 presents data on copra production for the then GEIC over the period 1953-74. The figures show that, despite considerable fluctuation from year to year, there has been little growth in copra production over the 21-year period. The mean annual production for the 3 years 1953-55 was 6,995 tonnes; for 1972-74 it was 6,661 tonnes. Plantation production has remained around 2,100 tonnes per annum over the same period and year to year fluctuations are somewhat less marked than those in indigenous production. Indigenous production accounts for 74 per cent of total production.

Table 6.2

Annual copra production in the GEIC 1953-74 (in tonnes)

Year	Indigenous producers	Total production	Percentage indigenous of total production
1953	7,828	10,287	76.10
1954	5,862	8,301	70.62
1955	7,295	9,449	77.20
1956	2,946	4,683	62.91
1957	2,426	4,395	55.20
1958	4,041	5,597	72.20
1959	7,996	9,915	80.65
1960	5,536	8,425	65.71
1961	5,943	8,045	73.87
1962	6,061	7,564	80.13
1963	4,117	5,755	71.54
1964	4,573	6,447	70.93
1965	7,801	9,889	78.89
1966	6,273	8,582	73.09
1967	8,822	11,378	77.54
1968	4,404	6,738	65.36
1969	5,142	6,773	75.92
1970	5,513	7,086	77.80
1971	6,560	9,051	72.48
1972	3,259	5,193	62.76
1973	7,229	8,716	82.94
1974	9,494	12,672	74.92
Mean	5,869.14	7,951.86	73.81
SD	1,911.55	2,173.54	
Coefficient of variation	32.57%	27.33%	

Source: Davey and Rogers (1971a); *Annual Abstract of Statistics 1970-74.*

The reasons for the lack of growth in production are not immediately obvious. However, it is probable that the answer lies in a lack of incentive to utilize fully the productivity of existing palms, rather than nut supply in total being a limiting factor in production levels. There is no evidence to support Davey and Rogers's assertion (1971a:2) that stagnation reflects increased consumption by an expanding local population. Rural population has not increased appreciably in the 1963-73 period¹ and migration to urban centres has absorbed most of the natural increase. This, coupled with the growth of urban employment on Tarawa, the remittance incomes it generates and increasing sales of store foods on outer islands, gives little reason to expect, or evidence to suggest, an increased subsistence use of nuts.² The answer is more likely to lie in the costs of and cash returns to production as an incentive, and the effect of alternative or external sources of income on this, as the evidence below will show.

DIFFERENCE IN MEAN PRODUCTION LEVELS BETWEEN ISLANDS

While Table 6.2 indicates considerable variation in annual production for the islands as a group, Table 6.3 reveals large differences between islands in both mean annual production per km² and per capita: ranging from 7 tonnes per km² (Nukufetau) to 44 tonnes for Niulakita,³ and 0.03 tonnes per capita (Nukufetau and Funafuti) to 0.48 tonnes, again for Niulakita. Given the difference in rainfall, population densities and size of islands evident in Table 6.3, such variations are not unexpected. In an

¹In 1963 rural population (i.e. total population less Urban Tarawa and Betio) was 42,679 or 87.49 per cent of total population. In 1973 it was 42,952 or 74.29 per cent.

²Davey and Rogers's (1971a) calculation of subsistence consumption based on Department of Agriculture estimates is excessive. Assuming annual per capita consumption of 0.137 tonnes they concluded that half the annual crop was consumed locally. Estimates of subsistence use (food, livestock etc.) from current studies range from 0.09 tonnes per capita per year (Nanumea) to 0.05 (Abemama) and 0.04 (Tamana). Assuming a mean figure of 0.06 tonnes it can be estimated that some 29 per cent of total nut use (excluding wastage) is directed to subsistence. If this figure is realistic, it strengthens the argument that subsistence use is not likely to be a limiting factor in the expansion of production at present. If it were one would expect a significant negative relationship between population density and copra production per unit area.

³The figures for Niulakita are atypical in that the island functioned as a plantation in pre-war years and was settled by people from nearby islands after World War II. It is still operated as a plantation with proceeds of copra belonging to Niutao people who live there on a rotating basis.

Table 6.3
Mean annual copra production 1947-74

	Mean annual production per km ² 1947-74 in tonnes ^a	Mean annual production per capita 1947-74 in tonnes ^{a,b,c}	Island size in km ^{2d}	Mean popula- tion density 1947-74 per km ^{2b}	Mean annual rainfall to 1970 in mm ^e
<u>Gilbert Islands</u>					
Makin	35.67	0.19	6.7	190	2,943.35
Butaritari	30.81	0.17	13.6	186	3,114.55
Marakei	29.63	0.19	13.5	156	1,886.20
Abaiang	31.56	0.16	16.0	199	2,217.93
Rural Tarawa	37.28	0.27	14.7	136	1,803.65
Maiana	20.76	0.21	15.9	98	1,511.05
Abemama	25.72	0.37	27.8	69	1,488.19
Kuria	17.15	0.30	12.3	57	1,336.55
Aranuka	8.71	0.22	15.5	39	1,021.84
Nonouti	12.47	0.16	29.2	76	1,247.90
Tabiteuea	12.90	0.12	38.0	100	1,125.47
Beru	14.76	0.09	14.7	158	1,216.41
Nikunau	12.25	0.12	18.2	101	1,151.13
Onotoa	8.35	0.08	13.5	138	1,177.04
Tamana	16.46	0.06	4.8	258	1,141.22
Arorae	13.46	0.07	9.5	178	1,403.86
Mean	20.50		16.49	133.69	1,611.64
SD	9.79		8.52	60.30	640.38
<u>Tuvalu Islands</u>					
Nanumea	8.97	0.04	3.9	247	2,791.46
Niutao	14.62	0.05	2.6	302	2,821.94
Nanumanga	28.57	0.14	2.8	200	2,596.64
Nui	17.24	0.09	2.9	186	3,183.64
Vaitupu	18.57	0.12	5.6	151	3,170.17
Nukufetau	7.00	0.03	3.0	204	2,901.70
Funafuti	8.21	0.03	2.8	260	3,677.41
Nukulaelae	23.68	0.14	1.9	171	3,571.24
Niulakita	44.00	0.43	0.5	92	3,505.45
Mean	18.98		2.89	201.44	3,135.52
SD	11.84		1.38	62.56	384.97

^aSource: Copra Board, 1975.

^bPopulation calculated from mean of 1947, 1963, 1968, 1973 censuses.

^cPopulation estimated from relevant census and growth rates in intercensal periods.

^dAreas from 1973 census.

^eSummaries of Climatological Observations (Table of Averages) Fiji, Tonga and WPHC Territories to end of 1970.

attempt to assess the importance of these variables correlation analysis⁴ was carried out between the two standardized measures of production (production per km² 1947-74 and production per capita 1947-74) and the following variables: mean population density (1947-74) which gives some measure of the per capita resources available and also workforce available per unit area; island size, a factor in density and also probably in the physical accessibility of resources; and mean annual rainfall (to 1970) which overseas studies suggest is correlated with palm productivity but not necessarily directly with copra production. At this point of the analysis the variables of price and distance from the market can be ignored because Copra Board policy ensures that all producers receive the same price regardless of location and payment is made at the presentation of the copra at marketing points on each island. Prices are derived from those obtained on export markets less costs of external and internal marketing arrangements. Production by the region as a whole is not large enough to affect world market prices.

⁴Note on statistics

In statistical usage simple correlation analysis seeks to indicate in numerical terms the extent of the relationship between two variables; e.g. in the context of this analysis, whether there is any statistical association between the price paid to the producer and the amount of copra he is willing to sell. The degree of relationship has specified limits which are evident in the correlation coefficient which can range from zero to ± 1.00 . If a change in price were not accompanied by any consistent change in output there would be no relationship and the correlation coefficient would be in the vicinity of zero. However, if each time the price doubled, output doubled the relationship is perfect and the correlation coefficient is $+1.00$. If the output halved each time the price doubled the relationship is still perfect but negative and the correlative coefficient is written as -1.00 . In most real world situations relationships are not perfect and coefficients fall between zero and ± 1.00 and generally the higher the coefficient (either positive or negative) the more strongly are the two variables associated. It must be stressed that the analysis does not prove that change in one variable *caused* change in the other.

Partial correlation analysis seeks to measure the relationship between one variable and another where the possible effect of other specified variables is accounted for; e.g. if it is thought that copra production is influenced by price paid to the producer and rainfall in a preceding period, partial correlation analysis gives a measure of the strength of the relationship between production and price, taking into account any association between rainfall and production and rainfall and price. The coefficients are expressed and interpreted in the same way as simple correlation coefficients.

The results of this analysis point up some issues of quite fundamental and crucial importance for policy making and suggest the need for a major redirection of emphasis in approaches aimed at stimulating copra production. These come out of the analysis of the relationships indicated between levels of copra production, population density and island size.

RESULTS (see Table 6.4)

Mean annual production per km²

No clear relationship is apparent between mean annual production per km² and any of the other variables considered when all islands are taken together. However, a somewhat different picture emerges if the Gilberts and Tuvalu are considered separately, which might suggest that different factors affect production in either group. In the Gilbert Islands there is a significant relationship between mean annual production and mean annual rainfall which simply suggests that, in mean terms, wetter islands tend to produce more copra. It says nothing about variations in annual production with annual rainfall for any one island (this is dealt with in Table 6.6). For Tuvalu alone there appears to be a strong negative relationship between mean population density and mean production per km² which suggests that higher densities are associated with lower production per unit area. However, no great weight should be placed on this because the result is very dependent on the values for one island (Niulakita) and is no longer significant when Niulakita is excluded and the effect of the variables of rainfall and island size are held fixed in the partial correlation.

The most important conclusion to be drawn from this analysis so far is that *the less densely populated islands do not produce more copra per unit area* as one might expect if subsistence consumption were competing for nuts and diverting resources away from copra production.

Mean annual production per capita

When per capita production is considered a quite different picture emerges. Production per capita and population density are the most consistently significantly correlated of the variables considered; for all islands and separately as the Gilberts and Tuvalu. Differences in mean annual rainfall do not appear to be associated with differences in mean annual production per capita. The correlation coefficients obtained suggest that *the more densely populated islands have significantly lower mean per capita production figures.*

Table 6.4

Results of simple and partial correlations between mean annual production per km², population density, mean annual rainfall and island size

	<u>Production</u>	<u>Pop. density</u>	<u>Rainfall</u>	<u>Island size</u>	
<u>Gilbert Islands and Tuvalu</u>					n = 25
<u>Simple correlation coefficients</u>					
Production	1.0000				
Pop. density	-0.0956	1.0000			
Rainfall	0.3084	0.5145	1.0000		
Island size	-0.1059	-0.6136 ^a	-0.6901 ^a	1.0000	
<u>Gilbert Islands and Tuvalu</u>					n = 25
<u>Partial correlation coefficients with 2 remaining variables fixed</u>					
Production	1.0000				
Pop. density	-0.3955	1.0000			
Rainfall	0.3141	-0.0242	1.0000		
Island size	-0.0349	-0.3000	-0.5317 ^a	1.0000	
<u>Gilbert Islands</u>					n = 16
<u>Simple correlation coefficients</u>					
Production	1.0000				
Pop. density	0.3803	1.0000			
Rainfall	0.8151 ^a	0.4514	1.0000		
Island size	-0.2343	-0.5755 ^a	-0.3100	1.0000	
<u>Gilbert Islands</u>					n = 16
<u>Partial correlation coefficients with 2 remaining variables fixed</u>					
Production	1.0000				
Pop. density	-0.1080	1.0000			
Rainfall	0.7697 ^a	0.0220	1.0000		
Island size	0.1267	-0.5117	-0.0897	1.0000	
<u>Tuvalu</u>					n = 9
<u>Simple correlation coefficients</u>					
Production	1.0000				
Pop. density	-0.7429 ^b	1.0000			
Rainfall	0.2142	-0.3714	1.0000		
Island size	-0.5798	0.2421	-0.3547	1.0000	
<u>Tuvalu</u>					n = 9
<u>Partial correlation coefficients with 2 remaining variables fixed</u>					
Production	1.0000				
Pop. density	0.2560	1.0000			
Rainfall	-0.4412	0.1093	1.0000		
Island size	-0.5266	-0.2622	-0.4023	1.0000	
<u>Tuvalu without Niulakita</u>					n = 8
<u>Simple correlation coefficients</u>					
Production	1.0000				
Pop. density	-0.4847	1.0000			
Rainfall	-0.1248	-0.1919	1.0000		
Island size	-0.1390	-0.3222	-0.1699	1.0000	

^aSignificant at the 99 per cent confidence level.

^bSignificant at the 95 per cent confidence level.

Table 6.4
Results of simple and partial correlations between mean annual
 production per capita, population density, mean
 annual rainfall and island size

	<u>Production</u>	<u>Pop. density</u>	<u>Rainfall</u>	<u>Island size</u>
<u>Gilbert Islands and Tuvalu</u>	<u>Simple correlation coefficients</u> n = 25			
Production	1.0000			
Pop. density	-0.6666 ^a	1.0000		
Rainfall	-0.0558	0.5145 ^a	1.0000	
Island size	0.2105	-0.6136 ^a	-0.6901 ^a	1.0000
<u>Gilbert Islands and Tuvalu</u>	<u>Partial correlation coefficients</u> with 2 remaining variables fixed n = 25			
Production	1.0000			
Pop. density	-0.7315 ^a	1.0000		
Rainfall	0.3350	0.3475	1.0000	
Island size	-0.1194	-0.3693	-0.4772 ^b	1.0000
<u>Gilbert Islands</u>	<u>Simple correlation coefficients</u> n = 16			
Production	1.0000			
Pop. density	-0.5654 ^b	1.0000		
Rainfall	0.1743	0.4514	1.0000	
Island size	0.2093	-0.5755 ^b	-0.3100	1.0000
<u>Gilbert Islands</u>	<u>Partial correlation coefficients with 2</u> remaining variables fixed n = 16			
Production	1.0000			
Pop. density	-0.7149 ^a	1.0000		
Rainfall	0.5819 ^b	0.6157 ^b	1.0000	
Island size	-0.1632	-0.4709	0.0398	1.0000
<u>Tuvalu</u>	<u>Simple correlation coefficients</u> n = 9			
Production	1.0000			
Pop. density	-0.7912 ^a	1.0000		
Rainfall	0.3490	-0.3714	1.0000	
Island size	-0.6089	0.2421	-0.3547	1.0000
<u>Tuvalu</u>	<u>Partial correlation coefficients with 2</u> remaining variables fixed n = 9			
Production	1.0000			
Pop. density	-0.8353 ^b	1.0000		
Rainfall	-0.1611	0.3251	1.0000	
Island size	-0.7093	0.5303	0.3490	1.0000
<u>Tuvalu without Niulakita</u>	<u>Simple correlation coefficients</u> n = 8			
Production	1.0000			
Pop. density	-0.7004 ^b	1.0000		
Rainfall	0.0267	-0.1919	1.0000	
Island size	0.0290	-0.3222	-0.1699	1.0000
<u>Tuvalu without Niulakita</u>	<u>Partial correlation</u> coefficients with 2 remaining variables fixed n = 8			
Production	1.0000			
Pop. density	-0.7489	1.0000		
Rainfall	-0.2443	-0.3528	1.0000	
Island size	-0.3443	-0.4364	0.6876	1.0000

Reconciliation of these results needs the recognition of several important factors. Firstly, under present conditions island size has no limiting effect on population size. Densities vary considerably but larger islands have significantly lower population densities than smaller ones. Secondly, populations are concentrated in villages and not spread uniformly over the island. Given the present transport technologies this means that not all areas are uniformly accessible and hence the costs incurred and the returns from exploiting resources in all areas are not equal.

The correlation analysis results and the points made above combine to suggest a situation where each village is surrounded by a zone of intensively used land. The width of this zone does not necessarily bear any relation to the size of the village but rather reflects the ability and willingness of the villagers to travel to collect nuts, to transport the nuts back to the village for processing, or to process nuts in the bush, leaving the split nuts to dry in the bush with the greater possibility of weather damage or theft. In this way the costs of production rise with distance from the village and a point must be reached where the marginal cost of production exceeds the return and this marks the limit of the actively exploited area regardless of resources available beyond this limit. Individual reports suggest the existence of such a limit (see A.R.: ch.6, Utilization of lands; TN.R.: ch.3, Problems of land use; B.R.: ch.6, Strategy in copra production) although on the small island of Tamana this did not seem to apply (T.R.: ch.7, Exploitation of land resources). A copra producer would only be persuaded to utilize more distant lands if the price rose, making the additional effort worthwhile, or if some new technology in processing, transportation or marketing were to substantially change the costs of production. Under present conditions on the smaller islands the actively exploited area might approach the total available area. In Tuvalu, where the largest island is only slightly larger than the smallest Gilbert Island, production per km² as well as per capita diminishes with increasing population density, but even here there is some indication (significant only at the 90 per cent level) that production per km² is inversely correlated with island size (i.e. larger islands produce less per km²). The critical factor is that the larger islands do not support significantly larger populations, but that people on these islands are dispersed in more villages, many of which are smaller than the villages on small islands. In combination this reduces competition between individuals for resources within the actively exploited zone and contributes to the higher per capita production.

The policy implications of these findings are manifest and recognition of them is critical to the successful implementation of any scheme seeking to stimulate copra production. Most schemes to date, and the Coconut Replanting and Improvement Schemes in particular, have concentrated on the improvement of

the individual's or group's palm resources. The analysis above suggests that land at least is not a limiting factor at present, and indicates potential for a greater response in the short and medium term from a program which seeks to change the cost structure of production and encourage more complete utilization of existing resources. The Coconut Improvement and Replanting Schemes may improve the quality and area of plantings but in no way ensure that the nuts produced will be made into copra. On most islands existing resources are not being fully utilized and this probably arises because the marginal costs of production rise steeply with distance. Government policy could influence the cost structure in several ways:

- (a) By influencing transport costs through road improvement, encouraging cooperative societies to purchase trucks and run carrying services on the larger islands and by making handcarts more readily available on all islands. The Butaritari Report already makes a plea for this and states that on Butaritari the greatest stimulus to production levels over the last few years was the introduction of the cooperative society truck (ch.6, Strategy in copra production).
- (b) By providing more copra-buying outlets, thereby reducing the distance over which copra must be carried to a buying point.
- (c) By introduction of price incentives whereby an individual would receive higher prices or a larger bonus for additional production.
- (d) Consideration might also be given to encouraging people to live on their own lands away from the villages. This goes against tendencies in play over the last century, is likely to cause drastic changes in patterns of social interaction, and without considerable investment in improving transportation and mobility might not have the desired effect and might simply reduce people's satisfaction with life in general.

The line of approach indicated here is likely to yield results in the short and medium term and to raise the level of utilization of present resources. In the longer term it may prove necessary to supplement these resources by introducing coconut replanting schemes, particularly in Tuvalu and the more densely populated Gilbert Islands, but if a landholder feels he can get an economic return from more remote lands because of lower transport costs he may even choose to do this without further incentive.

OTHER FACTORS IN MEAN PRODUCTION LEVELS

The correlation analysis did not indicate any clear relationship between copra production and any of the other variables

considered for the island group as a whole. However, when the Gilberts and Tuvalu were considered separately rainfall appears as a factor in copra production in the Gilberts. Mean annual rainfall is positively correlated with mean annual production per capita and per km². No similar significant relationships exist for Tuvalu. Thus the wetter islands in the northern and central Gilberts have higher mean levels of copra production than the drier islands to the south and this probably reflects differences in palm productivity. However, it should be stressed that these results apply only to differences in mean production levels between islands; they do not imply that rainfall variation is necessarily an important factor in copra production fluctuations on any one island over time, as the following analysis shows.

YEAR TO YEAR FLUCTUATIONS ON INDIVIDUAL ISLANDS

The data presented above indicate quite large differences between islands in mean production levels. However, Table 6.5 shows that such mean levels have little reality and that production on individual islands varies greatly from year to year. The coefficients of variation suggest that production in the southern Gilberts and Tuvalu is more variable than that in the central and northern Gilberts. In an effort to gain insight into the pattern of variation in production, correlation analysis was carried out between annual production and the two quantifiable and readily accessible variables thought likely to influence year to year production. These were price and rainfall (see Table 6.6). Since it is nearly 2 years between the initiation of the inflorescence and the falling of the mature nut (Small, 1972:44) and deficiency in the early stages of development (particularly at the time of the setting of the fruit) is thought to have the greatest effect on production, production and rainfall in the year preceding were correlated. This gave results which approached those expected, whereas correlation between production and rainfall in the same year or 2 years preceding gave no significant results. The index of price used was the mean of the month-end prices for the year. Again, this price applies to all sellers and price is independent of the volume of production.

RAINFALL AND PRODUCTION

On only 2 islands, Tamana and Arorae, were annual production and rainfall in the year preceding significantly correlated (i.e. at the 95 per cent probability level or above). On Tamana rainfall in the year preceding explains some 45 per cent of the variation in production; on Arorae it explains 64 per cent. Both islands are situated in the lower and more variable rainfall zone of the southern Gilberts, but as Table 6.3 shows, neither are among the very driest. The critical factor would seem to be the

Table 6.5
Copra production in tonnes 1963-74

Island	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	Mean 1963-74	Coefficient of variation ^a
Makin	190	291	208	204	178	167	302	189	239	201	192	67	202.33	29.72
Butaritari	439	452	366	412	419	316	578	310	554	583	689	242	447.08	29.68
Marakei	442	440	439	481	465	361	359	332	414	415	510	354	417.67	13.39
Abaiang	551	596	580	592	640	446	245	320	651	171	752	496	503.33	34.98
Tarawa	406	629	522	484	739	396	320	423	718	395	451	597	506.67	26.77
Maiana	211	323	396	309	615	233	219	308	304	142	478	524	338.50	41.51
Kuria	191	144	291	222	285	164	246	198	253	202	258	344	233.17	24.65
Aranuka	87	70	178	156	221	111	108	133	162	61	163	251	141.75	44.15
Abemama	682	696	1,117	775	1,046	600	822	844	899	518	825	1,350	847.83	27.40
Nonouti	90	76	678	516	788	203	187	470	361	18	503	1,096	415.50	78.53
Tabiteuea	260	128	993	668	825	305	339	140	479	119	867	1,381	542.00	74.67
Onotoa	56	24	266	174	320	140	121	n.a.	141	17	177	420	142.55 ^b	84.30
Beru	110	33	407	303	512	213	216	233	287	116	275	548	271.08	57.69
Nikunau	143	34	364	254	525	261	248	222	303	127	374	452	275.58	50.60
Tamana	4	24	155	62	226	75	125	n.a.	137	15	207	327	123.36 ^b	81.93
Arorae	11	1	167	123	313	40	64	138	96	1	329	333	134.67	94.08
Total Gilberts	3,873	3,961	7,127	5,735	8,117	4,031	4,499	4,260 ^c	5,998	3,106	7,050	8,782	5,661.73 ^b	33.79
Nanumea	1	33	91	33	60	8	69	20	29	2	10	202	46.50	121.40
Niutao	2	41	97	54	116	36	81	34	31	5	12	97	50.50	76.49
Nanumanga	35	58	62	31	89	14	70	58	87	23	9	62	49.83	54.11
Nui	50	71	60	70	74	34	80	15	57	7	3	38	46.58	57.92
Vaitupu	20	157	109	96	121	68	109	54	115	35	12	80	81.33	54.76
Nukufetau	3	70	30	25	36	30	47	24	23	-	-	14	25.17	80.71
Funafuti	13	22	26	11	15	11	39	5	26	-	-	-	14.00	89.90
Nukulaelae	28	68	53	72	43	74	46	42	56	3	-	31	43.00	56.64
Niulakita	27	20	23	26	12	29	21	16	35	27	19	35	21.67	37.40
Total Tuvalu	179	540	551	418	566	304	562	268	459	102	65	559	381.08	49.88
Total group	4,052	4,501	7,678	6,153	8,683	4,335	5,061	4,528 ^c	6,457	3,208	7,115	9,341	6,053.09 ^b	33.08
Mean month-end price per tonne	63.50	71.50	87.17	70.73	67.20	69.87	78.40	89.60	75.60	46.67	59.73	110.13		

Source: Davey and Rogers (1971a); *Annual Abstract of Statistics 1970-74*.

^aCoefficient of variation = $\frac{\text{standard deviation}}{\text{mean}}$

^b1970 excluded.

^cTamana and Onotoa excluded.

Table 6.6

Correlation coefficients for correlation analysis between production, rainfall and price on individual islands 1963-74

Island	Simple correlations			Partial correlations		
	Rainfall production	Price production	Rainfall price	Rainfall production price fixed	Price production rainfall fixed	Rainfall price production fixed
Makin	-0.3665	-0.5049	0.0728	-0.3831	-0.5154	-0.1398
Butaritari	-0.4033	-0.6876 ^a	0.3656	-0.2248	-0.6342 ^b	0.1329
Marakei	0.1410	-0.6207 ^c	0.0878	0.2503	-0.6420 ^c	0.2259
Abaiang	0.4790	-0.3430	-0.5394	0.3716	-0.1145	-0.4550
Tarawa	0.1788	0.2163	0.0987	0.1621	0.2029	0.0625
Maiana	0.5555 ^c	0.3746	0.0916	0.0891	0.3910	-0.1511
Kuria	0.0646	0.6359 ^c	-0.2464	0.2958	0.6740 ^c	-0.3733
Aranuka	0.3323	0.4998	-0.1738	0.4914	0.6002 ^c	-0.4160
Abemama	-0.0081	0.7967 ^a	-0.0685	0.0770	0.7980 ^a	-0.1026
Nonouti	0.1921	0.6124 ^b	-0.3258	0.5240	0.7275 ^b	0.0843
Tabiteuea	0.1339	0.4941	-0.1331	0.2317	0.5212	-0.2313
Onotoa	0.4129	0.3248	0.2582	0.3600	0.2480	0.1441
Beru	0.4934 ^c	0.5726 ^b	0.2183	0.4604	0.5476 ^c	-0.0900
Nikunau	0.4177	0.5730 ^c	0.5131	0.1758	0.4599	0.3677
Tamana	0.6694 ^a	0.6781 ^a	0.2932	0.6697 ^b	0.6785 ^b	-0.2944
Arorae	0.8038 ^a	0.4035	0.0095	0.8743 ^a	0.6653 ^b	0.0799
Nanumea	-0.0688	0.8172 ^a	0.2495	-0.4886	0.8637 ^a	0.5317 ^c
Niutao	0.0893	0.5910 ^b	0.1044	0.0344	0.5872 ^b	0.0642
Nanumanga	0.3394	0.4726	0.3470	0.2122	0.4022	0.2252
Nui	0.2343	0.1942	0.2209	0.2001	0.1502	0.1840
Vaitupu	-0.2112	0.3837	-0.3588	-0.0853	0.3375	-0.3077
Nukufetau	-0.1355	0.0526	-0.0519	-0.1330	0.0461	-0.0452
Funafuti	0.2445	0.1046	0.1479	0.2328	0.0714	0.1269
Nukulaelae	0.2089	0.1057	-0.2519	0.2448	0.1673	-0.2817
Niulakita	0.2339	0.1848	0.0118	0.2358	0.1872	-0.0328

^aSignificant at the 99 per cent confidence level or above.

^bSignificant between 95 and 99 per cent confidence level.

^cSignificant between 90 and 95 per cent confidence level.

combination of low rainfall and high population densities. It is likely that proportionately more of the total crop on these islands is diverted into subsistence use which is relatively inflexible and thus any fluctuations in palm productivity are translated directly into fluctuations in copra production. From a policy point of view these islands, Beru, Onotoa and possibly Nikunau should be prime targets for a sensitive and selective coconut improvement scheme aimed to improve palm resources in the future without impairing present resources.

PRICE AND PRODUCTION

In contrast to the results for rainfall and production, price and production are significantly correlated for 7 of the 25 islands, and a further 4 are marginally so (i.e. at between the 90 and 95 per cent probability level). The most interesting feature of the results is the consistent pattern evident in the coefficients within the Gilberts. The differing responses indicated here suggest basic differences in the character of island economies and the part copra plays in them. They also coincide well with the picture of the economies painted in the individual reports. The partial correlation coefficients for the 3 northernmost islands are negative (2 are significant at the 90 per cent level or above). The response to a price rise here would be to cut back production. The next 3 islands, Abaiang, Tarawa and Maiana, all have very low coefficients indicating very little relationship between price and production. The remainder of the Gilbert Islands are positively correlated (7 at the 90 per cent level or above), indicating that a rise in price would stimulate production.

The reason for the negative response to price change on Butaritari probably lies in the nature of the Butaritari economy. Remittance income makes up a smaller proportion of mean household income than on the other islands studied (Table 6.1). More importantly, the whole thrust of economic endeavour is to achieve 'an acceptable general standard of living, rather than one geared to the purchase of specific items. It is a standard below which virtually no people are prepared to fall, and above which few endeavour to rise, unless this can be done with relatively little effort' (B.R.: ch.6, Strategy in copra production). Thus when prices are low Butaritari people are forced to produce more to maintain the standard to which they aspire; when prices are high the same standard can be achieved from less effort and so production falls. It is possible that similar production strategies apply on Makin and Marakei.

In contrast, both the Abemama Report (ch.7, Role of luck and unforeseeable factors) and the Tamana Report (ch.8, Income variation over time) suggest economies lacking in such aspirations

and production strategies. They do not seek to achieve particular levels of consumption and instead adopt an opportunist stance to economic endeavour. If prices are good, and money from other sources is not readily available, production occurs because money is easy to get. If prices fall production is curtailed and more reliance is placed on remittance income or, if this is not available, there is a retreat into the subsistence economy. This pattern is probably characteristic of most islands in the central and southern Gilberts as well as Nanumea and Niutao, and has the effect of accentuating fluctuations in copra production. While copra income maintains this position in the total island economy the need for replanting and improvement of coconut resources will not be seen as pressing. In fact the large subsidies offered by the Coconut Improvement and Replanting Schemes were seen as just one of these alternative income sources.

No studies can be drawn on to explain the lack of response to price in the islands around Tarawa; it is probable that proximity to Tarawa and to alternative employment is an important factor.

PRESENT SITUATION AND POLICY IMPLICATIONS

Both sets of analyses point to similar conclusions as to the relationship between production and resources. Since there is no significant relationship between per capita land resources or rainfall and production it must be argued that neither resources nor their productivity is a limiting factor in production on most islands within the group. Similarly, the fact that production can be expanded substantially in response to price increases and independently of rainfall must mean that significant unutilized or under-utilized resources exist. Thus a rise in price alters the payoff between costs of production at the margin and returns, and stimulates either an increase in intensity of use of an area or an expansion in the area utilized. This points to the inescapable conclusion that increasing copra production in the immediate future is a problem of motivating people to utilize existing resources more fully and consistently and not necessarily one of immediately expanding the resource base. The conclusions relate particularly to the larger islands of the Gilberts group. They may apply with less certainty to the drier and densely populated islands of the southern Gilberts and to Tuvalu.

If motivation is accepted as the core of the problem two avenues of approach to the solution are indicated: firstly through price which influences the return to the grower for a given labour input; and secondly through the cost structure whereby efforts are made to change the costs of production to the grower for additional units of production.

Price is obviously important on most islands. The low prices prevailing during 1972 saw very low production levels on all but the northernmost islands. The more detailed information presented in individual reports suggests that once price drops below 3 ¢/lb the returns to effort are too low and there is little general interest in production. On Butaritari only was the commitment to cash use strong enough to give rise to an increase in production as a result of the price fall. This would indicate that under present total income patterns, if the government is committed to price support as a means of ensuring a reasonable level of production, the price cannot be allowed to fall below 3 ¢/lb. It is more difficult to identify 'trigger prices' which once reached could predictably lead to substantial increases in production. The high prices prevailing during 1974 saw enormous production increases, but it is by no means certain that consistently high prices would lead to sustained high levels of production. One cannot dismiss the deprivation and frustration of low copra prices during 1972 and 1973 as a factor in the response to price increases. The novelty of earning money easily may not persist indefinitely, particularly where present wants are not infinitely expansible and are relatively easily satisfied, and where social pressures militate against conspicuous consumption. It is probable that a society would stabilize at an accepted standard of living, as is evident on Butaritari, and that further price increases would not stimulate increases in production unless new wants are created. Here the range of goods stocked by stores could be a stimulus to further increases in production. The increased quantity and range of store goods available on the outer islands after 1967 may have had some effect in this respect (A.R.: ch.6, Coconut production), but there is no widespread evidence for this in the annual production figures for the islands as a whole (see Table 6.2).

Price or bonus payments might be used in a more selective manner to provide an incentive to achieve particular levels of production on either an individual or an island-wide basis. This method could be implemented by means of a sliding price or bonus scale with higher returns being granted once particular production levels have been reached. Higher bonus payments appear to have been the basis of an incentive scheme introduced on a few islands in 1967 (A.R.: ch.6, Coconut production; B.R.: Fig. 6.1). Documentation is insufficient to allow an evaluation of the scheme's success. All that can be observed is that the scheme does not appear to have persisted for long and does not appear to have greatly stimulated production on Abemama or Butaritari.

There appears to be considerable scope for changing the present cost structure and thereby encouraging more intensive and continuous use of existing resources. Distance and other difficulties in getting copra to buying points seem to be major disincentives to production. The Butaritari experience (B.R.: ch.6, Strategy in copra production) shows that there is a demand

for improved transport and that this can be a stimulus to production. On the larger islands improvements to roading and the introduction of a truck service, possibly under the auspices of the cooperative society, would make previously remote areas more accessible and enable the resources there to be more effectively utilized. It is also probable that the introduction of more basic and simple transport improvements would result in considerable gains in production. If small, sturdy handcarts were readily available through the island stores the effort involved in transporting nuts or processed copra back to the village or buying point would be lessened and the returns improved. It is possible that an increase in the number of copra-buying points would have a similar effect. These need not be continuously manned as long as they are manned at regular and widely publicized intervals, and they need not necessarily be associated with a goods outlet.

Finally, because motivation is probably more important than resource availability as a limiting factor in production, response to copra production as a source of income must be seen in the context of total income received from all available resources. On none of the islands studied does copra make up more than 34 per cent of total income (see Tables 6.1, 7.1) and on all islands in normal years except Butaritari copra income was considerably less than that received from remittance incomes. While these large and external sources of income remain such an important and expected part of economic strategy, consistent response to production opportunities cannot be expected, nor can one expect a sustained and concerted response to the need to husband and expand resources for copra production. This need may be felt by government officials but not necessarily by the people themselves.

COPRA RESOURCES AND THE FUTURE

The discussion so far has concentrated on the use of present resources under current economic conditions, and while there is little reason for concern on most islands, except perhaps for Tuvalu and the drier, more densely populated of the southern Gilberts, there is no surety that these conditions can be projected into the future. The quality of resources will alter with time; pressure on resources could increase as a result of population growth especially if the drawoff to urban centres declines with declining rates of expansion of employment; and perhaps most important of all is the imminent decline in employment on Ocean Island and then Nauru, which must be translated into declining remittance incomes, increased demands for locally generated income, and repatriation of employees. All these factors point to increased demands for coconuts for cash and subsistence use. Concern has been expressed that resources may not be adequate to meet future demand.

Table 6.7 summarizes the available data on palm resources. On most islands mean total palm densities exceed the optimum of 215 per ha suggested by the Department of Agriculture, although on Butaritari only does the density of bearing palms come up to the suggested optimum. It must be remembered that these are mean figures and in reality densities on individual islands vary considerably. Densities on Tamana are consistently lower than on other islands and this probably reflects more adverse environmental conditions — the greater elevation of much of the island and lower rainfall. This is also reflected in fewer senile palms and a higher proportion of young palms yet to come into production, some 73 per cent of which were planted. Because palms on the drier islands are killed by periodic droughts, a smaller proportion survive to reach senility and replanting following drought is a fact of life.

Table 6.7
Palm resources on study islands

Island	Density		Productive status as percentage of total trees		
	Total trees per ha	Bearing trees per ha	Senile	Bearing	Yet to bear
Butaritari ^a	277	212	7.86	76.43	15.71
Abemama ^b	321	152	26.68	47.35	25.97
Tamana ^c	137	63	3.73 ^d	45.99	50.28
Nanumea	n.a.	173 ^e	n.a.	n.a.	n.a.

^aFrom B.R.: Table 6.1. Based on palm counts of 25 0.1-acre plots at approximately 0.5-mile intervals between Ukiangang and Tanimainiku.

^bFrom A.R.: Table 3.4. Based on palm counts of 32 0.1-acre plots randomly selected from within the main coconut-growing area.

^cFrom T.R.: Table 5.2. Based on palm counts on 58.37 ha of bushland on 150 household plots.

^d299 senile palms not recorded in T.R.: Table 5.2.

^eFrom N.R.: Table 8.5. Relates to mature palms counted on about 40 acres of land belonging to 4 households.

On Abemama only do non-bearing mature palms make up a considerable proportion of total trees. Because these are balanced but not exceeded by trees yet to come into production, there are grounds for some concern. However, the greatest problems are not readily evident in the table and relate to the substantial replantings made in compensation for palm destruction during World War II. On Butaritari this amounts to 28 per cent of the area mapped; on Nanumea some 30 per cent of the area of present coconut bush is post-World War II replanting. These are large, contiguous, regu-

larly spaced stands of uniform age extending over many individual landholdings. At approximately 30-35 years of age they now have high productivity, but declining yields can be expected in another 25-30 years and the fact that all trees will enter this phase at approximately the same time means that replanting on a major scale will be necessary and an individual could lose production entirely from these lands until full bearing is reached again. Considerable hardship could arise if an individual had a large part of his landholdings in these areas.

IMPROVING THE RESOURCE BASE AND ITS UTILIZATION

Three areas have traditionally received major attention in this field: land reform which supposedly encourages better husbanding of land, absentee ownership, and direct assistance programs aimed at stimulating replanting.

Land reform

The land tenure system and the fragmentation and unequal distribution of land which results from it are frequently cited as a disincentive to expanded production.⁵ Usually no evidence is provided to support the contention and such statements fail to take account of more immediate determinants of production such as price, the need for money, alternative sources of income, and such disincentives to production as transport costs. In addition, such a viewpoint fails to make the distinction between land access and land ownership. All reports stress that while distribution of registered title to lands may be unequal, very few households have difficulty in getting access to land enough for their needs through manipulating kin and social obligations. Such mechanisms are embedded in the social organization and value systems of the people, whereas the 'official' conceptions of land 'ownership' and exclusive rights to land are both foreign and inappropriate. The present system is flexible and suited to the society in which it exists. The reasons for non-use of land do not relate solely or even primarily to land ownership and so any land reform program which sought to redistribute or reaggregate land would not necessarily give rise to an increase in production. If the land tenure system was manifestly unsuitable and in conflict with customary expectations, as appears to have been the case on Butaritari between 1922 and 1954 (see B.R.: ch.5, Land registration and commissions), there would be some grounds for reform, but this was not found to be the case on any island studied and no report recommended any modification to the land tenure system in the interests of more efficient use of land.

⁵E.g. F22/12:3 quoted in TN.R: ch.3, Problems of land use and Agriculture Department files quoted in T.R.: ch.12, Agricultural development and land reform.

Absentee ownership

Several reports expressed concern at the status of absentee-owned land. The Abemama Report (ch.6, Unused lands) suggests that when used this land was not used less intensively by caretakers than other lands; however many lands of both absentees and residents were scrub covered. The longer-term productivity of such lands could be impaired by the fact that there is, in custom, a positive discouragement to caretakers to improve such lands by replanting. On Tamana at least such action would bring censure because planting implies ownership of land (T.R.: ch.5, Access to land). Similarly, on Butaritari joint ownership, although enabling very efficient use to be made of existing resources, tends to mean that lands are maintained rather than improved (B.R.: ch.5, Contemporary tenure). If there is a prospect of permanent urban populations developing on Tarawa it would be worthwhile to encourage kin groups, Old Men's Councils or even Island Councils to consider ways in which the productivity of absentee-owned lands could be enhanced without bringing censure on any one individual.

Coconut Improvement and Replanting Schemes

In its relatively short history the Agriculture Department has fostered several attempts to stimulate replanting and grove improvement. The Coconut Campaign 1966-68 on Tamana, Arorae, Makin and Kuria was basically an extension project aimed at encouraging individuals to plant unproductive or poor lands (see T.R.: ch.12, Coconut Campaign). In 1969 and 1970 attempts were made on Nonouti and Abemama to set up agricultural cooperatives aimed at boosting production and pooling land and labour for replanting (see A.R.: ch.11, Agricultural cooperatives). The most important and widespread scheme was the Coconut Subsidy Scheme first introduced in 1969, modified in 1972 and suspended in 1974 and reinstated in a more flexible form later. Basically the scheme aimed at clearing low density groves for replanting or clearing lands and removing senile palms and unwanted seedlings to achieve a desired palm density. The heavy labour input during initial stages received a cash payment and subsidies were then paid for the maintenance of lands and as a cushion for lost earnings. The scheme was intended to effect up to a fourfold increase in production after 9 years of operation. This had not been achieved by 1978 (a year of good prices and rainfall) when production for the Gilberts alone was only 1.5 times higher than the 1963-74 mean annual production. The dedication and enthusiasm of Agriculture Department staff have never been in question. The problem stems from more basic and fundamental social and economic factors which the scheme failed to come to terms with. Major factors contributing to their failure are briefly as follows:

- (a) Land productivity is not the most immediate cause of low copra production. Problems of production efficiency,

particularly transportation, contribute to low levels of utilization of existing resources. The scheme did not address itself to these problems and because of this the outcome of massive expenditure on planting might not be increased production.

- (b) The schemes were not directly relevant to the felt needs of the people but were imposed from above. Many individuals feel that they have adequate resources for their present needs and are not convinced that replanting is necessary. This view is reinforced by low copra prices, reduced pressure on land because of migration to Tarawa and anticipation of increasing dependence on employment or remittances. The introductory explanation of the subsidy scheme did not stress strongly enough the need for replanting for future insurance, too much emphasis was placed on the short-term gains from employment and subsidies.
- (c) The implementation of the scheme began from the basis of cash motivation and these considerations outweighed all others. The scheme was a government scheme and it had little bearing on the people's own needs. The government's motives were of little concern to the people as long as the promised payments were made for work done. The monetary returns at the time were doubly attractive because of low copra prices and difficulties in raising large sums of money. These problems underline the need for much more thorough and penetrating extension work to ensure that such schemes are relevant to felt needs and that the purpose of the program is understood, accepted and valued by all concerned.
- (d) The schemes proved too inflexible and failed to take account of the reality of the Gilbertese landholding situation. This is manifest in the number of plots required to achieve a registrable area for the scheme. The justification of these minimum areas was never made clear and one must assume that administrative convenience was the reason. The structuring of the scheme in this way meant that its success depended on the cooperation of many individuals of differing degrees of motivation labouring together. An approach concentrating on individuals rather than land areas may have circumvented some of these problems. The Agricultural Officers would thus be working with people who are convinced of the need to improve their coconut resources. The more flexible approach to land area provisions taken by the Agriculture Department in 1978 will go some way to solving these problems.
- (e) The requirements that productive palms be felled prevented many landholders taking part in the schemes

even though their lands were sparsely palmed, because they thought they could ill afford the loss of production implied.

- (f) Finally the appropriateness of the model of production engendered by the scheme must be questioned. It is clear that the Agriculture Department envisaged a plantation-type approach to production with quite large tracts of perhaps optimally spaced trees of similar age which would have to be replanted once declining fertility set in. Given that a landowner's holdings are small and fragmented, that the lands are used for both subsistence and cash production and that these will be divided among the owner's offspring at some time in the future, such an approach is questionable. To gain the greatest stability and flexibility of production all lands should be productive entities all of the time. Two possible approaches are suggested: firstly research could be directed away from the plantation-type production as at present, and towards finding optimum spacing for mixed age stands giving a satisfactory level of continuous production with replanting schemes aimed at the implementation of these findings; or if it can be shown that the growth rates and returns from such an approach are substantially below that of periodic clear felling and replanting (unpublished research on under-planting at Makin suggests this may be so), then the area provisions of the replanting schemes should be adapted so that individuals could be encouraged to replant portions of lands at staggered time intervals so that some production from each land is always available.

SOURCES IN ISLAND REPORTS

- A.R.: ch.3, Coconut resources; ch.6; ch.11, Agricultural cooperatives; Coconut Replanting and Improvement Schemes; Innovation and extension; ch.14, Government enterprise.
- B.R.: ch.1, The island; Missions; ch.5, *Babal* pits; Contemporary tenure; Caretaker lands; ch.6; ch.14, Coconut production.
- N.R.: ch.6, War years and postwar reorganization; ch.8, Coconut bush land; Land tenure and inheritance; Size, quality and distribution of privately owned lands; ch.12, Income from copra production; App.7; App.8, Agriculture.
- T.R.: ch.7, Exploitation of land resources; Working the land; Clearing and planting; Coconuts in subsistence; ch.8, Copra production; Rates of return; Strategies of production; Levels of copra production and resources; ch.12, Agriculture Department; Coconut Campaign; Coconut Subsidy Scheme; New crops; Agricultural development and land reform; ch.13, Palm resources; Land reform.
- TN.R.: ch.3, Discrepancies between islanders' evaluations of land quality and investigator's evaluation; Land size, quality and distribution; Problems of land use; ch.6, Sale of copra and handicrafts to the cooperative societies on the island; ch.9, Department of Agriculture; Coconut Replanting and Improvement Schemes; Tanaeang Replanting Scheme; Special agricultural skills; Agricultural Assistants.

Chapter 7

Income and consumption

INCOME

The mean household annual income for the study areas was estimated to be as follows: Nanumea \$738, Abemama \$424.06, Butaritari \$303.16, Tamana \$146.52 and Tabiteuea North \$58. Care should be exercised in interpreting these figures because their worth depends on the representativeness of the sample households chosen and of the time period over which data were collected. The figure for Abemama probably underestimates mean household income because it relates only to 1972 when copra prices were low, whereas other estimates include data for 1973. Note a in Table 7.1 suggests the mean per capita income figure derived from the Nanumea sample households is considerably higher than that calculated for the island as a whole and that 1974 differed dramatically from 1973. Hence the figures for Nanumea are probably overestimates.

Sources of income

Table 7.1 presents the main components of household income. An important distinction to make is that between 'earned' and 'unearned' income because one influences the other and thus has a critical effect on household economic performance. The first category includes income from copra, handicrafts, local produce sales, wages and payment for casual labouring; the second consists mainly of remittances and gifts but also cooperative bonus payments (these in part reflect preceding year's income, but also include bonus payments on purchases) and coconut subsidy payments. The importance of unearned income lies in the fact that it is often anticipated or expected and is built into a household's economic strategy, usually leading to a decline in subsistence and local cash-earning activity.

Remittance income

Tables 7.1, 7.2 and 7.3 show the importance of remittances and gifts quite clearly. On only Nanumea and Butaritari was any

Table 7.1
Annual income per household by source

	Nanumea ^a	Abemama ^b	Butaritari ^c	Tamana ^d	Tabiteuea North ^e
Mean household annual income \$	738.00	424.06	303.16	146.52	58.00
Coefficient of variation %	82.52		124.87	41.78	71.58
Range in mean annual income \$ - highest	2,559.72	1,218.36	1,686.36	989.14 ^f	n.d.
- lowest	104.04	84.76	34.84	75.12	n.d.
Mean annual income per capita \$	112.56 ^a	68.51	29.16	24.42	11.46
Source %					
Remittances and gifts	26.97	31.77	14.07	24.27 ^g	48.03
Copra	33.27	14.07	30.53	7.05	32.67
Wage and casual labour	38.07	9.40	5.32	14.57	7.41
Sales of local produce	- ^h	12.53 ⁱ	11.32 ^j	1.58 ^k	6.19 ^l
Handicrafts	- ^h	- ^m	-	10.07	1.04
Agricultural subsidies	-	22.00	10.98	-	-
Other	1.69 ⁿ	10.23 ^o	27.78 ^p	42.46 ^q	4.66 ^r
Total	100.00	100.00	100.00	100.00	100.00

^aBased on mean of 19 households surveyed over 8 weeks from December 1973 to October 1974. Author notes island-based mean, rather than sample-based per capita figure, for 1974 was \$75 to \$77 and for 1973 was \$44 per capita.

^bBased on mean of 16 households surveyed over 10 weeks March-December during 1972.

^cBased on mean of 16 households surveyed over 7 weeks April-December 1972, April-November 1973.

^dBased on T.R.: Table 8.3 on mean of 15 households using mean annual income figures from all available recorded income sources 1971-73.

^eBased on mean of 16 households surveyed over 8 weeks April-December 1972, April-September 1973.

^fExcluded from calculation of means.

^gFigure for this and shortfall differs slightly from those in T.R.: Table 8.3 as figures are adjusted to accommodate missing telegraphic money order (telmo) data. This adjustment makes all % figures differ slightly from T.R. Table 8.3.

^hIncluded in Other.

ⁱIncludes sour toddy, bread, doughnuts, fresh and salt fish, thatches, coconut string.

^jIncludes sale of fish, sour toddy, bananas, commercial cooking and other village trade.

^kIncludes fresh and salt fish, sharkfin, boiled toddy, commercial cooking and string.

^lIncludes bread, rolls, salt fish, string and thatches.

^mIncluded in Sales of local produce.

ⁿIncludes sale of local food items, handicrafts, reward, land rent and auction takings.

^oIncludes cooperative bonus, Lands Court fees, gambling wins, salt fish sold on Nauru.

^pIncludes cooperative bonus, debt repayments, gambling wins, bank withdrawals and loans.

^qIncludes cooperative bonus, *Mronron* divisions, withdrawals from savings and the shortfall of known income of known expenditure. The latter accounts for 22.47 per cent of income and is probably made up of unrecorded gifts and remittances redistributed on the island and thus should probably be added to gifts and remittances. *Mronron* income (6.66 per cent) derives from cooperative trade in coconuts and copra, store goods, commercial cooking and such like.

^r*Mronron* distribution.

other single source of income more important; on Tabiteuea North it accounted for nearly 50 per cent of mean household annual income. However Table 7.2 suggests considerable inequalities between households in their access to remittances with over half the sample households on Butaritari receiving no remittances during the survey period. In all study areas half the households surveyed received 20 per cent or less of their income from remittances. Relatively few households were heavily dependent on remittances. Generally it was felt that the receipt of regular remittance incomes tended to dampen the level of activity in subsistence and local cash-earning sectors. The lower incidence of remittance receipts for Butaritari probably reflects a situation where income-earning possibilities on the island were sufficiently favourable to discourage wage labour migration and the lack of remittance income in turn ensures active participation in copra production, vegetable growing and similar local cash-earning pursuits.

Table 7.2

Percentage of sample households receiving specified proportions of income from remittances and gifts during survey weeks

Receiving following percentage of income from remittances and gifts	Percentage of sample households on			
	Nanumea	Abemama	Butaritari	Tamana ^a
No income	26.32	37.50	56.25	12.50
1-20	21.05	12.50	12.50	50.00
21-40	21.05	12.50	12.50	18.75
41-60	5.26	25.00	12.50	12.50
61-80	15.79	6.25	6.25	6.25
81-100	10.53	6.25	0.00	0.00
	100.00	100.00	100.00	100.00

No data for Tabiteuea North.

^aRemittances only, therefore underestimate.

Table 7.3 isolates Tarawa, Nauru and Ocean Island as the most important sources of remittance incomes. It also permits some estimate to be made of the likely loss of income to outer island households with the cessation of phosphate mining on Ocean Island. The estimates suggest a direct loss of 8 per cent of present cash incomes on Tamana and 3 per cent on Nanumea with a correspondingly smaller loss in incomes derived from inter-household and *mronron* trade stimulated by the cash inflow. The loss in cash income is small in comparison with the loss of the chance

to accumulate capital goods, expensive household items, and savings while in employment.

Table 7.3

Mean monthly value of telmos received by private individuals
(wages excluded)

Mean monthly amount received	Origin				
	Ocean Island	Nauru	Tarawa	Other	Total
Nanumea ^a	240.00	722.00	894.00	229.00	2,085.00
Abemama ^b	370.83	158.33	2,106.49	209.43	2,825.08
Tamana ^c	426.53	534.00	241.33	54.02	1,255.88
Tabiteuea North ^d	185.42	206.67	811.18	160.72	1,363.99

^aApril 1973-December 1974.

^bJanuary-June 1972.

^cJuly-December 1973.

^dJanuary-December 1972.

The rather surprising pre-eminence of Tarawa as a source of remittance income should be interpreted with care since the figure takes no account of the numbers in employment at each centre. Comparative data on these are unavailable. Data on frequent remitters to Tamana indicate that workers on Nauru remit more frequently and in larger sums than do workers on Tarawa. The importance of Tarawa as a replacement source of remittance income for the outer islands will depend on the continued growth of government employment, the size of the gap between wage levels and the cost of living on Tarawa and the attitudes of increasingly urbanized wage workers to their own consumption and their responsibilities toward kin on outer islands. Subjective evidence suggests a weakening of obligation toward kin over time by some employees on Tarawa. The employment situation on Tarawa contrasts with the contract labour system on Ocean Island and Nauru where employment is for a fixed length of time only, rations and accommodation are provided by the employer and wages are mainly for savings, remittances and the purchase of capital goods. Island based organizations on Nauru and Ocean Island mean that the island community can exert considerable pressure on individuals in employment there. Similar associations on Tarawa appear to be less cohesive and influential. While employment off the island is part of an individual's perception of outer island economic life, employment on Ocean Island and Nauru is seen as part of the normal outer island life cycle whereas employment on Tarawa is an alternative to it bought with investment in education.

If it is the policy of government to maintain levels of satisfaction with outer island life it must take cognizance of this fact: it cannot afford to look only at employment as a generator of remittance incomes but must understand the part employment plays in the life cycle of households and in providing capital equipment as well as income supplements for outer island life. Tarawa provides the income but not the needed capital goods and is seen increasingly as an alternative to outer island life.

It is impossible to get reliable estimates of remittance incomes generated by overseas seamen. Data from Tabiteuea North show very much higher levels of remittances from Betio than other centres on Tarawa and this could reflect seamen's remittances. However, data from Tamana suggest that overseas remittances and payments through the Bank of New South Wales automatic payment system are unimportant considering the number of males known to have entered the Marine Training School or thought to be employed on overseas ships.

Local wage employment

Wage employment on the island is not an important source of income for most households. The high proportion for Nanumea (38 per cent) reflects the influence of a few individuals with comparatively large wage incomes on the mean figure. In only two instances, both on Butaritari, was the employment of Gilbertese by other Gilbertese recorded. This was restricted to members of the same kin group and not considered to be of general significance. Most employment on the islands is related to government sponsored or encouraged activities. Access to higher paid jobs is through secondary education. Since many individuals in these jobs come from other islands and have no inherited land rights a large part of their wages is spent on food which may benefit inter-household and *mronron* trade. The only employment readily accessible to the population at large is Island Council and cooperative society casual work which is paid at much lower rates. On most islands studied people were willing to work for quite low rates of pay; on Abemama only was there any evidence of a minimum level of pay (\$1 per day) below which individuals did not consider the effort worthwhile. The willingness of workers on other islands probably reflects the shortage of easy ways of earning money, the attraction of immediate payment when work has finished and the fun of working together in the general excitement of a 'ship day'.

On some islands payment for work on communal, Island Council sponsored projects has replaced former work levies and there appears to be some pressure to extend the practice to all islands. This should not be encouraged. While it may raise job availability and income in the short run, in the final account any such wages paid must be raised from local revenue and hence lead to higher taxation. There is the added danger that such work is inevitably associated with government and hence wage levels prevailing in

Tarawa. In the southern islands at least it replaces a well-entrenched and accepted system of labour levies for village and island projects which have thus far been regarded as legitimate social costs and which stress and consolidate community cooperation and pride.

Copra

The factors affecting copra production and income are discussed more fully in Chapter 6 of this report. It is sufficient here to note that on most islands copra stands out as the most important source of locally generated income. With the high levels of copra activity prevailing on Nanumea in 1973-74 copra yielded nearly 20 times more income than the next most important generator of local income. Only on Abemama and Tamana was it nearly equalled or exceeded by other local income-earning activities. On Abemama this reflects the impact of low copra prices during 1972. On Tamana the situation is distorted by a surge in handicraft production during 1971 which was not sustained in following years. So, on all islands studied, it is safe to say that copra is the major local source of income and is likely to remain so in the foreseeable future.

Sales of local produce

Sales of local produce represent a small part of household income, but are an area of potential development which should interest planners. (For a fuller discussion of the constraints involved see Chapter 10 on enterprise.) At present the trade is directed towards two distinct markets: to the relatively large markets of Tarawa, Nauru and Ocean Island, and secondly to inter-household commerce on the island. The islands participating most actively in trade with Tarawa at present are those with better transport linkages, more favourable environmental conditions and lower population pressure. From Abemama the trade with Tarawa is mainly concerned with salt fish; from Butaritari incipient development of trade in vegetables, bananas and other fruit is apparent and several households appear to be actively specializing in production for the market although their motives are not purely economic at present. From Tamana small amounts of salt fish and boiled toddy are shipped to Tarawa but the trade is not actively fostered by the cooperative society. Purchasing by the cooperative begins and ends without warning and little assistance or encouragement is given with shipping and packing problems. No Tamana households are at a point where they produce specifically for the market; rather it is incidental selling when ready cash is needed and not available from other sources. Goods are usually sold from the household's domestic holdings of salt fish rather than from production specifically for the market.

Inter-household trade depends very much on the availability of cash on the island. Wage earners form a potential market and

stimulus to economic activity, particularly in villages close to the administrative centres. It was noticed on most islands that the level of inter-household trade rose with readier access to cash after the copra price rise. Inter-household trade functions to redistribute existing income rather than to generate substantial quantities of new income.

Handicrafts

While handicraft sales are generally an unimportant part of household income, comment is necessary because the studies were carried out shortly after a major effort by the Cooperative Federation to stimulate production. This appears to have met with little success on the islands studied. Data from Tamana suggest that large incomes can be raised from handicrafts — up to \$48 per month — but the effort was not sustained and declined even before the copra price rise and became insignificant after it. There is no evidence to suggest that resources or woman power were lacking in most households. Incentive appears to be the controlling factor. On Tamana high incomes from handicrafts coincided with a church sponsored drive to raise money for an electric generator. The church nominated handicraft production as the means of fund raising. For household income purposes returns from handicraft production are considered much too low. Seventy-one cents for a sleeping mat is not considered worthwhile and evokes no response. Some households made sleeping mats for \$2 each sold through relatives on Nauru. This was considered worthwhile and the availability of sales agents was a limiting factor to expansion.

EXPENDITURE

Data presented in Table 7.4 should be interpreted with care. For several islands at least there appears to be a considerable surplus of income over expenditure. In the absence of evidence of its being redistributed or diverted into savings, the implied surplus could arise from differences in the reliability of the sample data and thus have no basis in fact. It is possible that income earning, being a less frequent occurrence and one restricted to a few household members, is recalled more reliably, while store and *maonron* purchases are made frequently and by many household members and hence possibly are less reliably recalled. Data presented for Tamana (T.R.: Table 8.1) show that the sample survey weeks produced a mean annual household store expenditure of \$73.17 while the store records themselves showed that the mean sample household expenditure was \$150.89. However, there appears to be no basis for suspecting, within the expenditure recorded, that the proportion of expenditure among various commodities and services would be preferentially remembered.

Table 7.4
Estimated annual household expenditure

Mean household annual expenditure	Nanumea ^c	Abemama	Butaritari	Tamana	Tabiteuea North
	423.30	197.48	196.40	152.79 ⁱ	56.00
Percentage expenditure on selected commodity categories					
Store food	45.88	40.81	33.97	71.05 ⁱ	35.91 ^k
Local produce ^a	7.00	2.37	10.30	5.11	6.84
Store non food ^b	22.85	17.12	17.82	9.06 ⁱ	22.36 ^k
Licences, taxes	3.13 ^d	8.72	5.14	5.14	15.32
School fees	1.42 ^e	6.76	3.44 ^g	2.87	13.32
Church and commun- ity donations	19.72	8.16	19.62	5.47	6.25
Other	-	16.06 ^f	9.71 ^h	1.30 ^j	-
Total	100.00	100.00	100.00	100.00	100.00
Mean household annual income	738.00	424.06	303.16	146.52	58.00

^aIncludes fish etc. and prepared foods.

^bTobacco, fuel, batteries, stationery, flints, fishing lines, hooks etc., soap, toiletries etc.

^cCalculated from N.R.: App.6 and ch.12, Locally produced items and Gifts and contributions, not from Table 12.5.

^dLand and head tax only estimated from island-wide figures quoted in N.R.: ch.12, Gifts and contributions. Not included in calculation of coefficient of variation.

^eEstimated from N.R.: Table 10.1.

^fIncludes gambling losses, debts, fines, stock purchases for *mronron*, amusements and unclassified expenditure.

^gEstimated from B.R.: App.1.

^hIncludes gambling losses, fines, amusements etc.

ⁱRecalculated from T.R.: Tables 8.6, 8.8, does not allow for *mronron* expenditure, excludes highest earning household.

^jAmusements, films, Island Nights etc.

^kEstimated from TN.R.: Tables 6.2 and 6.3.

Household budgets

Because it is impossible to reconcile income and expenditure estimates for several of the study areas it is not feasible to draw conclusions as to the relationships between expenditure and income at different levels of income or between the proportion of expenditure on particular commodities, such as foodstuffs to income, particularly since no concrete evidence suggesting higher savings rates with higher incomes is provided.

Foodstuffs

In comparing the expenditure figures in isolation, food figures pre-eminently in purchases, never accounting for less than 40 per cent of known expenditure and rising to 77 per cent of mean household purchases in the case of Tamana. Flour, sugar and rice constitute the main food purchases. The emphasis on flour (see Table 7.5) rather than rice is interesting and possibly indicates that store expenditure to some degree supplements, rather than replaces, local foodstuffs. Flour is usually cooked with other local foodstuffs, toddy, coconut, *babai* and *te bero*, whereas rice is usually eaten by itself. Tinned foods as a protein source are of very minor importance even on Nanumea, the island with the highest mean household income. Consumption appears to be determined by whether ready cash is available. The consumption of flour and rice rose markedly on Tamana after the copra price rise because money became more readily available, *mronron* activities and after hours selling increased, and in several senses goods became more readily available.

Table 7.5
Weekly expenditure by mean sample household on
selected food items

	Rice	Flour	Sugar	Biscuits	Beverages	Prepared and local foods	Tinned foods	Other foods
Nanumea ^a	0.69	1.62	0.62	0.33	0.06	0.63	0.37	0.43
Abemama	0.33	0.50	0.46	0.09	0.05	0.09	0.04	0.08
Butaritari	0.94	0.94	0.94	0.94	0.08	0.14	0.13	0.13
Tamana	0.35	0.47	0.22	- ^c	0.03	0.15	0.07	0.03
Tabiteuea North ^b	0.11	0.42	0.29	0.09	0.07	n.d.	n.d.	n.d.

Based on weekly surveys. See notes a-e to Table 7.1.

^aRecalculated from N.R.: Tables 12.5 and 12.6.

^bRecalculated from T.N.R.: Table 6.2 by taking mean of figures for May-September 1972.

^cIncluded in prepared foods.

Other expenditure

A large part of the remaining expenditure went on store goods other than food such as tobacco, kerosene, benzine, flints, batteries, stationery, buckets, bicycle parts, tools and some fishing equipment. There appears to be little evidence of 'target income' earning (i.e. for particular purchases) or earning for

productive investment. There are several possible reasons for this. Many items associated with target incomes in other areas are in the Gilbert Islands traditionally associated with wage labour off the island. Workers go to Ocean Island or Nauru to accumulate capital and expensive household goods mainly for themselves, but also for kin. The goods they purchase are often not generally available in stores in their home islands, or if they are the range available in Ocean Island or Nauru is such that goods from there are considered better and brighter. The difference between wage levels in employment and returns from copra making are such that many individuals believe the money needed to purchase the larger items cannot be earned on the outer islands even if the goods were available in the stores. All of these factors tend to act together to dampen incentives to earn larger sums of money for special purchases (this is left to the limited few with entrepreneurial motivation).

The situation has very important policy implications. There is a need to convince the community at large that much more can be earned from island based activities and an important part of this exercise must be to increase the range of goods carried by the stores, particularly in the area of capital goods such as bicycles, fishing equipment, timber and paint.

The expenditure on church and community activities varies considerably between households and from island to island. It depends on the level of activity of the organizing bodies and on personal preference.

Saving

The precise level of saving is not easy to document. It is probably misleading in many instances to talk of 'saving' and 'deferred expenditure' is probably a more meaningful term in a situation where income earning is intermittent and the surplus is held to cover food purchases and such like over the intervening period when little is earned. Documentation of deposits with the cooperative society on Tamana supports this picture. Withdrawals exceed deposits, with large sums being deposited irregularly and being whittled away progressively by smaller withdrawals. Formal savings on Tamana amounted to slightly less than 2 per cent of mean household annual income. On most islands saving is seen principally as a means of holding income from being spent immediately, but also as a means of accumulating money for coming kin ceremonies, and for future needs. On the few islands where it was possible to purchase land or *babai* pits saving could take on the aspect of investment in future production, but in most instances saving was equated with hoarding rather than accumulating capital for specific future investment projects.

INCOME AND DIET

Given that such a large proportion of known household expenditure is on food, dietary patterns must give some measure of the importance of and relationship between the cash and subsistence sectors of the household economy and the likely impact on economic change.

Table 7.6 presents data on the frequency with which different food types appeared in meals taken. Other studies have suggested that as incomes rise with increasing involvement in the cash economy, reliance on subsistence foods declines. This is not evident in Table 7.6. The islands with higher mean household incomes do not consume subsistence foods less frequently. The differences in frequency of consumption of coconut are very small and coconuts are consumed more frequently on higher income islands. The pattern for *babai* and breadfruit bears little relation to income levels and is complicated by the effect of environmental differences and their effect on cultivation. Some decline in the importance of *babai* and the substitution of flour or rice has occurred on Abemama and possibly on Tamana and Tabiteuea North. On the latter *babai* maintains its importance in ceremonial activities. Fish is the major source of protein and appears to be eaten more frequently on islands with higher mean household incomes. However, the two factors are not necessarily related. It is possible that some of the latter's income was diverted into the purchase of fresh or salted fish but the differences in expenditure on local product (Table 7.4) are not large enough to lend much weight to this argument. Similarly, differences in the frequency with which fish and shellfish are eaten are not reflected in the time spent by mean households on each island in fishing. The situation probably reflects differences in quality and accessibility of marine resources (whether the island has a lagoon, extensive reef flats or not) and preference for particular fish types, fishing pursuits and differences in the efficiency of methods used. There is no evidence to suggest that it is related to differences in the degree of participation in the cash or subsistence sectors of the economy. The importance of the subsistence element in all households' diets suggests that it is still vital and as yet there is no evidence to suggest that as incomes rise the importance of the subsistence sector declines.

However, this is not to argue that cash incomes bear no influence on consumption patterns. Table 7.6 shows the frequency with which imported starches were consumed. Imported starches appeared in possibly 53 per cent of mean household meals on Nanumea, 40 per cent on Abemama and only 13-14 per cent of meals on Butaritari, Tamana and Tabiteuea North. The low figure for Butaritari reflects the strength of *babai* production on that island as a result of favourable conditions for cultivation of *babai*. On both Abemama and Butaritari team members observed that households with higher cash incomes tended to eat imported

Table 7.6
Percentage frequency of particular food types in meals taken

Food type	Island				
	Nanumea ^a	Abemama ^b	Butaritari ^c	Tamana ^d	Tabiteuea North ^e
<u>Local starches</u>					
<i>Babai, pulaka, taro</i>	19.06	5.78	36.50	1.04	1.80
Breadfruit	27.42	2.00	22.22	5.88	1.99
Coconut	51.77	54.94	58.33	49.89	48.10
Pandanus	3.18	4.89	0.56	3.98	19.73
<i>Te bero/felo</i>	0.57	-	2.17	9.81	2.00
Other fruits ^f	4.51	-	0.56	1.07	0.71
Arrowroot	-	-	0.44	-	-
<u>Imported starches</u>					
Rice	14.26	12.44	5.39	3.28	0.99
Flour	38.92	27.44	8.11	9.78	12.51
<u>Local protein</u>					
Fish	48.90	38.44	34.39	19.66	15.52
Shellfish	3.04	-	5.89	-	5.25
Chicken/pork	3.67	-	0.33	0.06	0.37
<u>Imported protein</u>					
Tinned fish/meat	3.39	0.89	0.61	0.66	0.16
<u>Local beverages</u>					
Toddy	31.46	61.50	10.89	89.76	54.67
Others ^g	1.53	11.78	2.06	1.68	1.44
<u>Imported beverages</u>					
Sugar water	7.31	31.94	3.83	4.84	2.53
Tea/coffee	11.83	n.d.	73.94	7.55	21.88

^aFrom N.R.: App.5.

^bFrom A.R.: Table 7.8.

^cFrom B.R.: App.3.

^dFrom T.R.: Table 9.2.

^eFrom TN.R.: App.2.

^fIncludes bananas, pawpaw, pumpkin, *te non*.

^gMainly *kamaimai*.

starch foods more regularly, although on Butaritari it was still an irregular and intermittent occurrence.

Table 7.6 also shows that flour was eaten far more regularly than rice. This is important on several counts. It reflects the different positions of the two foods in the present value system of the people. Most studies indicated that flour, being a cheaper and somewhat less esteemed food, is consumed mainly in household meals as prepared dishes with coconut, toddy, *te bero*, pandanus or other local products, and appears in feast or communal meals only in the form of bread, pancakes and some *babai* puddings. In contrast, rice, although eaten occasionally at household meals, is still something of a special food prepared for communal meals and feasts or presented to other households with gifts of food. This helps explain why there has not been a concomitant decline in the frequency of consumption of subsistence food with increasing expenditure on store foods.¹ If incomes were to rise to the point where consumers felt they could afford rice for everyday consumption a dramatically different situation could occur where increasing expenditure on rice could lead to decreasing consumption of subsistence staples; a situation which could have significant dietary consequences.

The diet data suggest that although a large part of known expenditure goes on foodstuffs, on 3 islands at least purchased foods are still a relatively infrequent element in the total meal pattern. This implies that the subsistence sector is still capable of providing a large proportion of the starch meals, and an overwhelming proportion of protein meals taken. In the light of present expenditure and meal patterns and the relatively small proportion of meals in which store purchased foods appear, any program aimed at raising cash income should be carefully evaluated.

DETERMINANTS OF ECONOMIC ACTIVITY

The data presented so far spell out the broad characteristics of the household economy in each study area. Attention is now focused on the factors influencing the economic response of individual households. The reports suggested a wide range of factors including household size and structure, economic circumstance, social position, community value systems, returns to effort and the utility of money. Probably the most important factor in the economic behaviour of individual households is that of economic circumstance.

¹It must be remembered that these data refer to the frequency with which particular foods were consumed. They do not relate to the volume of food consumed.

Economic circumstance

Given the dominance of 'unearned' income from remittances and gifts over sources of locally generated and 'earned' income for many households, it is no surprise that this plays a significant part in household economic strategy and will continue to exert an influence on future economic response as long as substantial quantities of income flow in from outside the local economy. Thus local response to factors affecting local markets, income-earning opportunities and returns is, and will continue to be, unpredictable: always tempered by the chance element of access to 'unearned' income. This provides the main dichotomy in economic life on the outer islands; between those with near kin in permanent employment and the substantial or regular remittance incomes that implies, and those without. The latter are forced to exploit their own resources of land and labour to provide the cash income needed for taxes, school fees, food and other items of expenditure; the former have the opportunity for choice. The decisions are highly individualistic and depend on food and work preferences, the need for income and response to social norms regarding work and laziness and the future expectation of gifts or remittances. Many of the case studies cited illustrate a willingness on the part of individuals, when confronted with the need for cash for taxes, school fees or fines (the major demand for cash in large sums experienced), to delay cash-raising activities in the hope that a windfall remittance may arrive. Remittances thus become part of the economic strategy of individual households.

To some extent access to remittances could be a function of the age and demographic development of a household in that households with older heads are more likely to have children of an employable age, but given the fluidity and mobility of households there can be no hard and fast rule.

Finally, while changing access to potential sources of income can cause a householder to change his economic strategy, it cannot be assumed that wants remain constant. On Abemama and Butaritari only was there any evidence of some households seeking to maintain particular levels of cash use. For the most part the case studies presented suggest that when a new need, such as secondary school fees, arises and cannot be met with remittances, the individual will seek by whatever means available to raise the required income and abandon the activity as soon as the want is satisfied.

Rates of return

Data on rates of return for various cash-earning activities are not available for all areas studied, and even if they were, interpretation and comparison would be very difficult. One cannot assume that the individual operates in a framework where he seeks at all times to get the highest rate of return for his effort.

In the Gilbertese context an individual's assessment of what is a worthwhile return for effort will depend on such things as the urgency of the need for cash, the immediacy of return for effort, the total sum gained from each stint of effort, the level and nature of income from other sources, the enjoyment gained from the particular cash-earning activity and the purpose for which the cash is being raised.

Most reports commented on the lack of general community awareness of the levels of cash return for particular ventures. On Tabiteuea North baking was a common means of cash earning but returns were small and losses not uncommon (TN.R.: ch.7, Sale of bread).

On Tamana the rates of return for various cash-earning activities were found to be (T.R.: ch.8, Handicrafts, Copra production; ch.11, *Mronron* economics):

Copra at 4 ¢/lb	35 ¢/hour
at 2 ¢/lb	17 ¢/hour ²
Casual employment at cooperative	5-30 ¢/hour
Cooperative fishing for <i>mronron</i>	something less than 20 ¢/hour
Work for <i>mronron</i>	6 ¢/hour
Handicraft swords	7 ¢/hour
Handicraft mats	4 ¢/hour

Individual responses varied with the factors mentioned above. Copra production all but ceased on Tamana when the price fell to as low as 2.5 ¢/lb where the return on the effort of copra making was not considered worthwhile and the intrinsic value of the nut as food was greater than that of the goods (usually flour and rice) purchased with the cash earned. Large-scale handicraft production on Tamana in November-December 1971 was in response to a church fund-raising drive. As the above figures show, many individuals cut copra for *mronron* at a return rate much lower than they would consider to be worthwhile if cutting their own copra and this presumably stresses the preference for group work and the pressures against individuals seeking to raise wealth through individual effort.

Household size and structure

No report was able to point to any clear and unequivocal

²Independently arrived at figures for Abemama give 17 ¢/hour at 2 ¢/lb. See A.R.: App.3.

relationship between household size or producer/consumer ratios and cash income levels. This is understandable on several counts. Remittances and gifts form an important part of household income but bear no relation to household size or needs. In addition the sustenance needs of the household can be met from subsistence or cash and increased effort expended in the subsistence sector will not be reflected in cash incomes. It is therefore misleading to expect a relationship between household characteristics and cash income levels. The number of near kin in wage employment on or off the island is probably a much more important factor in determining cash income levels.

At this point it is relevant to mention the reservations expressed in several studies questioning the extent to which the household represented a tangible and enduring economic unit with a coordinated approach to achieving economic goals. Fluidity and instability characterized households in all studies except Tabiteuea North. Chains of command coordinating the activities of individual members to achieve corporate aims were not readily in evidence. Activities of individual members in both cash earning and subsistence could be impinged upon or even directed by cooperative bodies outside the household. These factors taken together indicate that the household is not the only or even the most important economic unit to which planners should direct their attention. The *mronron* and similar large corporate groups are often more important and protect individuals from social sanctions by giving them anonymity, mobilize larger labour forces than those available to individual households, retaining their size despite frequent changes in personnel.

Social position

The households studied were invariably selected to bring out the range and differences in economic and social circumstances on each island and this probably tends to underemphasize and distort the elements of uniformity of effort and the general emphasis on the moral principles of self-reliance and self-sufficiency. The southern Gilberts is characterized by a staunchly democratic society where the belief in equality acts both as a stimulus to the lazy and a check on the ambitious. Disparities in access to resources do develop but do not challenge the generally held belief in equality. The central and northern Gilberts had stratified societies with landholding and worker classes at the time of European contact but these have been modified considerably. In Butaritari the remnants of the class system have largely disappeared under the impact of the new economic order where all must work and, because of this, must be equal. On Abemama traces still persist with some members of the former privileged classes putting in less productive effort because their needs are met from more than adequate land resources. However, differences in social position are, at present, probably neither large enough

nor widespread enough to outweigh other factors, particularly economic circumstance. On some islands where immigration resulting from land purchase or marriage has occurred it has been suggested that the immigrants, being relatively free from kin and other social obligations, have been able to operate outside the pressures for conformity. These are few in number on most islands and thus it is difficult to draw reliable conclusions.

Value systems and attitudes towards wealth

The 5 studies suggest a range of attitudes towards wealth, particularly cash wealth, and these impinge on an individual's willingness to devote time to new or additional cash-earning activities. True wealth is still seen on all islands as lying in the possession of land because land has permanence, defines one's position in society and provides access to livelihood in both the subsistence and cash sectors. Underlying most households' aspirations is the desire to be economically independent and control one's economic destiny which implies owning sufficient land and a range of capital equipment such as a canoe, sewing machine and other tools. Since most of these are unobtainable on the island and obtained during periods of employment overseas and because land sales are restricted on most of the islands (Abemama and Butaritari are exceptions), these long-term aspirations have little impact as a stimulus to everyday economic activity.

However, attitudes towards cash wealth and the consumption of goods it purchases differ between islands studied. In the democratic societies of the south the belief in equality is so strong that it tends to discourage individuals from seeking to amass wealth and raise themselves above the general community level. On both Tabiteuea North (TN.R.: ch.4, Economic productivity; ch.6, Tabiteuean attitudes) and Tamana (T.R.: ch.3, *Boraoi*) this acts as a disincentive to individual cash-earning activity and encourages participation in communal cash-raising activities. On Butaritari, despite the former aristocratic status system, the belief in equality is still pervasive, although the emphasis is rather on keeping up to a general village standard than restricting the level of activity (B.R.: ch.3, Economic goals). Since the aim of economic activity is to live well, and this implies to eat well, the potential for expansion of demand is somewhat restricted. Attempts to capitalize on such a potential through inter-household trade would transgress present morality because the trader would be attempting to get rich at the expense of others. Present trading activities get round the moral strictures by maintaining the fiction of helping others (B.R.: ch.7, Ethics of trade). On Abemama, probably the most cash-oriented island of those studied, wealth in a monetary sense is not disapproved of provided the possessor fulfils his obligations to assist others. The monetary system is considered to be separate from the traditional system (A.R.: ch.4, Concept of wealth) and this has considerable impact on the willingness of the individual to engage in entrepreneurial activity. Given such

differences between islands in attitudes towards wealth and individual freedom to amass wealth it is obvious that responses to development projects will differ from island to island.

Previous writings have cited *bubuti* (a request, usually by kin for assistance in either cash or kind, which cannot be refused) as a disincentive to economic activity. The present studies suggest the situation to be somewhat more complex. At an everyday level the custom ensures exchanges of fish, other foods, tobacco, cash etc. between households when the need arises and cannot be met from other sources. On a larger scale it is possible to cite examples where economic incentive was quelled by the fear of *bubuti*, but it is difficult to assess the real situation. The practice is probably less common and less of a threat than in the past. Also it must be remembered that it is not a one-way process. Shame accompanies a request just as much as non-compliance, because it is an admission of dependence. On the positive side *bubuti* provides a system of reciprocal aid and an effective means of sharing capital items not uniformly available within the community. *Bubuti* on Butaritari was less important than inter-household trade in achieving the recirculation of money (B.R.: ch.7, Remittances). On Nanumea inter-household gift giving is an important aspect of social interaction.

Utility of money

Any program aimed at encouraging an expansion of production and the raising of income levels must consider the utility of the additional income earned. Economic response will reflect an individual's perception of what money is and what it can be used for. In respect of the uses of money, when so large a proportion of expenditure is on store goods, food, fuel, tobacco, soap etc., and while these remain the most readily available or only goods stocked in island stores, the demand must have a ceiling and once an adequate level of consumption has been achieved any increase in cash earning becomes simply not worthwhile. The situation could be altered by increasing the range of goods stocked by stores, particularly in the field of small capital items.

On both Tamana and Butaritari distinctions were drawn in people's minds between money in small sums and money in large sums. On Butaritari preference was shown for economic activities yielding single large sums of money rather than more frequent smaller sums because in order to 'live well' it was thought necessary to have sufficient money at one time to purchase necessities such as fuel and have sufficient left over to purchase food. The preference for large sums led many households to ignore potential sources of petty income (B.R.: ch.13, Cash sector). On Tamana a similar dichotomy was extended to distinguish between 'spending' and 'keeping' money, the former being smallish sums associated with everyday economic activity on Tamana and usually spent on food, etc. The latter was usually gained during overseas employ-

ment and thought to be unobtainable on the island. It was reserved for the purchase of capital goods or expensive household items, for school fees or held for future security. 'Spending' money could not be aggregated into 'keeping' money and 'keeping' money was thought to be unobtainable on Tamana. Such beliefs tended to preclude the effort (T.R.: ch.8, Attitudes towards cash and cash earning). On both islands the preference for money in large sums encouraged participation in cooperative cash-earning activities where the rationale is not necessarily saving for a particular purpose but rather the prospect of getting a large sum of money easily. This preference is one which government-inspired programs could well capitalize upon. The Butaritari Report suggests that the failure to take account of the scale involved in the Butaritari cash economy is the most common cause of failure in government policy (B.R.: ch.13, Cash sector).

SOURCES IN ISLAND REPORTS

A.R.: ch.6; ch.7; ch.8.

B.R.: ch.3, The moral framework; Economic goals; ch.7, Fruit and vegetables; Vegetables; ch.9, Diets; Income and expenditure; Variation; Role of household structure; Role of economic circumstance; Role of social position; Summary; ch.13, Cash sector; Distance and economic opportunity; Population and resources; The economy in summation.

N.R.: ch.5, Relatives, neighbours and friends; ch.11; ch.12; ch.14, The Tuvalu situation today.

T.R.: ch.3; ch.8; ch.9; ch.10.

TN.R.: ch.6, Household income; Telegraphic money orders; Sale of copra and handicrafts to the cooperative societies on the island; Sale of foods and other items to Tabiteueans, the Government Station and cooperative societies; Employment; Cash income; Household expenditure; Purchases from cooperative society stores; Taxes and licences; Church donations; Summary of expenditure; Savings.

Chapter 8

Use of time

The analysis of activity patterns in the separate reports reveals some basic underlying similarities in the way time is viewed and used as well as some quite important differences. The broad characteristics of time allocation patterns at household level are evident in Table 8.1. Care should be taken in interpreting the values, particularly in inter-island comparisons, because they do not relate to the same base figure. Subsistence and social activities dominate time use by households on every island. Except on Butaritari no household spent more than 10 per cent of its active time in cash earning. The high value for Butaritari is in keeping with the aspirations of households there to achieve a particular standard of living and economic performance. The figures do not correlate well with data on mean household income (see Chapter 7); the islands with higher mean household incomes do not necessarily have higher time inputs to cash earning. This underlines the importance of external sources of income and the variability, on most islands, of cash-earning activities.

TIME ALLOCATION AT INDIVIDUAL LEVEL

Division of labour

Age and sex are clearly important factors in determining an individual's activity pattern. As both Tabiteuea North and Tamana Reports showed (TN.R.: ch.2, Activity patterns of *mwenga* members; T.R.: ch.6, Daily activity patterns), certain tasks are recognized as appropriate for people in particular age groups and are seldom undertaken by others. It is also evident on Tamana that there is an accepted length of time for which individuals should be seen carrying out particular tasks. In households lacking adult males tasks normally associated with adult males are not done and the household is usually supplied with items such as fish and toddy from the surplus produced by related households.

Age is associated with increasing responsibility. Young people become increasingly involved in economic activities from around the age of 12 years, carrying out a relatively small range

of tasks and often less efficiently than adults. Full responsibility is assumed from about 19 years of age. Marriage and child-raising responsibilities influence the activities of young adults who spend more time in cash and subsistence production and generally less time in organized social activities. This could be in response to necessity, but it could also reflect social attitudes and be what is expected of young adults. Retirement from economic activity depends to some degree on alternative labour sources within the household and personal preference. Activity usually tapers off at 50 years.

Table 8.1
Percentage time allocation by sector by mean
household in islands studied

Sector	Abemama ^a	Butaritari ^b	Nanumea ^c	Tabiteuea North ^d	Tamana ^e
Cash	9.45	13.27	3.50	8.70	7.29
Subsistence	22.01	42.71	19.25	38.70	50.44
Social	36.79	14.84	10.55	11.20	21.12
Other ^f	31.75	29.18	66.70	41.40	21.15
Total	100.00	100.00	100.00	100.00	100.00

^aFrom A.R.: Table 8.2 based on data for a 6-day week and the mean of 152 household weeks. Percentages calculated on allocated time which for mean household was 9.6 hours per day.

^bFrom B.R.: App. 2(b) based on data for a 6-day week and the mean of 144 household weeks. Percentages calculated on basis of a 12-hour day.

^cFrom N.R.: Table 10.2 based on data for a 7-day week and the mean of 152 household weeks. Percentages calculated on the basis of a 12-hour day.

^dFrom TN.R: App. 5 based on data for a 5-day week and the mean of 120 household weeks. Percentages calculated on the basis of a 14-hour day.

^eFrom T.R.: Table 6.4 based on data for a 6-day week and the mean of 100 household weeks. Percentages calculated on basis of allocated time which for the mean household was 6.5 hours per day.

^fIncludes sickness, school, gaol, care of others etc.

There appear to be some basic differences in men's and women's work patterns which could be important in governing response to new cash-earning activities. Women appear to carry out a much wider range of tasks, but these are intermittent in nature. A woman may become involved in several tasks at the one

time, no one of which absorbs all her attention all of the time. It is not uncommon for women to leave an activity unfinished and come back to it when time or interest permits. In contrast men appear to be involved in a smaller range of activities but many of these are done over longer time spans; the job often being completed before another task is begun. As a result a man's time is often structured around a set number of tasks each day and a choice between tasks is made rather than shortening the time allocated to each in order that all may be accommodated within a day's work. With these differences in mind it is possible that new cash-earning activities could be accommodated more easily within women's activity pattern than men's with less impact on subsistence-oriented activities and subsistence production (see T.R.: ch.6, Summary and some thoughts on the introduction of new cash-oriented activities).

TIME ALLOCATION AT HOUSEHOLD LEVEL

This section must begin with several basic observations of crucial importance to planners on the nature of the household and the way in which the activities of its members are regulated. On most islands the household is an exceptionally fluid entity; its composition changes constantly with movements of people away to work or visit on other islands, to other households on the island because of childbirth, sickness or family conflict. Thus the household resource base is constantly changing — both in labour and land, because land tenure is individualized and the rights to use certain plots often lapse once the person moves out of the household — and this means that long-term economic strategies depending on a fixed labour force or involving long-term investment in a constant land resource have little reality and the household cannot be regarded as an entity capable of achieving long-term economic goals. These belong to individuals within the household and relate largely to providing adequate resources for their offspring. The household is a unit of convenience using available land and labour resources for the immediate economic goals of providing for the household's immediate needs.

The second point relates to the decision-making process within the household and whether this enables time to be economized to achieve specific economic ends. On Tabiteuea North the activities of younger household members were supervised by older members (TN.R.: ch.2, Age group 19-30 years, female; Age group 19-30 years, male; Age group 31-59 years, female; Age group 31-59 years, male), but on both Abemama (A.R. ch.8, The household as an economic unit) and Tamana (T.R.: ch.6, Time allocation at the household level) centralized control appeared to be lacking and social norms and individual preference were probably more important determinants of activity. On Tamana in particular, the activities of individuals were often determined by cooperative

work groups which were formed to achieve certain general social/ economic goals and thus the activities did not necessarily satisfy the immediate needs of individual households.

Role of household composition and size

As previously noted the age and sex structure of a household has quite an obvious effect on the activities it engages in. Households without active males still engage in activities traditionally associated with females and depend on kin to provide them with such items as fish and toddy. Younger households with dependent children may concentrate more heavily on subsistence and cash production, but this is likely to be a response to the fact that they have no children in employment off the island and do not necessarily receive cash or food gifts from obligated offspring. The Nanumea Report (ch.10, Activity pattern variations) finds no evidence that households with smaller work forces and more dependants work harder although they may spend more time in productive rather than leisure activities. These conclusions are supported by linear regression analysis of Tamana data (T.R.: ch.6, Relationship between labour input and household size and Fig. 6.4) and it is also shown that households with large labour forces do not spend less time in subsistence activities; they either work less efficiently or create a surplus for redistribution.

Role of economic circumstance

Given that remittance incomes make up such an important part of many households' total cash receipts, the impact of them on subsistence performance is of particular interest and here the reports suggest quite different responses. On Abemama it is suggested that households receiving or expecting substantial or regular cash incomes spend less time in subsistence activities such as fishing or food gathering (A.R.: ch.8, Subsistence). This is not the case on the other islands (N.R.: ch.10, Activity pattern variations; T.R.: ch.6, Allocation of time and household types) and indeed on Butaritari the reverse is true; the receipt of a regular remittance income frees the households from the need to engage in cash-earning activities and enables them to spend more time in subsistence activities, particularly *babai* cultivation.

There appears to be no consistent pattern in time allocation to cash earning. On Butaritari younger households may devote more time to cash earning (B.R.: ch.9, General types of household) and do so with some regularity in order to maintain a particular standard of living. On other islands cash earning is, for most households, irregular and intermittent. It bears little relation to family size or workforce and depends on such individual circumstances as the need for money, access to alternative sources of income, and the ease with which money can be earned at any particular time.

Planning implications

There can be no doubt that at present considerable surplus labour exists on the outer islands and that this could be mobilized without seriously threatening the survival of the household subsistence economy. It is also clear that when favourable conditions present themselves these responses do occur, as the model canoe-making episode on Abemama (A.R.: ch.8, Planning implications), the handicraft boom in 1971-72 on Tamana (T.R.: ch.8, Handicrafts) and the mobilization of labour for the Coconut Improvement Scheme on all islands show. The availability of time is not a limiting factor. The willingness to divert time from other activities depends on economic factors: the need for money, the utility of the money earned and the value placed on the subsistence goods or leisure and social activities forgone.

SOURCES IN ISLAND REPORTS

- A.R.: ch.8; ch.14, Activity pattern.
 B.R.: ch.9, Island pattern of activity; App. 2(a), 2(b).
 N.R.: ch.10; App.4.
 T.R.: ch.6.
 TN.R.: ch.2, Activity patterns of *mwenga* members; Age group activities within the *mwenga*.

Chapter 9

Employment

Over the past decade the problems associated with formulating a policy for long-term manpower planning, in both the Gilbert Islands and Tuvalu, have become increasingly apparent.

Copra prices have shown marked fluctuation, threatening paid employment on some central Pacific islands, phosphate mining is rapidly drawing to a close and attempts to stimulate indigenous economic enterprises have achieved only limited success. The problems associated with ensuring a continued cash flow through the islands at a level which would encourage increased involvement in economic schemes and ensure a significant contribution to the revenue-earning capabilities of the colony have proved very difficult to surmount.

The general employment situation in both territories has been well covered since the survey period in a report prepared by Fairbairn of the South Pacific Commission (1976). This summary will avoid covering ground already treated in that report.

Since the commencement of phosphate mining on Nauru and Ocean Island in about 1901 both Gilbertese and Tuvaluans have relied for a major part of their cash income on employment and remittances from these territories. These sources, combined with employment opportunities on plantations on a number of central Pacific islands, have proved the most important income sources for islanders since the turn of the century. Government employment sources have expanded since World War II and are likely to become increasingly important with the downturn in employment opportunities in mining and agriculture spheres. Table 9.1 provides a broad indication of the importance of the various employment sources in the colony over the past 30 years. It can be seen that for Abemama, the island in closest contact with Tarawa, and the one which appears to have the greatest involvement in a cash-oriented economy, employment on Tarawa atoll is significantly more important than on other surveyed islands.

On all surveyed islands remittance income from relatives employed off their home islands contributed a major part of total

cash income, while local wage and casual labour income in all cases contributed a lesser proportion. Table 9.2 provides a general picture of the importance of these income sources to total income on each island. It is impossible to ascertain, but the increased proportions of total income derived from local wage labour sources for the islands of Tamana and Nanumea may be due to the difference in the periods of data collection for these islands as against others in the survey. Data for Butaritari, Abemama and Tabiteuea were predominantly collected in 1972, a year during which copra prices were unusually depressed. Data for the other 2 islands were collected during 1973, when copra prices had improved considerably. This may indicate a fluctuating local wage labour contribution to total income depending on the viability of local businesses in variant economic conditions.

Table 9.1

Importance of overseas employment (percentage of all employment sources for 5 islands of survey)

	Tarawa	Ocean	Nauru	Plantation islands	Line, Fanning, Christmas etc.	Other	Shipping	Percentage never left home island	Percentage absent home island 1973
Butaritari	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	29
Abemama	20	17	16	19		18	10	33	32
Tabiteuea	9	37	17	31		4	2	28	40
Tamana	11	50	22		14		3	25	32
Nanumea ^a	12	35	24		11	6	12	33	40

Sources: Island reports; 1973 census.

Data compared differed in several important respects. Figures should be treated as broad trends only.

^aData for men only. Expressed as percentage total years worked away from Nanumea.

While information presented in the Nanumea report suggests some ability on the part of households to obtain sufficient income on the home island for the purchase of some major capital items, the general means of obtaining such items has been through overseas employment (see Table 9.3). Most of those in employment purchase recognized capital item requirements for establishing a household before returning to their islands. The need to obtain overseas employment in order to purchase 'necessary' household items has been an important factor in ensuring the increasing demand for employment away from the home island. This coupled with household dependence on remittance income provides a powerful

incentive for ensuring that young adults are strongly encouraged to obtain wage labour off the home island.

Table 9.2
Percentage of cash income attributed to remittances,
local wage labour

	Remittances	Wage and casual labour income
Butaritari	12.5	5
Abemama	22	9
Tabiteuea ^a	26 (48)	4 (7)
Tamana ^b	15 (45)	14.5
Nanumea ^c	23	10

Source: Island reports.

^aFigures given are based on treatment of *mronron* purchases for coconuts as cash based. Bracketed figures show percentages if *mronron* purchases are excluded.

^bRemittances actually recorded. Bracketed figure shows estimated total percentage.

^cMedian sample household income used.

The pressures associated with maintaining this cash income source have undoubtedly contributed to the burgeoning population of Tarawa atoll (showing an increase of approximately 38 per cent between the census periods of 1968 and 1973). With employment opportunities at traditional work sources diminishing rapidly, a greater proportion of those in need of work must turn to Tarawa in the hope of finding employment.

Table 9.3
Percentage of households owning capital items usually
financed through overseas employment

	Bicycles	Sewing machines	Nets	Radios
Tabiteuea North	86	53	31	36
Tamana	93	75	-	81
Nanumea	50+	76	50	65
			approx.	

Source: Island reports.

At the time of the survey local employment sources were, in the main, provided through government department, local government

and government sponsored cooperative society activities. Other, non-governmental, sources of employment were few in number and poorly paid.

Although a number of government posts exist on each island these should not, usually, be regarded as home island employment opportunities since most departments have in the past adopted a policy of not posting employees to their home islands. There have been a number of reasons for this policy. Employees on their home islands face the problem of keeping their employment privileges and responsibilities separate from social obligations and the pressures of *bubuti* are very difficult to resist. On some islands it has been found that islanders resent the elevation of one of their number to a government position which enables that individual to exercise authority over them. In order to retain acceptance from fellow islanders, therefore, the appointee may have to show by his actions that he is not wielding authority and his efficiency may thus be undermined.

The wage income of government employees is of marginal significance to the general cash flow of the island on which they are employed. A part of this income is usually remitted to employees' home islands while much of the actual expenditure on islands flows directly into cooperative societies, thus only contributing to general island income through dividend payments, in which the government employees also share.

Local government employment opportunities have been based, in general, on central government approval and financing and are seen by many islanders as extensions of government department activity. The number of regular paid positions provided by local government bodies is small.

The major employers on each of the islands surveyed were registered cooperative societies. These provide both regular store-keeping positions and casual labour. The significance of the casual labour available appears to depend on the amount of copra handled and is thus affected by fluctuations in copra price and environmental conditions.

Mronron activity on Butaritari, Abemama and Tabiteuea has provided a means for cooperative cash accumulation activities but only on Tabiteuea does there appear to have been any attempt to provide limited employment opportunities through the *mronron* organization. On Butaritari much of the *mronron* activity seems to have been centred on the houses of members, while on Abemama the traditional repugnance of wage employment by fellow Abemamans has limited such developments. On Tabiteuea also, the form of organization is cooperative, with officials receiving payment for 'services rendered', and there is a marked reluctance to accept employment under a fellow Tabiteuean.

There have been very few indigenous developments on surveyed islands which have provided employment opportunities. Over a 20-year period spanning World War II the Tangitang movement of the central Gilberts provided employment for cooperative members and the North Tabiteuea *Mronron* Union, in a more limited way, showed the possibility of developing employment opportunities for members through activities on Tarawa and Abemama atolls. Both these movements have failed however and there appears to be little likelihood of any significant new developments in this area in the near future.

Educational achievement has become an increasingly important means of ensuring off the island employment for children in later life and on a number of islands there is evidence to suggest that children are being sent to Tarawa for schooling. This appears to be based on an assumption that places in secondary schools are more easily obtained from there than from home islands. The minimum standard of schooling for many government positions has been raised several times since World War II and schooling is thus seen as an important base for government employment.

With home island employment providing a small part of total cash income and involving a very limited section of the population, the '8-hour day' has not become the dominant organizing feature for village and home life. Certainly, school children must conform to starting and finishing times but the rest of the household seems to only minimally reorganize its schedules to fit in with this. Most household activity and organization are based on the requirements of a subsistence rather than a cash-oriented economy on all surveyed islands.

SOURCES IN ISLAND REPORTS

- A.R.: ch.9; ch.10, *Mronron*: summary; ch.14, Employment.
- B.R.: ch.7, Remittances; ch.10, Employment; Prospects; Summary; ch.13, The future.
- N.R.: ch.4, Nanumea as part of the colony; ch.9, Human resources and labour export; Summary; ch.14, The Tuvalu situation today; Alternatives.
- T.R.: ch.8, Sources of income; Other income sources; ch.13, Employment off the island; Development and the future.
- TN.R.: ch.4, Time allocation; ch.6, Telegraphic money orders; Sale of copra and handicrafts to the cooperative societies on the island; Employment; ch.7, Organization of cooperative societies.

Chapter 10

Enterprise

VALUES AND ENTERPRISE

On all islands studied, values of equality and conformity are strong and a number of levelling mechanisms inhibit individualistic forms of enterprise. Only remarkable individuals, such as Tito Teburoro on Tabiteuea North and Frank Smith on Abemama, have managed to emerge as full entrepreneurs, largely having achieved this status by creating a large gap between their own positions and that usual in their society. The Tamana Report (ch.3) describes the local ideal of equality or conformity (*boraoi*) as being so pervasive that no one can amass wealth or pursue 'non-normal' activities without incurring envy, accusations of arrogance, pride and boastfulness, and a variety of social sanctions.¹ There is the fear that if an individual raises himself above the level of his fellows, he may prejudice their ability to gain a local livelihood. Would-be entrepreneurs on other Gilbertese and Tuvalu islands are similarly inhibited in realizing their private economic goals. In the Gilberts, private cooperative businesses (*mronron*) provide a common and acceptable way out of the cultural impasse in which enterprising individuals find themselves. It is indeed ironic, and an illustration of how far social change has proceeded, that the *mronron*, representing a non-traditional type of organization, and involving goals of self-enrichment that would be very difficult to attain because of *boraoi* and *tibanga* if pursued by individuals, is now such a popular and common institution that it is indeed a Gilbertese institution *par excellence*, thoroughly characteristic of ordinary, day to day village life.

¹In this sense *boraoi* and *tibanga* express a Tamana ethos which appear to be a Gilbertese version of Foster's (1965) concept of 'the image of limited good'. On a small reef island or atoll resources are, of course, finite and very limited and if one person gains more land or coconut palms it may be seen to be at the expense of others.

In Nanumea, Tuvalu, individual enterprise and entrepreneurial drive are more closely integrated into the community based development activities. Nanumean patterns of enterprise thus differ substantially from those characteristic of the Gilberts and will, for this reason, be described first. The rest of this chapter focuses on Gilbertese *mronron* which, as an already extant and locally accepted economic institution, deserve increased government support.

Patterns of Nanumean enterprise

Few private, locally owned trading ventures or stores have ever existed on Nanumea. The two cooperatives run by the two village sides in the 1930s were amalgamated after World War II to become part of the government sponsored cooperative society. Subsequently, one of the established women's clubs ran a small store for about a decade, beginning in 1953. More recently 2 brothers ran a private store profitably for about 9 months in 1965 and from 1969 to 1971 another individual ran a local movie business. These ventures constitute the extent of recent private or small group entrepreneurial activity on Nanumea. During the period of study in 1973-74, no private businesses operated at all, even though several individuals were speculating about the chances for success of a restaurant or chicken-raising business. The main reason for the dearth of private profit-oriented economic ventures on Nanumea is that their basic nature runs contrary to the norms of the reciprocal exchange system which is the traditional (and still pervasive) exchange mode on this island. These norms require that surplus produce from both subsistence and cash spheres be shared with kin and neighbours, thus creating an obligation among the receivers to reciprocate at an unspecified future time on the basis of need. Entrepreneurs must thus take either the socially dangerous course of refusing entirely to meet the obligations of reciprocity or they must accept these obligations as part of the economic system in which their business operates and work within them. Thus far individual enterprise has followed the second course.

Community-run enterprise is by its nature exempt from the difficulties that beset private business on Nanumea and has been both successful and extensive. Rather than competing with the reciprocal exchange system, these projects transpose reciprocity from the individual and household levels to those of established groups and the community itself. Thus far Nanumean corporate enterprise has mainly consisted of building projects which are locally viewed as island development: building a generating plant to provide electricity for public buildings, building a new meeting house, building underground cisterns. The community itself finances, organizes and provides labour for these projects. It also contributes money to augment the government funds which purchase building materials needed for school, hospital, council

office and other officially sponsored projects. Interest from the island fund (the fund now totals over \$20,000 and is invested overseas) finances these communal projects. This fund continues to grow as those employed remit contributions and constitutes a source of money which can be put to uses other than building projects, as in the Nanumean fishing enterprise reportedly begun on Funafuti recently. It is clear that community projects, or those organized by an established group to benefit the community, usually receive extensive support and that impressive sums of money can be raised quickly to fund them (see N.R.: ch.12, Community funds). All these enterprises depend on enrolling individuals' skills and labour. They thus provide a socially acceptable context within which the drive of enterprising individuals can be realized.

MRONRON

In the field of *mronron* activity Gilbertese society illustrates strikingly the strong emphasis on enterprise that involves almost all households, the numerous ways in which people can evolve or adapt institutions to the actual conditions of village life such as availability of money or store goods, size of clientele and transitory opportunities of making money. The various forms of *mronron* thus represent responses to the actual *scale* of cash earning, saving and consuming in villages at a particular time, for they fill varying 'ecological niches' at different levels in the household, village and island economy. Although the word *mronron* appears from time to time in government memoranda and these enterprises were clearly known to exist, the almost complete absence of objective descriptions or data on *mronron* in the voluminous government files (the Howarth Report is a partial exception) indicates clearly that the European administrators, up to the early 1970s at least, were only vaguely aware of this whole realm of vital economic activity. Some fear of *mronron* competition to the official cooperatives appears to have existed however. The result was that the *mronron* and indigenous enterprise in the informal sector were ignored in official government policy: the imposition of an annual licence fee of \$30 to be paid to the Island Council, presumably to protect the official cooperatives from the competition, merely drove *mronron* underground.

A *mronron* is a Gilbertese business, engaged in one or a number of economic activities. Most are, at least in part, engaged in selling store goods and perhaps a few prepared foods in exchange for nuts or cash. It is unknown when or where *mronron* as they are known today first originated. However early this century, groups of Gilbertese were purchasing goods in bulk quantities from traders, and reselling them, usually for coconuts (B.R.: ch.8, *Mronron*), and especially since the 1930s various

indigenous cooperatives have sprung up (A.R.: ch.10, Tangitang Union and early cooperatives). With the exception perhaps of Tamana, where there appeared to be greater uniformity in type (due perhaps to the relatively small population and strongly cohesive community spirit), a considerable range of types of *mronron* is recorded on the Gilbertese islands studied.

Because of the transitory life of many *mronron* and the formidable problems of determining what an accurate sample might be, the reports are unable to give reliable information on what percentage of total retail trade is handled by the *mronron* sector. On Tabiteuea in 1972, however, it was estimated that about \$50,000 of turnover was contributed by the *mronron* which represented about 60 per cent of all sales of merchandise (TN.R.: ch.7, *Mronron*). On Tamana in 1973 it was estimated that *mronron* accounted for nearly 15 per cent of store purchases from the cooperative society and nearly 34 per cent of the island's copra sales. As a proportion of household income in 1972-73 money earned from *mronron* provided 7 per cent on Tamana and 5 per cent on Tabiteuea North. Since *mronron* had to purchase their stock from the cooperatives (though several were seeking to bypass them and buy directly from overseas, or from Tarawa importers) they are in this sense complementary to the cooperative, merely adding 10 or 20 per cent to their sale prices.

On Tamana in 1973 18 *mronron* were recorded for a population of 1,392 or 1 for 77 people on the average. This conformed closely to the number of *mronron* in the villages of Tebanga and Baretoa on Abemama in 1972. It has been noted that Gilbertese believe that prosperity can be achieved by cooperation and appear little concerned by competition between a considerable number of small *mronron* within a single village. Inevitably the potential for growth in volume of sales is limited by this situation. At the same time as villagers engage actively in 'penny capitalism' in the form of small enterprises involving only a few neighbouring households, the same people are often learning the advantages of economies of scale, efficient ordering, stocking and management in the cooperative society (of which they are loyal supporters) and in the operation of the cooperative truck.

MONETARY AND ECONOMIC FUNCTIONS OF *MRONRON*

An investment

Why is *mronron* membership or partnership in founding a new *mronron* such a popular activity? Above all a *mronron* is a profit-seeking activity, which paradoxically holds out the hope to villagers of earning substantial amounts of money in an environment that strongly discourages individual profit seeking. Apart from Tamana, where some goals are also community-oriented, individuals invest small sums in the hope that their money will grow.

Many *mronron* are founded after an unusually large sum of money has been earned, perhaps through the sale of a land, or after a period of employment on Ocean Island or Nauru. In this way, members hope to retain their savings, rather than dissipate them rapidly on store goods. Specific cash goals, such as money for school fees, taxes and the like, may also provide the motive for forming a *mronron*. Some *mronron* can achieve goals such as earning \$50 for an individual in a year or two, a sum which a villager would consider impossible to earn without the stimulus of corporate organization and the protection of the investment against the temptation to spend it. Moreover, although true wealth can be gained only by owning land, *mronron* membership is seen as providing the best avenue open to all people to improve their living standards and status. Wealth in a monetary sense can be earned from *mronron* enterprise.

Short-term benefits or deferred rewards

The importance of the *mronron* as a method of saving, or form of investment, may be balanced against other, more short-term goals. Thus, some *mronron* never distribute their profit to members until the time of dissolution and over a period of years the protection of the investment, the long-deferred reward to come, and the satisfaction and status of operating a successful enterprise provide sufficient return in the short term. However many provide some short-term pay-offs to their members, such as terms as acting as store-keeper, 'keeper of the key' of the cash box (TN.R.: ch.7, The *mronron* called Waki-n-rorobuaka) or other official positions in the *mronron* for which wages are received. In Tamana and Tabiteuea North *mronron* distribution of some of the profits earned was made just before Christmas (e.g. TN.R.: ch.7, The *mronron* called Waki-n-rorobuaka).

Source of loans

The usefulness of *mronron* as institutions from which people can borrow is also important. While this facility is usually available only to members, one *mronron* is recorded as having a special fund for loans to non-members (B.R.: ch.8, *Mronron*). Since most *mronron* never distribute profits, borrowing provides the main short-term benefit, apart from the wage which is sometimes paid to officeholders. Interest rates are high, often being 10 to 20 per cent or more, and increasing after the first month.

Credit

The extension of credit to individuals lacking cash enables them to purchase store goods and at the same time acts as an incentive to repay the debt (A.R.: ch.7, Expenditure; T.R.: ch.8, Attitudes towards cash and cash earning). Debts must be repaid

at the end of each week (T.R.: ch.11, *Mronron*) or month, and persistent debtors are relentlessly pursued for payment. In other cases it is a strict rule not to extend credit and rotating store-keepers serve as a check on this practice. If credit has been granted the store-keeper has to make up the deficit in the cash book.

Retail function

Above all else, the retail function dominates, for most commonly *mronron* operate as stores. Their ability to compete with the larger and well-stocked cooperative stores is essentially because of the convenience and 24-hour service that they provide; their clientele are little concerned about higher prices when only very small purchases are involved; *mronron* have no overheads, operating from a member's house; and labour costs are never counted. Above all, they represent a highly regarded, legitimate investment, which is seen as a way of making your money grow, and in some cases the loyalty of members to their own *mronron* ensures business. The convenience of using a nearby *mronron* is perhaps the paramount factor, and in supplying minute quantities of goods immediately desired, such as a matchbox of tea before breakfast, or one-eighth of a half pint of kerosene at nightfall (B.R.: ch.8, *Mronron*), the *mronron* fills a need. When there is no money in the house, or at a time of low copra prices when the economic advantage of making copra is marginal, goods can be obtained from a *mronron* on credit or with whole nuts that otherwise could not be purchased from a cooperative store.

Organization

The reports illustrate that *mronron* involve an enterprise of *individuals*, not households, and members participate as equals. A minimum of social organization is involved and kinship ties do not normally appear to be necessary for founding a *mronron*, although on Tamana 16-20 households living on 1 *kainga* (a spatial residential and not kin based unit) might form a *mronron*, or contiguous *kainga* might join (T.R.: ch.11, *Mronron*). Members contribute labour equally, 1 day either per week or fortnight, and they all serve as a check on the honesty of one another. Again, the special skills of members in fishing or other household production are often capitalized on.

CONSTRAINTS ON ENTERPRISE

The basic limitations to enterprise were both economic and socio-cultural. By its very nature, copra income is irregular, for the producer can gather ripe nuts only when they fall (see A.R.: Table 7.2), while the receipt of remittances by telmo

is often quite unpredictable. Apart from unusual years of high copra prices, when incomes are relatively high, most households receive only small sums of money at irregular intervals which are used to pay taxes or for the purchase of store foods. Available cash then is rapidly depleted because it is small in amount and funds needed for more important goals (such as payment of school fees or capital goods) are required in other ways, as in a request to a relation in off-island employment. Purchasing power in this situation is therefore rather weak, and operates in fitful, sporadic activity. This in turn must affect producers who hope to sell household items such as bread, doughnuts, sour toddy, sweets and the like: in a situation in which household cash is rapidly exhausted there is little inducement to produce on a regular basis. At the same time stocking policy in the stores aims at gaining the maximum utility from money, selling in small quantities (carried to a further degree in *mronron*) and stocking few expensive capital items that might conceivably encourage saving. In addition to these factors, frequent bottlenecks occur in supply, whether through delays in ordering (now not so common), delays in GEIDA on Tarawa, or through delays in shipping. When 'incentive goods' run out in the stores, the stimulus to engage in enterprise to acquire cash is accordingly weakened.

It is difficult to estimate to what extent these underlying economic conditions determine the pattern of production activity, which is also sporadic and discontinuous. Even outstanding entrepreneurs are not immune from the pattern, which suggests that cultural factors such as lack of sustained motivation are not a sufficient explanation, and that perceived economic opportunities are also important. It is also the case that a high level of entrepreneurial qualities and aspirations is not widely shared among Gilbertese individuals. The estimate made in the Abemama Report, that at best only 5 to 10 per cent of Gilbertese could be in any way considered entrepreneurial, is generous. Moreover many of these persons are far from typical in descent, upbringing, education, worldly experience or in religious affiliation. A few are Seventh Day Adventist, a church which seems to inculcate unusual achievement orientation among at least some of its followers in different countries of the South Pacific.

The short life characteristic of most *mronron*, caused usually by the withdrawal of capital by their members, serves as an important constraint on the economic potential of *mronron* in particular. While many instances exist showing that members will leave their investment in for long periods appreciating how their share has accrued in value, this will be done only if a worthwhile sum can be made easily. Price estimation is hazy, and several instances are recorded of *mronron* only breaking even in their sales (without, of course, costing labour) or in fact losing, especially when they fail to adjust their prices after a price change. Some *mronron* which agree to distribute profits from time

to time collapse because insufficient capital is left to maintain trading.

Moreover, *mronron* activity usually mainly involves the further circulation or internal redistribution of money already earned, rather than the generation of new income. Only a very few *mronron* such as the large-scale Tuta *mronron* on Abemama (A.R.: ch.10, Tuta *mronron*: a large-scale business) actually increased production (e.g. through the sale of salt fish, *kamaimai* or other products off the island) and thus actually contributed to economic growth in its strict sense. The plans for a fishing cooperative based on South Tarawa by the North Tabiteuea *Mronron* Union and the enterprise led by Tito Teburoro to operate a small bus and furnish a 'hotel' on Tabiteuea North could conceivably have been successful if well managed and work had been sustained (TN.R.: ch.7, North Tabiteuea *Mronron* Union). Apart from these instances the sole value of *mronron* from a strictly economic viewpoint was the increased utility and velocity in circulation of money that they stimulated, their encouragement to consume store goods (a very dubious virtue probably in the long term) and their value as institutions of capital formation and saving. But their value in numerous social ways, as indicated above, was very great indeed. Not only did they bring satisfaction through working together, but they discouraged laziness and encouraged saving, thrift, and working collectively to achieve positive goals.

FUTURE POLICY ON INDIGENOUS ENTERPRISE

Two key questions should be considered and answered in framing policy. First, could the pursuit of commercial, monetary goals ever seriously compete with and endanger the quality of life on the islands, including the viability of the subsistence economy? Secondly, in what manner can the institutions required for the successful operation of the cash economy and institutions required for Gilbertese and Tuvalu village life be blended into a viable form of commercial organization that is acceptable in the village context?

On the first point, it is vital that government be concerned with the *total* economy and not merely the monetary sector. The example of the excessive cash-earning zeal of a Tamana *mronron* which, in one week of high prices, made heavy inroads into future subsistence and cash production by actually picking coconuts from the palms instead of waiting for them to fall, indicates that some safeguards appear to be needed to protect (and indeed strengthen) the vital subsistence sector from activities that might weaken it. Moreover, it is also true that an emphasis on individualism in entrepreneurship can be destructive to social cohesion and to norms and values. Although the islands have a heritage of 90 years of trading by a number of European or

Chinese traders, the belief remains strong among local people that enterprise should be a *corporate* affair, either directly as on Nanumea or mediated through *mronron* as in the Gilberts.

With regard to the second question, *mronron* seem to offer a locally acceptable form of cash enterprise for the Gilberts. Their advantages include:

- (a) Their 'telescopic' nature: *mronron* expand and contract their operations over time and even sometimes change their function so that they fit with prevailing economic conditions and with their members' ambitions. (See T.R.: ch.11, Nei Toromi *mronron* for a good example of this ability.)
- (b) Many are closely articulated to the subsistence economy, as when they indulge in sales of sour toddy, salt fish or accept whole nuts as payment. They are thus part of the informal sector, basic to the national economy even though not included in the national accounts.
- (c) *Mronron* are an established social institution in the Gilberts and thus need no government extension efforts to create them. *Mronron* intrinsically possess the profit motivation that is relatively lacking at the household level and they constitute an institutional form that is capable of mobilizing labour and which has access to the necessary physical and capital resources needed for enterprise.

Though *mronron* may also possibly prove acceptable on Nanumea (and in Tuvalu generally) in the future, at present communal forms of enterprise seem to be most promising there.

Just as a large number of papers on numerous Third World societies in recent years have pointed out that official administration policies are geared only to the 'modern', capitalistic or monetary sector, ignoring or bypassing the large 'informal sector' not included in national statistics in spite of the considerable economic activity and potential that it contains, so it is important for the government in the Gilbert Islands to recognize the *mronron* sector, its complementary (rather than equivalent) role to the official cooperatives, and to build constructively on it. A marked change in government policy and perspective is thus called for, recognizing and according legitimacy to the institutions of the informal sector described above. Inevitably the question of priorities remains, even should the government decide to support such locally derived forms of enterprise as *mronron* or community projects. However, as Chapter 11 suggests, the stage now seems to have been reached where many island cooperative societies are mature enough to be capable of self-government.

Apart from the provision of audit from the Cooperative Federation and some external assistance and advice (e.g. running short courses on management), the central headquarters would be expected to play a steadily diminishing role, though the possibility of its stepping in in the case of serious setbacks on some islands cannot be discounted. If this is the case, more resources relatively should be available for assistance to the informal sector. But clearly, discrimination will have to be exercised among the multitude of *mronron* and clear criteria on economic performance for selecting those for further advice and assistance will have to be worked out. This would inevitably cause dissension. However, if the advice could be available for all those interested (e.g. courses held in village *maneaba* on bookkeeping, management, technical skills etc.) and once the problem of scarcity of resources and the inevitability of establishing priorities were fully understood, the local people would appreciate that the acid test must be successful performance, justifying the provision of further assistance to some while withdrawing it from others. Those enterprises with the greatest *spread effects*, stimulating other healthy production or marketing activity, also warrant a high priority in receiving assistance.

Danger of 'bureaucratization'

Above all however, government must be careful to avoid the ever present danger of 'over-bureaucratizing' the development process. A strong government policy with clear-sighted goals will sustain individual extension officers and improve their impact, but at all times government must avoid the danger of stifling healthy local initiative through red tape, regulations or by bogging down practical field men with a plethora of paper. The aim should be to provide healthy guidance though avoiding the many pitfalls (fully understood in the cooperative field) and teaching the necessary business and technical skills and advising on marketing and production problems.

Finally the other major role for government in fostering local enterprise is clearly to establish reliable and secure markets by instituting import substitution policies whether by import restrictions, tariff and other fiscal policies coupled with direct and indirect aid to Gilbertese producers of salt and fresh fish, pork, *babai*, bananas and other fruit and vegetable crops, or by improved transport, pick-up and handling arrangements and cool storage, or slaughtering facilities in South Tarawa. Providing shipping costs do not become prohibitive, consistent policies and carefully planned organization would bring increased confidence in the market and so more regular and sustained production would gradually develop over time. In the non-phosphatic future, if shipping costs become too high to make production for the Tarawa market economic even on the closest outer islands, the present pronounced economic dualism and gap between those islands

and South Tarawa will become quite unbridgeable and they will be forced to lapse into subsistence, with copra, and remittances from exported labour, providing the only sources of cash.

SOURCES IN ISLAND REPORTS

- A.R.: ch.4, Concept of wealth; Work; ch.7, Household sales; ch.10; ch.14, Enterprise.
- B.R.: ch.3; ch.7; ch.8; ch.13, Cash and subsistence; Cash sector.
- N.R.: ch.9, Literacy and business skills; ch.12, Other minor sources of income; Trading institutions and local entrepreneurship.
- T.R.: ch.3; ch.8, Attitudes towards cash and cash earning; Local income sources; Handicrafts; Sales of other goods; ch.10; ch.11; ch.13, The economy; Subsistence sector; Cash sector.
- TN.R.: ch.4, Toddy production; ch.6, Tabiteuean attitudes; Household income; Telegraphic money orders; Sale of copra and handicrafts to the cooperative societies on the island; Sale of foods and other items to Tabiteueans, the Government Station and cooperative societies; Employment; Cash income; Household expenditure; Purchases from cooperative society stores; Taxes and licences; Summary of expenditure; Savings; ch.7, Individuals and trading; *Mwenga* cash enterprises; Joint activities; *Mronron*; The *mronron* called Angiraoin Taukarawa; The *mronron* called Waki-n-rorobuaka; North Tabiteuea *Mronron* Union; *Mronron* copra production; Competition between *mronron*; ch.8, The traditional leader; The economic leader; ch.10, Cash enterprises.

Chapter 11

Cooperatives

A brief account of the evolution of cooperative societies has been provided in the island reports (see especially B.R.: ch.12, History; TN.R.: ch.7, Registered cooperative societies; A.R.: ch.10, Tangitang Union and early cooperatives; ch.11, The cooperative). Originally cooperative societies were intended to eliminate the intermediary trading station that existed on each island and so save the middleman's profit. By 1934 almost every island had at least one cooperative functioning, but the intense competition that soon developed between cooperatives and private firms prevented any society acquiring genuine financial strength before World War II and the evolution of the Tangitang Union under the leadership of W.P. Schutz (see A.R.: ch.10, Tangitang Union and early cooperatives). The failure of the private firms to return after the war enabled island-wide consumer societies to be formed and to take over empty stores. The initiation of the Government Trade Scheme (based partly on surplus American goods) was succeeded by the Colony Wholesale Society and a period of rising copra prices. The prosecution of a vigorous cooperatives policy by government led to a rapid expansion and strengthening of the cooperative movement in the late 1940s and 1950s. Although the policy of establishing a single cooperative society on each island to achieve economies of scale was not everywhere successful, on the whole they managed to transcend local factional and religious differences to a considerable degree and this has been one of the greatest achievements of the movement.

At the close of fieldwork for this study, the cooperative societies on the 5 islands demonstrated many encouraging features: strict adherence to an economic function had demonstrated to islanders that a profitable enterprise could be built up, even in such an unfavourable environment. The retail service was greatly appreciated by virtually all islanders (and especially by those strangers on islands who had access to few lands or *babai* pits), and although stores still ran out of major goods from time to time, this was now rather infrequent. In many ways, cooperatives illustrated to villagers how a profit-making enterprise should be run: the importance of sound principles of management, the benefits of bulk buying, budget control, regularity in ordering, regular

stock-taking, maintaining adequate working capital and reserves, avoidance of unprofitable lines and costly investment in fixed assets, and the need to carefully regulate buying policy to confine orders largely to goods with a rapid turnover. (The steps taken by F. Howarth in 1958-59 to salvage the near bankrupt societies of Abemama and organize them on a sound basis are described in A.R.: ch.11, The cooperative.) Indeed it is clear that failure to observe such basic principles frequently leads to the downfall of many *mronron*. Almost every household in each island belongs to the society and on Tabiteuea North where there are 2 societies, most households contain members of both (TN.R.: ch.7, Registered cooperative societies). People are glad to be members to receive the annual bonus and the common goals and group organization of the cooperative are supported primarily because they ensure individual benefit. Annual general meetings are well attended and members take a keen interest in the financial well-being and other business of their society. Although the rules might be thought to be European in conception, they are strongly supported by members, who are unrelenting in their attitude to employees who are guilty of embezzlement, who supply 'secret credit' to relatives or attempt to resell copra already purchased at the copra shed. In view of efficient management and regular stock-takings leakages are now low (about 2 per cent on some islands).

The financial strength and efficient operation that characterized almost all of the cooperative societies at the time of this study (1972-74) should not, however, divert attention from the peculiar history and unusual characteristics of the cooperative movement in the Gilbert and Ellice Islands. First the cooperative movement had virtually a complete monopoly in primary marketing and retail trading, and represented a large part of the total commerce of the country. Cooperatives have 'expanded to fill a vacuum', as Youngjohns (1969) points out, on the initiative of government. Under the strict control of Tarawa, operating under the umbrella of the government appointed Copra Board, supplied by the Colony Wholesale Society (later Gilbert Islands Development Authority) and GIDA Shipping Service, local cooperative societies have been thoroughly protected throughout their life and it is scarcely surprising that qualities of dependence and passivity are characteristic. Their role in retailing is also minimal, for goods imported from Tarawa are marked up according to a catalogue of prices determined in Tarawa. (This is, however, essential to ensure impartial treatment of all societies in the outer islands and the maintenance of uniform prices.) Management and supervision are therefore much easier than in many parts of the South Pacific. In view of the vital importance of the copra industry to the country it might be argued that the cooperative movement should be more enterprising in attempting to stimulate production,¹

¹However, the Cooperative Department was involved in the Nonouti Agricultural Cooperatives (1969-72) and the Te Keiaki Agricultural Cooperative (1970) in Abemama. See A.R.: ch.11, Agricultural cooperatives.

rather than confining its role merely to the purchase, weighing and storage of the copra and then shipping it to Tarawa.

In Butaritari the cooperative movement has been successful but here local factionalism has been especially strong. Many applications for the registration of break-away societies in the early 1950s forced the announcement of a new national policy in 1954 and 1955. This aimed at deregistering larger island-wide consumer-marketing societies and replacing them with a Wholesale Union which dealt directly with the Colony Wholesale Society (later, in part, GEIDA) on Tarawa, and imported and exported consumer goods for its members, the village cooperative societies. The Union would not engage in retailing, but would supply not only the co-operatives but also local *mronron* (B.R.: ch.12, History citing F162/4/3). This policy was, however, carried out only on Butaritari and North Tarawa, and on the former island 6 village societies are supplied by the island-level Cooperative Wholesale Society (CWS). In the early 1970s three problems in particular became apparent in Butaritari: members of the Butaritari Village society were dissatisfied at the disproportionate volume of capital that was supplied to the CWS and resented sharing the profits from their much higher cargo and copra turnover; they wanted to escape from the high labour and other operational costs of the CWS; and felt that, in comparison with other village societies, they were poorly supplied with provisions by the CWS. In 1973 the bid of the Butaritari Village society to withdraw from the CWS and to operate as an independent society was finally approved. Dissatisfaction at the cooperative's failure to supply some goods demanded by members and the desire for a greater service-oriented role, including stocking a wider range of products, led also to a proposal to form an organization in Butaritari village independent of CWS or Cooperative Department control. To meet these needs the Antekana *mronron* was established, and made an encouraging start with a turnover of almost \$100 a day (B.R.: ch.12, The Antekana *mronron*). In contrast to the cooperative society, the *mronron* supplied some of the goods demanded by members including spare parts for bicycles, some capital items and various items of luxury goods. Although in the latter respect it may appear that the *mronron*'s zeal to adopt a more service-oriented role is economically unsound, leading it to stock various unprofitable lines, it is significant that even the cooperative society committee members recognized the discrepancy between the broader village interests and the narrower goals of the cooperative society.

These events on Butaritari illustrate two problems of quite wide significance throughout the Gilbert Islands: the danger of segmentation of larger or island-wide societies into smaller units because of the increasing disparities or perceived differences in consumer preferences between the richer villages (Government Stations) and outlying villages, and the need for a new relationship to be forged between the headquarters of the Cooperative Department on Tarawa and the societies at the village

level. The unwillingness of richer islands or villages to subsidize the less privileged, poorer communities lies at the nub not only of the cooperative movement but also many aspects of local government. The dangers of factionalism or excessive parochialism can only be combated by more effective management by well-trained managers and by responsible, competent committees who supply communities more adequately to meet perceived needs, and where these are impracticable, to explain patiently why they cannot be met. Secondly the excessive dependence on Tarawa and the general view on all islands of the study, that the movement is essentially run by the government and particularly by Europeans rather than by the members, needs to be countered by specific policies. With increased localization of senior staff the allegation of control by Europeans will be progressively overcome, while more deliberate community education by the cooperative movement on why control is so tight on buying policy should bring greater community awareness. Of course splitting island-wide societies into smaller societies should bring greater participation by members and in some situations this may be preferable. But smaller societies bring new problems: the village societies of Butaritari and North Tarawa have a lower surplus than big single societies, and the large numbers of small societies will make it difficult to find enough competent managers (Report of Registrar of Cooperatives for 1971, para. 23). It is no accident that the most financially sound societies are those on some of the smallest, southern islands of the Gilberts or in Tuvalu which are too small to warrant the purchase of a truck. While a truck is extremely useful on the larger atolls and a launch is valuable for transport to outlying smaller islands, it is important for members to become fully aware of the cost of depreciation of vehicles, the difficulty of operating them on a profitable basis, and to appreciate the need to maintain them in good mechanical order.

Abemama

On Abemama the cooperative was most efficient and highly successful. People did not expect it to adopt a more service-oriented role and indeed were so concerned about maintaining a high level of profitability that they were anxious to rectify weaknesses, such as the operations of the truck where it ran at a loss. In spite of the widespread recognition of the public services performed by the Women's Committee, members were adamant at the annual general meeting that the Women's Committee should be charged the full sum for hiring the cooperative truck even though they were working on a new island *maneaba*. The need for a more enterprising, innovatory role was obvious on this island which lies close to Tarawa and has such a large lagoon with abundant supplies of fish. The cooperative could do much to stimulate a larger trade in salt (and fresh) fish, particularly if supported by an import-substitution policy aimed at reducing imported tinned foods. Wind drying of fish could be instituted and pick-up facilities for fish and

other produce throughout the atoll could be greatly improved, especially since completion of the new causeway early in 1973. Unless private enterprise performs the role, the cooperative could consider opening a mechanic's garage, to service not only the cooperative truck, but also the few outboard motors and large number of motor-cycles on the island.

Tabiteuea North

On Tabiteuea North some rivalry existed between the 2 cooperative societies but here the valuable role performed by the Department in Tarawa was illustrated by discouraging damaging competition. In some respects the 2 societies filled complementary functions: thus the truck possessed by one society could be borrowed by the other, and the launch is also shared in the same way. Many people felt that the societies were controlled by the Cooperative Department and Cooperative Federation on Tarawa and there was little involvement by members. Few people knew who their village representative was on the cooperative committee or were interested in his activities. Some unusual tools and foods suggested as new lines for the store in 1969 remained unsold 3 years later and demonstrated the need to concentrate on goods with rapid turnover. Probably the greatest handicap to improving the profitability of the societies was the failure to ensure that a reliable mechanic was employed on the island or visited it frequently: thus a 5-ton truck purchased for \$3,000 in 1969 had to be written off the books as soon as 1971 and a new truck purchased in 1972 for \$6,000 had to be push-started a year later because of a loose fan belt. The Central Society lost an average of \$984 annually on truck operations (excluding the loss on the first truck) and the Northern Society lost \$344 annually on launch operations. Some members were concerned that the increase in capital assets in the societies was not matched by an increase in the value of shares held by members. In contrast with the situation in *mronron*, shareholdings remained static in value and this contributed to the belief that the cooperatives were owned by government rather than by Tabiteueans (TN.R.: ch.7, Registered cooperative societies; Organization of cooperative societies; Problems facing cooperative societies).

Tamana

On Tamana the cooperative society was an efficient, effective institution. The manager did not see *mronron* as in any sense rivals to the cooperative store, but on the contrary believed they were beneficial to the Tamana economy. He argued that an expansion of *mronron* increases copra production and store sales, and since all of the copra and most of the store goods passed through the society's stores, this would benefit members.

Nanumea

On Nanumea island, Tuvalu, the cooperative was also a most successful institution, although here again there was a tendency to regard it as 'a semi-government institution', since a considerable measure of control was exerted from Tarawa. Unlike the situation in the Gilberts, the cooperative had a complete monopoly of the retail trade, for here *mronron* were absent.

COOPERATIVES IN FUTURE

What role can be envisaged for the cooperative movement in future years, after independence has been achieved? As the above account and the island reports indicate there is a need for the paternalism of the past to be gradually replaced by a relationship that will involve less dependence on Tarawa and for fuller participation by members in the affairs of their own societies. This is, of course, one aspect of the wider political relationship of outer islands to central government. Inevitably there will be a continuing need for training in the skills of management, book-keeping and the like — and some of the senior personnel and audit services will still have to come from the centre. But a basic goal of the cooperative movement is to achieve local autonomy, and this requires expanded efforts at wider community education on the goals and methods of the cooperation movement and the skills of business management. Of course good reasons exist for the tight control exerted by the Cooperative Department in the past (see Epilogue in this chapter), criticized by so many islanders: it was all too easy for local societies to invest in costly, unprofitable trucks, tie up money needed for working capital in costly fixed assets, order luxury items with slow turnover, or to become prone to purely social, community needs, or the demands of kinsfolk for 'credit'. It is clear that the sound, profitable nature of most of the cooperative societies of the early 1970s was achieved only as a result of the long continued, painstaking and consistent application of a body of well-tested knowledge and it would be foolhardy for the societies to jeopardize their sound financial position. Indeed it is easy to criticize 'paternalism', 'colonialism' or the 'control of *imatang*' and to make them the scapegoats for unpopular policies. It is all too easy to fritter away the hard-won achievements of the past, and in the enthusiasm that independence will bring there will be a real danger that local factions or parochial interests will assert themselves and regard cooperatives almost as booty available to be taken. It is a sad fact that the cooperative movement which was moderately successful (though operated on Eurocentric lines) in a number of colonies has lapsed badly after independence. A particular danger seems to be the tendency of local societies to order their goods through private wholesalers thus weakening the cooperative wholesaling division, and ultimately the whole movement. This has

happened in Fiji² and provides a clear warning to GIDA to maintain its supply of goods to village societies at prices competitive with those of private traders.

We have, however, suggested in Chapter 10 that a more liberal official view could be taken of the *mronron* sector³ and certain criteria worked out under which some might qualify for government assistance. Since skilled services will always be in short supply (since by definition they will be scarce and therefore costly) criteria will have to be worked out to make most efficient use of them. However, it is just as cheap to teach 60 as it is to teach 6, and much more use could be made of *maneaba* as meeting places for simple lessons on business management and bookkeeping so that all who wished to attend could do so. At the same time while the strict criteria of economic success should not be imperilled by overloading the cooperatives with many new, non-economic functions, a *cautious* widening of their role seems to be appropriate. Thus a more enterprising, innovatory role in the salt fish trade is called for on islands where a clear surplus exists. A rather more service-oriented role is appropriate to suit the distinctive needs of particular communities and the stocking of bicycles with spare parts and hand operated sewing machines would meet a real need. Some capital goods items now available only on Ocean Island or Nauru could be stocked. Consistency in ordering (e.g. on a particular brand of lantern) and in maintaining spare parts could be improved upon. Considerable room for improvement exists in the quality of handicrafts purchased by societies.

Finally, we would urge a rethinking of the ultimate goals of cooperatives if they are to serve their members in the most beneficial way, remembering that they operate here in a unique atoll environment. While profitability remains essential, prosecution of willy-nilly consumerism might ultimately endanger the subsistence economy. In the last resort ultimate success will be determined by the contribution cooperatives make to the quality of life on the atolls. While this might entail a vigorous retail trade and substantial copra exports it must also include the survival of a self-reliant subsistence economy. Obviously the stocking of fishing hooks, nylon line for nets, bicycles, even

²In 1977 only about 28 per cent of cooperative purchases in Fiji were from cooperative sources. Urgent steps have had to be taken by the Fijian Government to rectify the position which included a short-term salvage operation by overseas staff, and a study on long-term needs by a New Zealand firm. It is hoped under the plan to increase cooperative purchases from cooperative sources to over 60 per cent by 1981.

³If the competition of any of the larger *mronron* should endanger the profitability of a cooperative society, the cooperative could of course extend its hours of operation to provide an equivalent service.

bicycle trailers and suitable timber for canoes would make a real contribution to maintaining the subsistence economy and its cash-earning extensions. Moreover, policy should also be concerned with improving nutrition. In this respect tins of milk powder, in convenient inexpensive sizes, would be a worthwhile addition to store shelves. Needless to say, it is to be hoped that cooperatives will avoid the false allure of importing innumerable western consumer goods, foods and gadgets, which however essential they may appear to be in western life, serve no useful purpose in the islands. Indeed on most islands there is evidence to suggest that islanders have sensibly rejected such inappropriate or costly innovations (e.g. the refrigerators which merely serve as cupboards on Abemama, A.R.: ch.10, Frank Smith, trader extraordinary). Here the role of the media is obviously crucial and western-type advertising has fortunately been restricted and made little impact. The beneficial effects of these trends can be readily witnessed by a simple comparison of the Gilbert Islands and Tuvalu with American Micronesia which shows so much evidence of the noxious effects of heedless consumerism.

EPILOGUE

As this report went to press, information was received from the Senior Cooperative Officer (personal communication 29 March 1979) that in recent years the local cooperative societies on 3 of the 4 Gilbert Islands of the survey, Abemama, Butaritari and Tabiteuea North, have not flourished and major local problems have led to much lower profitability. Since 1973 when Abemama had a most competent manager, the island has had 4 managers 'who were generally chosen for family connections rather than ability', while the committee has also indulged in rash policies. A nadir was reached in mid-1978 (in spite of a good copra price) when there was little money in the store, a large debt to the Cooperative Federation, and no money to buy copra. A member of the staff of the Cooperative Department was appointed manager to put the society on a sound basis.

On Butaritari, the insistence of villagers on having their own village societies and island-wide Wholesale Society as described above meant that overheads were barely covered, while bad management compounded the problem. By early 1979 the CWS owed the Federation large sums and was reduced to supplying basic items only. 'Private enterprise flourishes and a further attempt at amalgamation will be made which will probably succeed now that societies and the CWS are almost beyond salvation.'

The 2 societies on Tabiteuea North dominated respectively by Roman Catholics and Protestants had continued after 1973 to be successful, competing only in a few larger villages. About 1976 however the competition became intense, and money that should have

been spent in buying merchandise was used to open stores in every village. The societies were reduced to penury but by 1979 the schism was over and under good managers the societies had begun to recover.

Tamana was characteristic of all 5 southern Gilbert Islands and in 1978 was as sound and stable as in 1973. Bonuses averaged 5 per cent over the period 1974-78 from a mark-up of only 15 per cent, illustrating the efficiency of the society. Tamana was 1 of only 2 islands providing South Tarawa's requirements for salt fish.

In view of this situation in 3 of the 4 Gilbert Islands studied, we would emphasize the note of caution sounded above. Clearly achievement of autonomy is still a good way off and there remains a continuing need for a central department to provide guidance, advice, and in extreme circumstances resuscitation to outer island societies.

SOURCES IN ISLAND REPORTS

- A.R.: ch.11, The cooperative; Need for a modified goal?
- B.R.: ch.12, History.
- N.R.: ch.12, Trading institutions and local entrepreneurship.
- T.R.: Tables 8.8, 8.9.
- TN.R.: ch.7, Registered cooperative societies; Organization of cooperative societies; Problems facing cooperative societies.

Chapter 12

Politics and government

ROLE OF GOVERNMENT AT VILLAGE LEVEL

The role of government, in the eyes of most Gilbertese, is to look after the people, to decide what is good for them and to make them lead good lives. It is the government's responsibility to think for the islands, and though people may sometimes suggest or disagree, government is under no obligation whatsoever to listen to them. The authority thus credited to government is immeasurable.

At the same time people firmly believe that government officials take advantage of their position for their own benefit. Copra prices are deliberately kept low and the prices of store goods high so that various administrators can grow rich, and it is generally supposed that development schemes put forward are designed to benefit the government in some way — any benefit to the people is merely incidental.

On all outer islands, 'government' means not only the administration in Tarawa, but also all departments on outer islands and institutions established by the government, such as the Island and Lands Courts and the Island Council. Any structure or scheme built or maintained by the government or any of its agencies is regarded as government property. The taxes people pay, therefore, are seen to be used in the construction and maintenance of government property on the island.

Most Gilbertese have come to regard the ways of government to be far beyond their control or understanding, and many believe the best government to be one that interferes least with the daily lives of the people. These attitudes clearly derive from a very long history of paternalistic control both by church and government, and they have led to numerous cases of the people agreeing to proposals presented by government personnel even when they can see no value in them. Indeed a proposal may be acceptable simply because it does not demand a significant commitment from the people.

VIEW OF EUROPEANS IN GOVERNMENT

The morality that governs Gilbertese affairs is dominated by a strict ethic of equality. No Gilbertese can legitimately take decisions on behalf of another, or be seen to benefit at the expense of another in any sort of exchange. This moral code, however, applies only to relations between Gilbertese — Europeans can take decisions on behalf of Gilbertese or benefit in trade with them without necessarily causing offence. It is generally accepted that Europeans are quite dispassionate in their dealings with Gilbertese people, and a decision that favours one person or group is merely accidental, to be treated as luck. For a Gilbertese to take the same decision can only be regarded as favouritism.

The presence of the European is now regarded as indispensable. By remaining socially and morally neutral, he can objectively mediate and secure an equal and fair treatment of all Gilbertese before the law. The present system of courts and councils is acceptable because Europeans are presumed to control them — without them, there is nothing to prevent open favouritism and exploitation. For most Gilbertese, therefore, the prospect of full independence is horrific.

Abemama

Abemamans generally seem less cynical in their opinion of government than most people on other islands. The people of that island have had more direct contact with Europeans and central government than other islanders; and, with a much higher per capita income seem more willing to acknowledge the benefits of the modern world. Certainly, most younger Abemamans understand the necessity for taxes, and the mass of the people do not so readily assume that Europeans are there to exploit them. Most Abemamans are quite ready to accept internal self-government, for while it is generally taken for granted that Gilbertese politicians at present make little effort to meet the needs of the people, there is a widespread confidence that this situation will improve, and that self-government with some European guidance is quite feasible. Abemama's experience of local government (A.R.: ch.13, Local government) is undoubtedly another factor in this situation.

Nanumea

The opinions that most Nanumeans hold of government make a striking contrast to the general pattern of the Gilbert Islands. Tarawa is still remote, and the ways of the government mysterious. But they are extremely grateful for the services government provides, particularly in health and education, and the potential usefulness of agriculture and other development projects is appreciated. The acceptance of those in power and their right

to rule is an integral part of Nanumean tradition, and the people generally do not regret their lack of direct control over island institutions.

SERVICES

The services offered to outer islanders by government — postal and radio links, medical care and the like — are generally well run, and most people are quite satisfied with them. These services are normally run from the Government Station, with personnel making periodic trips to other villages.

The medical staff on outer islands regularly visit other villages, but patients from outer villages requiring more frequent attention must either make the trip to the Government Station daily, or stay with relatives close by. Many adults with comparatively minor illnesses — and some more seriously ill — find a long trek to the Government Station by bicycle or foot simply not worthwhile. Distance on the larger islands is a factor of tremendous importance, and it is suggested that medical services would reach many more people if staff were required to make daily trips to all accessible villages.

EXTENSION PROGRAMS

Most extension workers on outer islands are Gilbertese people who may or may not belong to the island in question. It is very easy to assume that, because they are Gilbertese, extension workers will be intimately aware of outer island conditions, needs and aspirations. But the majority of Gilbertese extension workers left their home islands to attend secondary school, and received a subsequent training that emphasized the European point of view and government, rather than Gilbertese, objectives. Many extension workers are young, many have lost a respect for village life. Some are embarrassed by their lack of training in traditional skills, particularly pertinent in an agricultural officer. Extension workers generally receive a wage considerably higher than the average household income, so that it may be nearly as difficult for them as for a European extension worker to grasp the realities of the small-scale economies of outer islands. Some extension workers and Gilbertese central government staff have been genuinely perplexed by reaction to initiatives taken when they have clearly assessed the situation from a European point of view. The more specialist his training, the further an extension worker is removed from village conditions.

This begs the question — is it necessary for an extension worker in, for instance, the agricultural sphere, to have a secondary school education and to speak English to be effective?

Might not an older man from the island, with experience in local production and with a keen understanding of outer island life, have more to offer?

A government employee on an outer island will usually state a preference for working on his home island. This may result in accusations of favouring relatives in his work; but on any island a man can usually find some relative he might be accused of favouring in this way. On some islands in particular, strangers are not readily accepted, and this can, as has happened on Tabiteuea, hamper his efforts considerably. A stranger living on the Government Station may have very little social contact with villagers, further limiting his opportunities to understand the needs of the people. Furthermore, the differences in custom and in economic circumstances between different Gilbert Islands are pronounced. A man from a southern, drought-prone island can have little understanding of conditions on, for example, a northern island with a high rainfall. The case for placing extension workers on their home islands wherever feasible is therefore a strong one.

All this emphasizes the need for all extension officers and government personnel to more frequently consult the people, and more importantly to involve the people in planning any development project. For they possess an understanding that government personnel and extension officers may not have, an intimate awareness of village conditions — environmental, economic and social — and the implications for these that any project might have.

LOCAL GOVERNMENT AND POLITICS

The system of Island Councils established on all islands to plan and administer local development has met with varying degrees of success. On Nanumea, with its tradition of service to the community through political leadership, it operates extremely well: and on Abemama the prominent part played by the High Chief in contemporary politics has meant that old notions of power and authority have been incorporated into the Island Council structure. At the other extreme, on Butaritari and Tamana, no remnant of traditional ways of making decisions seems to exist in the Island Councils, and as a result the councils are simply not regarded as the rightful representatives of the people. At best their role is effectively limited to 'looking after the government's interest on the island': at times the people have openly demonstrated their hostility to the Council and its activities.

There appear to be major reasons for this state of affairs, and they probably apply in some measure to all Gilbert Islands.

Firstly, on all Gilbert Islands investigated there was a general understanding that Island Councils are government agencies, created to carry out 'the work of the government on the island'. This assumption has certainly derived from a long and continuing history of paternalism: District Office approval must still be obtained before virtually any action can be taken by the Councils. On every island there are numerous examples of well-considered initiatives put forward by the Council and genuinely reflecting the goals of the people, but rejected by the District Office on seemingly petty grounds or without explanation. Nanumea's Island Council is also subject to this control, but Tuvalu societies exhibit a strong sense of community; in the Gilbert Islands excessive paternalism has had the effect of fuelling existing apathy. Clearly, initiative and a sense of responsibility for their own future cannot develop in this climate.

Secondly, Gilbertese society is dominated by an ethic of absolute egalitarianism: it is utterly impossible for one person to place himself above another outside the family context. Traditionally, decisions have always been taken by the community as a whole, or by the heads of all kin groups, after lengthy discussion in which everybody is entitled to participate equally. It is quite unthinkable, therefore, for a small group of persons elected to the Island Council to be regarded as true island leaders, and on all Gilbert Islands investigated Council membership is regarded simply as 'working for the government'.

Two further points of general significance in the Gilbert Islands are also relevant. Of all the islands investigated it was only on Tamana that villages formed any sort of political identity. Elsewhere the households of a single village can and do combine to further common interests, in fund raising or in establishing rules to regulate social behaviour. But for island concerns, every extended family must be represented, for they, not villages, are the units of which society is composed. While the function of the Island Council is to do 'the work of the government' a representative from each village is a fair way to apportion the task; but if decision making is to come from the island, every family must be permitted to voice an opinion.

Because Island Councils in the Gilbert Islands are regarded as extensions of government, it is not surprising that the people considered the most suitable candidates for Island Council membership are those considered to be familiar with the ways of the European. The ability to speak English almost assures a willing candidate a place on the Council, and experience in working with or for Europeans in Tarawa, Ocean Island or Nauru is also considered most appropriate. These attributes are neither valued nor respected in the community; so that if a respected member of the community does gain Council membership it may be largely by accident.

Under these circumstances, it is not surprising that many Island Councils in the Gilbert Islands have been able to ignore public opinion, and have at times acted in ways considered quite contrary to the public interest. The task ahead is a formidable but not impossible one: to involve the people in the planning process, and to make the Councils responsible to the people, rather than solely to the administration. Despite the common characteristics, the situation and measures that can be taken vary from island to island, as the following analysis will show.

Tabiteuea North

The performance of the Council on Tabiteuea North is quite satisfactory, and generally claims the respect of the people. The Council is widely regarded as a vehicle for obtaining funds from central government, and its most notable feature is the fierce parochialism of Council members as each strives to gain for the region he represents as large a share of paid employment and investment allocated by the Council as possible. On any Gilbert Island, the benefits or rewards of any venture must always be divided equally among those involved, almost regardless of circumstances. This is particularly true on Tabiteuea, so that the most important consideration in the planning of any project is how the benefits to be gained can be shared among the districts represented on the Council. At least one project was abandoned when agreement could not be reached.

One village assumes some minor political functions, but there is no other surviving political institution on Tabiteuea North.

Tamana

The role of the Island Council on Tamana as understood by the people is quite unequivocally to do the work of the government on the island; it represents the government rather than the people. On occasions the activities of some Council members have incensed the people of Tamana, and they have found themselves without any means of influencing or even approaching the Council to discuss the matter. This has resulted in the people turning to the Old Men to call a meeting of the whole island, clearly showing the people's lack of identification with the Council. However, except in such times of crisis, the Old Men have generally lost much of their former position of respect, and no longer compose an effective forum for island interests.

The Council of Married Men in each village organizes most activities at the village level. These principally centre around fund raising for the maintenance of the village *maneaba*, but it also assumes responsibility for organizing labour for the Island Council or for government sponsored schemes. These Councils are

dynamic groups capable of expressing village interests, and mobilizing the village according to those interests. The 3 Councils have never united to form a platform for island concerns, but this possibility certainly merits consideration as a means of mobilizing island thought and interest in the planning process. From such a forum a council could emerge that truly represented the island, and was capable of taking a crucial role in planning.

Butaritari

Of all those investigated, the Island Council on Butaritari is the least effective, and many of its activities have produced considerable hostility and resentment in the community. On this island a Council of Old Men, comprising the heads of all families, has been formed to oppose the Island Council, to put forward alternative policies, and to introduce some schemes of its own. The Old Men are universally recognized as the legitimate representatives of the people, and the schemes they put forward genuinely reflect their aspirations. However, the Old Men are unable either to influence the Island Council or to enforce their policy on the people when it is contrary to narrow self-interest, such as the ruling that family land should not be sold. Under these circumstances it is not surprising that only a small number of Old Men regularly attend their meetings, although there is always at least 1 representative from each village present who can inform the other Old Men of the Council's decisions.

The power and authority credited to the government and its agencies on any Gilbert Island is enormous: it is because it is considered a government agency that the Island Council can ignore the Old Men and public opinion. The Old Men are more than willing to meet with central government staff to discuss policy and planning, and without doubt periodic consultation with this body would be a most effective means of eliciting the perceived needs and the goals of the people. Regular meetings between the Old Men and the Island Council to discuss planning and policy would mean that policy more accurately reflected the feelings and aspirations of the people; but such meetings can only be effective if central government is prepared to recognize the Old Men as equal partners in planning.

Abemama

The Island Council on Abemama is a strong body comprised of some of the island's most respected Old Men, as well as enterprising and educated younger men. Important roles were also played by a highly respected and able Ellice Islander and an Island Executive Officer who was widely regarded as one of the most competent in the Gilbert Islands and Tuvalu. The Council is generally effective in the management of services initiated by central government, in the more traditional functions of

island leadership, such as organizing feasts to welcome visitors, and in initiating projects considered to be in the interest of the island. While the traditional body of Old Men still exists, it is now quite ineffective, and the people recognize the Island Council as the true leadership of the island.

The High Chief of Abemama was president of its Island Council in 1972, and this is one clear reason why local government on Abemama should be so successful, at least at that time. By this means, a traditional way of doing things, rule by a High Chief with the assistance of others has been incorporated into the Island Council structure. The traditional right to govern has been successfully blended with the new skills that derive from a western education and sophistication, to produce a most effective form of local government.

Nanumea

Status and respect on Nanumea imply service to the community, in sharing, gift giving and above all in leadership. Nanumean society is also an egalitarian one, and all who are able are expected to take a turn in some position of leadership where their particular qualities are best employed. The Island Council system works most successfully under these circumstances, and membership of it has come to be regarded as the most important form of service to the community a person can offer. Decision making is well considered in the interests of the community, and issues are debated until a solution becomes self-evident. Public interest in and respect for decisions taken are high. A wide range of topics is debated: the agenda is by no means confined to issues envisaged by the District Office. The Council recognizes its role of servant to the community and is quite definitely accountable to it. The Council calls island meetings at least monthly to announce and gain endorsement for its decisions, and to discuss more important issues that members feel to be beyond the scope of the Council's power. Although it is the older respected men who contribute most to the discussion, others can and do present a point of view. There is no other political forum on Nanumea: the Island Council and the community's involvement in it truly represent the island and its interests.

The case of Nanumea serves as a model of how decision making and planning ought to proceed on other atolls. The level of community involvement present on Nanumea is not likely to occur on most Gilbert Islands no matter what steps are taken, for its basis in a high interest in community affairs simply does not exist. Nevertheless, a number of steps can be taken to generate a greater involvement of people in the planning process and to make the Island Councils accountable to the people.

THE WAY FORWARD

For as long as government continues to so closely supervise the activities of the Island Councils, removing from the people any real power to determine their own destinies, it is quite impossible for any sense of responsibility for planning for the future to develop. Government simply must resist the temptation to so rigidly control the activities of the Island Council and hand that role over to the people.

For all its shortcomings, the Island Council is worth retaining. Apart from conducting the day to day administrative work, a Council comprising men who tend to be more sophisticated in the ways of the European world has a valuable contribution to make — many people for instance sincerely believe government's aid budget to be literally infinite. But to go beyond this and take major decisions on behalf of other people is simply not Gilbertese. The ultimate responsibility must rest, not with government as it now does, but with the people as a whole. The Island Council must become the servant of the people, not the master.

The annual development plan for each island is at present drawn up by the Island Council in consultation with central government staff, and explained to the people in village meetings *after* final government approval has been granted. If planning is to genuinely reflect Gilbertese aspirations the people must be involved in the initial stages of planning, in meetings at which all people can voice an opinion and discussion can produce agreement in the traditional Gilbertese manner. On small islands with villages close together, like Tamana, island meetings are possible; separate village meetings would be necessary on larger islands. The Island Council members could take a major role in this planning process, and central government staff certainly need to attend meetings in an advisory capacity. The verdicts of the people must be accepted: to ignore or modify any decisions reached by the people as a whole is to reject the notion that the people have the right to determine their own future. This is a time-consuming process, but if the ultimate aim is to make the people responsible for their own planning, then this must be given the highest priority.

Where some tradition based decision-making structure exists, such as the Councils of Married Men on Tamana and the Council of Old Men on Butaritari, it is by definition genuinely representative of the people. Periodic consultation with such a body would give central government staff a ready access to the feelings and aspirations of the people: equally it can give the people direct access to the thinking of government — a situation that is lacking on most islands. Representatives from such bodies should also be accorded the right to attend Island Council meetings. This new relevance can only strengthen traditional institutions, and the decision-making process as a whole.

If effective decision making is to take place on the islands, it is imperative that local people be kept abreast of developments and changes of policy in Tarawa. In practice this implies that all visitors to the islands should meet the Island Council, rather than confining their attentions to their respective departments.

These measures together will inevitably make local government more effective in the Gilbert Islands. Traditional and agreed ways of doing things are incorporated into the general pattern of decision making, at once bringing the body of the people into the process of planning and controlling the Island Council by making it responsible to the people. By building on these accepted ways of reaching decisions and conducting government, there is no reason why local government on all other Gilbert Islands should not be as effective as it is on Abemama.

LEGISLATIVE COUNCIL MEMBER

The role of the Legislative Councillor is an ambiguous one. Gilbert islanders tend to treat their representative as a messenger — one who takes island problems to Tarawa and returns with a solution. In some cases considerable resentment may build up when solutions are not immediately forthcoming, but clearly this is no reflection on the member concerned. Most members are diligent in calling village meetings after sessions of the Council, but interest in issues that are not immediately applicable to island interests is very low, so that attendance is often poor.

The Legislative Council member represents his island in decision making in Tarawa, but he has no formal contact with the decision-making body on the island, the Island Council, or any formal access to island development plans. Very often he is also a member of the Island Council, but this is not necessarily the case, and his relationship with island bodies needs clarification.

SOURCES IN ISLAND REPORTS

- A.R. : ch.2, Role of *Te Uea*; Role of the *unimane* and the *maneaba*; ch.13; ch.14, Attitudes to government and development.
- B.R. : ch.2, The present; ch.3, Attitudes towards government; ch.11; ch.12, Medical services; Communications; ch.13, Decision making and planning; An alternative approach.
- N.R. : ch.4.
- T.R. : ch.11, Village level groups; Island level schemes; ch.12, Government through Tamana eyes; Government departments; ch.13, Decision making and planning.
- TN.R. : ch.2, Social structure; *Maneaba*; ch.8; ch.9, Law and order; Appeals; Medical Department; Duties of the Medical Officer; Village aides; Preventive medicine and hygiene; Health education in primary schools; Family planning; ch.10, Europeans; Local government; Government departments.

Chapter 13

Education

In both the Gilbert Islands and Tuvalu formal schooling has been a European innovation. Traditional forms of education provided for instruction in important economic, social and political skills within exclusive kin groupings as they were utilized by older members of the group. This was education by example and ensured that skills were passed only to particular individuals and included all the relevant magico-religious elements which gave them their efficacy.

From the mid-nineteenth century missions were active on several islands and formal schooling had been well established by 1900. The primary purpose of this schooling was to consolidate converts in the doctrines and dogma of the churches represented by the missions. Skills such as literacy and numeration were only taught to the extent that they served this primary purpose.

Missions remained the most important educational agencies within the colony until the government began to involve itself in the establishment of schools in 1954.

Prior to World War II most employment positions open to islanders were labouring in character and required little formal schooling. Almost all teaching positions were filled by mission-trained pastors and teachers and government administrative developments were kept to a minimum. Schooling was, therefore, regarded by islanders as being primarily of religious rather than economic importance and of marginal significance in terms of employment.

Following the war the colony administration gave new attention to the development of cooperative activities on outer islands and government secondary schools within the colony were upgraded to provide qualified graduates to fill the increasing number of government posts requiring clerical skills and proficiency in English. These schools, however, needed a better quality of entrant than that provided through the mission education system. The administration therefore found itself in the position of having to provide some form of elementary schooling.

In 1954 the High Commissioner for the Western Pacific stated:

An aim of education policy should be to ensure that the Government obtains the essential minimum of trained men (and possibly women) to fulfil the needs of the Government service. Other than this the Education Department should confine its activities as much as possible to general inspection, supervision and advice (GEIC F6/1 Vol. 1).

In line with this policy all elementary schooling was left in the hands of missions (a decision not welcomed by the London Missionary Society), while the government established Island Schools, designed to further train a select number of mission school pupils (school rolls were limited to a maximum of 40 on any one island) for possible entrance into a government secondary school. With such limited rolls and a selection age of 8 years this development did not greatly alter the general character of, or the attitudes of islanders toward, mission education.

Since the express reason for the establishment of Island Schools was preparation of students for entrance into government secondary schools and subsequent government employment, those who entered them were seen as automatically favoured to obtain well-paid government positions on graduation. Curricula of these schools were strongly academic and English was the dominant language of instruction.

A dual system of education was thus established. One section provided education for non-employment reasons and the other provided employment-oriented education.

In the early 1960s the London Missionary Society withdrew from the elementary education scene and the government found it necessary to expand its educational involvement. Since no specific elementary education policy had at the time been formulated the government improvised on developments it had already undertaken in this field. Island Schools were reorganized to accept entrants from the age of 6 years and, over the next few years, the rolls of these schools were expanded to cater for children no longer provided with education by mission schools. However, little or no reformulation of the curriculum or purpose of Island Schools was undertaken so that teachers of these expanded schools, now called Island Council Schools, still saw their primary purpose as the provision of entrants for government secondary schools (which had not been similarly expanded in size). Islanders also considered that the purpose of these schools was to provide employment-related education. During the survey period it was found, on all islands, that parents saw little other value in the education provided by government elementary schools.

As the government expanded its elementary school system it came into direct conflict with the Roman Catholic system. Sacred Heart Mission educators, recognizing the need for graduates from their schools to be competitive with government school graduates, altered their curricula to conform to Island Council School requirements. In this way, within a decade, all primary education became strongly academic, instruction was given in English and the purpose became preparation for secondary education and subsequent employment. Since barely 10 per cent of candidates gain entry into secondary schools, most of those participating in this style of education gain little instruction geared to actual life prospects.

During the early 1970s the Education Department, concerned at the failure of the elementary school system to provide education for life on outer islands, introduced two new dimensions to the system. New syllabi were developed to give education related to island life and the primary school was extended upward for a further 2 years to provide continuing education for those who did not obtain a place at secondary school. These innovations however took little account of teacher and parental biases. Teachers naturally consider that their teaching skill is reflected in the number of passes in the secondary school entrance examination obtained by their school (a view shared by the parents). New syllabi which do not contribute to this success rate are unlikely to be taught with either the same enthusiasm or emphasis as those preparing students for the examination.

Parents see the schools as preparing children for employment off their home island. Where the primary school is extended upward, parents who continue to send their children to school do so, in the main, in the hope that this will provide a better chance of employment. The additional 2 years of primary schooling tends to be viewed as adding to the employment prospects of those who attend.

It must be concluded that, so long as Island Council Schools remain examination oriented, the chances of new, non-examinable syllabi of instruction becoming important elements of the curriculum are not high. Further, the likelihood of islanders seeing additional classes as more than a 'second chance' for employment will depend on their being convinced of the validity and importance of the instruction offered to outer island needs.

Since the selection for secondary school education affects such a small percentage of the elementary school population the possibility of developing a mainstream elementary education geared directly to the requirements of life on an outer island needs to be seriously examined. To retain the present bias throughout the elementary school and simply attempt to provide additional education for those who fail academically seems unreasonable. Team members have made a number of recommendations

relating to such an alternative form of elementary education. They have, however, cautioned against attempts to displace traditional forms of training through providing alternatives to such education in the school curriculum. They suggest that:

(a) It is unlikely that specialists in traditional skills will be prepared to give such instruction in schools since this would undermine the 'social security' value of the possession of such skills.

(b) Any government attempts to provide alternative education based on these skills may result in an undermining of the traditional skills, particularly of their 'magico-religious' content. This could threaten one of the remaining and important underpinnings of island social and economic organization.

(c) The value of such education may be seriously questioned by parents since education in this area is already available through relatives.

RECOMMENDATIONS FOR AN ALTERNATIVE SCHOOL CURRICULUM

The dual education system existing in the 1950s had much to commend it. Those who were likely to obtain employment were given training to equip them, while the rest of the population was provided with an alternative form of education. The failure of the system lay in the poor curriculum provided by village schools. Should preparatory education for secondary schooling be given to only a selected few individuals the rest of the school population could then be provided with a home island oriented curriculum. Suggested subject matter for such a revised curriculum would include:

(a) Bookkeeping and other related skills necessary to the successful development of a small business such as a *mronron*. Such education may well include training in the methods and organization of cooperative ventures.

(b) Mechanical training for the maintenance of items used on outer islands, including simple combustion engines, bicycles, sewing machines, water pumps and so on.

(c) Health and hygiene dealing with specific problems of outer islands such as diet, waste disposal, insect control.

(d) Agriculture. Care should be taken to ensure that instruction in this area complements rather than displaces traditional skilled knowledge. Topics such as land management, alternative food items, forms of land tenure and utilization could profitably be included.

(e) Legal instruction, the rights and obligations of the individual, the police, the courts, ways in which traditional constraints may differ from legal constraints.

(f) The organization and activity of local government bodies and their relationships with the household, village and central government.

It is felt that all instruction in such schools should be in the vernacular, which should itself form a subject area.

Little has been said of the secondary school system in the Gilberts since few graduates from these schools have returned to live in their home villages. However, since many students at these schools leave their homes at about age 12 there appears to be some necessity for including instruction in the vernacular in secondary school curricula. Pupils are away from home at a time when for most individuals the adult vocabulary is being developed. The vernacular vocabularies of these students may, therefore, be less well developed than those of their less successful contemporaries. This may lead older islanders to view their expertise and authority with some disdain and mistrust.

Traditional forms of training have been weakened since the turn of the century by a variety of shifts in both social and political organization. It would be unwise to encourage any developments which might further undermine these traditional forms and government should carefully consider new developments in policy or organization for such effect before they are implemented.

SOURCES IN ISLAND REPORTS

- A.R.: ch.12, Education; Catholic education on Abemama; Missions and education; Evaluation of education; ch.14, Education.
- B.R.: ch.10, Educational institutions, past and present; Role of education; Interest and aptitude; Summary.
- N.R.: ch.9, Non-traditional skills; Literacy and business skills; Carpentry and mechanical skills; Women's skills; Summary.
- T.R.: ch.12, Education; Purpose of education.
- TN.R.: ch.9, Education; Roman Catholic education; Reasons for education; Curriculum content; New curriculum developments; Parents and schools; ch.10, European education.

Chapter 14

Social and cultural aspects

Such topics as the tone of life on each of the 5 islands studied, the world view of their inhabitants, and the premises and ideology of their culture are analysed in detail in the individual island reports and there is little value in contrasting them here. Three topics in the social and cultural realm are usefully considered, however. One of these, the use of and attitude to leisure time, concerns the organization of outer island life itself. The other two, the effects and import of radio broadcasts and of the local language newspapers, mainly involve the impact of the larger world on the local communities.

LEISURE TIME

As the individual island reports made plain, time to pursue informal leisure activities is deeply appreciated by both Gilbertese and Tuvalu islanders. On all the islands studied, casual visiting, impromptu and team sports, card playing, as well as simply relaxing at home, provide a meaningful dimension to daily life. These unorganized leisure activities are variable and depend greatly on the preferences of individuals but throughout the islands some simple characteristics are shared in common. Resting and relaxation are commonly enjoyed intermittently during the day, often as an interval between finishing one task and beginning another. Particularly near evening, resting and socializing have a prominent place. As the age of adults increases, so does the amount of time generally given to leisure. It is clear that for both Gilbertese and Tuvalu islanders, time is not a scarce resource and productive activities are not rigidly compartmentalized away from social ones. Leisurely socializing can legitimately break into any repetitive activity that does not demand the full concentration of participants.

Informal relaxation and socializing fulfils a number of social functions in island life. This activity expresses local norms of friendliness. It also plays an important role in developing group solidarity and creating common bonds of interest and information. Such 'resting' is regarded as a positive part of the day's activities, as a worthy activity sought for the pleasure it

brings. In addition, the simple enjoyment that comes from relaxing and chatting with friends and kinsmen can be used to mask the unpleasantness or drudgery of some tasks. The boredom inherent in repetitive work like mat weaving, washing clothes, mending nets or slow cooking can be dispelled if socializing takes place as well.

In summary, most islanders appreciate a slow-paced life-style in which productive activities are interspersed or intermixed with socializing or resting. Such a pattern meshes well with the local climate and with an economic system in which time is not a scarce resource. Unorganized leisure forms a valued counterpoint to the productive activities and to the more formal family, church and club activities which together fill outer island life. However, there is a small number of extremely enterprising individuals who would prefer that more money-earning opportunities did exist in their home communities and who would willingly devote part of their leisure time to them.

RADIO

Radio transmissions are now a valued part of outer island life. Census data (*Population Census 1973 Provisional Report* pp.56-8) show that about half of the households on all 5 islands had a radio in working order in 1973. Virtually all of these make a practice of listening to the radio daily. Although most outer island Gilbertese listen to programs only in their own language, a large proportion of people in the Tuvalu islands listen to the broadcasts in Gilbertese and English as well as the one in Tuvalu. This reflects the fact that many Tuvalu people can speak and/or understand Gilbertese.

Radio news reports bring a glimpse of the outside world, or at least selected aspects of it, into island society. They are an important source of knowledge and information, and can provide local people with useful perspectives from which to assess their own affairs. For example, Lawrence found that Tamanans referred to other Gilbertese islands strained by religious strife as 'Northern Irelands'. Chambers found that Nanumeans were particularly interested in the Watergate prosecutions, perhaps because they themselves had thrown out their Island Council some years earlier for the misbehaviour of some members. It would be a mistake to assume that overseas news receives much overt comment by outer islanders. It does, however, have a definite broadening effect on their life-style and provides virtually the only source of information about world events that is available to them. The nature of the present radio news broadcasts is such that individuals who want to hear the details of the news can do so, while others with less dynamic interest can simply listen vaguely. While world news coverage seems to be adequate, there is too little coverage of Pacific affairs. Either an effort should be

made to append Pacific area news on to the BBC report or else a separate program should be developed to cover this topic. With independence, a knowledge of Pacific area affairs is vital.

If islanders were asked for their preference, broadcasts of music would undoubtedly be given the highest rating. The request and message programs are also particularly well liked. The effectiveness of radio for communicating local news is only moderate. Sewell noted that changes in the copra price were not known by members of some radio-less households on Butaritari even after several days had passed. Radio does play an extremely effective role, however, in disseminating information in areas in which people have already developed an interest. When shipping and plane schedules, particularly the last minute cancellation of a flight or a change in a ship's route, are known to be broadcast regularly, those who are interested do make a point of keeping informed. Visiting neighbours in order to hear a radio announcement is also widely accepted. Because reception is often poor and because the whole household gathers to listen to broadcasts, radio would not seem capable at present of providing a useful vehicle for detailed extension broadcasts.

NEWSPAPERS

There is very little that comes into the hands of outer islanders that is printed in their own languages. For this reason, the news sheets *Tero* and *Tuvalu News* are particularly valuable. Distribution of these was not uniform at the time of fieldwork and not all households received a copy. Those received are valued and read, however, but the news they contain is inevitably out of date. Perhaps for this reason, there is less interest in the newspapers in general than there is in radio. The newspapers do have the advantage though of providing the serious reader with more facts and detailed information than can usually be absorbed or remembered from a radio broadcast and they can be consulted again at will. In this regard, the summary provided of the House of Assembly meetings is particularly valuable. The local newspapers can potentially also play a valuable role in developing a national consciousness.

Perhaps because it is so rare, virtually anything written in a local language gets read by at least some of the islanders who see it. Departments that have some relatively important and concise message to get across might consider making use of printed leaflets to do so. They should be wary, however, of inundating islanders with trivial printed matter. Although literacy has long been widespread, people are not yet accustomed to reading for pleasure.

Chapter 15

Future of the Gilbert Islands and Tuvalu

It has long been known that an atoll is a difficult and unique environment; long-term human experience of such a marginal habitat represents a complex, carefully worked out adjustment within a delicate ecosystem. Gilbertese and Tuvalu societies and their varying sub-cultures (e.g. north, central and southern Gilbertese) have evolved over the centuries specialized ways of gaining a livelihood and coping with such vicissitudes as droughts. The impact of the west over the last century and a half has interfered in two profound ways with this age old adjustment by man to the atolls: on the one hand it has undermined the social and political structure and ethos that sustained the skills and the motivation needed to effect a successful adjustment to the atoll environment (so that *babai* pits have deteriorated, and skills of cultivating *babai*, catching certain fish, practising folk medicine and even cutting toddy have been lost or have deteriorated); on the other hand it has introduced a whole new set of philosophies, values, attitudes and policies that can conveniently be grouped under the label of 'westernization'. These are on the whole either irrelevant in the local setting (until the westernized school curricula create people who demand more western goods, values and policies) or are positively harmful since many policies are inappropriate and maladjusted to small-scale societies in an atoll environment or cannot be reconciled with traditional principles. Thus it is clear that increased monetization above a certain point begins to threaten the survival of the subsistence economy.¹ Of course, the impact of the west in the past might be deplored but it cannot be altered, and its legacy is inescapable. But it is not true to believe that its continuing impact in the present and future cannot be altered, softened, mediated or diverted into different directions to be more appropriate to the real needs of the islands. To do this of course would be an immense achievement, for the full weight of western capital, technology, know-how and

¹See note 4 below. In the same way principles of parliamentary democracy and of a gerontocracy are essentially incompatible; in a society where the acquisition of key skills was of paramount importance it is natural that the greatest power would be wielded by the old men, who were mentors and guardians of these skills.

sophistication seems to be constantly bearing down upon these tiny fragments of islands through the media, symbols of the west and most immediately in the form of an endless stream of advisers, 'experts' and aid officials, nearly all of whom recommend greater conformity to some western model or slight variant of it that appeals to their particular vision. Clearly it is immensely difficult, if not impossible, for the local people to resist the imposition of western models on their islands, for they have long since ceased to be separate subsistence economies but are part of the international system. For many decades now they have been fully involved in this interdependent international system, but since they still possess a degree of choice as to the manner or mode of integration into the wider world, we propose here to sketch broadly two possible futures for the people of the Gilbert Islands and Tuvalu.

One future is a general model of 'westernization' or 'development' that is already well entrenched and is perhaps inescapable unless resolute action is taken. The characteristics, implications and trends of this pattern of development can be readily observed in many developing countries of the world and it is disquieting to note that no matter how distinctive the local society and its resource endowment might be, the uniform 'western mode of development', as we shall term the process, remorselessly and imperiously proceeds, being modified only in detail from country to country. This future we have projected aims at recreating the local society in as western a form as possible. The alternative future, which is advocated here, seeks to adapt the positive aspects of western technology and institutions to serve locally generated goals.

The following pages open this discussion by first describing the uniform western mode of development, whose standard features dominate regardless of economic and social differences existing from country to country. This is followed by a discussion of the extent to which these general features are presently characteristic of the Gilberts and Tuvalu. The real meaning of the term 'development' is then discussed, followed by an analysis of some of the alluring options that tempt development-oriented policy makers. Finally, the problems inherent in relying on 'grand solutions' to very complex issues are presented and some suggestions are made for an appropriate 'way forward' for the 2 island groups. In doing this, an attempt is made to view the situation of the Gilberts and Tuvalu within the perspective of the South Pacific as a whole, bearing in mind recent trends under way within the region.²

²There are too many studies on the South Pacific to list here all those relevant. Four major studies stand out, however, and have been influential for they analyse situations and trends that also apply in some degree in the Gilberts and Tuvalu: the Overseas

UNIFORM WESTERN MODE OF DEVELOPMENT: A MODEL TO AVOID

After the establishment of the seat of government in the new colonial territory, the introduction of the expatriate system of law and order and a system of administration, building of port facilities and other infrastructure, a system of revenue is needed to pay for growing local needs. Taxation and tariffs are introduced and so an expatriate organized 'colonial town' representing the establishment of these new functions begins to take shape and grow as a separate world in the host society. Before and after the establishment of administration expatriate settlers seek out promising opportunities of exploiting local resources, such as opening mines, or securing lands on which to operate plantations. At first the indigenous population is little interested in either the new colonial town with its foreign institutions and mode of organization or in the alien systems of production and only a few seek 'target income' by working in the mines or plantations or as unskilled labour or servants in the town. A few industries follow the administrative functions - import-export firms, wholesaling, banking, retail or enterprises supplying the needs of the expatriate community - while imported workers (often Chinese or Indian) supply the semi-skilled labour not forthcoming from the indigenous population, who remain largely contented with subsistence-based village living and are said to be characterized by 'low motivation'. The expatriate whites enjoy salaries and housing conditions in excess of what they would receive in their home country and the disparities with the village sector become glaringly obvious. The links between the enclave and the home, metropolitan country are often stronger than with the village sector.

As time passes, taxation, sometimes in the early days forced labour, or the provision of incentives to induce more participation in the cash economy become less necessary as the villagers show increasing interest in the colonial enclave. The trickle of rural-urban migration increases to a flood as awareness of higher income, better amenities, superior education and the bright lights of the colonial town cumulatively lead to new aspirations and new expectations. In many countries involved in World War II the occupation of islands by American troops hastened the overall westernization process. Accompanying the demonstration effect of

Footnote 2 continued

Development Group (East Anglia) Report (or Faber Report) on Papua New Guinea in 1973; our Victoria University of Wellington Socio-economic Survey of the Solomon Islands, 4 vols (Bathgate, Frazer and McKinnon, 1973); the comparative market study of the New Hebrides, Tonga and Fiji led by R. Gerard Ward and T.G. McGee (e.g. McGee, Ward and Drakakis-Smith, 1978) and the UNESCO-UNFPA Man and the Biosphere study of Eastern Fiji led by H.C. Brookfield (see Brookfield *et al.*, 1977).

the colonial enclave is the influence of missions, of western style education, of mass media including in recent times the transistor radio, which all lead to increasing acceptance of western values and preferences. The benefits of 'development' are fully appreciated and are equated with living in town. The propensity to import western goods and especially foods becomes greater and a large proportion of income is spent in this direction rather than in productive investment. Luxuries like flour, sugar or tinned fish become necessities as the revolution of rising expectations proceeds apace. These trends manifest the profound social and cultural changes that are occurring, but the emergence of a consumer society is quite unmatched by the growth in output of export crops. Growing participation of the indigenous population in cash cropping and wage labour leads to wider investment in the countryside and improved services but the more rapid expansion of the alien enclave incorporating the colonial town (we should now refer to a *plural society* or to *economic dualism*)³ coupled with improved communication between town and countryside serve only to accelerate rural-urban migration.

At this stage concern mounts at the failure of the village sector (or indeed the economy as a whole) to increase output and specifically export earnings at a rate commensurate with the rapidly increasing import bill. Moreover it is now realized that the enclave cannot absorb more labour in the absence of economic growth and that the bureaucracy is already over-large. Foreign aid becomes increasingly important to meet the gap in balance of payments, or to make up the shortage of revenue to pay for government expenditure (budget gap) and of local savings to pay for investment (savings-investment gap). Rather than making possible an important change in direction in economic development, foreign aid now becomes essential to plug these three gaps, and soon the economy becomes dependent on it.

By this time there is usually a reasonably large number of better educated local people (whose numbers have been swelled by belated localization policies) groomed to take positions of responsibility. They now reside in the town, become committed to western and urban middle class life-styles and later take over the government of the country as self-government and then independence are reached. Essentially the members of this new elite, who become ever more remote from their villages of origin, tend to be more and more concerned with the interests of the urban dwellers, who represent the richest, most articulate and influential part of the electorate. To maintain power, the native elite unconsciously tend to become more responsive to urban demands,

³The monetized mode of production is different in *kind* and not merely in degree from subsistence and reciprocity production.

creating more jobs in town, raising urban salaries, extending urban infrastructure or subsidizing the costs of urban living. Even if indigenous society is egalitarian in nature the hierarchy of status differences formerly filled by the departing expatriate officers provides an inherited structure (salary differences, grades of housing and the like) that will encourage the trend towards class differentiation and a new elitism. At the same time their wider policies in the country as a whole tend to be of the liberal, laissez-faire type, imitating the policies of the colonial power in pre-independence times which will automatically favour recognized institutions, large, quasi-western systems of organization or enterprise which have the available capital and know-how as well as being quickest to take advantage of any new opportunities. Inevitably this will lead to greater contrast between the centre and the periphery and between classes and bypass the indigenous informal sector which could in some instances have performed the enterprise or service, though possibly at a lower level of efficiency. When these trends are far advanced and are perhaps irreversible the indigenous elite realize, too late, that the economy is grossly lop-sided, over-centralized, over-urbanized, saddled with an import schedule that it can ill afford to pay, with many of the money-earning enterprises owned and controlled by foreign firms whose allegiance lies elsewhere. As if this is not enough to contend with, the last cruel blow falls in 1973 when the price hike in petroleum imports imposed by the oil exporting countries greatly compounds the problem and makes the balance of payment situation quite irredeemable. The full weight of sustaining national revenues lies on a countryside which increasingly sees itself as being deprived or impoverished, and depends on a limited range of export crops that fluctuate wildly in value on the world market and are often susceptible to crippling climatic hazards. The rest of national revenue derives from foreign aid, which usually has strings attached and which tends to favour foreign inspired technocratic solutions that are inappropriate to the real nature of the country. Even if serious attempts are made to rectify the imbalances and emphasize soundly based rural production rather than urban infrastructure, government will find that most young people possessing the skills and enterprise needed for the new tasks have already fled from the countryside - the slide into complete dependence on foreign metropolitan countries and firms has almost been completed.

APPLICABILITY OF MODEL TO THE GILBERTS AND TUVALU

How applicable is this general model of the evolution of a dual society and 'neo-colonialism' to the Gilberts and Tuvalu? Surely, it can be argued, the process of modernization is not as starkly sinister as suggested above. Some genuine progress has of course occurred in some fields, as in health, education and material benefits, but the advent of consumerism and aspects of

the welfare society has not initiated an economic transformation that produces or pays for the benefits. It is true that certain ingredients of the model are lacking and some of the trends, though present, are not yet as far advanced as to be obvious. European plantations, apart from the government coconut plantations on Fanning Island and Niulakita, were absent. Although a few Chinese skilled labourers did immigrate, the numbers have never been large, and they have intermarried and been happily assimilated into Gilbertese society. Although missions have hastened westernization, in recent years some at least have made great efforts to encourage self-reliance, and strengthen the sense of national identity and pride in Gilbertese or Tuvalu culture. And the colonial government has been careful to protect the islands from overseas fishing companies and other enterprises which have sought to operate in the islands largely on their own terms (the era of Japanese or other foreign fishing enterprise and control may however be about to begin). Finally, the Gilberts and Tuvalu have been fortunate in being spared the evolution of local elites, in the sense described above. Although local leaders are westernized and generally conform to urban middle class life-styles, they do not possess great wealth or status and it is not true as yet to assert that they are alienated from their home islands or villages, unresponsive to rural needs, or unmindful of the need to emphasize the cultural identity of each country. Nurtured in a strongly missionized culture and the products of a westernized schooling system, the leaders of the Gilberts and Tuvalu are by and large sincere, honest and determined men with a high sense of duty, personal integrity, and moderation in marked contrast to many members of the elites of some African or Asian countries. Their biggest weakness might lie in their tendency to adopt a conventional conservatism, a readiness to defer to expatriate advisers due to a lack of self-confidence or experience and an uncritical tendency to adopt standard western solutions to development problems, which in this distinctive atoll environment are either quite inappropriate or are poorly designed to suit local conditions (e.g. the coconut replanting campaign on Abemama or the Te Keiaki Agricultural Cooperative, A.R.: ch.11, Agricultural cooperatives; Coconut Replanting and Improvement Schemes).

There is however sufficient evidence to suggest that a large part of the above model is applicable and most of the trends suggested are well and truly under way. While Urban Tarawa is a rudimentary town by western standards, it is a separate world when compared to Tabiteuea South or Nanumea. Rural-urban migration has increased to reach a substantial level. The Abemama Report (ch.14, Over-centralization and over-urbanization) documents the situation which shows the economy is grossly over-centralized and over-urbanized (26 per cent of the total population of the Gilbert Islands and Tuvalu lived in South Tarawa in 1973). Wage dualism is quite pronounced with urban salaries greatly exceeding rural earnings except in years of exceptional copra prices. A big gap exists between urban conditions and the outer islands. The

escalation of imports, including imported foods often of low nutritional value, has not been matched by an increase in exports (except for a fortuitous rise in phosphate prices). Copra output remains stagnant and no new lines of production have emerged: the economy in short has become totally dependent on phosphate (due to run out in 1979), copra and foreign aid. At the same time as interest in the money economy has grown so the subsistence economy appears to have been weakened at least on some islands, for there seems to be a reciprocal relationship between the two.⁴ A westernized form of schooling has until recently⁵ weakened any sense of cultural identity and national pride, while knowledge of the vernacular language and many precious traditional skills evolved to suit the precarious conditions of atoll living have been lost or endangered. And although it is much less conspicuous than in many developing countries, an elite has developed of people who have become relatively remote from their own villages. And in recent years GEIDA has further encouraged economic dualism, with its high charges and excessively large-scale alien organization highlighting the contrast between the two sectors.

The real enemy is not colonialism but the dual economy and plural society inherited from colonial times, and most of all the confused, conventional thinking that uncritically imposes solutions devised for western, alien situations. Hart (1974:14) has posed the general problem in these terms:

Pluralism is thus not just a case of white against black; it is town versus countryside, foreign-owned industry versus indigenous agriculture and trade, rich versus poor, educated versus uneducated, the elite against the mass. It is a whole way of life imposed on another, earlier form and it is characterised by exploitation, whether conscious or unconscious. But the governing elite is reluctant to make this diagnosis and casts around for the answers to a number of linked questions. How to stop urban drift? How to fund educational and welfare services? How to redress the imbalance in foreign trade? How to revitalise the countryside? How to create employment? How to achieve a fairer

⁴As the Fisk model of economic transition (Fisk, 1962 and 1964; Fisk and Shand, 1969) suggests, there comes a point in the expansion of cash cropping when money income is substituted for subsistence crops formerly grown. This has been confirmed for Fiji by Watters (1969, ch.7) and for Western Samoa by Lockwood (1971). In the Gilberts, the economic behaviour of some on Abemama receiving remittances or wage income is similar: their interest in copra declines and with regard to subsistence their interest in growing *babai* or cutting toddy declines or becomes desultory.

⁵Since about 1970 major steps have however been taken to reform the curricula.

distribution of income? How to regain control of a national economy which was lost so long ago? How to slough off the paralysis of cultural imperialism?

Although late in the day to ask these questions and to seek viable solutions, it is never too late to begin. Above all it must be realized that all these individual problems are merely manifestations of an integrated process, of the functioning of a dual economy and dual society, the encroachment of an alien enclave, the expansion of foreign enterprise, the prosecution of false policies, values and creeds. Piecemeal tinkering with individual policies might alleviate some conditions but cannot possibly succeed as they are dealing with a complex whole; nothing less than a radical alteration of the whole political economy will suffice that will enable a new economic, social and political structure, firmly rooted in the real pattern of the islands, to emerge.

'PRIMROSE PATHS'

In the frantic search to find new sources of overseas funds it is likely that a number of development options, whether real or illusory, will be considered in the Gilberts and Tuvalu in the future. While clearly the local people must decide for themselves, we here set out some of the characteristics and implications of some of these well-known 'solutions'. Too many societies (including our own) regrettably choose these options only to find out when it is too late that the gains are relatively meagre, that quite unforeseen consequences occur or that the social costs are much greater than envisaged. Such solutions only partly achieve the desired results while creating many new problems. We will use the term 'primrose paths' to describe such alluring options.

Option of tourism

A fundamental fact of Pacific geography in the last decades of this century is that the Gilberts and Tuvalu represent some of the most remote and least visited islands of the central Pacific and yet are flanked by large affluent nations (the United States, Canada, Japan, Australia, New Zealand) which are experiencing the second stage of the age of mass consumption. Whereas purchase of a motor car, washing machine, refrigerator and the like represented the first stage of mass consumption, the keenly sought after luxuries of the second stage of 'new consumerism' include overseas travel as well as the fast car, colour television, hi fi record players and the like. Increasingly as people seek new diverting forms of recreation for their leisure time international travel becomes popular. Hitherto it has been thought that the Gilberts and Tuvalu had very limited prospects for tourism, being merely flat, uniform coral islands which lack the normal comfortable

facilities expected by tourists. However, their appeal, at least to the venturesome, might lie in their very remoteness, in notions of romantic escapism and in the cultivation of ethnic tourism. The pristine qualities of these relatively unspoilt 'idyllic tropical cultures' would be emphasized; here westerners might rediscover Nature and Simplicity. If these assumptions can be accepted, does tourism provide a possible way out when the phosphates run out? What are its advantages and disadvantages?

Tourism is generally seen as a major source of foreign exchange earnings. Moreover it generates employment and increases government revenues. It can become a rapid growth industry in which the country's competitive advantages (sunshine, sea or ethnic qualities) are exploited abroad. The country's image overseas can be greatly improved leading to increasing numbers of tourists.

These advantages, all economic, are substantial, but they are not always as great as imagined. The numbers of dollars of increased services and goods generated from each dollar spent by tourists in various countries (multiplier effect) is not as great as is generally calculated (especially by tourist promoters) (see Levitt and Gulati, 1970:326-43). Moreover the great proportion of money spent by tourists is returned through the hotel corporation or airline company to the parent company and little is retained in the host country. Tourism, too, is a notorious industry for becoming highly dependent on imported goods and services. With mass tourism, as every effort is made to simulate the metropolitan comforts for the visitor (beef steaks, air conditioning etc.) scarce overseas funds are spent on such imports which benefit only the tourist and vested interests. Banking, roads and services increasingly have to serve the needs of itinerant visitors rather than the permanent inhabitants of the country. While tourism is often said to be an agent of modernization, the form that this takes is strikingly visible in the high rise hotels, airport, swimming pools and infrastructures which increase the trend towards a lop-sided economy and the gap between rich and poor, while the mass of the population receives few benefits. In view of the need for such large-scale investment, the tourist industry steadily falls under foreign ownership and often control; thus foreign interests can make important decisions about the industry according to factors unrelated to the welfare of the host population. Since tourists are frequently inclined to pay higher prices for goods and services than local citizens, there is a tendency for prices to be pushed up and inflation results. Moreover the higher salaries commonly paid to employees in the tourist industry cause wage dualism that invariably reacts unfavourably upon agriculture. In almost every country with a major tourist industry (e.g. Switzerland, northern Spain, Caribbean countries or Seychelles) agriculture stagnates because of this feedback effect and the difficulty of integrating this form of foreign-owned corporate capitalism directly with local agriculture or manufacturing. Finally it is a most unstable industry, thriving on boom

conditions in the metropolitan countries and slumping badly in times of recession. It is subject to changing fads and fancies with respect to which countries should be especially promoted. Foreign airlines, tour operators and hotel firms which package an appealing holiday can of course pull the plug on a host country at any time. Since the desires of the consumer (the individual tourist) will dominate irrespective of the wishes of the host society, the local government will be constantly beset by pressures to upgrade facilities to suit the material needs of fleeting visitors. The price paid for not permitting those developments is a drop in investment in the industry and probably a decline in tourist numbers. The establishment of duty free shops, to provide tourists with cheap liquor, cameras, binoculars, watches, tape recorders and electronic gadgetry, does little to prevent real profits from being remitted out of the country, for in the main only dealers and manufacturers benefit. If one asks the key question: 'Who gets what?' it can be seen that foreign interests benefit in the main, and the real economic benefits to the local population may not be very great. If these trends in the evolution of a large-scale tourist industry proceed relatively unchecked, it can be seen that tourism becomes a new kind of neo-colonialism with foreign actors pulling the strings to regulate conditions to suit the needs of foreign visitors. Caribbean countries or the Seychelles provide good examples of this process.

The social and cultural costs of the impact of tourism are well known but should not be minimized. The great danger here is the undermining of cultural identity and the loss of cultural authenticity. Colourful customs or aspects of culture are 'commoditized' to meet the tourists' quest for the exotic. For example, one could imagine in the Gilberts the spectacle of toddy cutting at sunset, suitably accompanied of course by background music. Hibbert, a senior government officer in the Solomon Islands, describes this process (1970):

The hotels ... in order to titillate the jaded senses of their customers will hire troupes of dancing girls who will swing their hips and sway their grass skirts in the faces of the visitors to the tunes of electronic guitars strumming out pseudo-Pacific music. These the proprietors will hire in the desperate hope that their clients will sit back in their comfortable chairs drinking even larger quantities of alcoholic liquor. It is indeed from the import duties on the liquor that these people consume that I can see the only real profit coming to this country.

That is what is going to happen and worse, for I see your beauty spots despoiled, your holy places defiled, your women prostituted, your culture debased and your art driven back relentlessly to concentrate solely on the meretricious.

While crafts may be stimulated for the production of souvenirs for tourists, it will be by courtesy of the hotel gift shop and the standardization and simplification of production might result in a loss in craftsmanship. In many ways the large luxury hotel symbolizes all that is wrong with modern mass tourism, implying foreign ownership and profit making, creation of a 'playground culture', perpetuation of fantasies, prosecution of the pseudo, employment of the locals only at the lower levels, and inhibiting visitors' exposure to local cultures.

Of course the extent of the impact of tourism depends on the numbers of overseas visitors. While the behaviour of tourists might be unexceptionable when their numbers are small and they are conspicuous mingling with the local population, as their numbers become great there is often a brazen disregard for the hosts' sensitivities and values. Occasionally tourists indulge in an arrogant display of wealth and in general the imposition of foreign values and tastes undermines the local culture and generates new aspirations without improving the people's capacity to achieve them. At the stage of mass tourism the local reality is packaged to create a playground fantasy land that will make it practically impossible for any genuine dialogue between interested visitors and friendly hosts: a synthetic culture will be created so that there will be no need to go out of the hotel to see *genuine* Tuvalu or Gilbertese custom, and tourists will be able to partake of local delicacies in perfect comfort and safety (such as drinking chilled coconuts or *moimoto*). Many such innovations of course may not appear to be a bad thing in themselves, but in total they promote the pseudo, the exotic (the best of traditional custom along with modern plumbing) at the expense of the real. Ultimately they reduce to absurdity cultural-educational tourism, or the need for the real thing. Some of the worst effects of tourism, which can be found in the Caribbean, have been described by Matthews (1978:51):

The arrival of the metropolitan tourists themselves increases the potential for cultural conflict. They display affluence in poor countries. In the Caribbean white visitors are conspicuous even if they try not to be. They often pursue the four s's of tourism — sun, sea, sand and sex — with an aggressiveness which seems grossly out of place in a casual Caribbean setting. They wear swimsuits to the supermarket and they make love on the beach. They demand loud rock music and rare steaks. Their local shopping is characterized by a single loud question: 'How much is that?' Even when prices are ridiculously low some tourists feel compelled to argue.

Critics have observed that metropolitan tourists leave their morals and manners at home when visiting sun spots abroad. They seek exotic vacations far away from the social constrictions of their home. Members of host societies are expected to be servile. Although the behaviour of some

tourists may change completely between their home and destination, their expectations of material comfort remain the same or increase in their playground destination. Air conditioned rooms are required, familiar foods are demanded—both at the lowest possible price. Since the tourist has paid his fare, the host culture must now adapt to him.

Surely, it might be argued, this is a grossly exaggerated view of tourism, and hardly represents a balanced assessment of its economic, cultural and political effects? Surely such things could never come to pass in the Gilberts or Tuvalu? Indeed attention has been focused primarily on its disadvantages, since tourist promoters can be guaranteed to present its advantages and apparent virtues. And it is also probable that the majority of tourists would not behave in the outrageous manner suggested in the quotation above. However it must be remembered that only a few need to behave in such a way to create cultural conflict, while not many foreign visitors are likely to respect Tuvalu or Gilbertese standards of decorum, conservative style of dress, personal modesty, or religious values.

Possibility of limited tourism

If, it could be argued, modern mass tourism leads to a new kind of neo-colonialism, acts as the enemy of authenticity and cultural identity and leads to many harmful effects, cannot a limited kind of tourism be encouraged that will bring greatly desired overseas funds, government revenue and employment and yet avoid most of the above abuses? It is remotely conceivable that this might perhaps be managed, given a resolute, strong and far-sighted government that can stand up to strong external and internal pressures, but there are few examples of such a half-way solution in the contemporary world. In the South Pacific, Fiji provides an example of a country which vowed to resist the domination of overseas firms, 'cultural pollution', and ensure maximum local participation in the industry. Thus in 1963 the Acting Colonial Secretary declared that 'there must be no prostitution of Fijian traditional ceremonial to serve the purposes of tourist entertainment ... There is need to ensure that the social problem which a large influx of tourists brings with it is recognised and that action is taken to ensure that it does not get out of hand' (Turner and Ash, 1975:166). However, Fiji's ambivalence toward tourism is revealed in this quotation by her Finance Minister: 'I don't want to see the country of my birth ruined by millions of visitors running over it. But neither do I want to live in a poverty stricken country' (Turner and Ash, 1975:166). Regrettably Fiji has not retained firm control of tourism, calling in foreign professionals to run an arts festival, and permitting the huge Pacific Harbour Development (described as a 'rich, white ghetto') even although the Fijian Prime Minister termed it 'an experiment'. One Fijian described the effects of tourism in these terms: 'I

suppose we have made a bit of money out of it, but at what a frightful cost' (Hibbert, 1970). In Viti Levu especially agriculture has stagnated, while economic dualism has become more pronounced and the disparity between the centre and periphery has widened.

It is sadly ironic that some of the qualities in South Pacific societies that are most appealing to the metropolitan tourist — their smallness of scale, lack of sophistication, uncontaminated by the commercial values of the west, and their reputation as societies based on 'communal living' and sharing — make them especially vulnerable.⁶ Compared with Hawaii, Tahiti or even Fiji, the Gilberts and Tuvalu are relatively unspoilt, and innocent even although their cultures have proved their robustness after experiencing syphilis, measles, the threat of extinction of their population in the late nineteenth century as well as the impact of World War II. It is this relative innocence, however, that makes their exploitation by tourist interests more likely and their spoliation more certain. If a larger nation like Fiji has failed adequately to control tourism, can Tuvalu and the Gilberts realistically hope to succeed? Perhaps as great a danger lies in internal developments as in the plans of foreign tourist promoters. Thus while the enterprise of islanders on Butaritari, Abemama and Tabiteuea North who wish to open local 'hotels' is to be applauded, this could easily develop into a situation that is open to takeover and manipulation by external interests. An open, laissez-faire economy like that of Fiji in which overseas investment is encouraged makes it particularly prone to exploitation by tourism. Clearly extreme care and caution will be needed if the tourist option is ever seriously considered, for no country appears to have foreseen the consequences of its decision on the industry or the pattern of change that has ensued once this option has been chosen.

Option of foreign 'experts' and overseas aid

A major strategy of development planning throughout the Third World since World War II has been the diagnosis of problems, often by visiting technical experts, the provision of foreign aid and heavy reliance on the transfer of technology. While the strategy has been markedly successful in a few instances, the success achieved in most countries and throughout the region of the South Pacific has been very meagre. While the reasons for this are complex, including socio-cultural obstacles and a lack of political will, much of the foreign advice and overseas aid has been wrongly conceived and inappropriate.

⁶Recent general studies of tourism that are applicable are Turner and Ash (1975), Smith (1977), Matthews (1978), Bryden (1973) and Levitt and Gulati (1970). For tourism in the South Pacific see also Finney and Watson (1977), and Crocombe (1972).

In general foreign experts may have been expert in their chosen field in a metropolitan country but they have failed dismally to be expert in the Gilberts or Tuvalu.⁷ Their visits have generally been a matter of only a few weeks or 2 or 3 months even when the problem might be complex⁸ and they have failed to 'learn the country' which involves understanding the local society and environment and relating effectively to its people.

In 1978 I met a friend who had recently visited Tuvalu. In the course of 2 weeks on Funafuti he had met a large number of foreign experts on short visits: labour experts from the International Labour Organization, experts on tourism, agricultural experts who were suggesting that all coconut palms be removed and totally new crops should be planted, and advisers in various other fields. In this matter I was reminded of my earlier flight from Funafuti to Tarawa where I discovered my companion in the next seat, a Classics graduate of Oxford, was reading a copy of Tacitus. He was a delightful companion and it turned out that he was an expert visiting to advise on taxation. He admitted readily that this was his first visit to the South Pacific and indeed his first experience with an economy with a very large subsistence sector. Although the man may have possessed real ability I could not help wondering, since his visit was short and local data had not been collected, how he would unravel complex issues of property ownership, land use and tenure, access to resources and the process of monetization, all of which are relevant to a locally meaningful system of taxation.

Of course such anecdotes hardly provide a clear case challenging the soundness or appropriateness of foreign advice or methods. But the detailed case studies in the island reports surely do (see TN.R.: ch.9, Local Enterprises Development; A.R.: ch.11, Agricultural cooperatives; Coconut Replanting and Improvement Schemes). They provide firm evidence of schemes that were at least partially unsound in conception, organization and management, given the conditions in which they had to operate. Yet these projects which manifest many of the usual ethnocentric and

⁷Of course the work of the 5 members of this team study must be subjected to the same sceptical evaluation as that of any other foreign adviser. We too are foreigners who may have failed at times to understand or relate to the local reality. However we did attempt to avoid the deficiencies that beset most technical advisers: in staying 12 to 18 months and concentrating on only 1 island each we did attempt to understand the local society and its environment and team members attempted to learn Gilbertese or the Ellice language. Above all the studies are essentially *empirical*, with conclusions based on actual findings.

⁸Of course some technical aid is straightforward (such as a reef blasting study) and might well be satisfactorily undertaken in a short visit.

technocratic faults of foreign aid⁹ were actually devised by expatriates *within* the Gilbert Islands. The chances of success for externally devised projects would seem to be even more remote.¹⁰

'Bureaucratization' of development:
square pegs in round holes

The illustrations above also illustrate another major characteristic – the 'bureaucratization' of the development process. In the absence of a large private sector, it is inevitable that government has had to initiate and manage a large number of projects in every field. This is by no means a bad thing in itself, but in the frantic search for new sources of income, and to improve the social, economic and political structures to provide a sounder base at independence (1978 in Tuvalu and 1979 for the Gilberts) there has been a proliferation of all kinds of projects.

Indeed there has been a tendency indirectly to equate this great surge in administrative activity in setting up projects as implying genuine economic or social development. Unfortunately the number of government staff has been far too small for all this activity and where genuine development may have begun, the red tape, delays and dead hand of bureaucracy have often proved a stifling rather than a stimulating influence. In many respects the operation of market forces in the islands might be more effective than the guidance of bureaucracy, given the responsiveness of people in the *monon* sector. However it is clear that major changes will need to be made in the role and functions of the bureaucracy as it changes over from its formerly protective, policing role of the colonial era to one appropriate to a new kind of independence in which self-reliance will be the main watchword. Again the tendency has been to attempt to copy the public service of much larger, industrialized welfare state countries rather than to think through the new roles and functions required in special kinds of mini-states.

What is really involved in development?

The most fundamental reason why overseas aid fails to be effective is, as Schumacher (1973, especially ch.11) has noted, because we think of development as merely implanting or *creating*

⁹In the sense of being based on assumptions and deductions as to the local society and how it would respond and not being founded on local conditions or fully involving the local people in the planning or goals to be achieved.

¹⁰Some of the essays by Pacific Islanders in Momak and McCall (1978) strongly criticize the western mode of development and suggest alternative indigenous models.

new technology, new agricultural or industrial systems. Our approach has been characteristic of western materialism, concentrating only on the material factors of production, such as a lack of capital, natural resources or inadequate infrastructure. So modern technology has been transferred (or a modern demonstration farm created) to set up a modern enclave in the underdeveloped country. But these new economic activities will only be effective or viable if they can be sustained by broad groups of people who possess the skills and motivation, organization and discipline appropriate to them. For as Schumacher points out, development does not start with goods but with *people* and their education, organization and discipline. (We might add also motivation.) In referring to the rapid economic recovery of European and Asian countries devastated by World War II, he stresses the importance of 'invisible factors' in development: 'Every country, no matter how devastated, which had a high level of education, organisation, and discipline, produced an "economic miracle". In fact these were miracles only for people whose attention is focused on the tip of the iceberg. The tip had been smashed to pieces, but the base, which is education, organisation and discipline, was still there' (Schumacher, 1973: 140). A basic fallacy in overseas technical aid is to attempt to implant the tip of the iceberg without giving attention to the underlying structures which must support it. Thus development is essentially a problem of *evolution*, not of creation or implanting.

An appreciation of this view of what is really involved in development will lead people to reject the orthodox western model of development outlined above. For one must question the implicit assumption in most developing countries that the modern sector can be expanded to absorb virtually the entire population and that this can be done in a fairly short period of time. There can be

a process of stretching — never a process of jumping. If new economic activities are introduced which depend on *special* education, *special* organisation and *special* discipline, such as are in no way inherent in the recipient society, the activity will not promote healthy development but will be more likely to hinder it. It will remain a foreign body that cannot be integrated and will further exacerbate the problems of the dual economy (Schumacher, 1973:141).

Indeed it is significant that it is only relatively recently that many economists have become aware of the term (or process) of economic dualism and they have wrongly regarded the process as merely transitional. It has been widely assumed that what is best for the rich must also be best for the poor, what has succeeded in industrial economies must also be appropriate in non-industrial, largely subsistence economies.

It is regrettably true that the great majority of overseas technical advisers who have visited the Gilberts or Tuvalu are

promoting either consciously or unconsciously some part or version of the western model of development. Even if one does not object to their ethnocentrism or their slavish adherence to the western model (after all it does work most successfully in many countries), the approach must be rejected because it is unrealistic — they are attempting a process of jumping rather than a process of stretching. And at the same time, since they are promoting economic dualism with all its evils, their influence might be not merely ineffectual but positively harmful. The faults of foreign advisers then depend mainly on the imposition of foreign models, philosophies or policies uncritically on to a unique culture and environment. Their recommendations significantly are usually based on deductions about what the local country is like and what its people want, since the length of visit and the manner in which the expert works rarely permit the careful gathering of an adequate data base from which findings could be drawn. Instead of such an approach we would recommend the reverse — an attempt to learn the country and relate to its people, and the adoption of an *inductive* rather than *deductive* approach. It should be flexible, not based on preconceived ideas and should be essentially empirical and founded directly on conditions affecting the mass of society in the indigenous village sector. In Tuvalu and the Gilberts many overseas advisers have not only failed to move out from Funafuti, South Tarawa, their comfortable hotel or guest house base at the Government Station into the real village situation, they have also failed to adapt to the problem of *scale*. Thus many of their recommendations are too grand or too large-scale to *fit* the actual conditions.¹¹ For example, a proposal that more emphasis should be given to a rat control program to increase coconut production (N.R.: ch.12, Income from copra production) might seem to them to be a trifling irrelevancy. Yet many of the best solutions for the islands, ones that will fit, are likely to lie precisely at this small-scale level — at a level of 'intermediate technology' that is appropriate for the conditions of the Gilbert and Tuvalu Islands, and their education, motivation, organization and discipline. As the reports have proposed, a great deal could be achieved by innovations at this intermediate or appropriate level of outboard motors, aluminium boats for fishing, improved fish drying techniques, greater numbers of bicycles and bicycle trailers to facilitate the transport of coconuts from distant lands.

It is encouraging to note that the government of the Gilbert Islands is alive to many of the deficiencies of foreign aid advisers, for in their 1976 Annual Report they expressed considerable reservations about the work of many foreign experts visiting their country. Of course one must not condemn all overseas aid, for some

¹¹In talks Schumacher often used to make a pun on his name 'Shoemaker'. A successful shoemaker must know a lot not only about shoes but about feet if his shoes are to fit. The analogy is apt for all advisers in the development field.

jobs are indeed performed expertly, fit local conditions, and meet the host country's needs. Recently the Task Force on Aid in the South Pacific region found that:

Every country has its stories of misfits, emotional breakdowns, arrogance, political entanglements, culture shock, booze, incompetence, idleness, or overt racism — as well as many accounts of satisfactory accomplishment of a task without any fuss, and a number of outstandingly successful people who not only did their job well, but successfully transmitted their skills to local counterparts (Aid Review Task Force, 1976: para. 8.3).

Of course, since the Gilberts and Tuvalu live in an interdependent world and want to achieve economic and social development they will have a continuing need for foreign expertise and advice. Not all the blame however should be levelled overseas; responsibility for defining terms of reference for visiting aid personnel and monitoring their activities lies with the local government. To do this effectively a clear conception of the model of development to be pursued (and its component parts) is needed and an appreciation of the many implications that will follow from any recommended innovation.

Danger of overseas aid

The closely related question of financial aid from overseas countries is even more important. The dangers of aid are well documented and hence need only very brief reiteration. The Aid Review Task Force (1976: para. 2.1) declared that because of the unequal power between donor and recipient countries, the interests of the donor country are likely to have the greater influence. The greatest danger here is the imposition of foreign values and tastes (and indirectly an implicit western model of development) with little regard for local conditions or wishes. It is hardly surprising therefore that the Task Force found that there was a 'tendency for aid to worsen important defects instead of remedying them'; and that aid was ineffective in achieving 'its stated objective of increased self-reliance' (para. 1.2).

Since the terms of trade are usually distinctly unfavourable for South Pacific economies, most South Pacific countries will require increasing aid for the foreseeable future. There is a tendency for aid to be used to plug the three gaps described above — the budget gap, balance of payments gap and the savings-investment gap. Thus over time overseas aid has the effect of increasing dependency rather than enabling an economy to take steps to strengthen self-reliance.

THE WAY FORWARD?

It is a common human response, when attempting to escape from some impending predicament or to solve intractable local problems, to cast about for some grand solution. In particular in small-scale, relatively traditional societies it is perhaps natural to seek salvation overseas, in modernization by way of a number of alternative paths. Many Third World countries have, over the last 20 to 30 years, plunged headlong along these attractive roads, primrose paths as we have termed them, only to find out today to their cost that their general situation is in many ways no better and a host of new problems has resulted. Too late many people in these countries today can see that they chose spurious goals, philosophies and policies, were hoodwinked by false prophets and plausible, doctrinaire solutions, believing too readily in the prospect of quick profits and the value of aid or large-scale overseas investment. The allure of these primrose paths is deceptive, precisely because they divert attention from a serious analysis of the particular problem and a close consideration of the actual nature of the local reality. We are not so critical of these primrose paths (the western model of development, tourism, overseas aid, large-scale investment by foreign firms, foreign expertise) because of any ideological view or romantic, nostalgic or reactionary sentiment of preserving unchanged two small pristine cultures in the South Pacific. We are critical because of practical reasons: the inappropriate character of many changes which succeed only in undermining or distorting the local situation.¹² The Gilbertese and Tuvalu societies have changed profoundly since the arrival of the west and it can be confidently predicted they will continue to change profoundly in the years ahead. But whatever model of development is chosen, it is to be hoped that it will be founded on the local reality, recognize the latent qualities of societies, the imperatives of the atoll environment, the actual enterprise that does exist in the *mronron* sector and build on the subsistence economy and the skills of atoll living that still survive. If this is done it will be truly their *own* model of development, designed to suit purely *their* needs. If overseas solutions are tried (and they involve more than peripheral activities like a philatelic or stamp bureau) they must be adjusted to the resource base, and the systems and structures characteristic of these islands. No country can escape the environmental imperatives, the limitations of its resource pattern and the remorseless logic inherent in its social and economic structures, and one must accept the utter futility and misguided purposes of activities that ignore them. Even if there were an enormous commitment, huge investment and if clear goals were pursued over a long period of time, only small changes in the social and economic structure

¹²The policies of the large-scale Development Authority (GIDA) which was dissolved in 1977 are a good illustration.

might be achieved.¹³ The basic, unique geography of the islands will remain unchanged.

If the way forward is to be sought mainly within the country rather than outside, what steps could be taken? Almost everything of course depends on the quality of leadership at the political level, at senior and middle governmental level and at the key decision-making level on the outer islands. Clearly when the phosphates run out there will be an immense need for a wise, community-dedicated leadership of the Nyerere type that is not frightened of conducting its own patient analysis and making bold, original decisions. The Gilberts and Tuvalu show many of the signs that they may act in the same way as the elites of most other South Pacific governments in recent years — they will pursue the right wing, conventional economic policies of the former British administrators and continue with an open laissez-faire economy, welcoming foreign investment capital.¹⁴

¹³It is incredible how often these simple obvious facts have been forgotten. Thus although the coconut replanting campaign had a goal of the highest priority it was not adjusted to island conditions. Provision of a power driven drill to dig through the hardpan might have made a major difference to the campaign.

¹⁴Academics are increasingly alarmed at what appears to be the drift of these South Pacific countries into a situation in which they will accept multinational companies whose activities will seriously distort the local economy. Indeed there is no need for a 'hidden hand' theory to explain this familiar behaviour of the governing elite, and their failure to take decisions and institute policies that would protect the village sector and strengthen self-reliance. The real situation is that right through the South Pacific people recently graduated from high school or university find themselves a year or two (or sometimes a month or two) later plummeted into positions of responsibility and relatively high income: senior civil servants, politicians or even cabinet ministers who are expected to deal promptly with a great volume of unfamiliar files and the complex and plausible proposals of sophisticated foreign companies. Not only do they not know what to do, but their foreign education (which might in some instances have touched on Keynesian economics but certainly not modern economic development theory) has not equipped them adequately to evaluate the new proposals or to envisage the likely consequences. In general they are inclined to put their trust uncritically in the plausible proposals of efficient overseas firms. And so elites that are inexperienced, trusting and rather naive (and certainly not evil or particularly self-seeking) lead their countries into further overseas entanglements and deepening dependence.

The leaders need to be austere and moderate in their own tastes and style of living, practise restraint in public spending and be able to dampen down local expectations and aspirations that are no longer realistic. Revitalization of the traditional sector and the strengthening of self-reliance could be the major elements of the new policy. These could be achieved both by weakening the trend towards the dual economy, possibly by decentralizing some government services and creating regional substations in the outer islands where feasible, eliminating subsidies in the town, taxing imports more heavily and allowing urban living to become much more costly and therefore less attractive compared to the village sector. At the same time a carefully worked out import substitution policy (e.g. pork production on outer islands to replace imported meat) should stimulate the village sector if supported by an extension policy and a regional economic policy (e.g. favouring Butaritari for fruit and *babai* production, Marakei for *babai* exports, Abemama for salt fish and more distant islands perhaps for craft production and salt fish).

Revitalization should take the form of strengthening subsistence whenever possible, e.g. encouragement, perhaps through competitions in *babai* pit construction and maintenance, number of tubers per pit or size of tubers. Toddy cutting could also be encouraged by national campaigns and competitions and its substitutes as drinks (tea, sugar) taxed more heavily by way of import duties. Again specialized fishing skills could receive precise encouragement and men possessing such skills (as in *babai* growing) would be worthy of special recognition. In the case of fishing and *babai* growing a revitalization campaign would be supported by the knowledge that surplus production would bring income from sales in South Tarawa. Again in the field of health and medicine a complementary relationship needs to be forged between folk medicine and low cost western medical treatments. Improved marketing arrangements (e.g. cool stores for fruit; a butcher's shop and slaughter yard in Betio for pigs from outer islands) would greatly assist, as well as a suitable rationalization of shipping services to meet these new needs. On large islands improvements to the road and close attention to the number of shipping or truck pick-up points is needed. Import substitution too could take the form of local manufacture of bicycle trailers, so useful in harvesting nuts from distant lands. A number of such small-scale innovations and adoption of intermediate technology would be helpful, while closer attention to savings and the kind of investments required on outer islands (e.g. aluminium boats, large fishing nets, out-board motors, mechanical skills to service them) is needed.

There are, moreover, some encouraging signs of the resilience of outer island society and their determination to preserve and extend many familiar ways of doing things rather than placing their faith in external solutions. Thus indigenous concepts and goals asserted themselves in the broadly based discussions of the Constitutional Convention in 1977 that were designed to work out a

constitution for independence (Murray, 1977:12-13). And by early 1979 a number of associations of outer islanders had established vigorous retail trading companies at Betio, South Tarawa. These had become so successful that they had challenged the large co-operative stores, and earned substantial profits for their relatively impoverished outer islands.¹⁵ These two examples give grounds for optimism that the islanders will gradually work out their own, indigenous model of development.

GRAND SOLUTIONS?

It is true though that a number of grand external solutions are likely to be needed even if many small necessary steps and a basic new attitude are adopted internally. Funds provided by the 'golden handshake' customarily given at independence, together with income from overseas investments made in recent years from phosphate earnings are likely to last for only a few years, bridging the time needed to establish a new kind of economy.

Tony Hughes, a recent Development Planner in the Gilbert and Ellice Islands, suggested that the things that really matter to a people can be essentially reduced to four fundamental goals: (1) the future wealth and happiness of the family; (2) the earning power and hence the real standard of living of this generation and the next; (3) the preservation or disappearance of the comforting and well-known features of their childhood; and (4) the feeling of being reasonably free, reasonably uncowed by physical or economic dangers and reasonably sure that you are your own boss (Hughes, 1972:11). This chapter has argued strongly for recognition of the third and fourth goals in this quotation as they are often overlooked by planners and politicians, but the first two goals clearly depend on what new exports, if any, can be found to replace phosphate. At this stage it is clear that there is a certain minimum monetary component needed to achieve human happiness as defined by the Tuvalu people. The size of this component probably is almost as large and equally as important for the Gilbertese. The likelihood is that, apart from labour, copra will remain the only important export from the islands and clearly every effort will be warranted to increase exports without jeopardizing subsistence. Here the implications of regional blocs can be appreciated, with the Gilberts and Tuvalu aligning with the other South Pacific countries to press in world forums for recognition of their special case (e.g. as in the Lomé Convention to gain access for their exports to the EEC countries) and for stability and a reasonable price for coconut oil in the vegetable oil market. At this level close regional cooperation and liaison are clearly called for rather than maintaining a parochial posture.

¹⁵Personal communication from Roger Lawrence after returning to Tarawa after an absence of 5 years.

The other great hope of course lies in the sea, the 4,430,000 km² of ocean (Tuvalu 760,000 km²), in which these tiny fragments of land are scattered. Unless mineral riches are some day discovered, the fish resources of this ocean provide perhaps the last hope of earning a large source of income.¹⁶ Again the method of exploiting skipjack tuna or any other fish becomes crucial¹⁷ and the recent history of joint ventures between small countries and Japan is not encouraging if dependence is to be avoided. At the price of earning some money income, the third and fourth goals might have to be partly sacrificed. These are the kinds of decisions and options that the islanders will have to take in the years ahead.

¹⁶Recently Britain gave the Gilbert Islands a small fisheries patrol vessel. In such a vast area of ocean it will however be quite unable to police its 200-mile zone for vessels breaking the limit.

¹⁷In 1972 a plan was mooted of fishing for skipjack tuna from a number of outer islands, using 10 m dories operating in groups of 2 or 3. These small but fast vessels would be manned by islanders themselves and so would enable them to run and staff the new industry. However later investigations by the Fisheries Department suggested this scheme was impractical. Another recent project has been a brine shrimp experiment on Christmas Island.

Chapter 16

Summaries of conclusions and recommendations

CHAPTER 2: MEANING OF DEVELOPMENT

- (1) Fundamental differences exist in goals sought in development planning and in understanding of the development process between European colonial officers and advisers and Gilbertese or Tuvalu villagers.
- (2) Serious contradictions arise from these different viewpoints. Differences in priorities are held by both groups and the development strategies chosen by each would diverge.
- (3) Economic planning in the South Pacific has been in the hands of people whose prior experience was of a foreign rural economy which they have tried to reproduce in Pacific Island settings. They have not studied the indigenous social and agricultural systems in any great detail. The logic of the European view is sound if an economy is considered purely in monetary factors but this creates many undesirable consequences from a local point of view.

The European approach did not start with the indigenous social organization and agricultural system and attempt to build development on to that foundation, improving what was already there. Instead it ignored, bypassed or undercut the traditional systems. No great success has been achieved in increasing gains in per capita output, while the cumulative impact of social change has been to weaken or seriously endanger the delicate ecological balance that populations had worked out with their atoll environments.

- (4) Rejection of the western mode of development and usual approaches (see also Chapter 15) would however lead to a lower growth in national income, personal incomes and in government revenues. But it would lead to an indigenous controlled economy which in the absence of extreme poverty might be considered to be a better objective. Aspects of the outside or western view must however be learnt and understood by villagers.

- (5) (a) The inside view of development. On all islands there are two basic conceptions of development:
- (i) Innovations that come from government. The idea of development is wholly associated with 'Tarawa' (i.e. the government). Most immediately development represents tangible results – air service, roads, shipping services, medical services, Island Council Schools, coconut replanting subsidies and the like. Such development is to be gained by lobbying or manipulating government if feasible and a major goal in politics is to induce government to invest on one's home island.
 - (ii) A greater opportunity to pursue Gilbertese ends. These can be achieved more easily with money.

Gilbertese ends are closely associated with the idea of security or freedom (*oinibai* on Tamana) – to be self-sufficient or free to control your own activities. This is a very important and basic goal of many development plans.

- (b) Education and employment in Tarawa. To have children going to school in Tarawa with the prospect of salaried employment to follow is to achieve 'freedom': seen in this context subsistence work becomes drudgery and cash and freedom become almost identical.
- (6) Attitudes to development are intimately bound up with attitudes to government. An unfortunate attitude that should be resisted is to expect payment for labour on some community asset (such as a medical dispensary) initiated by government. The great gulf between central government and outer islanders must be bridged and in-depth discussion initiated on the role of government, need for services, and purposes of taxation.
- (7) Attempts must be made to rectify the lack of understanding of planning from the western point of view so that islanders can participate in planning for their own island as well as in national plans.
- (8) Development plans. Faith should not be placed in a development plan to achieve targets and a certain rate of economic growth if the political power or determination are lacking. Many South Pacific development plans are criticized as being technocratic documents produced in a political vacuum. They often lead to illusions or delusions, become propaganda, window dressing or shopping lists to take to aid donors. Not all present a serious analysis of the economy and almost all ignore important social and cultural factors or goals in development. Although it is important to involve the people in planning, the danger here is that long- or medium-term goals, strategy or structural alterations are sacrificed to meet short-term needs. A two-way process of communication

involving a sound and representative system of local government is the most likely way of avoiding this danger.

If development planning can avoid these dangers it remains a most important exercise of great value to the people of any country.

CHAPTER 3: POPULATION

- (1) Although recent declines in resident populations on some islands are encouraging, the overall population of both island groups continues to increase. Population pressure remains a problem of overriding importance, for land resources are constant and employment opportunities overseas or within the region are either stable or declining.
- (2) Potential population densities, based on the assumption of absentees returning to their home islands as off-island employment and sources of remittance income dry up, are very high. This suggests that real hardship and a serious decline in living standards are likely to occur in the post-phosphate era.
- (3) The ratio of children of less than 5 years per thousand women aged 15-44 has dropped on all islands from 1968 to 1973, but the dramatic drop on Nanumea and Tamana illustrates the success of the family planning campaign on those islands. The campaign appears to have made a greater impact in Tuvalu overall than in the Gilberts as a whole.
- (4) In contrast to Butaritari, the use of contraceptives on Tabiteuea North, Tamana and Nanumea was well established in 1972-73 (Abemama appeared to be in an intermediate position). It is suggested that where the population density is high and islanders are Protestant, the response to the program is likely to be good, leading to the greatest fertility decline.
- (5) Labour. On all islands studied, the supply of labour was generally adequate to meet household needs. Some households lack people to cut toddy or fish for them, but these deficiencies can usually be made up by kinsmen or neighbours.
- (6) The highest priority should be given to a strongly mounted family planning campaign. On islands where a substantial impact has already been achieved it is suggested that priority should be given to follow-up techniques, pointing out for example the advantages to be gained from spacing the arrival of children. On islands where only a small impact has occurred, islanders will still have to be convinced of the need to limit the size of their family and to plan for the future. A number of particular illusions still have to be

dispelled to prevent people thinking that the burden of responsibility lies solely with government, and not with themselves.

- (7) Women's organizations are worthy of official support. They serve valuable community needs and provide a medium for extension work on family planning, crafts, health, sanitation, nutrition and preventive medicine.

CHAPTER 4: LANDS AND LAND TENURE

- (1) Land is not in short supply. Even on the densely populated southern islands only a portion of the numbers of lands held was worked regularly; on 2 islands less than half the area held was worked. On Abemama the area of land held by most households was especially large. However should all absentee owners return to their home islands, land pressures would increase greatly. It is only in years of high copra prices that islanders utilize lands that lie at some distance from their homes. The basic factor here is the copra price and the availability up to the 1970s of alternative sources of income (such as remittances), though the greater availability of bicycles and handcarts to tow behind bicycles would encourage more thorough use of distant coconut groves. The availability of loans for this purpose is recommended.
- (2) Low rate of coconut replanting. The lack of perceived land scarcity has, on all islands other than Nanumea, been reflected in the low rate of coconut replanting, so that on some islands fewer than 50 per cent of coconut palms were bearing in 1972. Self-sown palms appear to greatly predominate over sown nuts on some islands.
- (3) Effect of flexible sources of cash income. The great facility with which islanders have been able to alter their household economic strategy year by year has not encouraged long-term improvements or investment in the land. When the copra price is low or harvest poor, households can usually make up the shortfall in income by requesting remittances from relatives, or indulging in household sales, handicraft making, *monron* activity etc. When the price of copra rises, greater interest in planting and copra cutting occurs. This flexibility in the household income base remains a major disincentive to government's efforts to encourage villagers to improve their land resources, or to plan for the future needs of family members.
- (4) Land fragmentation. This is characteristic of all islands surveyed and is a problem for improving land use, though fragmentation is more severe in the southern islands.

Official policy should attempt to counter the causes of fragmentation by:

- (a) Encouraging the exchange of land to enable consolidation to 1 or a small number of concentrated blocks.
 - (b) Stressing the economic advantages (e.g. in working coconut lands, copra cutting and transport of copra) of consolidation of lands near the home site.
 - (c) Development of courses in land management and utilization at new community colleges and in community education in the *maneaba*.
- (5) Absentee lands. Absenteeism ranges from 15 to 35 per cent of total land owned. On all islands of the survey except Butaritari the problems of improvement of absentee lands are serious, since caretakers will not improve them in case the owner returns at any time to reclaim them.

If employment opportunities off the home island decline, as seems likely in the post-phosphatic period of independence, it is possible that many absentees might return to reclaim these idle lands. Tax penalties on unused land (or conversely tax rebates for coconut plantings) might be a better way to approach the problem of absentee lands.

- (6) Land sales. Great care should be taken to prevent the creation of a landless class, and even a policy of encouraging the sale of the lands of absentees must be queried to prevent such an outcome, bearing in mind a possible drying up of much off-island employment in the years ahead.
- (7) Lands Court hearings. Well-established utilization patterns exist on all islands and inheritance usually follows these patterns. Although there is a backlog of Lands Court cases on all islands this seems to cause few serious problems in practice in the absence of real pressure on lands, in view of the efficacy of customary principles, and the need for a cooling off period in disputes.

CHAPTER 5: SUBSISTENCE ECONOMY

- (1) The nature of the subsistence economy varies markedly in the 5 islands of the survey, depending on climate and ecological factors, character of lagoon and ocean, population density, importance of the cash economy and other factors.
- (2) Although the most common reason for under-used *babai* pits on Butaritari is the failure to replant after harvesting, a secure opportunity to sell surplus *babai* and breadfruit to South Tarawa would provide a major incentive to the island and especially to those rich in supplies.

- (3) Reef blasting on some islands along the southern islet of Butaritari might, if judged to be ecologically sound, greatly improve the opportunities for fishing.
- (4) We deplore the situation in which planning for the rural sector up to date has concentrated almost purely on the cash economy. We recommend much more positive planning and extension work designed to strengthen and expand the subsistence economy (*babai*, fishing, toddy, pandanus, breadfruit, coconuts). Great care must be taken not to stimulate cash earning on outer islands that would seriously deplete subsistence resources or downgrade the importance of subsistence agriculture and fishing. These policies could take several forms:
- Promotion of the salt fish trade from Abemama and other outer islands by
- (a) Heavier duties on tinned meat and fish.
 - (b) Active extension work on islands such as Abemama which appear to have abundant fish supplies (investigations of likely fish resources are recommended on other islands).
 - (c) Spasmodic supply of fish is best countered by creation of a reliable market in South Tarawa, Ocean Island and Nauru. Improved truck transport along the road at regular pick-up times is infinitely preferable to transport of small quantities by bicycle.
 - (d) Construction of wind-drying facilities under cooperative management should be investigated.
 - (e) Fresh fish sales to South Tarawa should be investigated. This would require cool store facilities on Abemama and Tarawa.
- (5) (a) Import substitution and tariff alteration policies to promote the expansion of pork production on outer islands and limit imports of tinned meat and fish. The experience of the Department of Agriculture suggests that pigs could be satisfactorily fattened in small pens on a diet of coconuts and fish remains.
- (b) Establishment of a butcher's shop and slaughter yards at Betio with appropriate regulation of hygiene standards.
 - (c) Rationalization of shipping to ensure adequate pick-up arrangements and transport of live animals under reasonable conditions.
- (6) *Babai* and breadfruit sales from Butaritari to South Tarawa offer considerable scope, as does the sale of pandanus in various preserved forms from Tabiteuea.

- (a) There is merit in the idea of allocating turns to all those prepared to sell in groups to supply a stipulated quantity of *babai*, salt fish or other produce.
 - (b) The price for such outer island products must be set at a sufficient level to provide real incentive for the producer.
 - (c) Any unavoidable delays or cancellations in marketing services should be broadcast on the radio.
- (7) Crayfish sales to the hotel. Extension work and careful organization again seem to be called for with the fixing of a quota of a maximum number that can be sold at any one time. The allocation of turns is again perhaps preferable.
 - (8) A small sale of pawpaws and bananas to the hotel might be worth investigating further.

CHAPTER 6: COPRA PRODUCTION

- (1) Copra resources
 - (a) Only on Butaritari does the density of bearing palms come near to the optimum recommended by the Department of Agriculture. On most islands mean total palm densities exceed the optimum of 215 per ha.
 - (b) Replanting is common on the drier islands following droughts that kill palms periodically.
 - (c) On Abemama non-bearing mature palms make up a considerable proportion of total trees and the number of senile non-bearing palms is as great as young non-bearing palms. On this island therefore a greater incentive to plant new palms is needed.
 - (d) The substantial replantings made on several islands with war compensation payments are now 30-35 years old. Declining yields can be expected in another 25-30 years over large areas of palms of the same age. Staggered replantings on these lands to compensate for the future decline in yields are recommended.
- (2) Lack of growth in production can probably be explained best by the lack of incentive to utilize the productivity of existing palms more fully, rather than in the limitation of total nut supply.
- (3) Correlation analysis highlights some issues and indicates the need for major policy alterations. The analysis suggests that on larger islands land is not a limiting factor at present. Better prospects exist for a program which seeks to reduce the costs of production and to encourage more

complete utilization of existing coconut resources, rather than aiming primarily at improving the quality and area of plantings.

- (4) On 2 islands, Tamana and Arorae, annual production and rainfall in the year preceding were significantly correlated. The critical factor seems to be the combination of low rainfall and high population densities. It is probable that proportionately more of the total crop on these islands is used in subsistence which is relatively inflexible, so fluctuations in palm productivity are translated directly into fluctuation in copra output. Tamana, Arorae, Beru, Onotoa and possibly Nikunau should be targets for a sensitive and selective Coconut Improvement Scheme aimed at improving palm resources in the future without jeopardizing present resources.
- (5) Price and production
- (a) Seven of the 25 islands have results in which price and production are significantly correlated, with 4 more being marginally so.
- (b) Differing responses on price and production correlations suggest basic differences in the character of island economies and in the part copra plays in them. These data provide a warning against any coconut planting or copra policies that treat the Gilbert Islands or Tuvalu as a whole, in blanket fashion.
- (c) On 10 of the 16 Gilbert Islands the partial correlation analysis suggests that a rise in price would stimulate production.
- (d) On the 3 northernmost islands the results are negative, suggesting that a price rise would lead to a cut back in production. (The argument on copra production and earnings in B.R.: ch.6, Strategy in copra production, supports this interpretation.)
- (e) The next 3 islands, Abaiang, Tarawa and Maiana, have results that suggest very little relationship between price and production; the hypothesis is presented that alternative employment in Tarawa is an important factor.
- (f) The likely expansion in production in response to price increases indicates that substantial unutilized or under-utilized land exists.
- (6) Especially on the larger islands of the Gilberts the price and production correlation results show that the problem of increasing copra production is essentially one of motivation. Policy should seek to provide incentive to use existing resources more fully and consistently rather than trying to expand the area of coconut groves.

(7) Accordingly policies should attempt to:

(a) Maintain a satisfactory price that will provide incentive to the producer.

(b) Reduce costs of production.

In the economic conditions of the early 1970s a copra price of below 3 ¢/lb provided little incentive. Only on Butaritari did the fall in copra price lead to an increase in production.

(i) Price support by government is recommended to maintain the price at about 3 ¢/lb as a trigger price to maintain production. Response to higher prices is not predictable because cash needs are not infinitely expandable.

(ii) Stocking of island stores with a suitable range of goods, especially capital goods, provides an additional stimulus to production.

(iii) Price or bonus payments might be made in a more selective way to provide incentive to reach particular levels of production.

(iv) Reduction in production costs by improving transport linkages, opening more buying points on larger islands, improved roading and trucking services, greater availability of handcarts and bicycles on all islands.

(8) As long as large, external sources of income such as remittances or government subsidy payments remain, a consistent response to production incentives cannot be expected. If, as seems likely, external sources of income and employment prospects decline after the exhaustion of phosphates, measures aimed at encouraging copra production are likely to provide greater incentive.

(9) Land reform. The arguments, common in the past, that recommended land reform to do away with land fragmentation and inequities in ownership failed to distinguish between land access and land ownership. Very few households had difficulty in gaining access to land sufficient for their needs. Whereas the official conceptions of land 'ownership' and exclusive rights to land are foreign and inappropriate, the present system, based on the people's social organization and value system, is sufficiently flexible to meet the people's needs. Reasons for non-use of land do not relate to the question of land ownership but to absence of motivation, absentee owners and other causes.(10) Absentee ownership. Since some established communities may develop of absentees living permanently on Tarawa, discussions among kin groups, Old Men's Councils or Island Councils should be encouraged to find a new solution that will enable the lands of absentees to be replanted without involving the censure of any individual.

- (11) Coconut Improvement Schemes. A great asset in these earlier schemes was the dedication and enthusiasm of the staff of the Department of Agriculture.

Failure of these schemes, reviewed in the island reports, stems from failing to come to terms with basic social and economic factors.

Major causes of failure:

- (a) Land productivity was not the most immediate cause of low copra production. The schemes were not designed to improve production efficiency or transport of copra or nuts from distant areas.
 - (b) The schemes were imposed from above and were not built on the felt needs of the people. In introducing the schemes to villagers the need for replanting as an insurance for the future was not sufficiently emphasized. It was unfortunate that short-term gains from subsidies and employment dominated.
 - (c) Cash motivation outweighed all other considerations. There is a need for sensitive and penetrating extension work so that the felt needs are established and become a part of the project, and that the purposes of the scheme are understood, accepted and valued by all.
 - (d) The schemes were not based on the real landholding situation. The minimum area of land required was far too large (presumably fixed for administrative convenience), requiring the cooperation of a large number of individuals with differing motivations and commitments. An approach concentrating on interested individuals rather than land areas might have avoided some problems.
 - (e) Many landowners were naturally reluctant to fell productive palms.
 - (f) The plantation-type approach adopted may be questioned, involving large areas of optimally spaced palms of the same age that would all decline in production and require replanting at the same time. An alternative approach is recommended of finding optimum spacing for mixed age stands to give satisfactory and continuous production on small, fragmented lands that have to serve both subsistence and cash-earning needs.
- (12) It is probable that rat control programs would substantially reduce nut loss on some islands and thereby increase resources available for copra production.

CHAPTER 7: INCOME AND CONSUMPTION

- (1) An important distinction is between earned and unearned income because one influences the other and thus has a major

effect on household economic performance. Unearned income (remittances, gifts, coconut subsidies, cooperative bonus) is often anticipated or expected and therefore becomes part of the household economic strategy, discouraging subsistence or local cash-earning effort. Because of the possible availability of unearned income, response to income-earning activities in the village sector will remain unpredictable.

- (2) The claim to pay labour for work on communal or Island Council projects should be resisted. In the short term it may improve job availability and income, but eventually the wages must be met from local income and higher taxation. Being 'government' work there is the added danger that it will become associated with the artificially high Tarawa wage levels. It replaces a well-entrenched and accepted system of labour levies for village and island projects which have thus far been regarded as legitimate social costs and which stress and consolidate community cooperation and pride, values which development should seek to enhance rather than destroy.
- (3) Sales of local produce have potential for expansion to supply Tarawa. Purchase by the cooperative is too abrupt and also ceases without warning; clearly notification and assistance should be provided for future purchase, packing and shipping.
- (4) There appears to be little evidence of target income earning or earning for productive investment. There is a need to convince people that much more could be earned from island based activities.
- (5) An individual does not always engage in activities in situations in which he seeks at all times to gain the highest rate of return for his effort. What he considers to be a worthwhile return for effort will depend on a variety of factors — the urgency of the need for cash, the immediacy of return for effort, total sum gained, level and nature of income from other sources, enjoyment gained and purpose for which cash is being earned. Rates of return varied between 17 ¢/hour for copra at 2 ¢/lb (35 ¢ @ 4 ¢/lb) and from 4 to 30 ¢/hour for a number of other income-earning activities.
- (6) Utility of money. As long as store foods, fuel, tobacco, soap etc. remain the most readily available or only goods stocked in island stores, demand must have a ceiling. Above the adequate level of consumption of these items little incentive to earn money will exist. Increasing the range of goods stocked by stores, especially small capital items, is recommended, providing concrete targets for producers to aim for. The likely demonstration effect of these goods in outer island stores should not be underestimated.

- (7) Because overseas employment is so important in supplementing local income and providing means of access to basic capital equipment for outer island life, serious attention should be given to replacing declining employment on Ocean Island and eventually Nauru with a satisfactory system of contract employment either outside the colony or on Tarawa. The arguments in favour of contract or fixed term employment are:
- (a) It spreads opportunity as widely as possible within the community, giving as many people as possible the chance to supplement local income when the need arises, and to accumulate a stock of capital goods to maintain the efficiency of subsistence production.
 - (b) It integrates work off the island with outer island life. Employment off the island becomes a recognized phase in outer island life rather than an alternative to it, at the same time contributing to the satisfaction of outer island life.
 - (c) It reduces the potential for the development of a permanent urban elite with only weakened ties and responsibilities to outer island society and whose supposed higher living standards diminish satisfaction with outer island life and provide further incentives for migration to centres of permanent wage employment.
- (8) The local sector. Government must recognize the strength and contribution of the subsistence economy and its ability to supply a large part of the everyday needs of outer island societies. Any program aimed at increasing cash-earning activities must recognize the possibility of diverting time and interest from subsistence activities with a consequent decline in the quality of dietary intake.
- (9) The response to programs seeking to expand local cash earning will depend on an individual's perception of his need for money and the uses to which that money can be put. Felt needs at present are small and not infinitely expandable. Planners must take account of the scale of the household economy and ensure that programs developed are appropriate to the income needs and resources, both material and time, available in the household.
- (10) Because of the scale problem planners could well look at encouraging and utilizing already existing cooperative fund-raising groups such as *mronron*.
- (11) Copra production still appears to be the area where planners' attention should be concentrated. There is still room to expand the resource base and the rates of return for copra are still higher than most other activities available. At present prices returns for handicrafts are so low as to be unattractive. The scope for expanding vegetable, fruit, salt

fish and boiled toddy production for the urban market depends on the overcoming of marketing and transportation problems and the organizing of many small producers to provide a regular and sufficient supply for the market. People appear to be willing to work in groups for much lower rates of return because of the anonymity referred to above and because group participation contributes to the enjoyment of work by adding a social dimension.

CHAPTER 8: USE OF TIME

- (1) Subsistence and social activities dominate time use by households on every island.
- (2) Cash-earning activities
 - (a) No household on average spent more than 13 per cent of its active time in cash earning and most fell below 10 per cent.
 - (b) No consistent pattern appears to be allocated to cash earning. On most islands cash earning is irregular and intermittent. On Butaritari some younger households may devote more time to cash earning, or do so more regularly in order to keep up to a particular standard of living.
- (3) Islands with higher mean household incomes do not necessarily have greater time inputs to cash earning. This reflects the variability of ways of earning cash and the importance of external sources of income.
- (4) Division of labour
 - (a) Age and sex are important in determining how an individual will spend his or her time as certain tasks are regarded as appropriate only for males or females in particular age groups.
 - (b) Women appear to carry out a much wider range of tasks than men, but the tasks are more intermittent in nature. It is possible that new cash-earning activities could be accommodated more easily within women's activity pattern than men's with less interference to subsistence-oriented activities and production.
- (5) Household level. The household cannot be considered an entity capable of attaining long-term economic goals because of its fluid composition. This means that its labour (and sometimes land) resource base is therefore constantly changing. The household is a unit of convenience that uses available land and labour to satisfy immediate household needs.

- (6) Role of economic circumstances. On Abemama it was suggested that households receiving or expecting substantial or regular cash incomes spend less time in subsistence activities such as fishing or food gathering, but this is not the case on Nanumea or Tamana and indeed on Butaritari the reverse is true (the receipt of regular remittances enables more time to be spent on subsistence and especially *babai* cultivation).
- (7) Undoubtedly considerable surplus labour exists on outer islands which could be mobilized without jeopardizing the household subsistence economy. The willingness to divert time from other activities to income-producing activities depends on the need for money, the utility of money earned and the value placed on the subsistence goods, and social or leisure activities forgone.

CHAPTER 9: EMPLOYMENT

- (1) Over the last decade the problems of providing a cash flow through the islands at a level to ensure that outer islanders maintain their interest in economic schemes and make a contribution to government revenues have become formidable. The major factors in this situation have been:
- (a) Phosphate mining on Ocean Island and Nauru will soon cease.
 - (b) Copra prices fluctuate to a very great degree, varying within a few years from 2 to 8 ¢/lb.
 - (c) Attempts to stimulate indigenous economic enterprises (e.g. the Local Enterprises Development Project or the Nonouti agricultural cooperatives) have either failed or achieved only very limited success.
 - (d) Labour export to work for German shipping lines.
 - (e) Government employment.

Of these five sources of employment only the second, fourth and fifth remain, and the fourth has a most uncertain future. (Recruitment by the China Navigation Company has recently been discontinued.) The extent to which other cash activity occurs depends greatly on the *multiplier effect* of these income resources (thus *mronron* activity on the islands is stimulated greatly by high copra price). Conversely a contraction in their income-producing sources leads to a severe restriction in cash-earning activities.

- (2) Remittance income. The extent to which most outer islands are 'subsidized' by external earnings is indicated in the importance of remittance income, resulting from requests or gifts to relatives. Remittances are estimated to contribute

between 12.5 per cent and 45 or 48 per cent of total island cash income (Table 9.2) and in 1972-74 the phosphate islands contributed between 28 and 76 per cent of total remittance income for all islands studied apart from Abemama. Tarawa was a more important source of remittances for the nearby island of Abemama, while the plantation islands, overseas shipping and colony shipping were moderately important sources of remittance income for some other islands.

(3) Need for off-island employment

(a) The prime need for employment off the home island is for income needed for ordinary household living together with the payment of taxes and school fees.

(b) Purchase of capital items or large household items is almost always made when overseas in employment - e.g. money for bicycles or motor-cycles, large Chinese chests, sewing machines, eating utensils, radios and the like. The incentive to leave one's island in order to purchase such items could perhaps, in a future period of poorer employment opportunities, be partly countered by stocking some of these items in the largest cooperative store on an outer island. Acquisition of capital items (such as large fishing nets, outboard motors etc.) could be assisted by an Agricultural and Industrial Loans Board policy.

(4) Government employment. In view of the downturn in mining and agriculture, employment for the government is likely to be by far the most important source of wage earning in the future. The capacity for future expansion of government employment is greatly limited however and there is a danger of bureaucracy stifling indigenous development. Again Tarawa will be the major island for employment in the future.

(5) Attitudes to employment. Indigenous enterprise is undoubtedly seriously hindered by the repugnance of Gilbertese to accept wage employment for other Gilbertese in an employer-master relationship. A small amount of employment has been provided by vigorous *mwonxon*. Partnerships between co-equals or near equals in *mwonxon*, or group forms of enterprise, offer the best prospects. The Tangitang Union at the time of World War II and more recently the North Tabiteuea *Mwonxon* Union provide examples of successful large-scale enterprises that provided employment and some income to a number of people for some years before failure occurred.

(6) Education and employment. In future at best only 10 or 12 per cent of the population can expect to gain wage employment. Then as now, securing a superior education (currently a high school education is necessary) is seen as the key to gaining such highly desired employment which will ensure the future security and welfare of the family. Education

is evaluated almost solely in this light (see Chapter 13) and even primary schooling on Tarawa is judged to be automatically superior to that provided on any outer island.

- (7) Time allocation studies on all islands indicate that activity patterns are regulated by the requirements primarily of a subsistence rather than a cash economy.

CHAPTER 10: ENTERPRISE

- (1) Attitudes of equality and conformity are so strong that only a few remarkable individuals (5 per cent of the population at most) are able to cope with social sanctions and open a gap between their living standard and that of society at large. *Boraai* and *tibanga* are concepts of pervasive significance.
- (2) The *mronron* provides an acceptable means for pursuing enterprise and in effect non-Gilbertese ends, protecting the individual by the anonymity of the group and also providing the satisfaction of group activity.
- (3) The variety of forms of *mronron* reflects differing responses to the *scale* of cash earning, saving and consuming under village and household conditions, the availability of money and of store goods, size of clientele and transitory opportunities of making money.
- (4) Goals of *mronron* are:
- (a) To make a profit, through investing small sums which, it is hoped, will grow.
 - (b) To retain savings, rather than rapidly spend them on store goods.
 - (c) To provide a form of investment.
 - (d) To constitute an institution from which individuals may borrow.
- (5) Basic constraints on enterprise
- (a) Irregular income, fitful, sporadic character of production.
 - (b) Weak and fluctuating purchasing power of households.
 - (c) Frequent exhaustion of household cash.
 - (d) Lack of expensive, capital goods in stores.
 - (e) Delays in ordering.
 - (f) Delays in shipping.
 - (g) Bottlenecks in supply by GEIDA.

- (h) Lack of a tradition of saving or storage.
 - (i) The tradition of production only for immediate consumption ends.
 - (j) Capital needed for gaining a livelihood not great and can be easily acquired.
 - (k) Restrictions on mobilizing labour except in groups of co-equals, for to work for another is to accept an inferior, lower status.
 - (l) Large landholders (e.g. on Abemama) were men of status and excessive work was unbecoming to their social standing.
 - (m) Social and demographic factors, such as stage in the life cycle, needs of the household at the moment for cash, determine the strength of motivation toward enterprise.
- (6) *Mronron* account for a substantial percentage of store purchases and also of island copra sales. If they purchased stock from private wholesalers they would represent a serious threat to the cooperative stores but since in 1972-73 they purchased stock from the cooperatives their role was complementary.
 - (7) It is important that government does not continue to ignore the informal sector (comprising *mronron*, *airere*, *berita* and *karekare* groups) but recognizes the existence of such activity and its legitimacy.
 - (8) The household is the most important production and consumption unit but is too fragile an institution (lacking cohesion and clear goals) on which to expect much enterprise to be based. Any model of an enterprise must combine a market for the goods and services produced, motivation, land or special skill, labour, leadership, institutional structure and competence in business management and bookkeeping. *Mronron* or church fund-raising groups may occasionally approximate such a model of enterprise, providing the above qualities (and especially motivation). The critical factors often lacking are able leadership and competence in business management but wise government assistance could greatly strengthen *mronron* and groups in this area.
 - (9) Government must avoid the tendency towards bureaucracy in the development field. A strong policy, clear-sighted goals and good back-up for extension officers are needed, but a minimum of red tape, regulations or paper work that might stifle local initiative. Healthy guidance can help pitfalls to be avoided, temper unrealistic planning, advise on marketing and production problems and teach the necessary business and technical skills.

- (10) Advice on business management, bookkeeping, and technical skills needed in enterprises should be taught to all those interested — e.g. in village *maneaba* in short courses. Enterprises with the greatest spread effects, stimulating other production or marketing, warrant the highest priority for assistance.
- (11) Government can establish more reliable and substantial markets for outer island producers by:
 - (a) Import substitution policies (by tariff changes, import restrictions, taxation or other policies) that will encourage production of salt fish, pork, *babai*, vegetables and fruit for the South Tarawa market.
 - (b) Extension assistance and marketing advice to producers of the above items.
 - (c) Improved storage, cool store, pick-up road transport, shipping and slaughtering (for pork) facilities and organization.
- (12) The 'leader farmer' approach is also not recommended for extension work or lending institutions. A group-oriented approach of 15-25 men who have access to lands and who will willingly work together is preferred.

CHAPTER 11: COOPERATIVES

- (1) In 1972-73 the cooperative societies on the 5 islands were in a strong position. They were profitable businesses, with a popular, well-stocked retail service. In view of efficient management, leakages were low (about 2 per cent on some islands).
- (2) Much of their success up to 1973 was due to strict adherence to an economic function. They provided villagers with a good example of how a profit-making enterprise should be run, i.e.:
 - (a) Importance of sound management decisions and proper bookkeeping.
 - (b) Benefits of bulk buying.
 - (c) Importance of budget control.
 - (d) Regularity in ordering, and in stocktaking.
 - (e) Importance of maintaining adequate working capital and reserves.
 - (f) Value of avoiding unprofitable lines, and costly investment in fixed assets.
 - (g) Need to confine orders to goods with rapid turnover.

- (3) Cooperatives are popular primarily because they ensure individual benefit through the annual bonus. They provide a good retail and copra buying service. Members take a keen interest in cooperative business, support the rules and are unrelenting in their demand that officers guilty of mal-practice should be punished.
- (4) Cooperatives have enjoyed unusually favourable conditions in the Gilbert and Ellice Islands. These are:
- (a) An absence of competition from private firms.
 - (b) Almost complete monopoly in primary marketing and retail trading.
 - (c) Much government support and protection (Copra Board, Colony Wholesale Society, government shipping).
- (5) Qualities of dependence and passivity reflect the history of government control of the cooperative movement and the small scope that has been allowed to local initiative.
- Cooperatives could play a more active role in stimulating the planting of coconuts and production of copra rather than merely purchasing, storing and shipping copra.
- (6) Inherent weaknesses of the cooperative movement in the Gilberts:
- (a) Danger of factionalism and excessively parochial interests likely to lead to segmentation of larger, or island-wide, societies.
 - (b) Unwillingness of richer or more productive villagers or members to subsidize the less privileged, poorer communities or members.
- (7) There is a need for a balance to be reached between societies that are small enough to enable full participation of members yet are big enough to make possible the key economies of scale. A proliferation of many very small societies would mean that it would be impossible to find sufficient numbers of competent managers to staff them, and most would be too small to be able to afford a truck or to operate it efficiently. While members may prefer a situation of many small societies they need to be fully aware of the costs involved.
- (8) The excessive dependence on Tarawa needs to be gradually removed with greater community education on cooperatives and enterprise, and as the competence of managers and committees improves so greater self-reliance can be achieved.
- (9) On some of the larger islands a more innovatory role by the cooperatives is called for, encouraging coconut planting and copra production and especially on Abemama an expansion in

the salt fish trade. Wind drying of fish and improved pick-up and transport arrangements are recommended. Operation of a small mechanic's garage to service vehicles, outboard motors and motor-cycles should be investigated.

- (10) While control from the centre might stifle healthy initiative, the need for sound guidance and monitoring the efficiency of their operations must not be lost sight of. Societies need to be fully aware of the dangers of:
 - (a) Tying up money needed for working capital in costly fixed assets.
 - (b) Ordering too many luxury items, or goods with slow turnover.
 - (c) Becoming too prone to purely social needs, that might greatly lessen their profitability.
 - (d) Owning trucks which are costly, rapidly depreciate in value, need to be run profitably with full loads and should be maintained in good mechanical order.
- (11) The sound financial position of cooperatives in 1973 was built up only slowly after the application of well-tried principles and techniques over many years. This position could be frittered away almost overnight by unsound policies and incompetent management. The local factions and excessively parochial interests threaten the prospects of the poorer or less favoured villages or areas and care will be needed to safeguard their interests.
- (12) There will be a continuing need for an efficient country-wide wholesaling division that can order supplies in bulk from overseas and maintain competitive prices with private traders. The bypassing of the cooperative wholesaling division in Fiji by local societies has seriously undermined the economic strength of the whole movement in that country.
- (13) There will be a continuing need in the cooperative field for a central organization that will provide services such as audit, training in business management and bookkeeping skills and advisory functions. The possibility of the central organization stepping in to avoid collapse or serious setbacks in some conditions or to assist the replacement of leadership where no local replacement exists, should not be lost sight of. However a steadily diminishing role should be played by the centre as some grassroots enterprises on outer islands learn to operate successfully and begin to recognize the limits within which they can continue to be viable.
- (14) Bearing in mind (2) and (10) above, there might be scope for cautious widening of their role by some cooperatives to

include some of the basic needs of the community at large and indeed concern for the general quality of life on an atoll. Thus societies should be encouraged to be concerned with nutrition (e.g. suitably sized tins of milk powder could be stocked) and in maintaining the subsistence economy. However, they must also not lose sight of the importance of sound financial management.

- (15) Stocking of capital goods (bicycles, sewing machines, nets, bicycle trailers, suitable timber for canoes), a few expensive household items and adequate spare parts (e.g. for well-known brands of lanterns etc.) could be gradually extended without endangering overall profitability.
- (16) Encouragement of feckless consumerism might increase cooperative profits in the short term but is quite undesirable in the long term as it might ultimately endanger the subsistence economy. The worthless results of western consumerism and of abject dependence on the United States can be witnessed in nearby American Micronesia. It is fervently hoped that the policies of government and the cooperative movement will be such that the Gilberts and Tuvalu will be spared such a fate.

CHAPTER 12: POLITICS AND GOVERNMENT

- (1) Indigenous view of government. The role of government is thought to be to look after the people. It is the responsibility of government to think for the islands. Thus the authority credited to government is immense.

It is often assumed that development schemes are designed primarily to benefit the government, with any benefit to the people being only incidental. Any building or scheme built by government is regarded as government property.

As far as many Gilbertese are concerned, the ways of government are quite beyond their control or understanding. The best government is one that interferes least in the everyday lives of the people. Agreement with a government proposal may signify apathy or indicate that it does not involve a commitment from the people.

- (2) The role of Europeans and view of independence. Europeans are considered to be eminently fair and objective. The ethic of equality governs relations between Gilbertese and this is a serious problem for Gilbertese responsible for making decisions affecting others. They are often regarded as guilty of nepotism, favouritism, or exploiting others. The European is thus often regarded as indispensable for he can dispense justice objectively, being socially and morally neutral. In 1973 the prospect of independence and

total self-government was thus not welcomed by many Gilbertese, for it was presumed that Europeans control the courts and councils and so ensure equal and fair treatment before the law. If the European were to depart it is believed that open favouritism and exploitation would occur.

- (3) Services. Government services on outer islands – postal and radio communication, medical and the like – were generally efficient and people were satisfied with them. Services are much better at the Government Station and on large islands distance is a major factor preventing outlying villagers from receiving the benefits of some services. Medical staff should be required to make frequent and regular visits to all accessible villages.
- (4) Extension programs. There is a great need for extension workers and government officers to consult the people frequently and to involve them in planning development projects.
- (5) Local government. The system of Island Councils has met with varying success. Where no legacy of traditional decision making has survived in the Island Councils (e.g. Butaritari and Tamana) the Councils were not regarded as being the legitimate representatives of the people. Here they merely 'look after the government's interests on the island'.

In view of the ethic of egalitarianism it is unGilbertese for a small group of people, the Island Council, to be regarded as true island leaders. The only true way to decide an issue is for the community as a whole to discuss the matter or for the heads of kin groups to participate in the debate as co-equals.

- (6) If the function of the Island Council is to do the work of government, it is appropriate that there should be a representative from each village. If however a genuine island decision is to be formulated every family must have the right to express its opinion.
- (7) Since the Island Council is seen to be an agency of government rather than a representative form of local government, candidates for election are thought to be those who are the most Europeanized, who can speak English or who have worked with Europeans. However these qualities are not particularly valued or respected by the community.
- (8) In view of the above role that is attributed to the Island Council (one that is quite contrary to its intended role) some Island Councils find it easy to ignore public opinion and can even act in ways that flout public opinion.

- (9) Nanumea. This island in Tuvalu provides a model of how decisions should be made and planning undertaken. Regrettably many of the characteristics of society on Nanumea do not exist in the Gilberts and the high interest in community affairs of Nanumea can only be found in the southern Gilberts. The island is characterized by an egalitarian ethos, acceptance by individuals that all must take a turn in a leadership role, and by recognition that to become an Island Councillor is to provide a most important service to the community. The Council is thus accountable to the community and the method of reaching decisions (to debate an issue until the solution becomes self-evident) and the practice of holding island meetings monthly illustrate that it serves the people. No other political forum exists on the island, nor is one needed.
- (10) Need for representative institutions concerned with planning and policy. It is essential that institutions should be responsible primarily to public opinion rather than being able to ignore it through owing responsibility to government. On islands such as Butaritari and Tamana consultation by government staff with the Old Men on policy and planning, and regular meetings between the Old Men and Island Council (with recognition being given to the former as equal partners) are urged to enable policy to be related to the real needs of the people.
- (11) No real sense of responsibility for planning for the future will emerge if Island Councils are too closely and rigidly supervised, or if the people are denied the power to determine their destiny.
- (12) The Island Council system does however have some real advantages, which are outlined.
- (13) Where the Island Council is quite unrepresentative of island opinion, or some tradition-based political structure does exist (as in the Council of Old Men on Butaritari or Council of Married Men on Tamana), the latter should be recognized and respected by being given the right to attend Island Council meetings as co-equals.
- (14) Legislative Council member. His role was ambiguous in 1973 and he served largely as a messenger between his island and Tarawa. When he does not return with a solution from Tarawa resentment might develop. It is important for the member to call village meetings after sessions of the House of Assembly to enable understanding of issues and policies to evolve. His relationship with island bodies needs to be clarified and closer contact (where he is not a member) is recommended.

CHAPTER 13: EDUCATION

- (1) The predominant social process that reshaped and reformed the societies of both groups was missionization. Almost all schools in the colony for 70 to 100 years (up till 1954) were mission schools and the religious component of schooling was paramount. Schooling was not considered to be important for obtaining employment at this time.
- (2) In our opinion the goals of the dual education system prior to 1954 had much to commend them. Schooling was done in the vernacular and was not dominated by the academic requirements needed by the 10-12 per cent who would proceed to secondary schools and paid employment.
- (3) On all islands it was found that parents saw little value in education other than in preparing their children to reach a level that would enable them to obtain paid employment. A lottery ticket approach to schooling, and to obtaining places in the government secondary school as a precondition to employment, dominated all thinking on education. Success of teachers was judged purely in this light: of how many passes in the entry examination to secondary school. It is clear that the full realization that only 10-15 per cent of pupils would qualify for secondary school and 10-12 per cent ultimately for paid employment (likely to be lower after phosphates are exhausted) needs to be assimilated and the goals of education thoroughly thought out and discussed in the context of the total economic and social environment and bleak employment prospects in the future.
- (4) We deplored the narrowly academic and examination-oriented approach to Island Council Schools. Valuable syllabi are unlikely to receive the attention they deserve because they are non-examinable. The greatest task is to devise mainstream elementary school curricula that are geared directly to the requirements of life on the outer islands and at the same time inculcate a sense of identity, pride and confidence in Gilbertese or Tuvalu culture and values. The academic bias that existed in the schools in the early 1970s should be eliminated as well as the attempt to provide additional schooling for those who do not succeed academically.
- (5) The most basic forms of education in the Gilberts and Tuvalu and some of the most fundamental skills for coral island living have always been carried on outside the school - education by example passed on by older people within the confines of exclusive kin groups. Associated with these important economic, social and political skills were magico-religious attributes which enhanced their efficacy. It is essential that nothing should be done which might further impair the

traditional teaching of these skills. Attempts to provide alternative schooling based on these skills would only serve to undermine them.

- (6) We recommend that the following subject matter could be included in a revised curriculum designed to equip students for outer island life:
- (a) Bookkeeping, business management, methods and organization of cooperatives.
 - (b) Mechanical training for simple combustion engines etc.
 - (c) Health and hygiene (diet, waste disposal, insect control etc.).
 - (d) Agriculture, land management and atoll ecology. Skills to complement and not displace traditional teaching.
 - (e) Legal instruction.
 - (f) Organization and role of local government.
- (7) Teaching should be in the vernacular, which should be a subject in its own right. It should also be included in the secondary school curriculum.

CHAPTER 14: SOCIAL AND CULTURAL ASPECTS

- (1) Leisure. Time for informal leisure activities is deeply appreciated by Gilbertese and Tuvalu islanders.
- (a) Time is not viewed as a scarce resource and productive activities are not rigidly compartmentalized from social activities.
 - (b) Socializing and relaxing are regarded as positive activities that bring satisfaction.
- (2) There are, however, some individuals who would welcome the existence of incentives or sufficiently attractive prices that would enable them to spend less time in leisure and more in productive activities (e.g. A.R.: ch.8, Planning implications).
- (3) Radio
- (a) Radio broadcasts are now a valued part of outer island life.
 - (b) It appears that about half the households on the 5 islands had a radio in working order in 1973.
 - (c) News reports
 - (i) They are an important source of information, are popular and help to provide perspective to everyday affairs.

- (ii) Overseas news receives little comment, but remains almost the only source of world events available to outer islands.
 - (iii) Coverage of Pacific area news is inadequate and should be improved. With independence an improved understanding of Pacific area affairs is essential.
 - (iv) Radio is only moderately effective in communicating shipping and plane schedules, cancellations etc. However it is important that changes in plane and shipping schedules should be broadcast over radio when necessary to avoid the waste of time and resources.
 - (d) In 1972-73 it appeared that extension programs broadcast over radio made little impact as the villager did not identify his situation with the kind of conditions covered in the broadcast.
 - (e) Music (especially local songs) provided the most popular programs, together with request and message programs.
- (4) Newspapers
- (a) In 1972-74 very little printed matter at all let alone what was printed in their own language reached the outer islands of the Gilberts or Tuvalu. Thus *Tero* and *Tuvalu News* sheets were particularly valuable.
 - (b) Distribution was not always adequate. Many households in the Gilberts did not receive or even see a copy.
 - (c) Those received were valued and read although the news was dated, emphasizing the important role of radio news.
 - (d) The summary of debates in the House of Assembly is especially valuable. Potentially local newspapers can play a valuable role in developing national consciousness.
- (5) Other printed material
- (a) Departments should avoid the temptation to inundate islanders with trivial printed matter. Although almost all people are literate, they are not accustomed to reading for pleasure.
 - (b) The 'Travelling Library' supplied by large chests of books brought by ship began in 1972. It had only a very slight impact on a few islands and inevitably was used by only a small number of better educated people at Government Stations. For these people however it filled a real need.

CHAPTER 15: FUTURE OF THE GILBERT ISLANDS AND TUVALU

- (1) The legacy of western impact is inescapable but the continuing influence of the west can be ameliorated, softened

or diverted to be more appropriate to the needs of the islands. To achieve this difficult but not impossible goal it is necessary to formulate an indigenous model of development rather than implicitly accept the western model of development. Such an indigenous model would provide guidance in selecting appropriate policies and goals.

- (2) The outline of the model of the western mode of development shows that many problems that are usually thought to be unrelated are really related because they become part of the political economy, and that many western innovations, while good in themselves, may lead cumulatively to the development of economic dualism, a lop-sided economy, over-centralization and over-urbanization, the development of an elite, a stagnating rural sector and growing dependence on overseas interests and countries. Even at a time at which political independence might be achieved the country in such a situation would be becoming ever more dependent.
- (3) The real enemy is not colonialism or even the western model of development but the dual economy and plural society inherited from the past, and above all the confused, conventional thinking that uncritically imposes solutions devised for western, alien situations.
- (4) Many individual problems are merely manifestations of an integrated process, of the functioning of a dual economy and dual society, the encroachment of an alien enclave, the prosecution of false policies, values and creeds. Piecemeal tinkering with individual policies cannot possibly succeed but nothing less than the rebuilding of a new economic, social and political structure that is firmly based on the real pattern of the islands.
- (5) Many developing countries seek salvation by way of a number of beguiling alternative paths of modernization. These primrose paths are attractive and deceptive for they appear to postpone difficult and painful decision making and divert attention away from a serious analysis of the particular problem and from the nature of the local reality. Common primrose paths are tourism, overseas aid, large-scale foreign investment, foreign expertise. While these may bring many advantages they often introduce spurious goals, philosophies and policies or unwanted costs and consequences and may lead to only superficial solutions.
- (6) Any model of development that is chosen should be founded on the local reality, recognize the imperatives of the atoll environment, the latent qualities of society, the actual enterprise that does exist in the *mronron* sector and build on the subsistence economy and skills of atoll living that still survive.

(7) The future of the Gilberts and Tuvalu is likely to be affected by the needs and desires of the affluent nations that lie on the Pacific rim. Overseas travel to both groups is a distinct possibility.

(a) The advantages of tourism are likely to be the earning of foreign exchange, employment, and increased government revenue. Some local activities (e.g. souvenir making, dancing groups) would be stimulated.

(b) However many disadvantages of tourism are often underestimated: only a small percentage of tourist spending is retained in the host country, the industry makes great demands for imported goods and services, and requires government to provide expensive and elaborate facilities and infrastructure that increase the trend towards a lop-sided economy. The mass of the population receive few benefits, local people are invariably employed only at the lower levels, and with the need for large-scale investment, tourism becomes characterized by foreign ownership and often control. Wage dualism usually occurs and because of feedback and difficulty of integrating agriculture with the tourist industry agriculture usually stagnates. It is an unstable industry, subject to booms and slumps, and fads and fashions as to popularity of countries. Foreign interests gain most. Social and cultural costs are often great: the loss of cultural authenticity and undermining of cultural identity. Foreign values and tastes are imposed. Tourists often display little understanding or sensitivity towards local standards and values and stimulate unrealistic local aspirations. In short, tourism can become a form of neo-colonialism with many harmful social effects.

(c) Limited tourism. Few small countries have managed to control tourism so as to bring economic benefits and to restrict the harmful economic and socio-cultural influences.

(8) Overseas aid

(a) Throughout the South Pacific overseas aid has achieved very limited success in the last 20 to 30 years in overcoming basic problems. The reasons are many, including socio-cultural obstacles and a lack of political will, but much overseas aid is wrongly conceived and is inappropriate.

(b) Visits of overseas experts are often very short, even though complex problems might be involved. Rarely do they learn the country', which involves trying to learn the language, understand the local society, institutions and environment and relate effectively to its people.

(c) Most of the largest development schemes in the Gilberts in recent years were at least partially unsound in conception, organization and management, manifesting many of the usual ethnocentric and technocratic faults of foreign aid.

Thus they were based on preconceived assumptions about local conditions and how the local people would respond rather than being based on knowledge of actual conditions and involving them in planning the scheme.

(d) We challenge the conventional view of the western model of development that the modern sector can expand to absorb virtually the entire population and that this can be done in a fairly short period of time. Unless the sea yields mineral riches or makes a large-scale fishing industry possible, there will be no real basis for a vigorous modern sector on Tarawa. Funafuti too lacks an economic basis for any genuine modern sector.

(e) Most overseas advisers promote, either consciously or unconsciously, some version of the western model of development. Yet this approach is unrealistic for it demands a process of jumping rather than a process of stretching. They are also promoting economic dualism with all its faults and imposing foreign models, philosophies or policies uncritically on to a unique culture and environment.

(f) Alternatively, we recommend that technical aid should be based on an attempt to learn the country, relate to its people, and adopt an inductive rather than deductive approach. It should be flexible and empirical, be adjusted to the small scale involved, and attempt to fit the actual conditions of village living. A number of examples are given of desirable innovations in intermediate technology.

(g) The Aid Review Task Force found that the interests of the more powerful donor country are likely to predominate over those of the recipient country. They found that there was a tendency for aid to worsen major defects instead of remedying them.

(h) Rather than to increase the local country's self-reliance, overseas aid is often used to plug the three gaps – the budget gap, balance of payments gap, and the savings-investment gap.

- (9) There is a constant danger that bureaucracy will stifle healthy enterprise through regulation, red tape, delays and impersonal negative attitudes. Major changes are needed in the role and function of the bureaucracy as it changes from its protective policing role of the colonial era to one appropriate to a newly independent country hoping to strengthen its self-reliance.
- (10) Development does not begin by implanting or creating new technology or new agricultural or industrial systems. It begins with people and their education, organization, discipline and motivation. A basic fallacy in overseas technical aid is to concentrate on the tip of the iceberg

and to try to implant that in the developing country rather than giving attention to the underlying structures which support it. Development is thus primarily a problem of evolution rather than of implanting or creating.

- (11) In the era of independence, if self-reliance is to be strengthened and a sensible indigenous model of development appropriate to local conditions is to be followed the quality of leadership becomes crucial. Both Tuvalu and the Gilberts are fortunate in having honest leaders dedicated to serving the public interest. There is a great need for these leaders to conduct independently their own patient analysis, to remain sceptical of overseas solutions and not to be frightened of making bold, original decisions. Austerity and moderation in life-style are also needed and restraint in public spending. Considerable political skill will undoubtedly be needed to dampen down local expectations and aspirations that are no longer realistic.
- (12) A policy of self-reliance could involve weakening the trend towards the dual economy by making urban living more expensive and less attractive. This would involve heavier import duties or taxes on imported foods, elimination of subsidies in the town and less spending on urban infrastructure.

Appendix 1

Research project on problems of economic development and social response in the Gilbert and Ellice Islands Colony

OBJECTIVES

In the 1970s there will be a growth of about 25 per cent in the population of the GEIC, and the loss of about 49 per cent of the Cash National Income when the phosphate deposits on Ocean Island are exhausted about 1976. At a time in which there will be increased participation in and responsibility for policy by the territory's own citizens, there is an urgent need to study the socio-economic responses of islanders to alternative forms of money earning (especially copra production) and to gather detailed factual data on socio-cultural patterns affecting production and fuller and more efficient use of island resources. The GEIC Development Plan 1970-72 and the Mooring Report of 1968 gave high priority to strengthening the activities of the Department of Agriculture, yet both note that 'little data, unfortunately, is available on which to base the preparation of the agricultural programme'. This study proposes the systematic collection of such data.

SCOPE

- (1) Density of population per acre of land held, land and lagoon used and per unit-area of productive and cultivable land. Limiting effects of ecology on population size. Demographic characteristics of sample communities - comparison with patterns in other island groups. Residential patterns and extent of mobility. Meaningful definition of population pressure in GEIC context. Extent of problem of overpopulation within GEIC - potential for redistribution within the area before colony as a whole can be termed overpopulated at present standards of living and economic activity.
- (2) Study of existing agricultural practices in their variable ecological setting and degree of successful adaptation to atoll or reef island ecology (rainfall, soils, vegetation, water use, salinity). Structure and functioning of agricultural system. Study of forms of land use in relation to plot size, location, productivity and history of particular plots. Labour inputs, contribution to total income made by subsistence agricultural system and fishing.

- (3) Systems of land tenure and inheritance. Correlation of production with degree of fragmentation, male or female ownership or joint ownership or use. Trend to individual ownership in joint tenure areas? Comparison between land tenure practices for copra land and subsistence cropland. 'Caretaker' tenure and labour input and yield in comparison to landowner tenure. Attitudes towards absentee owners and possible consolidation, effects of producer cooperatives and other new organizations in landholding. Effects of and responses to Neglected Lands Policy. Local perception of overpopulation, as opposed to official attitudes.
- (4) Study of copra productivity, especially of labour input and price elasticity of supply. Effect of social structure and cultural values on methods of production. Customary sanctions upon methods of production and their influence on innovation, enterprise and output. Concept of geographical space, boundaries of village, and migration over small distances as affecting modes of land usage. Incentives and disincentives to copra planting, thinning, collection, pest control and improved drying and storage. Attitudes toward delayed returns. Copra marketing and existence of middlemen. Reactions to government-sponsored schemes and incentives (Coconut Grove Improvement Policy etc.). Study of volume of output - mapping, measurement of sample groves, planting, harvesting figures. Amount of production consumed, sold, exchanged (reciprocity), wasted. Competition between subsistence and cash economy for coconuts. Patterns of copra and other work organization, individual versus group work, division of labour. Scope in GEIC for diversification into other crops and to increase volume of copra available for export. Outlook of world market in copra.
- (5) Fishing - measurements of labour input, harvest, contribution to subsistence economy, potential for supplying urban centre, import substitution, problems of fish marketing.
- (6) Consumption patterns
 Sample household income and expenditure accounts including subsistence income and monetary income. Composition of diet of sample households. Study of structure of wants, classification of wants, including those derived from wage economy as well as subsistence economy. Likely effects on consumption of increase in coconut harvest. Size of customary money needs, other customary costs, including exchangeability between monetary and non-monetary customary costs. Inflation of customary costs. Identification of new material possessions as well as traditional acquisitions which are highly valued cultural symbols, conferring status to possessors. Flexibility of wants, determination of those deemed essential (constant demand) and 'discretionary wants' by

compilation of household diet charts, analysis of store sales. Patterns of acquisition and disposal of cash, crops and other goods and services. Size and effects of remittances. Elasticity of demand for consumer goods and particular items relative to levels of income, availability, and prices of store goods. Utility of money, concepts of wealth, role of local store and its handling of finance. Savings institutions – goals and concepts of the future.

(7) Values and motivation

Study of motivation and values. Nature of and preferred rewards for effort, case studies of situations involving clash of custom versus cash and methods of reconciliation, priorities at times of conflict. Exchange of wealth studied against the background of social relations, authority system and individualistic trends and institutional structure. The ways in which the traditional reciprocity economy and modern market economy are integrated or conflict at village level. This study would be based on a thorough study of the social structure and social organization by means of analyses of concrete case studies (continuity of *maneaba* customs, membership rights, relation between *boti* and *kainga*).

(8) Efficacy of island councils and political organizations for stimulating economic development – effects of traditional politics on economy – e.g. taxation, seats in the *maneaba*, role of *unimane* and other leaders in control of land, labour and derivative resources. Channels of communication between government and key decision makers on islands.

(9) Labour and underemployment

Size and demographic characteristics of island labour forces, consequences of absentee labour, unbalanced age and sex structures, history of elasticity of aggregate and island labour supply to phosphate islands, Line Island plantations, Tarawa, overseas sources of employment. Proportion of migrant labour. Sluggish or ready response of subsistence sector to changes in aggregate labour demands and increases or decreases in wage rates. Elasticity of labour supply today – extent of 'fully committed' wage work, partially committed or 'modified target' work and relatively rigid 'target work' – identification of size of market for strongly committed wage workers and opportunity costs of this labour. Effort-price of incomes earned in village and island vis-à-vis effort-price of incomes earned in phosphate islands, plantations or Tarawa. Effect of good copra harvests and improved coconut varieties on labour supply. Extent and intensity of preference for money as against 'leisure' in village. Level of income that can be earned in islands, effort-price requirements of this income including sacrifice of 'leisure' – to be determined by study of individual

perception, study of entrepreneurs and energetic farmers against the background of land tenure, institutional structure, community judgments of economic behaviour, norms and sanctions, social deviance or marginalism and changes in these values. Socio-cultural and economic context of choice about exchanging some 'leisure' (itself dependent on some monetary income?) for some income, and nature of risks, discomforts, insecurities and other 'costs' involved in such exchanges. Case studies of individuals who sacrifice 'leisure' to attain income goals vis-à-vis those who sacrifice income and contract their demand for non-island goods because of preference for 'leisure'. Comparison with sample household income and expenditure accounts. 'Agreeableness' of wage-earning jobs, nearness of employment to island of origin, effort-cost of transport. Extent to which GEIC is a sub-market within the international market economy or whether subsistence economy is strong and capable of expansion as during World War II.

- (10) Scope for labour export. Demographic, economic and social consequences for island labour force, family patterns, division of labour, dietary patterns. Possibilities and effects of overseas recruitment in shipping lines.
- (11) New forms of organization. Cooperatives as a viable system — relationship to traditional social organization. Study of operation of the producer cooperatives and private producer groupings.
- (12) Handicraft industry — modes of production, raw materials, supply potential, problems of variable quality, uses of income, nature of marketing outlets.
- (13) Shipping, transport and marketing problems, including differential effect of transport costs and delays in shipping on copra output, price of merchandise, and in buttressing the subsistence economy through diminishing the usefulness of money. Effects of recent improvements in transport and external supply sources.

Ray Watters (Associate Professor
in Geography)

Nancy J. Pollock (Senior Lecturer
in Anthropology)

Victoria University of Wellington
1 March 1971

Bibliography

The primary sources used are listed at the end of each island report.

UNPUBLISHED SOURCES

- Background to development, 1972. Tarawa (MS).
- Bedford, R.D., 1967. Resettlement: solution to economic and social problems in the Gilbert and Ellice Islands Colony, MA thesis, University of Auckland.
- 1968. Urban Tarawa 1968: some problems and prospects, report presented to the Resident Commissioner GEIC Colony, Tarawa (mimeo).
- The Bikati landowners' petition, told by Eritai Bauro, held in Lands Office, Tarawa.
- Bishop, G.D., 1972. Report on a visit to the Gilbert and Ellice Islands 15 April-23 April, Tarawa (MS).
- Central Planning Office, 1972. Quarterly reports to Development Committee, Tarawa.
- Colonial Conference, 1956. Proceedings, October, Tarawa (MS).
- Davies, J., 1972. The future of the Local Enterprises Development Project as a possible location for craft development, Tarawa (MS).
- Davis, Captain E.H.M., 1892. Dispatch no.36 of 9th August 1892 on Gilbert Islands - establishment of British Protectorate for the Group, Western Pacific Archives, Suva.
- Deas, J.H., 1972. Report of Education Adviser on her visit to the GEIC, May 6-28, Tarawa (MS).
- Diocese of Tarawa, n.d. The Catholic teacher yesterday and today, Teoraereke, Tarawa (MS).
- Gordon, G.D.I., 1974. Aspects of Maukean population migration, MA thesis, Massey University, Palmerston North.
- Green, N., 1973. Education and culture in the Gilbert and Ellice Islands.
- Guichet, P., 1968. Report on the problem of overpopulation in the Gilbert and Ellice Islands Colony, Bishop's House, Tarawa (MS).
- Hallway Hotels Overseas Ltd, 1967. Report on the potential for the development of tourism in the GEIC, London (mimeo).
- Harrison, Mrs D.C., 1972. Handicrafts: production, marketing and development, typescript prepared for Committee of Cooperative Federation, June, Tarawa.

- Howard, I., n.d. A brief description of the current land tenure situation in the G. and E.I.C. and some of the problems connected with lands administration, Tarawa (MS).
- Howarth, F., 1960. Report on two year tour in the GEIC Colony [The Howarth Report], 12 January, Tarawa (MS).
- Jansen, A.A.J., n.d. The nutritional status of Gilbertese children, Tarawa (typescript).
- Kittermaster, A.M., 1970. A report on information and broadcasting in the GEIC, commissioned by Ministry of Overseas Development, Tarawa (mimeo).
- Macdonald, B., 1971. Policy and practice in an atoll territory: British rule in the Gilbert and Ellice Islands Colony, 1892-1970, Ph.D. thesis, Australian National University, Canberra.
- McGee, T.G., Ward, R.G. and Drakakis-Smith, D., 1978. Food distribution in the New Hebrides, report, Department of Human Geography, Australian National University, Canberra.
- Office of the Resident Commissioner, 1968. Memorandum on copra production, 4 June, Tarawa (typescript).
- Riddell, R., 1968. A capital centre at Tarawa, report to Resident Commissioner, Tarawa (mimeo).
- St Michael's Teachers' College, 1972. Report 1964-1972, Manoku (MS).
- St Michael's Teachers' Training College, Manoku, Abemama, brief survey 1914-1964, Manoku, n.d. (MS).
- Skinner, T.M., 1968. Report on localisation of the civil service, Tarawa (MS).
- Small, C.A., 1972. Atoll agriculture in the Gilbert and Ellice Islands, Department of Agriculture, Tarawa (typescript).
- Tate, Gloria M., 1969. Report on tour in the Gilbert and Ellice Islands Colony, 30 May to 26 June, Tarawa (MS).
- 1971. Report of Gloria M. Tate, SPC language teaching specialist, August, Tarawa (MS).
- Tetabea, K., 1972. Agricultural extension and rural development in the GEIC, with special reference to the use of the group approach method, dissertation, Agricultural Extension and Rural Development Centre, Reading University.
- Tregear, P.S., 1969. A report on educational development in the Gilbert and Ellice Islands, commissioned by Ministry of Overseas Development, October, Tarawa (MS).
- Youngjohns, B.J., 1969. The co-operative movement in the Gilbert and Ellice Islands Colony, report on a visit by B.J. Youngjohns, Adviser in Co-operatives, Ministry of Overseas Development, London (MS).
- 1972. Co-operative wholesaling in GEIC, interim note on a visit by Mr B.J. Youngjohns to Tarawa, April (MS).

PUBLISHED SOURCES

- Abeywardena, V., 1966. 'Crop fluctuations in coconut', *Ceylon Coconut Planters' Review*, 4(2):47-50.
- 1968. 'Forecasting coconut crops using rainfall data: a preliminary study', *Ceylon Coconut Quarterly*, 19:161-76.
- Aid Review Task Force, 1976. *More Effective Aid: a Report of the South Pacific Forum*, SPEC, Suva.
- Amerson, A.B. Jr, 1969. 'Ornithology of the Marshall and Gilbert Islands', *Atoll Research Bulletin* 127, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Bassett, I.G. (ed.), 1969. *Pacific Peasantry: Case Studies of Rural Societies*, New Zealand Geographic Society, Manawatu Branch.
- Bathgate, M.A., 1973. *West Guadalcanal Report*, Victoria University of Wellington Socio-economic Survey of the Solomon Islands, Wellington.
- , Frazer, I.F. and McKinnon, J.M., 1973. *Socio-economic Change in Solomon Island Villages* (team report), Victoria University of Wellington Socio-economic Survey of the Solomon Islands, Wellington.
- Becke, L., 1909. *'Neath Austral Skies*, John Milne, London.
- Bedford, R., 1973. 'A transition in circular mobility', pp.187-227 in H.C. Brookfield (ed.), *The Pacific in Transition*, Australian National University Press, Canberra.
- 1974. 'Models and migration in a Melanesian archipelago', *New Zealand Geographer*, 30(2):129-50.
- Belshaw, C.S., 1955. 'The cultural milieu of the entrepreneur: a critical essay', *Explorations in Entrepreneurial History*, 7:146-63.
- Blau, P.M., 1964. *Exchange and Power in Social Life*, Wiley, New York.
- Bohannon, P., 1966. *African Outline*, Penguin, Harmondsworth, Mdx.
- Brady, I., 1970. *Land Tenure, Kinship and Community Structure: Strategies for Living in the Ellice Islands of Western Polynesia*, Ph.D. dissertation, University of Oregon (University Microfilms, Ann Arbor, Mich.).
- 1975. 'Christians, pagans, and government men: culture change in the Ellice Islands', pp.111-45 in I.A. Brady and B.L. Isaac (eds), *A Reader in Culture Change*, Vol. 2, *Case Studies*, Schenkman, Cambridge, Mass.
- Brookfield, H.C. (ed.), 1973. *The Pacific in Transition*, Australian National University Press, Canberra.
- *et al.*, 1977. *Population Resources and Development in the Eastern Islands of Fiji: Information for Decision-Making*, UNESCO and UNFPA, Man and the Biosphere (MAB) Programme, Project 7: Ecology and Rational Use of Island Ecosystems, Canberra.
- Bryden, J.M., 1973. *Tourism and Development: a Case Study of the Commonwealth Caribbean*, Cambridge University Press, Cambridge.

- and Faber, M., 1971. 'Multiplying the tourist multiplier', *Social and Economic Studies*, 20:61-82.
- Burns, M.E., 1971. *The Upper-Primary Curriculum in the Gilbert and Ellice Islands*, Education Department, GEIC, Tarawa.
- Catala, R.L.A., 1957. 'Report on the Gilbert Islands: some aspects of human ecology', *Atoll Research Bulletin* 59, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Chambers, Anne, 1975. *Nanumea Report*, Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands, Wellington.
- Child, P., 1960. 'Birds of the Gilbert and Ellice Islands Colony', *Atoll Research Bulletin* 74, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Christensen, D., 1964. 'Old musical styles in the Ellice Islands, Western Polynesia', *Ethnomusicology*, 34-40 (Wesleyan University Press, Conn.).
- Clarke, W.C., 1977. 'The structure of permanence: the relevance of self-subsistence communities for world ecosystem management', in T.P. Bayliss-Smith and R.G.A. Feachem (eds), *Subsistence and Survival: Rural Ecology in the Pacific*, Academic Press, London.
- Coates, A., 1970. *Western Pacific Islands*, HMSO, London.
- Cochrane, G., 1970. 'The administration of Wagina Resettlement Scheme', *Human Organization*, 29:123-32.
- 1971. *Development Anthropology*, Oxford University Press, New York.
- Connell, J., 1975. 'Pacific urbanization: the exceptional case of Tarawa atoll', *Geographical Review*, 65:402-4.
- Copra Board, 1975. '1974 copra output a record', *Atoll Pioneer*, 10, 23 January.
- Coulter, J., 1847. *Adventures on the Western Coast of South America and the Interior of California, Including a Narrative of Incidents at the Kingsmill Islands*, Vol. 1, London.
- Couper, A.D., 1967. *The Island Trade: an Analysis of the Environment and Operation of Seaborne Trade among Three Island Groups in the Pacific*, Ph.D. thesis, Australian National University, Canberra (microfilm).
- 1968. 'Protest movements and proto-cooperatives in the Pacific Islands', *Journal of the Polynesian Society*, 77:263-74.
- Crocombe, R.G., 1968. 'Observations on land tenure in Tarawa, Gilbert Islands', *Micronesica*, 4(1):27-37.
- 1968-69. 'That five year plan', *New Guinea and Australia, the Pacific and South-East Asia*, 3(4):57-70.
- 1969. 'Crocombe to his critics', *New Guinea and Australia, the Pacific and South-East Asia*, 4(3):49-58.
- (ed.), 1971. *Land Tenure in the Pacific*, Oxford University Press, Melbourne.

- 1972. 'Preserving which tradition? The future of Pacific cultures', *Pacific Perspective*, 1(1):1-15; 1(2):28-49.
- Davey, B.H. and Rogers, S.J., 1971a. *A Study of Copra Marketing in the Gilbert and Ellice Islands Colony*, report commissioned by Foreign and Commonwealth Office, Overseas Development Administration, London.
- 1971b. *The World Coconut Market*, report commissioned by Foreign and Commonwealth Office, Overseas Development Administration, London.
- Department of Cooperatives, *Annual Reports*, 1947-48, 1960-61, 1970-71, Tarawa.
- Department of Lands, n.d. *Instructions to Lands Courts*, Tarawa.
- Eastman, G.H., 1941. *In Times of Trial, being Decennial Report 1931-40 of the Gilbert Islands and Nauru Mission, Central Pacific*, LMS Press, Beru.
- 1950. *Through Fires of Testing: being the Decennial Review, 1940-50 of the Work of the Gilbert Islands and Nauru Mission, Central Pacific*, LMS Press, Beru.
- Epstein, T.S., 1968. *Capitalism, Primitive and Modern: Some Aspects of Tolai Economic Growth*, Australian National University Press, Canberra.
- Faber Report, 1973. See Overseas Development Group.
- Fairbairn, I.J., 1976. *Employment in the Gilbert and Ellice Islands*, South Pacific Commission, Noumea, July, pp.29.
- Finney, B.R. and Watson, Karen Ann, 1977. *A New Kind of Sugar: Tourism in the Pacific*, East-West Center, Honolulu.
- Firth, R., 1954. 'Anuta and Tikopia: symbiotic elements in social organization', *Journal of the Polynesian Society*, 63:87-131.
- 1957. 'A note on descent groups in Polynesia', *Man*, 57(2):4-8.
- Fisk, E.K., 1962. 'Planning in a primitive economy: special problems of Papua New Guinea', *Economic Record*, 38:462-78.
- 1964. 'Planning in a primitive economy: from pure subsistence to the production of a market surplus', *Economic Record*, 40: 156-74.
- 1974. 'Rural development', *New Guinea and Australia, the Pacific and South-East Asia*, 9(1):51-60.
- and Shand, R.T., 1969. 'The early stages of development in a primitive economy: the evolution from subsistence to trade and specialization', pp.257-74 in C.R. Wharton, Jr (ed.), *Subsistence Agriculture and Economic Development*, Aldine, Chicago.
- Fosberg, F.R., 1953. 'Vegetation of Central Pacific atolls: a brief summary', *Atoll Research Bulletin* 23, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Foster, G.M., 1965. 'Peasant society and the image of limited good', *American Anthropologist*, 67(2):293-315.
- Frazer, I.L, 1973. *North Malaita Report*, Victoria University of Wellington Socio-economic Survey of the Solomon Islands, Wellington.

- Geddes, W.M., 1975. *North Tabiteuea Report*, Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands, Wellington.
- Geertz, C., 1962. 'The rotating credit association: a 'middle rung' in development', *Economic Development and Cultural Change*, 10: 241-63.
- 1965. *Social History of an Indonesian Town*, MIT Press, Cambridge, Mass.
- Gilbert and Ellice Islands Colony, 1970a. *Development Plan 1970-72*, Tarawa.
- 1970b. *A Report on the Results of the Census of the Population 1968* by F.H.A.G. Zwart and K. Groenewegen, Government Printer, Sydney.
- Gilbert and Ellice Islands, 1972. *Draft Development Plan 1973-76*, Tarawa.
- 1974a. *Development Plan 1973-76, First Annual Review*. Government Printer, Tarawa.
- 1974b. *Housing Seminar*, 8 February, Legislative Council Chamber, Tarawa (mimeo).
- 1974c. *Population Census 1973 Provisional Report*, Tarawa.
- 1975. *Report on the 1973 Census of Population*, Vol. 1, *Basic Information*, Office of the Chief Minister, Bairiki, Tarawa.
- Goodenough, W.H., 1955. 'A problem in Malayo-Polynesian social organization', *American Anthropologist*, 57:71-83.
- Green, L.P., Bukhari, M.S. and Lawrence, Roger, 1979. *Report of the Mission on Decentralisation in the Gilbert Islands*, report to the Government of the Gilbert Islands, privately printed, Development Planning Unit, Bartlett School of Architecture and Planning, University College, London.
- Grimble, A., 1933. *The Migrations of a Pandanus People*, Polynesian Society Memoir 12, New Plymouth.
- 1952. *A Pattern of Islands*, John Murray, London.
- 1957. *Return to the Islands*, John Murray, London.
- 1972. *Migrations, Myth and Magic from the Gilbert Islands: Early Writings of Sir Arthur Grimble* arranged by Rosemary Grimble, Routledge and Kegan Paul, London.
- Hale, H., 1846. *United States Exploring Expedition during the Years 1838, 1839, 1840, 1841, 1842*, Ethnography and Philology, Philadelphia.
- Hart, K., 1974. 'A model of development to avoid', *Yagl-ambu: Papua New Guinea Journal of the Social Sciences and Humanities*, 1(1): 8-15.
- Henderson, J.W. et al., 1971. *Area Handbook for Oceania*, U.S. Government Printing Office, Washington, D.C.
- Hibbert, D., 1970. 'Speech to the Legislative Council, Solomon Islands', *British Newsletter*, New Hebrides, 20 January.
- Howlett, Diana, 1973. 'Terminal development: from tribalism to peasantry', pp.249-73 in H.C. Brookfield (ed.), *The Pacific in*

- Transition*, Australian National University Press, Canberra.
- Hughes, T., 1972. 'What is development?', *Pacific Perspective*, 1(2): 8-19.
- 1973. 'All done by mirrors', paper delivered at seminar on *Social Issues in Development Planning in the South Pacific*, Suva, 29 November-3 December.
- Johnston, K.M., 1967. 'Village agriculture in Aitutaki, Cook Islands', *Pacific Viewpoint Monograph* 1, Wellington.
- Kennedy, D.G., 1931. *Field Notes on the Culture of Vaitupu, Ellice Islands*, Memoirs of the Polynesian Society 9, New Plymouth.
- 1953. 'Land tenure in the Ellice Islands', *Journal of the Polynesian Society*, 62:348-58.
- Knudson, K.E., n.d. *Titiana: a Gilbertese Community in the Solomon Islands*, Department of Anthropology, University of Oregon.
- Koch, G., 1961. *Die materielle Kultur der Ellice-Inseln*, Museum für Völkerkunde, Berlin.
- Lambert, B., 1963. *Rank and Ramage in the Northern Gilbert Islands*, Ph.D. thesis, University of California, Berkeley (University Microfilms, Ann Arbor, Mich.).
- 1964. 'Fosterage in the Northern Gilbert Islands', *Ethnology*, 3:232-58.
- 1966a. 'Ambilineal descent groups in the Northern Gilbert Islands', *American Anthropologist*, 68:641-64.
- 1966b. 'The economic activities of a Gilbertese chief' in M. Swartz, V.W. Turner and A. Tuden (eds), *Political Anthropology*, Aldine, Chicago.
- 1967. *A Cycle of Rebellion in Micronesia*, paper presented to Symposium on the Structure of Cognatic Societies, at Annual Meeting of American Anthropological Association, Washington.
- 1971. 'The Gilbert Islands: micro-individualism', pp.146-71 in R.G. Crocombe (ed.), *Land Tenure in the Pacific*, Oxford University Press, Melbourne.
- Lawrence, Roger, 1977. *Tamana Report*, Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands, Wellington.
- 1978. 'Problems in stimulating outer islands' salt fish production for the urban market in Tarawa, Gilbert Islands', pp.93-110 in E.K. Fisk (ed.), *The Adaptation of Traditional Agriculture: Socioeconomic Problems of Urbanization*, Development Studies Centre Monograph 11, Australian National University, Canberra.
- 1979. 'Land use of a reef island: Tamana (Gilbert Islands)', *Photo Interpretation*, 79(3): pt 2, 9-16.
- Lerner, D., 1958. *The Passing of Traditional Society*, Free Press, Glencoe, Ill.
- Levitt, K. and Gulati, I., 1970. 'Income effect of tourist spending', *Social and Economic Studies*, 19(3):326-43.
- Lockwood, B.A., 1970. *Economic Statistics of Samoan Village Households*, Australian National University Press, Canberra.

- 1971. *Samoan Village Economy*. Oxford University Press, Melbourne.
- 'Log of ship *Navy* on a whaling voyage from New Bedford to the North Pacific Ocean 1857-63', *Pacific Manuscripts Bureau*, 300, frames 253-387.
- Lundsgaarde, H.P., 1968a. 'Some transformations in Gilbertese law: 1892-1966', *Journal of Pacific History*, 3:117-30.
- 1968b. 'The strategy and etiology of Gilbertese property disputes', *American Anthropologist*, 70:86-93.
- 1970. 'Law and politics on Nonouti Island', pp.242-64 in T.G. Harding and B.J. Wallace (eds), *Cultures of the Pacific: Selected Readings*, Free Press, New York.
- 1971. 'Some legal aspects of Gilbertese adoption' in V. Carroll (ed.), *Adoption in Eastern Oceania*, University of Hawaii Press, Honolulu.
- 1974. 'The evolution of tenure principles on Tamana Island, Gilbert Islands' in H.P. Lundsgaarde (ed.), *Land Tenure in Oceania*, Association of Social Anthropologists of Oceania Monograph 2, University of Hawaii Press, Honolulu.
- n.d. *Social Changes in Southern Gilbert Islands, 1938-64*, Department of Anthropology, University of Oregon.
- and Silverman, M.G., 1972. 'Category and group in Gilbertese kinship: an updating of Goodenough's analysis', *Ethnology*, 11(2): 95-110.
- Luomala, Katharine, 1953. 'Ethnobotany of the Gilbert Islands', *Bernice P. Bishop Museum Bulletin*, 213, Honolulu.
- 1970. 'Babai (*Crytosperma chamissonis*): a prestige food in the Gilbert Islands culture', *VII Congrès International des Sciences Anthropologiques et Ethnologiques*, Moscow.
- 1974. 'The *Crytosperma* systemic pattern: aspects of production in the Gilbert Islands', *Journal of the Polynesian Society*, 83: 14-34.
- McArthur, Norma, 1956. *Report on the Census of the Population [Fiji], 1956*, Government Press, Suva.
- and McCaig, J.B., 1964. *A Report on the Results of the Census of the Population [Gilbert and Ellice Islands Colony] 1963*, Government Press, Suva.
- McCreary, J.R. and Boardman, D.W., 1968. *Some Impressions of Social Change in the Gilbert and Ellice Islands*, report to the Resident Commissioner, Department of Social Science, Victoria University of Wellington, Wellington (mimeo).
- Macdonald, B., 1972. 'Te Reitaki n Nonouti: a survival of traditional authority in the Gilbert Islands', *Journal of Pacific History*, 7:137-50.
- 1975. 'Secession in the defence of identity: the making of Tuvalu', *Pacific Viewpoint*, 16:24-44.
- McKinnon, J.M., 1973. *Bilua Report*, Victoria University Socio-economic Survey of the Solomon Islands, Wellington.

- Mahaffy, A., 1909a. *Report by Mr Mahaffy, Assistant to the High Commissioner, on the Gilbert and Ellice Islands Protectorates*, Resident Commissioner's Office, Ocean Island, 11 March.
- 1909b. *Report ... on a Visit to the Gilbert and Ellice Islands, 1909 ...* London, Colonial Office (Western Pacific Archives, Suva: Despatches from Secretary of State, Numbered, 1909, pp.509-16).
- 1910. 'Report by Mr Mahaffy on a visit to the Gilbert and Ellice Islands in 1909', *House of Commons Papers, Cd 4992*, lxvi, 1107.
- Marshall, M. and Marshall, Leslie B., 1975. 'Opening Pandora's bottle: reconstructing Micronesians' early contacts with alcoholic beverages', *Journal of the Polynesian Society*, 84:441-65.
- Matthews, H.G., 1978. *International Tourism: a Political and Social Analysis*, Schenkman, Cambridge, Mass.
- Maude, H.E., 1950. 'The co-operative movement in the Gilbert and Ellice Islands', *Proceedings Seventh Pacific Science Congress*, 7:63-76.
- 1963. *The Evolution of the Gilbertese boti: an Ethnohistorical Interpretation*, Polynesian Society Memoir 35, Wellington.
- 1968. *Of Islands and Men: Studies in Pacific History*, Oxford University Press, Melbourne.
- 1970. 'Baiteke and Binoka of Abemama: arbiters of change in the Gilbert Islands', pp.201-24 in J.W. Davidson and D. Scarr (eds), *Pacific Islands Portraits*, Australian National University Press, Canberra.
- and Leeson, Ida, 1965. 'The coconut oil trade of the Gilbert Islands', *Journal of the Polynesian Society*, 74:396-437.
- and Maude, H.C., 1931. 'Adoption in the Gilbert Islands', *Journal of the Polynesian Society*, 40:225-35.
- Maxwell, Captain, 1881. *Gilbert, Ellise, and Other Islands, Captain Maxwell to Commodore Wilson, H.M.S. 'Emerald'* contained in Newspaper Cuttings, Vol.52, Mitchell Library, Sydney.
- Mitchell, J.C., 1959. 'The causes of labour migration', *Bulletin of Inter-African Labour Institute*, 6(1):12-47.
- 1969. 'Structural plurality, urbanization and labour circulation in Southern Rhodesia', pp.156-80 in J.A. Jackson (ed.), *Migration*, Cambridge University Press, Cambridge.
- Momak, A. and McCall, G. (eds), 1978. *Paradise Postponed: Essays on Research and Development in the South Pacific*, Pergamon Press, Oxford.
- Mooring, G. et al., 1968. *A Socio-economic Survey of the Gilbert and Ellice Islands*, commissioned by Ministry of Overseas Development, May, Tarawa.
- Moresby, J., 1876. *Discoveries and Surveys in New Guinea and the D'Entrecasteaux Islands: a Cruise in Polynesia and Visits to Pearl-Shelling Stations in Torres Straits of H.M.S. 'Basilisk'*, John Murray, London.
- Morison, S.E., 1951. *A History of the United States Naval Operations in World War II*, Vol. 7, *Aleutians, Gilberts and Marshalls, June 1942-April 1944*, Little Brown and Co., Boston.
- Morrell, W.P., 1960. *Britain in the Pacific Islands*, Clarendon Press, Oxford.

- Moul, E.T., 1957. 'Preliminary report on the flora of Onotoa atoll, Gilbert Islands', *Atoll Research Bulletin* 57, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Munro, I., 1967. *The Fishes of New Guinea*. Department of Agriculture, Stock and Fisheries, Port Moresby.
- Murai, Mary, Pen, Florence and Miller, C.D., 1958. *Some Tropical South Pacific Island Foods*, Honolulu, University of Hawaii Press.
- Murdock, G.P., 1964. 'Genetic classification of the Austronesian languages: a key to Oceanic culture history', *Ethnology*, 3:117-26.
- Murray, A.W., 1876. *Forty Years' Mission Work in Polynesia and New Guinea*, Nisbet, London.
- Murray, D.J., 1977. 'The Gilbertese plan a home-made constitution for independence', *Pacific Islands Monthly*, 48(8):12-13.
- Nash, M., 1966. *Primitive and Peasant Economic Systems*, Chandler, San Francisco.
- Native Laws of the Ellice Islands* (British Protectorate), 1894, Government Printer, Suva.
- Neal, Marie C., 1965. *In Gardens of Hawaii*, Bernice P. Bishop Museum Special Publication 50, Honolulu.
- Newton, W.F., 1967. 'The early population of the Ellice Islands', *Journal of the Polynesian Society*, 76:197-204.
- New Zealand Meteorological Service, 1947-70. *Annual Meteorological Summaries: Stations in Fiji, Tonga, New Hebrides and Western Pacific High Commission Territories*, Government Printer, Suva.
- [1971]. *Summaries of Climatological Observations: Stations in Fiji, Tonga and Western Pacific High Commission Territories to the End of 1970*, Government Printer, Suva.
- 95th Naval Construction Battalion, n.d. *The Cruise Record of the 95th Naval Construction Battalion, April 1943-September 1945*, published by the Battalion Personnel.
- Nixon, Ursula, 1977. *Astride the equator: an account of the Gilbert Islands*, tr. by U. Nixon from E. Sabatier, *Sous l'Equateur du Pacifique: Les Iles Gilbert et la Mission Catholique*, Oxford University Press, Melbourne.
- Overseas Development Group, University of East Anglia, 1973. *A Report on Development Strategies for Papua New Guinea* for the International Bank for Reconstruction and Development, acting as executive agency for the United Nations Development Programme, Port Moresby.
- Proceedings of the Gilbert and Ellice Islands Colony Advisory Council*, 1963- , Tarawa.
- Pusinelli, F.N.M., 1947. *A Report on the Results of the Census of the Population, Gilbert and Ellice Islands Colony 1947*, Government Press, Suva.
- Randall, J.E., 1955. 'Fishes of the Gilbert Islands', *Atoll Research Bulletin* 47, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.

- Roberts, R.G., 1953. 'The dynasty of Abemama', *Journal of the Polynesian Society*, 62:267-77.
- 1958. 'Te Atū Tuvalu: a short history of the Ellice Islands', *Journal of the Polynesian Society*, 67:394-423.
- Royal Navy, Australian Station, 1886. *Reports of Commander Eustace Rooke, H.M.S. 'Miranda', of Proceedings When Visiting the Islands of the Union Group, the Phoenix Group, Sophia and Rotumah Islands, the Ellice Group and the Gilbert Group, April to July 1886*, Government Printer, Sydney (29 pp., consulted at New Zealand National Archives).
- Sabatier, E., 1939. *Sous l'Equateur du Pacifique: Les Iles Gilbert et La Mission Catholique [1888-1938]*, Dillen, Paris. See also Nixon, Ursula.
- 1971. *Gilbertese-English Dictionary*, tr. Sr Mary Oliva, South Pacific Commission Publications Bureau, Sydney.
- Sachet, Marie-Hélène, 1957. 'Climate and meteorology of the Gilbert Islands', *Atoll Research Bulletin* 60, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Schultz, W.G., 1969. *Technical Memorandum on Small-Scale and Handicrafts Development in the Gilbert and Ellice Islands Colony*, International Labour Office, Man. Dev./He/1/1969, Geneva.
- Schumacher, E.F., 1973. *Small Is Beautiful: a Study of Economics As If People Mattered*, Blond and Briggs, London.
- Sewell, Betsy, 1976. *Butaritari Report*, Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands, Wellington.
- Shankman, P., 1976. *Migration and Underdevelopment: the Case of Western Samoa*, Westview Press, Boulder, Co.
- Silverman, M.G., 1971. *Disconcerting Issue: Meaning and Struggle in a Resettled Pacific Community*, University of Chicago Press, Chicago.
- Smith, S.P., 1897. 'The first inhabitants of the Ellice Group', *Journal of the Polynesian Society*, 6:209-10.
- Smith, V.L. (ed.), 1977. *Hosts and Guests: the Anthropology of Tourism*, University of Pennsylvania, Philadelphia.
- South Pacific Commission, 1973. 'Population 1972', *Statistical Bulletin* 1, South Pacific Commission, Noumea.
- Statistical Unit, 1970-. *Annual Abstract of Statistics*, Government Printing Office, Tarawa.
- Stevenson, F.V. deG., 1914. *Cruise of the 'Janet Nichol' among South Sea Islands*, Scribner's Sons, New York.
- Stevenson, R.L., 1900. *In the South Seas*, Chatto and Windus, London (facsimile reproduction, University of Hawaii Press, Honolulu, 1971).
- Stone, E.L. Jr, 1953. 'Summary of information on atoll soils', *Atoll Research Bulletin* 22, Pacific Science Board, National Academy of Sciences-National Research Council, Washington, D.C.
- Thomas, W.L. Jr., 1963. 'The variety of physical environments among Pacific islands' in F.R. Fosberg (ed.), *Man's Place in the*

- Island Ecosystem: a Symposium*, Bernice P. Bishop Museum Press, Honolulu.
- Thorner, D., Kerblay, B. and Smith, R.E.F. (eds), 1966. *The Theory of Peasant Economy by A.V. Chayanov*, R.D. Irwin for American Economic Association, Homewood, Ill.
- Turner, L. and Ash, J., 1975. *The Golden Hordes: International Tourism and the Pleasure Periphery*, Constable, London.
- Twomey, J.B., 1968. 'Results of a pilot land survey for Tarawa atoll, Gilbert Islands', *Micronesica*, 4(1):19-25.
- United Nations Development Advisory Team for the Pacific, 1973. *Higher Level Manpower in the Pacific*, Suva.
- U.S. Department of Agriculture, 1963. 'Composition of foods', *Agriculture Handbook* 8 (revised), Superintendent of Documents, Washington, D.C.
- U.S. Department of State, 1972. *25th Annual Report to the United Nations on the Administration of the Trust Territory of the Pacific Islands*, Washington, D.C.
- Watters, R.F., 1969. *Koro: Economic Development and Social Change in Fiji*, Clarendon Press, Oxford.
- 1970. 'The economic response of South Pacific societies', *Pacific Viewpoint*, 11:120-44.
- 1977. *Abemama Report*, Victoria University of Wellington Rural Socio-economic Survey of the Gilbert and Ellice Islands, Wellington.
- Whitmee, S.J., 1871. *A Missionary Cruise in the South Pacific — Being the Report of a Voyage amongst the Tokelau, Ellice and Gilbert Islands in the Missionary Barque 'John Williams' during 1870*, Joseph Cook, Sydney.
- Wilkes, C., 1845. *Narrative of the United States Exploring Expedition during the Years 1838, 1839, 1840, 1841, 1842*, Vols 2, 5, Lea and Blanchard, Philadelphia.
- Wilson, J.S., 1966. *Economic Survey of the New Hebrides*, HMSO, London.
- Woodford, C.M., 1895. 'The Gilbert Islands', *Geographic Journal*, London.

London Missionary Society

LMS papers, including the South Seas manuscript journals, letters, etc., are now held in the Library of the School of Oriental and African Studies, University of London. They are also available on microfilm at several other libraries, including the Alexander Turnbull Library, Wellington. Titles below are as given in the inventory to *LMS Micro Mss Coll 2* which may differ slightly from the title on the document itself. Items by LMS personnel not held in the above collection are indicated with an asterisk.

- Davies, S.H., 1873. On board "J.W." — Report of a visit to Ellice and Gilbert Groups. Dec. 11.
- 1880. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. Sept. 3-Nov. 6.

- 1882. Samoa — From Apia to Tokelau, Ellice and Gilbert Isles in the John Williams. Aug. 26-Oct. 23.
- Elekana, 1863. Letter, dated 5 January, Malua, Samoa (describing his drift visit to Nukulaelae in 1861).
- French, A.E., 1899. Samoa, Papuata — Visit to N.W. Outstations in the John Williams. June 10-Aug. 2.
- Gee, H., 1862. Letter to LMS, London, dated Apia, 16 September (report on Elekana's drift visit to Nukulaelae in 1861).
- Gill, W.W., 1872. Diary of a tour of the Gilbert, Ellice, Union and Loyalty Islands in the John Williams ... 21 May-11 October, Sydney, Mitchell Library, MS B1444.
- Marriott, J., 1883. Samoa — from Apia to Tokelau, Ellice and Gilbert Islands in the John Williams Aug. 11-Oct. 23.
- 1895. Samoa — Visit from Apia to Tokelau, Ellice and Gilbert Islands in the John Williams. June 4-July 18.
- *Murray, A.W., 1865. (Report of a visit to the Ellice Islands, 3-25 May) *Missionary Magazine and Chronicle*, December, pp.335-45.
- 1866. Samoa, Ellice Islands, etc. Oct. 19-Dec. 21.
- Newell, J.E., 1885. Samoa, Savaii — Voyage to Tokelau, Ellice and Gilbert Islands in the John Williams. Sept. 7-Nov. 20.
- 1894. Samoa, Malua — Visit to N.W. out-stations with Miss Moore (no dates).
- 1896. Samoa, Malua — Visit to N.W. out-stations in the John Williams. June-July.
- Nisbet, H., 1875. Samoa — Visit to Tokelau Ellice and Gilbert Groups. Aug. 16-Oct. 23.
- Phillips, C., 1881. Samoa, Tutuila — From Apia to Tokelau, Ellice and Gilbert Islands. Sept. 13-Nov. 25.
- 1884. Samoa, Apia — Voyage to N.W. out-stations. July 8-Sept. 15.
- Powell, T., 1871. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. With illustrations. Sept 19-Dec. 31.
- 1879. Samoa, Upolu — Visit to N.W. out-stations. Oct. 2-Nov. 18.
- Pratt, G., 1872. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. July 15-Aug. 16.
- Turner, G.A., 1874. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. May 26-Aug. 2.
- Turner, G., 1876. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. May 9-July 21.
- Turner, G.A., 1878. Samoa — Visit to Tokelau, Ellice and Gilbert Groups. May 11-July 21.
- Vivian, J.C., 1871-72. Tahiti — Voyage in the John Williams from Tahiti to Sydney calling at numerous islands en route. Apl.-Feb.6.

Glossary of Gilbertese words

Fuller meanings are given in the appropriate place in the text.

Where the definite article *te* has been used in the text this has been ignored in placing the word in the Glossary.

Certain meanings in the Glossary are derived as follows:

- A.R.: scientific names are from Catala 1957
- B.R.: scientific names are from Catala 1957
- T.R.: identification of fish is from Randall 1955 and Catala 1957, common names from Sabatier 1971; botanical names from Catala 1957
- TN.R.: Sabatier 1971

<i>aba</i>	Country, land, earth
<i>abamakoro</i>	Islet, land cut by sea passages
<i>aba n akoi</i>	A land plot given to another for favours rendered
<i>aba ni maiu</i>	The land of the living. Productive land
<i>aba ni mate</i>	The land of the dead. Unproductive land
<i>aba ni kuakua</i>	The land of nursing
<i>aba n natinati</i>	A land plot given to an adopted child from outside the <i>mwenga</i>
<i>aba n nati n tama</i>	Land plot given to bastard child
<i>aba n tabetabe</i>	The land of the adopted child
<i>aba n tibutibu</i>	Land plot given to adopted grandchild
<i>ae biti</i>	A soup made from rice, flour and sugar or toddy
<i>ai</i>	Prefix to kin terms meaning 'the same as'
<i>ai ai</i>	Group formed to pool toddy surpluses
<i>ai eta</i>	Coconut with kernel hardened but water still good to drink
<i>airiri</i>	Group of persons working together for the benefit of each member in turn
<i>ai-tibutoru</i>	Siblings of great grandparents, great grandchildren of siblings
<i>Akawa</i>	Skilled and respected fisherman
<i>amakai</i>	Coconut that is nearly ripe, kernel nearly hard and water acid
<i>Anikai</i>	Under the trees, Gilbertese name for Tabiteuea North

<i>anti</i>	Non-physical spirit or quality of either physical object or piece of knowledge
<i>Anti-n-Tioba</i>	'Spirit of Jehovah', name given to exotic religion on Tabiteuea North in nineteenth century
<i>antouman</i>	A particularly large and valued variety of <i>babai</i>
<i>aontari</i>	At the surface of the sea
<i>atirababa</i>	Large stones, boulders
<i>aua</i>	Mullet (<i>Mugilidae</i> , B.R., TN.R.; <i>Crenimugil crenilabis</i> , T.R.)
<i>Awaiaki</i>	Summer solstice (March to September) characterized by easterly winds
<i>Aumeang</i>	Winter solstice (September to March) characterized by westerly winds
<i>Auti, Nei Auti</i>	Pleiades stars
<i>ba</i>	Leaf, palm, midrib of palm leaf. Hardpan of cemented coral sand above water lens
<i>babai</i>	<i>Cyrtosperma chamissonis</i> , large starchy, taro-like root that is highly valued feast food and formerly important in subsistence
<i>babanga</i>	Ignorance, ineptitude
<i>baitari</i>	Large edible jellyfish (<i>Seypho medusae</i>)
<i>baneawa</i>	<i>Chanos chanos</i> , milk fish. A fresh and salt water fish raised in fish ponds
<i>banuea</i>	Relatives of <i>Te Uea</i> , the highest or 'royal' class
<i>batano</i>	Sand rock. Softer than <i>te ba</i>
<i>bebe</i>	Spongy formation inside germinated coconut
<i>beibeti</i>	Fishing with line floating on surface
<i>bekei</i>	A feast food, mixture of grated <i>babai</i> , coconut and <i>kamaimai</i>
<i>ben</i>	Mature coconut
<i>ben ae katarinaki</i>	Ripe coconut flesh cut into slivers for eating
<i>ben ae kokoaki</i>	Ripe coconut flesh grated
<i>berita</i>	To promise, a promise club
<i>bero</i>	<i>Ficus tinctoria</i> , a fig tree bearing edible berries
<i>bike</i>	The beach
<i>bikebike</i>	Sandy soil
<i>bobanikaina</i>	To collect leaves of the pandanus
<i>boboti</i>	Cooperative
<i>bon</i>	Rich, black soil
<i>boraoi</i>	Equality, conformity
<i>Botaki n Rorobuaka</i>	Meeting of married men

<i>boti</i>	Seating place of clan in <i>maneaba</i> , clan which shares this sitting position
<i>buakonikai</i>	Bushland
<i>buatoro</i>	Feast food made of toddy and <i>babai</i> or <i>bero</i>
<i>bubuti</i>	To borrow, to request or beg; a request for an object, piece of information, or assistance which (theoretically) cannot be refused
<i>buki</i>	The bottom, lower part; plaited pandanus leaves used to contain compost at base of the <i>babai</i> plant
<i>bunia</i>	Sweet coconut, immature husk of sweet coconut
<i>Buraeniman</i>	Feathers of a bird, name given to adherents of <i>Anti-n-Tioba</i>
<i>butia</i>	To ask, to beseech. Root of word <i>bubuti</i>
<i>ibo</i>	Worm (<i>Sipunculus indicus</i> Peters) found in sand of lagoon floor and beach
<i>ibu</i>	Toddy container made of coconut shell
<i>ika</i>	General term for fish
<i>ikanibong</i>	Red snapper (<i>Lethrinus</i> sp.)
<i>ikaraoi</i>	Collective term for cultivated varieties of <i>babai</i>
<i>ikare</i>	Lagoon fish, <i>Albula vulpes</i> var. <i>Solmoneus</i> L.
<i>imatang</i>	European
<i>inaki</i>	Rows of thatch. Place of clan in <i>maneaba</i>
<i>inaomata</i>	Free, independent, freeman, self-sufficient
<i>ing</i>	Gauze-like fibre between palm frond and trunk
<i>iraorao</i>	Reciprocated friendship
<i>kababa</i>	Fishing for flying fish at sunset with scoop nets
<i>kabara</i>	Deep sea fishing where bait is freed at depth by jerk on line
<i>kabeabea</i>	To request labour
<i>kabirongorongoro</i>	Money which is spent rather than saved
<i>Kabowi</i>	Name of Island Council established by Murdoch
<i>Kabowi n Abamakoro</i>	Council of the Island. Forerunner of Island Council
<i>kabubu</i>	Preserved food made of dried pandanus fruit. Drink made of preserved pandanus fruit in a form called <i>karababa</i>
<i>kaburebai</i>	The land of nursing
<i>kainga</i>	Section of territory in which people who share common ties of descent have access to use the land; total persons who share claim rights to a tract of land. Residence site inhabited by a major kin group

<i>kaiura</i>	Variety of <i>babai</i> with reddish stems
<i>kakakibotu</i>	Leisure, relaxation, socializing with others
<i>kamai</i>	Narrow shelf in outer reef slope
<i>kamaimai</i>	Syrup or molasses produced by the prolonged boiling of toddy
<i>kamanging</i>	Fermented toddy
<i>karababa</i>	Pandanus fruit cooked and dried without removing fibres
<i>karaiti</i>	To rewind the fishing line, deep water
<i>karekare</i>	Mutual work or fund-raising group, with each member taking turns to receive the total funds
<i>karewe</i>	Toddy. Juice of the coconut spathe
<i>karikiriki</i>	Development, new production, novelty
<i>karinimane</i>	Money to be held or saved
<i>karo</i>	Deep water
<i>katakitoki</i>	To try to reach the bottom, deep water
<i>katautau</i>	Agreed to division (of lands)
<i>katete</i>	Toddy which has been boiled once
<i>katiki</i>	Fishing by trolling
<i>katiti</i>	Mixture of flour, water and grated coconut
<i>katokaben</i>	Drink made of grated coconut and toddy. Grated coconut either mixed with tea or drunk with tea
<i>katokabero</i>	Drink made of <i>bero</i> fruit and toddy
<i>katokakabubu</i>	Drink made of dried pandanus fruit and toddy
<i>katura</i>	Small edible shellfish
<i>katutu</i>	Collective term for uncultivated varieties of <i>babai</i>
<i>kaubai</i>	Rich (in things)
<i>Kaubure</i>	Village policeman (A.R., B.R.). Member of village council (T.R.). Members of Island Council established by Murdoch (TN.R.)
<i>kaumane</i>	Rich (in money)
<i>kaura</i>	A plant (<i>Wedelia stringulosa</i>) used as compost for <i>babai</i>
<i>kawarawara</i>	Grooved and fluted zone at edge of reef flat
<i>kirina</i>	Gravel
<i>kiriwaka</i>	Dish prepared of finely sliced pandanus fruit and coconut cream
<i>koikoi</i>	<i>Asaphis deflorata</i> L, an edible shellfish. Shell used to grate coconut and hence grated coconut
<i>koraki</i>	Family, kindred, more immediate relations within the <i>utu</i>

<i>koro karewe</i>	Cutting coconut spathe for toddy, general term for all activities associated with toddy collection
<i>kuakua</i>	Care for a sick person, often receiving a land in return
<i>kuana</i>	Guano
<i>kunei</i>	Common sea-bird on Tabiteuea North, brown noddy
<i>mai</i>	Breadfruit
<i>maiaki</i>	South
<i>Mai Keang, Mai Tarika, Mai Uea</i>	Varieties of breadfruit
<i>maitoro</i>	Cold, a drink of sugar and cold water
<i>makemake</i>	<i>Tacca leontopetaloides</i> , arrowroot
<i>makoro</i>	Coconut tree which has temporarily ceased to produce nuts
<i>makuri aon te aba</i>	Work of the island. Work for the Island Council or Old Men
<i>makuri n te kawa</i>	Work of the village
<i>mama</i>	shame
<i>manai</i>	Edible land crab (<i>Cardisoma carnifex</i>)
<i>manam</i>	Food preparation of <i>babai</i> and grated coconut
<i>mane</i>	General term for man
<i>maneaba</i>	Community meeting house where social or ceremonial occasions are held and public affairs discussed. Meeting house for village or any recognized group of people
<i>manibwebwe</i>	Envelope of coconut spathe, protuberance at base of <i>babai</i> leaf
<i>man ni karewe</i>	Species of <i>Cantharis</i> found around toddy
<i>mao</i>	Saltbush (<i>Scaevola frutescens</i>)
<i>maungatabu</i>	Meeting of all people of the island
<i>meang</i>	North
<i>moiben</i>	A drink of tea with toddy or sugar, with grated coconut
<i>moimoto (or te ni)</i>	Green nuts used for drinking. Young coconut at stage when pulp is beginning to harden
<i>mronron</i>	A small indigenous enterprise trading in cash or coconuts. A group or single individual selling store goods for coconuts or cash
<i>mwenga</i>	Household, smallest independent social unit
<i>nati</i>	Root of word 'child'
<i>ngea</i>	Bush of very hard wood (<i>Pemphis acidula</i>)

<i>niba</i>	Hole dug through hardpan large enough to accommodate 1 <i>babai</i> plant only
<i>nikiranroro</i>	Woman or girl unmarried when most of her age group are
<i>nimareburebu</i>	Tree (<i>Hernandia sonora</i>)
<i>nimatamin</i>	Edible reef shellfish
<i>ninimai</i>	A lagoon fish, <i>Gerres</i> genus
<i>ni ni marai</i>	Lands allotted to adoptive parents by biological parents of child at the time of adoption
<i>non</i>	Fruit of a shrub usually used for medicinal purposes (<i>Morinda citrifolia</i>)
<i>oinibai</i>	Self-sufficient, free to control one's own activities
<i>okai</i>	Coconut storehouse
<i>oratakakoro</i>	Low water spring tide when reef flat is left completely dry
<i>rabakau</i>	Clever, knowledgeable
<i>rabata n te tautaeka</i>	The body of the government, the people
<i>rabono</i>	Conger eel (<i>Gymnothorax</i> spp.)
<i>rang</i>	Inferior people
<i>rangirang</i>	Mad
<i>ranniben</i>	Coconut cream
<i>rao</i>	Companion, root of <i>iraorao</i>
<i>rara</i>	Blood, kinship link
<i>rauara</i>	Cigarette paper made from outer surface of selected pandanus leaves
<i>ren</i>	Shrub to small tree, <i>Messerschmidia argentia</i>
<i>riburibu</i>	Sand or mud beneath water on reef flat
<i>riki</i>	Germinated coconut
<i>riki ni beti</i>	Pandanus grown from seed rather than cutting
<i>Rimimata</i>	Star, Antares of Scorpio
<i>rin</i>	Withered coconut leaf, torch made of these leaves for night fishing
<i>roba</i>	Mat made from unshredded pandanus leaves
<i>roro</i>	Preserved pandanus fruit coated in coconut cream
<i>roronga</i>	Single man, bachelor
<i>rua</i>	Pit excavated to water table in which <i>babai</i> plants are grown
<i>tabetabe</i>	Adoption

<i>tama</i>	Father
<i>tangana</i>	Mixture of grated coconut and pandanus fruit
<i>tangauri</i>	Pulp of pandanus fruit
<i>tanimainiku</i>	Facing the west
<i>taningaroti</i>	Lazy
<i>tano</i>	Sand
<i>tanobike</i>	Greyish sand
<i>tanobon</i>	Sand with good proportion of humus
<i>tanomaere</i>	Sand with slightly more humus content than <i>tanobike</i>
<i>tanouea</i>	Reddish sand found above water lens
<i>tanrake</i>	Facing east, the ocean coast
<i>tarabuti</i>	<i>Harengula</i> sp., a small, herring-like fish
<i>tari</i>	Sibling of same sex; salt fish
<i>tatae</i>	Fishing for flying fish at night with flare and scoop net
<i>taubuki</i>	Ridge of house roof, summit
<i>tauri</i>	Wire frame and multiple hooks used in deep sea fishing
<i>tautaeka</i>	Government, authority
<i>tetabo</i>	The place of staying alive. Low-lying drought refuges
<i>tia makuri</i>	Commoner (also <i>taboniba'i</i> , <i>rorobuaka</i>)
<i>tibanga</i>	Fate, lot in life
<i>tibu</i>	Grandparent, grandchild
<i>tina</i>	Mother
<i>tinaba</i>	Special relationship including sexual favours offered a person in exchange for lands or fishing for the household
<i>toka</i>	Aristocrat
<i>tongo</i>	Mixture of grated coconut and <i>kamaimai</i>
<i>tore</i>	To eat and drink at the one time
<i>toro</i>	Slave, people conquered in battle
<i>tororau</i>	To flatten and clean pandanus leaves for thatch
<i>totoki</i>	Sliced, boiled pandanus fruit
<i>tuae</i>	Preserved pandanus food made from dried pulp without fibre
<i>tubu ni mæemwæara</i>	Soup made of <i>ranniben</i> and pawpaw
<i>tubwere</i>	Dish made of boiled <i>moimoto</i> flesh and fluid
<i>uea</i>	High chief or king
<i>Uekera</i>	Mythical tree planted at Buariki on Tarawa atoll

<i>wimane</i>	Old man of higher status. Council of Old Men
<i>uri</i>	Tree used for timber and the leaves for <i>babai</i> compost (<i>Guettarda speciosa</i>)
<i>utu</i>	Extended family or clan; social unit linking people of common identity or who are regarded as belonging together
<i>wairau</i>	Work of making thatch
<i>waiwai</i>	Reef flat, dimpled surface of reef surface

Notes on the authors

Bill Geddes, following research for this report, gained his Ph.D. in 1976 from Victoria University of Wellington with a thesis focusing on economic anthropology. Since 1978 he has been involved in the production of published open university courses in social anthropology for Deakin University, Victoria. He is currently working in an ADAB project investigating socio-economic factors on Urban Tarawa and Tabiteuea North over a 15-month period. This will result in a report comparing present rural and urban socio-economic conditions and describing the degree of change which has occurred in Kiribati over the past 10 years since the research for this series was conducted.

Anne Chambers was born in 1945 in Honolulu, Hawaii. She received her B.A. with honours and her M.A., both in anthropology, from the University of California, Berkeley and is currently completing her Ph.D. for the same institution, with a dissertation on Nanumean reciprocal exchange. She has lectured in anthropology in Norway and New Zealand and is the author of several scholarly articles, mainly on Nanumea and Tuvalu. Her research interests include social organization, village and household economies, health care systems and beliefs, and socialization patterns. At present she is an honorary research associate at the Department of Anthropology, University of Auckland. She is married to Keith Chambers, who is also an anthropologist, and they have 2 young daughters.

Betsy Sewell comes from a farming background in mid Canterbury, New Zealand. In 1971 she graduated from the University of Otago with a B.A. (Hons), First Class, in social anthropology. Since working on the GEIC project, she has trained as a primary school teacher and has spent several years teaching in Australian and New Zealand schools. She now lives in Christchurch and works in a retail plant nursery.

Roger Lawrence is a senior lecturer in the Department of Geography, Victoria University of Wellington. He graduated in geography at the University of Sydney and Australian National University where his M.A. research was focused on Aboriginal habitat and economy. In 1979 he returned to Kiribati as part of a team from Development Planning Unit, University College London, to report on prospects for decentralization and implications of proposals to shift the administration from Tarawa.

Ray Watters is associate professor in geography at Victoria University, Wellington, New Zealand. He gained his M.A. at Wellington and Auckland and Ph.D. at the London School of Economics. With Dr Nancy J. Pollock he was director of the Rural Socio-economic Survey of Kiribati and Tuvalu. Earlier, he directed a similar team study of the Solomons. He has also worked in Fiji and Western Samoa. In 1963-64 he was FAO Shifting Agriculture Adviser for Latin America, working in Peru, Venezuela and Mexico.

Development Studies Centre Publications

Monographs

- No 1 *Labour and the Law in Papua New Guinea*, D.W. Smith, 1975. 129 + vii pp. A\$4.00.
- No 2 *The Role of the Papua New Guinea Defence Force*, Paul Mench, 1976. 231 + xii pp. A\$6.00.
- No 3 *Education, Employment and Migration in Papua New Guinea*, J.D. Conroy, 1976. 248 + xii pp. A\$6.00.
- No 5 *Professional Structure in South East Asia*, T.H. Silcock, ed., 1977. 306 + xi pp. A\$6.00.
- No 6 *Education and Nation-building in Plural Societies: the West Malaysia experience*, Chai Hon-Chan, 1977. 116 + ix pp. A\$6.00.
- No 7 *Bougainville in Transition*, T.K. Moulik, 1977. 200 + xii pp. A\$6.00.
- No 8 *Man and Environment in Eastern Timor*, Joachim Metzner, 1977. 380 + xxi pp. A\$6.00.
- No 9 *Micro-macro Links in Planning*, P.B. Krishnaswamy, 1977. 116 + ix pp. A\$6.00.
- No 10 *Appetite for Education in Contemporary Asia*, K. Orr, ed., 1977. 165 + ix pp. A\$6.00.
- No 11 *The Adaptation of Traditional Systems of Agriculture*, E.K. Fisk, ed. 1978. 400 + x pp. A\$9.00.
- No 12 *Taim Bilong Mani: the evolution of agriculture in a Solomon Island society*, John Connell, 1978. 271 + xii pp. A\$9.00.
- No 13 *Practice Without Policy: genesis of local government in Papua New Guinea*, D.M. Fenbury, 1978. 315 + xvi pp. A\$9.00.
- No 14 *Customs of Respect: the traditional basis of Fijian communal politics*, John Nation, 1978. 165 + xx pp. A\$8.00.
- No 15 *Agricultural Project Design and Evaluation in an Island Community*, Alan Bollard, 1979. 228 + xiii pp. A\$9.00.
- No 16 *International Aid: some political, administrative and technical realities*, R.T. Shand and H.V. Richter, eds, 1979. 276 + xiv pp. A\$9.00.
- No 17 *Forestry in National Development: production systems, conservation, foreign trade and aid*, K.R. Shepherd and H.V. Richter, eds, 1979. 245 + x pp. A\$9.00.
- No 18 *Indonesia and Australia: the politics of aid and development since 1966*, Philip J. Eldridge, 1979. 224 + viii pp. A\$8.00.
- No 19 *Corned Beef and Tapioca: a report on the food distribution system in Tonga*, Epeli Hau'ofa, 1979. 169 + xii pp. A\$8.00.

- No 20 *Prestige and Profit: the development of entrepreneurial abilities in Taiwan, 1880-1972*, Manfred Steinhoff, 1980. 150 + xvi pp. A\$8.00.
- No 21 *The Political Economy of Political Development: a case study of regional development in the Philippines before martial law*, Modh A Nawawi, 1980. 79 + xv pp. A\$6.00.
- No 22 *Food in Fiji: aspects of the produce and processed food distribution systems*, M.W.P. Baxter, 1980. 276 + xx pp. A\$9.00.
- No 23 *The Island States of the Pacific and Indian Oceans: anatomy of development*, R.T. Shand, ed., 1980. 512 + xxii pp. A\$9.00.
- No 24 *Rural-born Fijians and Indo Fijians in Suva: a study of movements and linkages*, Shashikant Nair, 1980. 94 + x pp. A\$8.00.
- No 25 *Food Distribution in the New Hebrides*, T.G. McGee, R.G. Ward, D.W. Drakakis-Smith with a contribution by J. Bonnemaision, 1980. 260 + xiv pp. A\$9.00.
- No 26 *Black Out in Alice: a history of the establishment and development of town camps in Alice Springs*, M. Heppell and J.J. Wigley, 1981. 216 + xviii pp. A\$8.00.
- No 27 *Population Mobility and Development: Southeast Asia and the Pacific*, G.W. Jones and H.V. Richter, eds, 1981. 474 + xi pp. A\$9.00.
- No 28 *Agriculture and Population Pressure in Sikka, Isle of Flores: a contribution to the study of the stability of agricultural systems in the wet and dry tropics*, Joachim K. Metzner, 1982. 345 + xxxii pp. A\$15.00.
- No 29 *Demographic Impact on Socio-economic Development: the Malaysian experience*, Cheong Kee Cheok and Lim Lin Lean, 1982. 124 + xii pp. A\$10.00.
- No 30 *Population Resettlement Programs in Southeast Asia*, G.W. Jones and H.V. Richter, eds, 1982. 190 + x pp. A\$12.00.

The Aboriginal Component in the Australian Economy

- No 1 *Tribal Communities in Rural Areas*, Elspeth Young, 1981. 279 + xxii pp. A\$9.00.
- No 2 *Town Populations*, E.A. Young and E.K. Fisk, eds, 1982. 170 + xv pp. A\$12.00.
- No 3 *Small Rural Communities*, E.A. Young and E.K. Fisk, eds, 1982. A\$12.00.
- No 4 *Adelaide Aborigines: a case study of urban life 1966-1981*, Fay Gale and Joy Wundersitz, 1982. 192 + xiv pp. A\$12.00.

Atoll Economy: Social Change in Kiribati and Tuvalu

- No 1 *Islands on the Line: Team Report*, W.H. Geddes *et al.*, 1982. 222 + xx pp. A\$12.00.

Pacific Research Monographs

- No 1 *Technical Training and Development in Papua 1894-1941*, Tony Austin, 1978. 204 + xiv pp. A\$8.00.
- No 2 *Villagers at War: some Papua New Guinea experiences in World War II*, Neville K. Robinson, 1979. 224 + xix pp. A\$8.00.
- No 3 *A Thousand Graduates: conflict in university development in Papua New Guinea, 1961-1976*, Ian Howie Willis, 1980. 362 + xiv pp. A\$8.00.
- No 4 *Viceroy of the Pacific: a life of Sir John Bates Thurston*, Part II of *The Majesty of Colour*, Deryck Scarr, 1980. 336 + x pp. A\$9.00.
- No 5 *Brown or White? A history of the Fiji sugar industry, 1873-1973*, Michael Moynagh, 1981. 311 + x pp. A\$9.00.
- No 6 *Education in Fiji: policy, problems and progress in primary and secondary education 1939-1973*, C. Whitehead, 1981. 228 + xix pp. A\$9.00.
- No 7 *The Fijian Colonial Experience: a study of the neotraditional order under British Colonial rule prior to World War II*, Timothy J. Macnaught, 1982. 204 + xviii pp. A\$10.00.
- No 8 *The Hiri in History: further aspects of long distance Motu trade in Central Papua*, Tom Dutton, ed., 1982. 158 + xv pp. A\$12.00.

MADE Research Series

- No 1 *The Dynamic Replacement Problem in the Rubber Industry of Sri Lanka*, S.K.W. Jayasuriya, 1976. 112 + xi pp. A\$5.00.
- No 2 *Rational Farm Plans for Land Resettlement in Indonesia*, M.A. Wardhani, 1976. 136 + xiii pp. A\$5.00.
- No 3 *The Evaluation of Agricultural Loans: a case study of Development Bank financed cattle projects in the Markham Valley of Papua New Guinea*, Desmond P. Brunton, 1980. 157 + xii pp. A\$5.00.
- No 4 *The Intercropping of Smallholder Coconuts in Western Samoa: an analysis using multi-stage linear programming*, R.J. Burgess, 1981. 259 + xiii pp. A\$5.00.
- No 5 *The Australian Rice Industry in Relation to the International Rice Trade and its Implications for Southeast Asian Rice Exporting Countries*, Khin San May, 1981. 144 + xii pp. A\$5.00.
- No 6 *The Rehabilitation of the Economy of Uganda: internal and external balance*, Fulgence K. Byamugisha, 1982. 149 + xvii pp. A\$5.00.

Thesis Abstracts

- No 1 *Studies in the Economics of Agricultural Development*, D.M. Etherington and B. Carrad, eds, 1976. 45 + vii pp. A\$3.00.
- No 2 *Studies in the Economics of Agricultural Development*, D.M. Etherington and B.C.F. Boucher, eds, 1979. 55 + ix pp. A\$3.00.
- No 3 *Studies in the Economics of Agricultural Development*, D.M. Etherington and B.C.F. Boucher, eds, 1982. 51 + ix pp. A\$3.00.

MA in Demography Research Series

- No 1 *An Exploratory Demographic Study of the Nupe of Niger State: the case of Sakpe Village*, Abubakar Katcha, 1978. 115 + ix pp. A\$5.00.
- No 2 *The Value of Children Among Tea Estate Workers' Families: a case study in a village of West Java, Indonesia*, Asep Djadja Saefullah, 1979. 128 + xiii pp. A\$5.00.

Teaching Notes Series

- No 1 *Basic Mathematics for Demographers*, S.K. Jain, 1979. 127 + viii pp. A\$5.00.
- No 2 *Beginning Population Studies*, David Lucas, ed., 1980. 236 + viii pp. A\$5.00.
- No 3 *Women, Demography and Development*, Helen Ware, 1981. 242 + vii pp. A\$5.00.
- No 4 *Demographic Evaluation of Family Planning Programs*, John Laing, 1982. 157 + viii pp. A\$5.00.

If using cheque or money order etc. please add postage and packing as shown for publications listed above.

Rates within Australia:

Single copy order \$3.00; up to 5 books \$4.00; over 5 books \$5.00.

Overseas rates (surface mail): Each book A\$1.20.

Occasional Papers

- No 3 *Burma's Rice Surpluses: accounting for the decline*, H.V. Richter, 1976. 51 pp. A\$2.00.
- No 4 *The Fading of Earthbound Compulsion in a Hongkong Village: population mobility and its economic implications*, Rance Pui-leung Lee, 1976. 15 pp. A\$2.00.
- No 7 *The Limits of Economics for the Study of Development*, R.M. Sundrum, 1977. 16 pp. A\$2.00.
- No 8 *Public Housing in the City States of Hong Kong and Singapore*, David Drakakis-Smith and Yeu-man Yeung, 1977. 17 pp. A\$2.00.
- No 9 *The Island of Niue: development or dependence for a very small nation*, E.K. Fisk, 1978. 12 pp. A\$2.00.
- No 10 *The Regional Economy of Bougainville: growth and structural change*, M.L. Treadgold, 1978. 81 pp. A\$2.00.
- No 11 *The Structure of Rural Supply to the Honiara Market in the Solomon Islands*, M.A. Bathgate, 1978. 65 pp. A\$2.00.
- No 12 *Primary Industries in Papua New Guinea*, Julius Chan, 1978. 11 pp. A\$2.00.
- No 13 *Industrialization in Indonesia: development and prospects*, Peter McCawley, 1979. 88 pp. A\$2.00.
- No 14 *Technical Assistance: towards improving the underlying framework*, Rodney C. Hills, 1979. 30 pp. A\$2.00.

- No 15 *Social and Economic Aspects of Tidal Swamp Land Development in Indonesia*, William L. Collier, 1979. 70 pp. A\$2.00.
- No 16 *Surveys of Free Resources: is there a role in planning and project implementation?* Rodney C. Hills, 1980. 30 pp. A\$2.00.
- No 17 *Replacing Imported Food Supplies to Port Moresby, Papua New Guinea*, Geoff T. Harris, 1980. 22 pp. A\$2.00.
- No 18 *Elitist Involvement in Agriculture in West Africa*, Rowena Lawson, 1980. 66 pp. A\$2.00.
- No 19 *International Civil Aviation in the South Pacific: a perspective*, C.C. Kissling, 1980. 62 pp. A\$2.00.
- No 20 *Economic Activities of Women in Rural Java: are the data adequate?* Hazel Moir, 1980. 44 pp. A\$2.00.
- No 21 *Selected Aspects of Guyanese Fertility: education, mating and race*, Jotis Singh, 1980. 74 pp. A\$2.00.
- No 22 *Remittances and Rural Development: migration, dependency and inequality in the South Pacific*, John Connell, 1980. 62 pp. A\$2.00.
- No 23 *Tourism, Dependency and Development: a mode of analysis*, Stephen C. Britton, 1981. 22 pp. A\$2.00.
- No 24 *Energetics and subsistence affluence in traditional agriculture*, Satish Chandra, 1981. 34 pp. A\$2.00.
- No 25 *Food Production and Crisis in the West African Savannah*, John C. Caldwell, 1981. 23 pp. A\$2.00.
- No 26 *Multi-Period Budgeting and the Economic Assessment of Perennial Crop Intercropping Systems*, Dan M. Etherington, 1981. 42 pp. A\$2.00.
- No 27 *Positive Methods of Agricultural Decision Analysis*, James A. Roumasset, 1981. A\$2.00.
- No 28 *Power Structure in Rural Bangladesh: some reflections from a village in Comilla*, Barkat-e-Khuda, Nurul Islam Khan and Sunil Kumar Saha, 1981. 49 pp. A\$2.00.
- No 29 *Digraphs and the Management of Complex Development Projects*, Rodney C. Hills and *Systems Theory: uncertainty in the design and management of complex development projects*, Tom Beer and Rodney C. Hills, 1982. 29 pp. A\$2.00.
- No 30 *Integration of Population and Development Policies and Programs in Asia: a review*, Gavin W. Jones, 1982. 53 pp. A\$2.00.
- No 31 *Towards the Monetary Valuation of Absolute Poverty*, Dodo J. Thampapillai, 1982. 16 pp. A\$2.00.

Postage and packing rates for Occasional Papers:

Within Australia - 1 book 70¢, 2 books \$1.20

Overseas rates (surface mail) - each book 75¢

The prices listed above are the recommended retail prices.

The Monographs, Aboriginal Monographs, Atoll Economy Monographs, Pacific Research Monographs and Occasional Papers can be obtained from ANU Press, PO Box 4, Canberra, ACT, 2600, Australia and the balance of the publications from the Development Studies Centre at the same address.

