

SOCIAL ORGANIZATION AND HEALTH SERVICES FOR PRESCHOOL  
CHILDREN ON NIUE ISLAND, WESTERN POLYNESIA

by

JUDITH C. BARKER

DISSERTATION

Submitted in partial satisfaction of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

MEDICAL ANTHROPOLOGY

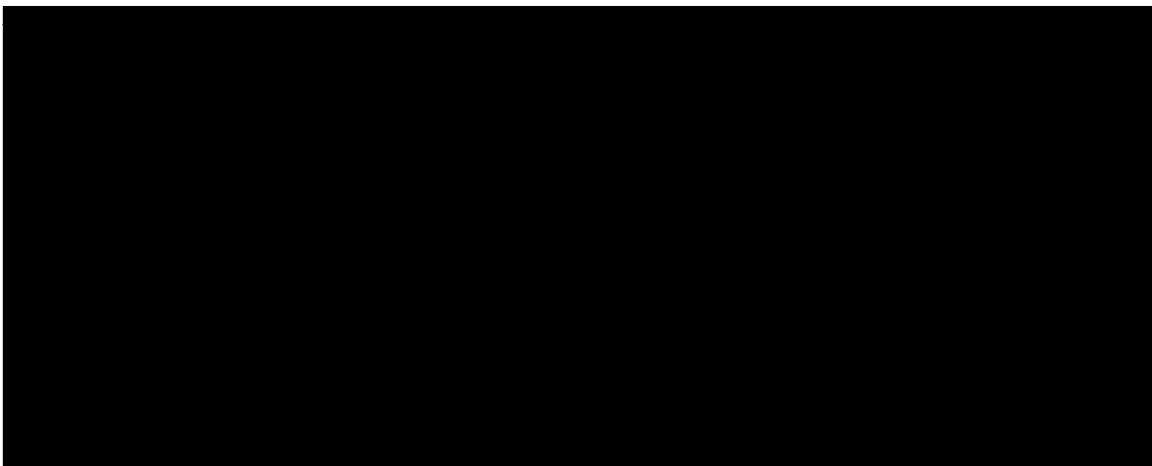
in the

GRADUATE DIVISION

of the

UNIVERSITY OF CALIFORNIA

San Francisco  
& Berkeley



Date

DEC 29 1985

University Librarian

Degree Conferred: .....

**SOCIAL ORGANIZATION AND HEALTH SERVICES  
FOR PRESCHOOL CHILDREN ON NIUE ISLAND,  
WESTERN POLYNESIA**

by

**JUDITH C. BARKER**

## PREFACE

I would like to thank all those people who, over the years, have made it possible for me to achieve this goal.

Support, in the form of Fellowships at various times during training, from the New Zealand Federation of University Women, from the American Association of University Women, and from the Regents of the University of California, has been much appreciated.

The South Pacific Medical Research Committee of the New Zealand Medical Research Council funded the data collection portion of this study, through a project grant entitled "Migration And Children's Health: The Niuean Case." I hope this dissertation repays in some small measure the trust that Committee displayed when it ventured into supporting research on topics outside the usual clinical sphere.

My dissertation committee--composed of Drs M. Margaret Clark, Corinne N. Nydegger and James N. Anderson--deserves thanks, too, for not flinching at the length of this work, and for giving constructive advice.

Other faculty and fellow students at the Medical Anthropology Program, University of California, have played a large role in my professional development over the past few years, teaching, guiding, challenging and assisting me in innumerable ways: to all of them I offer my thanks.

Throughout, the support of my parents and family has been both monumental, invaluable and never-failing. Without

them I would not have succeeded: to them my heart-felt thanks.

Though she has been an extremely valuable source of advice and assistance, especially with the statistical analyses contained herein, it is not for that alone that I offer Dr Linda S. Mitteness my profoundest thanks. She has supported, comforted, and taught me myriad things throughout this venture. Without her, this dissertation would not have reached fruition.

Last, but by no means least, I would like to thank the many Niueans, both on the island and in Auckland, New Zealand, who gave willingly of their time, their energy, and their knowledge, and made this dissertation possible. Special thanks are due: to Dr H. T. Nemaia, QSO, for his support of this work; to Taimoka Utalo for her unfailing good humour and help, and for the good times we had together going to Child Welfare Clinics on Niue. Thanks, too, to Jane Nemaia, Veve Jacobsen and "Toi" Nemaia for their assistance in Auckland.

To all Niueans, wherever they be, I offer this work, hoping that it will help them to continue maintaining their most precious resource: their children. To them all I say:

"Fakaaue lahi mahaki ki a mutolu oti. Monuina  
ki a mutolu oti."

## ABSTRACT

### SOCIAL ORGANIZATION AND HEALTH SERVICES FOR PRESCHOOL CHILDREN ON NIUE ISLAND, WESTERN POLYNESIA

Judith C. Barker

This dissertation examines relationships among cultural values, child-rearing practices, family and household organization, and use of formal and informal health services for children on Niue, a Polynesian island in the Southwest Pacific.

Though primarily ethnographic in approach, this study also uses data from health records and archival documents to examine: (1) the organization of health services for children on Niue; and, (2) parental responses to sickness in preschool children.

Niue's geography and colonial history left her, at Independence, with the best medical facilities in the Pacific. Certain values central to Niuean culture ensure that these services remain at a high standard.

Children are especially valued because of recent rapid out-migration from the island. Along with a very low rate of mortality, Niuean children experience rates of morbidity similar to that of children in more developed, temperate zone nations.

The Polynesian child-rearing pattern, so evident on Niue, strongly influences mothers's expectations of child development, especially after infancy. Early acquisition of social skills is enhanced by peer/sibling socialization.

Mothers poorly assess the seriousness of certain signs and symptoms of illness in children, particularly in infants. Also, mothers follow cultural norms by tending to delay seeking medical help for a sick child until the condition is well-established.

Mothers do, however, seek advice from their own mothers or other older female relatives about problems with children. Households are organized in such a way that the maternal grandmother can easily play a key role in raising children, especially first- and second- born children.

In addition to making extensive use of therapeutic and preventative health services offered by the Health Department on the island, mothers also resort to traditional healing for certain disorders of childhood for which cosmopolitan (Western) medicine lacks efficacy.

In showing how cultural values and social organization come to play central roles in parental understandings of and responses to sickness in children, this dissertation brings into greater focus an area in medical anthropology which has thus far received little attention.

## TABLE OF CONTENTS

	Page
PREFACE	ii
ABSTRACT	iv
TABLE OF CONTENTS	vi-xii
List of Maps	ix
List of Figures	x
List of Tables	x
CHAPTER I: INTRODUCTION	1
Problem Selection	1
Research Design And Methodology	5
Fieldwork And Modifications In Research Design	10
Major Findings From The Study On Niue	14
Significance Of This Study	16
Organization Of The Dissertation	21
Note	22
CHAPTER II: NIUE IN HISTORICAL PERSPECTIVE	24
Physical Geography	24
Early European Contacts With Niue	28
European Missionaries And An Era Of Disillusionment	34
From Annexation To Independence	40
Self Government	52
CHAPTER III: CONTEMPORARY NIUE	55
Service Infrastructure	55
Commerce And Employment	64
Land Use	66
Demography	68
Migration--A Central Feature Of Population History	69
Current Population Structure	74
The Effects Of Recent Migration At Village Level	76
Social Responses To De-Population	80
Governmental Responses	82
CHAPTER IV: NIUEAN ETHNOGRAPHY: TRADITIONAL AND MODERN	87
Sources Of Knowledge	87
Niue In Legend	89
Prehistory	90
Social Organization	94
Family Organization	99
Economic Pursuits	106
Religious Concepts	112
Modern Niuean Ethnography	118
Egalitarianism, Social Hierarchy And Achievement	119
The Church	122

Family And Land	125
National Consciousness	128
Ceremonies Of Childhood	129
<u>Hifi-Ulu</u> --A Boy's First Hair Cut	131
CHAPTER V: TRADITIONAL MEDICAL BELIEFS AND PRACTICES	137
The Influence Of The Samoan Pastors On Niuean Medicine	137
European Medicine And The Retention Of Indigenous Belief	140
Indigenous Niuean Medical Beliefs	143
The <u>Taulaatua</u> Or Traditional Healer	148
Disease In Pre-European Times	153
Traditional Medicine On Niue After Annexation	159
Traditional Healing In Contemporary Niue	166
CHAPTER VI: HISTORICAL DEVELOPMENT AND CONTEMPORARY ORGANIZATION OF HEALTH CARE SERVICES ON NIUE	167
The Beginning Of The European Era	167
Early Colonial Government Health Services	170
Foundations Of The Modern Health Service	173
Steady Growth In The Middle Decades: 1930 - 1960	179
The Effects Of Policy Changes In The 1950s	188
Health Services In The 1960s and 1970s	194
Medical Services In Independent Niue	199
The Economics Of Contemporary Health Care	200
The Health Department As Employer	203
Organizational Structure Of Health Services	206
Administrative Section	211
Preventative Section	214
The Therapeutic Section	217
Dentistry On Niue	224
Ancillary Services	226
CHAPTER VII: GENERAL AND PEDIATRIC MORTALITY AND MORBIDITY ON MODERN NIUE	229
General Mortality	230
General Morbidity	231
Pediatric Mortality	235
Pediatric Morbidity--Hospital Admissions	237
Total Child Admissions, 1977 to 1982	241
Causes Of Pediatric Admission	244
Principal Types Of Disorder	248
Length Of Stay	255
Hospital Admissions By Village	260
Summary Of Pediatric In-Patient Data	272
Pediatric Use Of Out-Patient Services	274
Comparison With Other Countries	282
Summary Of Pediatric Out-Patient Data	285

CHAPTER VIII: FORMAL AND INFORMAL ASPECTS OF CHILDREN'S HEALTH SERVICES, NIUE	287
Mothers And Sick Children	287
Development Of Child Welfare Services On Niue	291
Organization Of Child Welfare Services	294
Children With Special Problems	300
Child Welfare Clinics For Infants And Preschoolers	304
Attendance At Child Welfare Clinics	312
CHAPTER IX: THE LIFE COURSE IN POLYNESIAN SOCIETY	315
The Importance Of Children In Polynesian Life	316
Stages Of Maturity In Polynesian Life	317
Child-Rearing In Polynesian Culture	326
Adoption On Niue	330
Reasons For Adopting	336
Arranging An Adoption	339
Adoption And Stigma	343
Legal Adoption	348
CHAPTER X: ORGANIZATION OF NIUEAN HOUSEHOLDS IN WHICH PRESCHOOL CHILDREN RESIDE	354
The Developmental Cycle In Household Form	354
The Survey Of Households	358
Composition Of Households With Young Children	362
Area Differences In Household Constellation	367
Child's Birth Order And Household Composition	369
Household Constellation And Social Support	373
The Major Child-Raising Trio	377
CHAPTER XI: MOTHERS'S EXPECTATIONS OF CHILD DEVELOPMENT	381
The Life Of Polynesian Children	381
Niuean Ideas Of Development In Young Children	389
The Sample Of Mothers	391
The Structured Questions On Child Development	395
The Uniformity Of Mothers's Responses	399
Acquisition Of Motor Skills	401
Language Development	404
Development Of Personal And Social Attributes	405
Intellectual Development	413
Emotional Maturity And Independence	416
Year-By-Year Development	424
CHAPTER XII: MOTHERS AND THEIR RESPONSES TO SICK CHILDREN	427
Vignettes Of Medical Symptoms And Situations	428
Mothers's Ranking Of Vignettes By Seriousness	432

Delays In Seeking Help	438
Certain Conditions In Infancy	446
Characteristics Of Situations Deemed Serious By The Mothers	450
"Dont' Know" Responses	452
Mothers's Actual Use Of Elders For Advice About Children	455
Mothers's Responses To Actual Illness In Children	458
The "Call Book"	459
Child-Related Telephone Calls	463
Reason For Calling	470
Calls And Vignettes	474
CHAPTER XIII: CONTEMPORARY USE OF TRADITIONAL MEDICAL BELIEFS AND PRACTICES FOR CHILDREN	476
Traditional Medical Beliefs And Practices	476
Pregnancy And Child-Birth	478
Immediate Post-Partum Period	484
Traditional Medicine In Infancy	488
Older Children And Traditional Medicine	493
CHAPTER XIV: DISCUSSION	496
Niue Encapsulated	496
The Place Of Children In Niuean Life	498
Conclusion	502
NOTES	504
BIBLIOGRAPHY	512
APPENDICES	
1: Population Base Used In Calculating Rates Of Hospital Admission	531
2: Characteristics Of Extremely Long-Stay Pediatric In-Patients	533
3: Knowledge And Expectations Of Child Development	534
4: Niuean Mothers's Responses To Child Development Questions	537
5: Vignettes Of Medical Symptoms And Situations	539
6: List Of Medical Situations/Symptoms Presented In Each Vignette, And Appropriate Response Numbers, And Niuean Mothers's Responses To Vignettes Of Symptoms And Situations	542
LIST OF MAPS	
1: The Southern Pacific Region	25
2: Location Of Niue In Western Polynesia	26
3: Map Of Niue	57
4: Distribution Of Population On Niue, by village, 1981	58

## LIST OF FIGURES

1: Population Distribution, By Age, Niue, 1981	75
2: Village Population Distribution, Niue, 1966 to 1981	77
3: Layout Of Health Department Complex, Niue	207
4: Organizational Chart Of Niue Health Department	209
5: Reasons For Pediatric Admission To Hospital, Niue, 1977 to 1982, by sex and area	266

## LIST OF TABLES

1: Remuneration And Length Of Service For Permanent Staff, Niue Health Department, December 1982	204
2: Provision Of Hospital Beds And Staff (per capita), Niue and New Zealand, 1982	217
3: Total Number Of Dental Attendances And Type Of Work Performed, Niue Dental Clinic, 1981	226
4: Number Of X-Rays Taken And Pharmacy Items Dispensed, Niue Health Department, 1981	227
5: Major Causes Of Adult Death On Niue, 1978 to 1982, by age and sex	231
6: Admissions To Hospital On Niue, 1977 to 1982	233
7: Infant Mortality Rates On Niue, By Decades, 1940 to 1980	236
8: Number Of Children, Aged 0 to 15 years, Admitted To Hospital On Niue Between 1977 and 1982, by sex and year of admission	242
9: Rates Of Pediatric Hospitalization, by age and sex, for Niue 1977 to 1982	242
10: Comparison Of Rates Of Pediatric Hospitalization, by age and sex, for Niue 1977 to 1982, and New Zealand (NZ) 1979	243
11: Major Causes Of Pediatric Admissions, by sex, for Niue 1977 to 1982	245
12: Major Reasons for Pediatric Admission, by age, for Niue 1977 to 1982	246
13: Comparison Of Major Causes Of Acute Pediatric Admission To Hospital, for Niue 1977 to 1982 and New Zealand 1979	247
14: Admission For Various Types Of Respiratory Disorder, by sex, for Niue 1977 to 1982	249
15: Admission For Various Types Of Gastro-Intestinal Disorders, by sex, for Niue 1977 to 1982	250
16: Length Of Stay For Pediatric Admissions, Niue 1977 to 1982	255
17: Mean Length Of Stay For Pediatric In-Patients, by age and sex, Niue 1977 to 1982	257
18: Mean Length Of Stay (Days) By Reason For Admission, by sex, Niue 1977 to 1982	259
19: Number Of Pediatric Admissions, by sex and village of residence, Niue 1977 to 1982	261
20: Number Of Pediatric In-Patients From Each Area,	263

21: Number Of Pediatric In-Patients From Each Area, by age, Niue 1977 to 1982	264
22: Number Of Pediatric In-Patients From Each Area, by length of stay, Niue 1977 to 1982	268
23: Mean Length Of Stay (Days) For Pediatric In- Patients From Each Area, by sex, Niue 1977 to 1982	270
24: Mean Length Of Stay (Days) For Pediatric In- Patients From each Area, by age, Niue 1977 to 1982	271
25: Number of Pediatric Out-Patient Attendances, by sex, Niue 1982	279
26: Reasons For Pediatric Out-Patient Attendance, by sex, Niue 1982	280
27: Number Of Children On Niuean Child Welfare Records, by sex and area, and Ratio Of Children To Mothers, June 1982	312
28: Birth Order Of Children On Child Welfare Records, June 1982	313
29: Kin Relationships Between Applicants For Adoption And The Adoptive Child, Niue 1981 and 1982	350
30: Number Of Persons Per Household	362
31: Number Of Generations Per Household	364
32: Composition Of Niuean Households Which Contain Preschool Children	365
33: Variation In Household Constellation By Area, Niue, 1975	369
34: Number Of Parents A Child Lives With, By Birth Order Of Youngest Child To Those Parents	370
35: Number Of Adults In The Household, By Birth Order Of Youngest Child	373
36: Median Responses To Motor Skill Items	401
37: Median Responses To Items Concerning Language	404
38: Median Responses To Items About Personal And Social Development	405
39: Median Responses To Items About Intellectual Development	414
40: Median Responses To Items About Emotional Maturity And Independence	417
41: Serious Conditions Presented In The Questionnaire, In Order From Most To Least Urgent	433
42: Niuean Mothers's Rank Of Symptoms By Seriousness Ranked By Median Score	434
43: Niuean Mothers's Ranking Of Vignettes Referring To Infants, In Order From Serious To Relatively Innocuous	447
44: Age And Sex Of Children About Whom Calls Were Made	464
45: Age Distribution Of Children In Calls, By Area	466
46: Relationship Of Caller To Child About Whom Calls Were Lodged	467
47: Duration Of Complaint Before Call	469

48: Length Of Time Between Onset Of Problem And Call, By Age Of Child	469
49: Symptoms Mentioned In Child-Related Calls	471
50: Age Of Child And Type Of Complaint	472
51: Type Of Complaint By Area	472
52: Type Of Problem By Duration	473

## CHAPTER I

### INTRODUCTION

This dissertation examines relationships among cultural values, child-rearing practices, family organization, and formal and informal health services for children on Niue, a Polynesian island in the Southwest Pacific.

Reasons for the selection of this particular topic are examined first in this Introduction. Considered next are the design of the research and the methodology, followed by a discussion of the modifications in the execution of the study that became inevitable once fieldwork actually started. A brief review of the major findings is followed by discussion of how these findings contribute to a variety of disciplines, including the field of medical anthropology itself. The Introduction ends with an overview of the organization and linkage of the chapters which follow.

### PROBLEM SELECTION

Migrants from various Pacific Islands now constitute around two percent of the entire population of New Zealand, my country of origin. These population movements began around the end of the World War II and have continued at an increasing pace ever since. At present, in certain areas, particularly in Auckland and the surrounding environs in the North of New Zealand, Pacific Islanders or Polynesians as

they are commonly called, constitute a much larger and still growing segment of the population, up to 50% in certain suburbs (New Zealand Census 1981).

As in all cases of migration, both migrant and host communities take time to adjust to each other, especially if their cultural backgrounds are vastly different, as in this case. One area in which difficulties of adjustment frequently show up is health care (Tonkin et al 1979; Stanhope & Dodge 1974; Clark 1983).

#### Polynesian Child Health Status After Migration

Physicians, nurses and teachers, especially in Auckland, are finding that migrant Polynesian children often suffer particular and deleterious changes in health status after migration (Tonkin 1974a,b,c; Tonkin & Wynne-Jones 1979; Tonkin et al 1979). Children from the Tokelau islands, for example, experienced greater morbidity in New Zealand, stemming from increases in chest infections, severe ear infections with consequent hearing losses, skin infections, parasitism, gastro-intestinal disorders, and tuberculosis. For one group of under-five-year-olds the proportion who had ever been hospitalized reached 45% (Tonkin 1974b).

Reasons for this decline in children's usual health status are unclear. Genetic susceptibility, dietary changes, climatic differences, change in socio-economic status, style of child-rearing and general "life-style" differences have all been implicated (Stanhope & Dodge 1974; Stanhope 1977).

While it is probable that each of these factors plays some role in accounting for children's declining health, the majority of explanations given in the literature single out Polynesian "life-style" as the prime cause. Indeed, accounts of migrant Polynesian parents in New Zealand and their responses to illness in their children, present a rather gloomy picture.

#### Parental Response To Sick Children

A veritable litany of problems is recounted. Some parents do not know where to take their child to receive medical aid. Polynesian parents delay seeking help until the child is very ill, or do not seek medical help at all. Parents do not recognise or accurately assess the seriousness of signs and symptoms displayed by sick children. They are often non-compliant with physician's orders and are frequently reluctant to allow children to undergo necessary hospitalization (Barnett 1977; Mackay 1977; Mackenzie 1976; Tonkin 1974a,b,c; Tonkin & Wynne-Jones 1979). Even if they do allow the child to be admitted, parents make poor plans for the convalescent period, relying on teenagers or even younger children to care for a child newly discharged from hospital. So hospitals keep Polynesian children an average of two days longer than all other pediatric in-patients (Krantzler 1984). It has even been suggested that Polynesian parents, especially women, adjusting to employment and to new circumstances, are under

such tremendous stresses created by migration and acculturation that on occasion they neglect or abuse their offspring (Ritchie & Ritchie 1981; Dubanoski & Snyder 1980; Dubanoski 1981).

In addition to these suggestions, that Polynesian parents do not recognise, assess or cope very well with childhood illness, other explanations were put forth to account for the decline in migrant children's health. These other reasons all focussed on the changes migration wrought in Polynesian social organization.

Polynesian family life in New Zealand is less cohesive, adversely affecting children. Change occurs in parental interaction, with men becoming more central figures in domestic organization, taking over roles previously reserved for women. A reduction takes place in the generational depth in the household, with a consequence that young adults, especially women, are forced early into decision-making roles usually reserved for older, more experienced persons. This makes people hesitant, afraid and rigid in the face of a host of decisions which confront migrants in a new land. There is also shrinkage in the number of people living in a household. This creates difficulties for women who are unaccustomed to, but often suddenly forced into, undertaking childcare on their own for long periods of time. Also, different patterns of child-rearing, with a greater reliance upon sibling caretaking, though inappropriate in a New Zealand setting, are maintained for a variety of social or economic reasons ( Barnett 1977; Tonkin 1974a,b,c, 1977;

Social Development Council 1978; Ritchie & Ritchie 1981; see also Dubanoski 1981; Dubanoski & Snyder 1980).

This picture of Polynesian parenthood and response to children's illness has been drawn by inference, largely though not exclusively from clinical cases, from anecdote, and from interpretation of official statistics. It has considered only the "problem cases", the ones that came to attention because something went wrong, ignoring--or rather, being unaware of--those cases in which no problems arose. Moreover, though certain changes in social organization had been noted in the various Polynesian migrant communities, little work had been done to actually link these changes to alterations in children's health status.

Moreover, on the basis of scant evidence, it has been assumed that parental reactions to illness in children were altered or even created by the migration experience. How valid is this assumption? Is it, indeed, only after migration that parents delay seeking medical help for their sick children, that they do not recognise or assess adequately signs and symptoms of illness?

#### **RESEARCH DESIGN AND METHODOLOGY**

Here then was a sizeable problem in the medical field that was amenable to study by a social anthropologist. Moreover, it was a real problem, not just a theoretically interesting one. The outcome of studying this problem offers opportunity for assisting the major protagonists--Polynesian

peoples and staff in a cosmopolitan medical system--to understand each other better through culturally-sensitive "translation." Furthermore, it combines several of my interests: in family organization, in social process, in migration, and in the anthropology of medical systems, particularly in relation to children's health.

Thus, I developed a dissertation research project designed to answer three central questions. Do Polynesian parents, in their homeland situations, recognise and correctly assess signs and symptoms of illness in children? Do parents delay seeking medical help for sick children? What roles do family organization and cultural values play in preventing childhood disease and in healing sick children?

To answer these questions, investigations would be made of: cultural beliefs and practices in general and especially around children; family organization; child-rearing practices; and, use of formal and informal health services, in the island of origin of a Polynesian people.

The South Pacific Medical Research Committee of the Medical Research Council of New Zealand, interested in the problem, funded the data collection stage of the study.

### The Choice Of Niue

Despite the considerable similarities which exist among all Polynesian societies, they are significantly different from each other (Macpherson 1978). There is a danger in generalizing from one Polynesian group to another.

Obviously, however, not all Pacific Island Polynesian groups that migrate to New Zealand could be studied. One particular group had to be chosen from the major Polynesian migrant groups in New Zealand, from Western Samoans, Cook Island Maoris, Niueans, Tongans, and Tokelauans.

Niueans were the people selected to act as a test case for all Polynesian peoples who migrate to New Zealand. Several factors led to this choice.

First, Niueans are New Zealand citizens with free access to the mainland. A large proportion of the Niuean population has migrated to New Zealand in the past and a large proportion continues to move in the present: it is estimated that some 5,000 Niueans now live in Auckland while only about 3,000 remain on the island. Also, this is one of the few Polynesian nations for which adequate demographic records exist, for both the island and the mainland situations (Walsh 1980; Walsh & Trlin 1973).

A third and important reason for choosing Niueans is that, unlike other Polynesian groups (for example, Samoans and Tokelauans), Niueans have not been subject to much social science research, either in their homeland or their new land, and so have not reached "saturation point" or a level of intolerance for such endeavours. Indeed, such study will help fill a significant gap in knowledge about contemporary Pacific peoples.

Further, like other Polynesian groups, Niueans have a high birth rate (about 3.8% per annum) which means that

children constitute an important segment of Niuean society. Unlike most other Polynesian nations, though, Niue is a single island with no out-lying islands; hence there are no internal differences in access to medical care, no rural hinterland/port town differences in access to or quality of medical services, as is common on other islands.

Finally, health services on Niue are of a high standard--"the best in the Pacific" according to some commentators (Walsh & Trlin 1973; Connell 1983)--which ensures that Niue's population are familiar with modern Western medicine. This minimises the likelihood that parental response is due to either very low expectations of what medical services can do or to "fright" stemming from a lack of experience with the machinery and paraphernalia of cosmopolitan medicine.

#### Data Collection Techniques

Both ethnographic and other standard social science techniques, such as interviews, structured questionnaires, and archival research were used. Data from the interviews and questionnaires were supplemented by study of medical records, at hospitals and clinics on the island, and by observation of children in typical medical settings. After a period of familiarization with the community via established participant-observation in all aspects of island life, the study moved to its second phase: formal and informal interviews with parents and other key informants, such as physicians, nurses and community leaders.

The research was designed so that both parents of 20 children (10 male, 10 female) were to be intensively interviewed about a wide range of topics: family form, social support networks, interaction with spouse and with children, expectations of child development, how to recognise illness in children, what is done about sick children. Three structured questionnaires were to be employed to help elicit data amenable to quantitative as well as qualitative analysis on these topics. These questionnaires, on spousal interaction (Spanier 1976), on child development expectations (Constable, Jacobs & Ward 1981), and on parental reactions to a series of hypothetical medical situations involving children (Stine & Chuaqui 1969), were used as adjuncts to other means of data collection rather than being ends in themselves.

To be eligible for interview, parents had to have a first-born child between the ages of one and five years. The actual parents interviewed were to be randomly selected from those eligible.

From studies in Western societies, it has been found that several factors affect not only the amount of attention parents pay to symptoms of illness in children but also the type and timing of treatment sought and compliance with physician orders. Some of these factors are: family size; child's birth order, age and sex; and number, type and severity of previous illnesses in children (Chen & Cobb 1960; Mechanic 1964; Morris, Hatch & Chipman 1966; Picken & Ireland 1969; Pratt 1973).

There is no reason to suppose that these factors did not also operate to some extent in a non-Western society. Selecting parents of first-born children between one and five years of age, therefore, considerably reduces variation arising from these factors. Also, parents of first and young children are themselves in the process of learning to cope with childhood illness, and so will be able to talk about who they consult for advice on children and childhood illnesses. Further, the children will be too young to wield much influence in these decision-making processes. Children of this age, too, are not so young that symptomatology is rapid, diffuse and uniform but rather signs of illness are differentiated and cluster into particular clinical patterns.

This study set out to examine in detail the role of fathers as well as mothers. The part others played, too, was not to be overlooked. Examination of the role of grandmothers and older female relatives in maintaining child health would be of interest.

#### **FIELDWORK AND MODIFICATIONS IN RESEARCH DESIGN**

From May 1982 through May 1983, the study was carried out on Niue Island, in the Southwest Pacific. As in all anthropological studies, once I arrived in the field and learnt how life is actually organized on Niue, changes had to be made in the design and execution of the study. Some factors resulted in the complete abandonment of proposed

activities, others merely modified my original intentions. Nevertheless, the central ideas were investigated.

During my time on the island I lived in the Nurses' Home at the hospital on Niue, which gave me easy access, both informally and formally, to health care services on the island and, more importantly, to many staff, their families and their social events. Though not ideal, this living situation turned out to be a reasonable compromise.

As a single woman, living on my own even in a village would have made me just another ex-patriate. Living with a particular family would have enmeshed me in multiple complex and long standing rivalries between families in the village and, further, between villages, all of which would limit my ability to get a complete, island-wide picture of child health. The Health Department and by extension the hospital, was seen as a Niuean institution with the Nurses' Home functioning as a quasi- Niuean family. Because the hospital was not affiliated with any one village it was not embroiled in inter-village rivalries.

### Work Timetable

The first six months of fieldwork consisted chiefly of language learning, general ethnographic study of contemporary Niuean life, and participant-observation of all aspects of health and welfare services, particularly those involving children. Later, examination of archival documents, official reports and medical records was undertaken to develop a sense of the type and severity of

health problems experienced by children on the island. More intensive attention was paid to child welfare and health services. The final stage of fieldwork involved a census/survey of four villages plus extensive interviews with mothers, physicians, nurses, community leaders and others interested in children's health. Interviews with mothers included structured questionnaires on expectations of child development and response to common medical situations concerning children.

Niueans are a friendly but shy people, still relatively unused to interacting with palagi (Europeans or expatriates) (McEwen 1974). They take a long time to "warm up" to one but once they do, they are direct, kind, generous and eager to help. Thus, it took much longer than anticipated to establish good rapport with individuals and the local community.

Intensive interviewing was delayed, too, for the same reason. This delay precluded doing additional interviews where necessary to fill gaps. While the total number of useable interviews fell below that aimed for in the original design, the overall research goals were achieved through other forms of data collection.

### Sampling Difficulties

All Niueans firmly believe that child-rearing is women's business and so they were non-plussed at the idea that men be interviewed on such a topic. Moreover, in this

culture men work hard--they work for wages during the early part of the day and then spend evenings, and often nights too, labouring in their bush gardens or out fishing. So it was difficult not just to find men as they were rarely home but also to find ones who had time to be interviewed. The greatest block to interviewing men, however, turned out to be their wives and girlfriends. These women were very suspicious of a female wanting to interview their men on a topic that was nothing to do with men. Many women thought "interviewing" was probably just a cover for some other activity! Hence, it proved impossible to interview fathers and discover their responses to the questionnaires.

Being able to interview mothers only was not too serious a limitation. The literature from Western societies, for example, shows clearly that the single most important person influencing a child's health status is the mother (Alpert et al 1967; Haggerty & Alpert 1963; Litman 1974). The most salient features determining a mother's ability to adequately control her child's illness are: her level of education, by far the most crucial factor; her family's income; her access to formal and informal means of social support; her relationship with her husband, particularly with respect to decisions about the child; her style of child-rearing; and, her knowledge of matters medical (Campbell 1975; Dodge et al 1970; Litman 1974; Mechanic 1964; Stine & Chuaqui 1969). All of these aspects were investigated.

Niuean women had some difficulty in understanding why I, a woman without children of my own, would be so intensely interested in issues surrounding the raising of children. Such interests were not really appropriate until one had a child of one's own. Nevertheless, they were prepared to humour me and so responded to my questions and interest with a degree of indulgent amusement.

Once rapport had been established with the women they proved very willing to answer questions and to talk about themselves, their family life, their children, and health issues. Niueans are not a very introspective people, however, and often it was hard to get women to think about general, more abstract topics as opposed to specific, concrete issues. The women's lack of familiarity with questionnaires, form-filling, social science and research also proved too great for one instrument. Spanier's (1976) instrument on marital interaction and stability proved entirely unworkable under these circumstances, unable to elicit reliable data from informants. The other test instruments (that based on Constable, Jacobs & Ward 1981, and Stine & Chuaqui 1969) were able to be administered in a fashion that generated useful data.

#### **MAJOR FINDINGS FROM THE STUDY ON NIUE**

Paradoxically, Niueans are typical Polynesians yet they are also very different from other such peoples. Their language, major traditional beliefs, economy, social

organization, and the general tenor of life are very like other Polynesian societies. But, Niue's strong emphasis on egalitarianism and achievement with, consequently, a small and flexible social hierarchy makes this a unique society, distinct from all other Polynesian cultures. Niue's natural resources and colonial history, too, differ from that of most other related groups. All these characteristics have left their stamp on many institutions on modern Niue, including the health services.

Migration has always been important on the island but recently it has achieved massive proportions with some villages losing as much as 50% of their population in the past five years. In such a climate, in which the inhabitants feel beleaguered and uncertain about the very existence of their nation in the future, the birth of new citizens and the preservation of the health of children becomes especially salient. Children, highly valued in all Polynesian societies, are especially valued on Niue.

Niue is in the position of being an under-developed nation in the tropics with a disease profile and health services more commonly found in Western industrialized nations. On Niue, child mortality, including infant mortality, is very low and childhood morbidity is unlike that in neighbouring Polynesian islands. Despite the dominance of males at many levels of society, from politics through social structure to ritual ceremonies, no differences could be found in the health status of children by sex.

The typical patterns of Polynesian child-rearing strongly influence mothers's reponses to sick children. Recognition of signs and symptoms of illness in children and alacrity of response to sick children are both enacted in a way that fits particular central values in Niuean life. Views of child development match Western norms throughout the first twelve months of life but thereafter, as the child ages, diverge widely as the strong cultural emphasis on early acquisition and display of social skills comes into effect. The role played by the maternal grandmother, that of teaching her daughter to parent, and to cope with illness in young children, is reinforced through household organization.

Although efforts have been made throughout the past 80 years to suppress native medicine, traditional healers still exist on Niue. Mothers make extensive use of traditional healing practices in order to prevent disorders in children and to cure certain diseases which are specific to Niueans.

#### **SIGNIFICANCE OF THIS STUDY**

This anthropological study of children's health contributes to several fields. It expands medicine's currently slim knowledge about children's health in the Pacific. Then, in the social sciences, it does several things. First, it produces a picture of the life of a Polynesian people about whom little has been written for 60 years. Second, it shows how attention to very specific facts

about family constellation, namely child's birth order, can give a vastly refined understanding of the developmental cycle in the organization of households. A third contribution is in the field of child development where it expands previous work by looking at exactly when and how central cultural beliefs and social processes around children create specific expectations. Finally, it opens up a previously neglected pathway in anthropological studies of children in society.

#### Contribution To Medicine

Very few socio-medical studies have ever been done on Pacific children's health. Tonkin and her co-workers on the Tokelau Island Migrant Study (Tonkin 1974 a,b,c; 1977; Tonkin & Wynne 1979; Hooper & Huntsman 1975) have provided the most extensive account available of pediatric health in both the homeland and migrant situations. Mackenzie's (1973) unpublished study is another such endeavour which looks at child health problems in Rarotonga, Cook Islands. The work of Kinloch (1980) and Parsons (1983, 1984) touch peripherally upon children's health when considering modern health practices among Western Samoans and Tongans, respectively.

The work presented here, then, augments that small body of literature in an important way. It shows how the interactions among cultural beliefs, family and household organization, and child-rearing practices, give rise to particular ways of and ideas about caring for children, be

they well or sick. It demonstrates the continued importance of informal, traditional healing practices for maintaining child health. Some of the salient dimensions of delay in seeking help and in recognition of signs of illness have been discovered. Interestingly, these are shown to be not simply the result of migration but, rather, a more central fact of Polynesian life.

From this data, health educators and public health officials can derive programs to inform mothers of how to recognise sick children and of when to promptly seek medical help. This service is as vital in a homeland situation as it is in migrant communities.

### Significance To Social Science

Ethnography. So little has been written about Niue since the last standard ethnography (Loeb 1926) that it is still little known even in the world of academics interested in Pacific peoples. In part this is because Niue is a small, isolated island with a miniscule population compared to her larger neighbours, Western Samoa and Tonga. In part this is because she has been content to sit back and carry on quietly with the task of modernising and entering the international arena as an independent nation.

This study, then, presents a reasonably coherent view of contemporary Niue. It documents the intermingling of tradition and change in the face of massive out-migration, and the importance of children to a people whose very existence in the future is in doubt.

Developmental Cycle. On an entirely different level, this dissertation makes another contribution to social science. Since its introduction in the 1930s, the notion of developmental cycle has become well-established.

Anthropology has made great use of the idea to explain intra-cultural variation in household size, composition, and location (White 1969; Fortes 1958, 1978). Most of these studies, however, have concentrated on gross variations in household composition generated by major life-cycle stages, such as marriage, birth of children, initiation of youngsters, and growing old. Thus far, no studies have looked at micro-differences in household form and linked those with other social processes or cultural values.

This study demonstrates how birth order of a child can account for variation in household composition within a single major life cycle stage, the stage of households still producing young children. It also shows how these small differences in household composition display central values around child-rearing.

Child Development Literature. Children have not only been prominent figures in countless ethnographic works but for several decades now but they have constituted a major focus of study for one important branch of anthropology--culture and personality studies. Many works (e.g., Mead 1928; Whiting 1941; Whiting & Whiting 1975; Barry, Bacon & Child 1957; Barry, Child & Bacon 1959) have examined the way in which cultural beliefs and values mould children into adults, in which differences in child-rearing

practices can be linked to larger social factors, such as economic strategies or religious beliefs. Child development in non-Western countries is also a topic that has generated much interest for many years (see, e.g., Laboratory of Comparative Human Cognition 1979; Super & Harkness 1982; Wagner & Stevenson 1982; Werner 1979).

Most of work on child development, however, has concerned itself with understanding differences in children's physical growth, in their psychological and social development, and in differences between children of various cultures based on norms derived from Western theory.

Various "niches" (Harkness & Super 1983) for child development have been explored in broad outline but rarely has anyone looked at the exact manner in which cultural beliefs and practices shape the culture's own expectations of child development. Hence, this dissertation breaks new ground in demonstrating how Niuean values around social skills and hard work are reflected not just in the emphases mothers place on certain values but in the very substance of their expectations of child development.

Strategies For Maintaining Child Health. Hilger's (1966) handbook assists investigators in collecting data about child-life and cultural customs about children. That otherwise comprehensive guide to fieldwork, however, does not consider in detail aspects pertinent to child health. Indeed, this is a long neglected aspect of study within the discipline: few anthropologists have examined the way in

which cultures manage sick children or attempt to protect their children's health.

Most works that discuss medical and healing practices deal with children peripherally. To be sure, topics involving children, such as birth customs, nutrition, rituals of initiation, and the like, are common but few works focus specifically on children and their health. So, the present dissertation extends a so far little used trail of interest within anthropology, focussing as it does on children and their health and well-being in the light of wider societal values, beliefs and practices.

#### **ORGANIZATION OF THE DISSERTATION**

The first part of this dissertation provides background information about Niue. Chapter II briefly outlines the physical geography of the island, followed by a history of discovery, annexation and administration until Independence. Chapter III looks at the service infrastructure of modern Niue and presents a short history of population movements to and from the island. Next, in Chapter IV, comes a discussion of Niuean ethnography, both traditional and modern. This sets the scene for Chapter V's consideration of traditional Niuean medical beliefs and practices.

The historical development of health services on Niue, from the time of the initial European settlers to Independence, and present day health services on the island, are discussed in Chapter VI. Mortality and morbidity data

are presented next, in Chapter VII, which deals mainly with pediatric admissions to hospital on Niue and use of out-patient services by children. This part of the dissertation closes with Chapter VIII's presentation of data on Child Welfare services on the island.

Chapter IX takes the discussion in a different direction, away from health services into the life course in Polynesian society. This is followed, in Chapter X, by consideration of the organization of Niuean households with under-five-year old children. The links between child-rearing patterns, family organization and mothers's expectations of normal child development are presented in Chapter XI.

The final part of the dissertation is made up of Chapters XII and XIII. These chapters look at how well mothers recognise and assess signs and symptoms of illness in children, and at the use mothers make of traditional healing techniques in preventing and curing sickness in children.

Chapter XIV discusses the major conclusions reached in the dissertation. This is followed by Notes, Bibliographic References, and Appendices.

#### NOTE

Throughout this dissertation, use of the male gender is inclusive, not exclusive, of females. Reference to "he", "his", or "him" is merely a grammatical device which I find to be less confusing than arbitrarily scattering "her"s and

"she"s throughout the text and to be more esthetically pleasing than "it" or "its" after a generic reference such as "the child".

The text is written in the ethnographic present. Some minor changes have occurred in the personnel and organization of the Health Department on Niue and in some other areas of Niuean life that make present day life on the island slightly different from the account given here. This account refers to Niue between May 1982 and May 1983.

## CHAPTER II

### NIUE IN HISTORICAL PERSPECTIVE

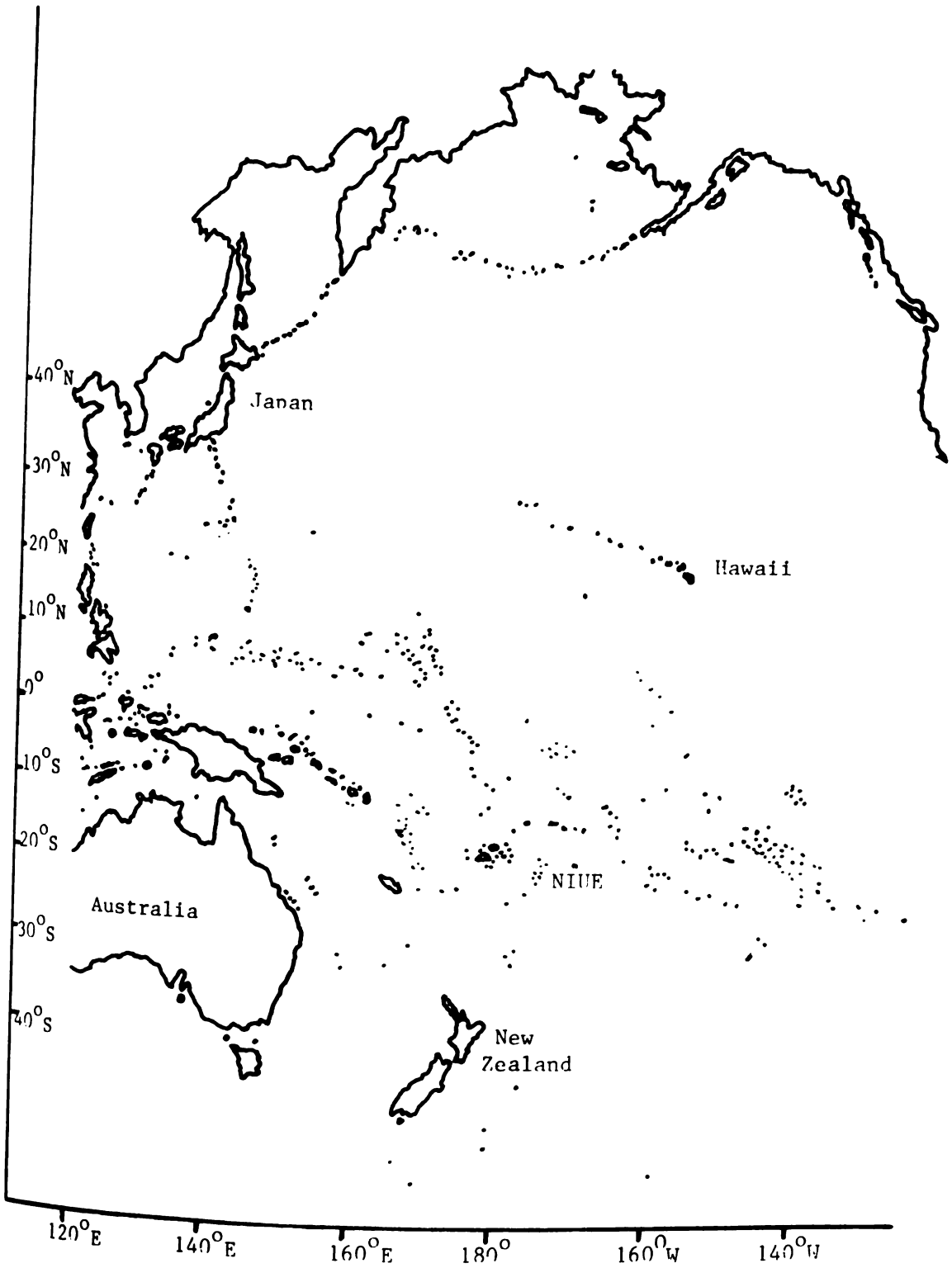
Niue is an isolated, single island in the southern Pacific Ocean. Far from neighbouring islands, it is located some 500km east of Tonga, 600km SSE of Samoa, and 1,000km west of Rarotonga in the Southern Cooks (see Maps 1 & 2). It has been inhabited by a small group of Polynesian people, less than 5,000 in number, probably from as early as AD120 (Ryan 1977:46).

### PHYSICAL GEOGRAPHY

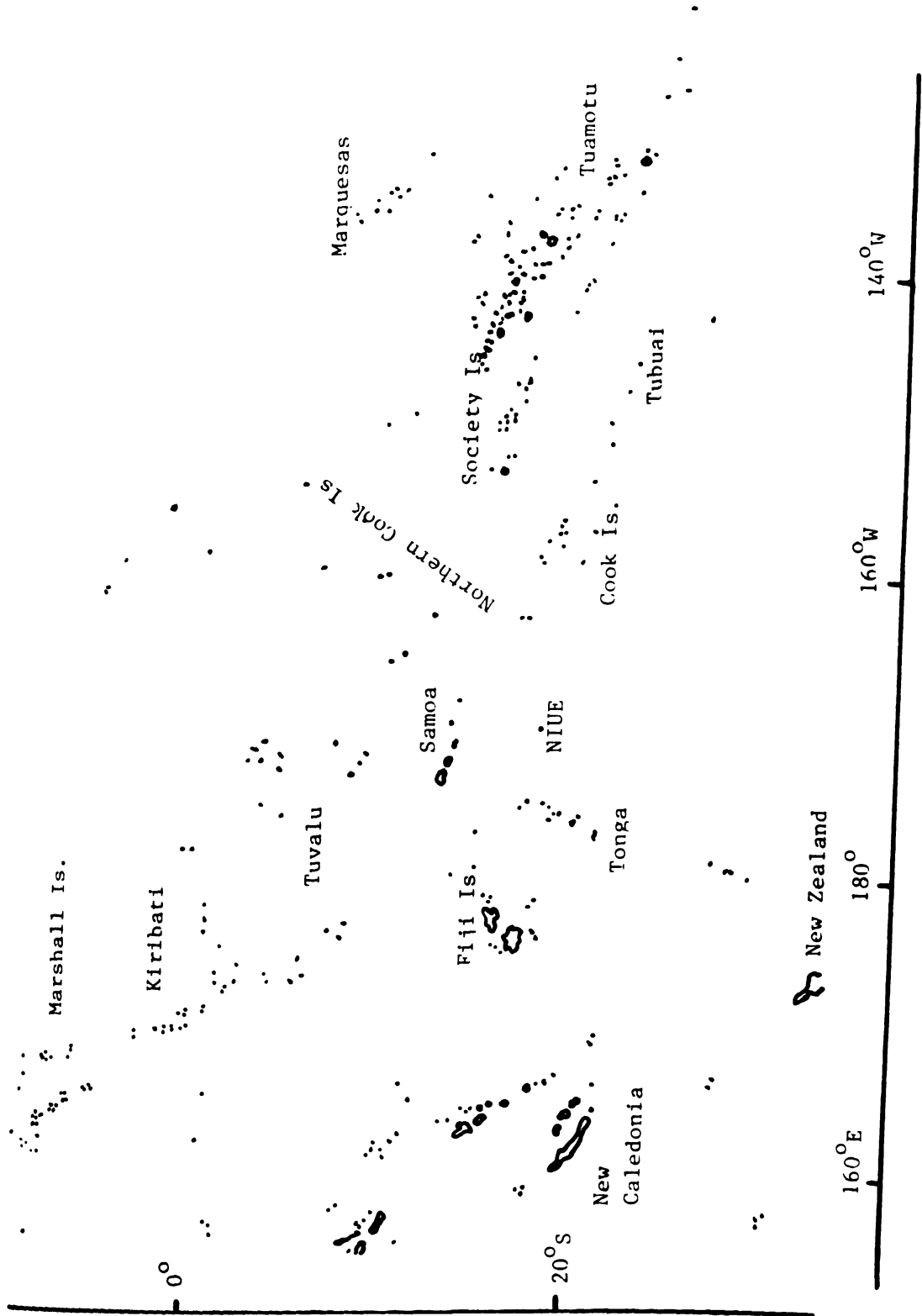
When one mentions the phrase "South Pacific island" an image of luxuriant tropical foliage surrounding golden, sandy beaches and placid clear lagoons, springs to mind. Niue is not such an Eden.

Niue Island rises directly from the ocean floor some 8,000m below sealevel to clifftops 75m above the ocean surface (Fieldes 1972). The deep ocean waters surrounding the island are rough and uninviting. The island's rugged coastline is broken and split by chasms and caves. Access is difficult. There are no true reefs or lagoons and only a few miniscule beaches of coarse sand and jutting coral rock. Coastal vegetation is sparse and stunted.

MAP 1: THE SOUTHERN PACIFIC REGION



MAP 2: LOCATION OF NIUE IN WESTERN POLYNESIA



## Geology and Climate

Reputedly the largest coral island in the world (Ministry of Foreign Affairs 1983:3), Niue is a single island, 260 sq.km in area with a circumference of 60km. Formed by two separate volcanic upheavals over 300,000 years ago (Fieldes 1972), it consists of a narrow (200m wide) shelf of land 30m above sea level which encircles a central saucer shaped plateau some 75m above sea level. About 16km in diameter, this central basin, thought to be a dried up lagoon, has the best soils and plantations on the island.

There is no surface water on Niue, and only a few caves in which pools of brackish water can be found. An average temperature of 27<sup>o</sup> C and average humidity of 75%, accompany an average annual rainfall of over 2,000mm (Naval Intelligence 1943). Niue does, nevertheless, occasionally suffer from severe droughts lasting twelve months or more. The last such occurrence was in 1982-83. The prevailing easterly trade wind makes the ocean on the eastern side of the island particularly rough and dangerous and helps dry out the soil during droughts.

Situated on the edge of the hurricane belt, Niue is vulnerable between December and March. Though hurricanes actually pass over the island on average only once every seven years, there are many "alerts" each season as hurricanes pass close by. Devastation by the extreme winds, torrential rains and high seas associated with hurricanes is not frequent but does occasionally happen. The last hurricane to affect the island occurred in 1979.

### Indigenous Fauna and Flora

There were no large indigenous animals on Niue before the introduction of dogs, pigs, cows, and horses in the 19th Century. The native fauna consisted mainly of a rat (now extinct), the flying fox or bat, lizards, birds, and a variety of land crabs. The native bat, pigeon, and land crabs are used extensively as food sources supplementing the supply of fish, seafood, and edible vegetation.

Approximately 15% of the total land surface on Niue is bare, jagged coral rock. This basic coral limestone is covered by a thin mantle of soil some 35cm thick, able to be tilled only by hand because it is found in pockets between limestone outcrops. Some 10% of available land is under cultivation at any one time. Most of the rest of the island is covered in fern, scrub or secondary growth forest. One small part, primary forest at Huvalu, remains a sacred, tapu region, and serves as an undisturbed breeding ground for local fauna. One fifth of the forest, whether primary growth or secondary plantings, consists of merchantable native timbers (Frost & Berryman 1966; Ministry of Foreign Affairs 1983; Sykes 1970).

### **EARLY EUROPEAN CONTACTS WITH NIUE**

The history of European contact and exploitation of Niue is much the same as the history of any South Pacific island except that contacts by missionaries and traders and annexation by a Great Power took place decades after the

other islands. Niue's location, lack of resources and the reputation of its inhabitants accounted for this.

### Origins Of the Indigenous Population

Contemporary Niuean language and social organization differ markedly from other Western Polynesian forms yet are clearly linked to them. Some argument surrounds the exact origin of the Niueans, whether from Samoa (Loeb 1926) or from Tonga (Mc Ewen 1970; Pawley 1967). Little archaeological evidence is available to decide this issue, but the consensus of opinion, based on linguistic and socio-cultural evidence and oral traditions, favours Tonga as the point of origin of these people, with considerable later influences from Samoa and Pukapuka in The Cook Islands (Kumitau & Hekau 1982; McEwen 1970; Ryan 1977:45; Tahafa Talagi 1982).

Because literate people rarely visited Niue until after considerable social change had occurred and because the tradition of oral history is not as central to Niuean life as to other Polynesian societies, there exist few reliable accounts of life on the island prior to the late 19th Century. Reconstructions from scanty ethnographic and traditional data are rather flimsy (see Loeb 1926 and Smith 1983; Ryan 1977).

### Acquiring A Reputation

Captain James Cook was the first European to sight Niue Island, on 21 June 1774, during his second voyage of

discovery in the South Pacific region. His three attempts to land were uniformly greeted (see McLachlan 1982; Ryan 1984). Hostile war parties would suddenly appear, the men clad in ferns, their bodies darkened with ashes, the red juice of the hulahula banana running down their chins. Waving spears and uttering blood-curdling screams, the Niueans advanced to engage his men. Little actual combat seems to have occurred, but tradition has it that shots were fired by Cook's men during the third encounter, at Opaahi near Alofi. Cook hastily retreated aboard "Resolution" and left, content to name the place "Savage Island" and to move on to more congenial discoveries elsewhere (Fifita Talagi 1982).

Not only then was Niue a small island, far from established trade routes in the Pacific, but it had no strategic importance, extremely difficult access and terrain, no valuable indigenous products, a hostile population, and little hope of ever producing commercial crops in quantities sufficient to repay capital investment. Niue was an exceedingly unattractive prospect for annexation by the European powers.

Indeed, it was not brought under the flag of one of the European nations until 1900, many decades after most of the other Pacific islands had been annexed by one or other Great Power. That did not mean, however, that it escaped the influence of European intrusion into the South Seas. From the early 1800's on, Niueans encountered a miscellany of Europeans displaying all the diverse aspirations and achievements of 19th Century Western civilization:

shipwrecked sailors, escaped convicts, sealers and whalers, black-birders, missionaries, naval commanders, and traders, American, British, Spanish and Peruvian, all of whom played some role in ushering Niuean society out of the Stone Age.

### The Coming Of The Gospel

Niue was relatively free of European visitors for nearly 50 years following Cook's visit, perhaps because of the hostile reputation he gave them but also because it was small, far away, and had nothing of value to European society.

After Cook, the next significant encounter with a European took place in June 1830. The missionary John Williams, roving the Pacific aboard "The Messenger Of Peace" taking the gospel message to new lands, hove-to off Niue intending to land two London Missionary Society teachers from Aitutaki in the Southern Cooks. Twice they landed and twice they were met by hostile crowds. In a fracas surrounding their departure, Williams captured two Niuean youths, Uea from Makefu and Niumaga from Alofi, an act that cannot have endeared him to Niueans.

The two boys returned the next year from Raiatea in the Society Islands where Williams had taken them so they could learn the gospel. Soon after they landed, however, an epidemic broke out, spreadly quickly and killing many. As a revenge, they were pursued. Uea and his father was killed while Niumaga managed to make his escape, along with another lad, Peniamina Nukai. Oral tradition claims that the boys

were landed at Tuapa, far from Niumaga's point of origin, and that it was as much for that as for the disease, that he was pursued. That same oral tradition, today credits Uea with having brought three things to Niue: the gospel, the pawpaw (loku), and a disease, known as kafukula, which some say was influenza and others claim was "syphilis-like" (Fifita Talagi 1982:113).

Niumaga and Peniamina eventually arrived in Samoa where they worked for the missionary Dr Turner, learning to read, write and teach the Bible's message (Fifita Talagi 1982:113-114). Though occasional short visits were made to Niue in the 1830's by European missionaries, no systematic efforts were made to convert the people to Christianity for still the natives strongly resented the presence of strangers on their island. In October 1840, Peniamina returned to his homeland bringing, once more, the gospel and new European goods. He, too, was greeted with suspicion by the inhabitants of Mutalau, the village where he was landed. At first, no one would offer him shelter for fear of getting some new disease, but he was fortunate, no outbreak of disease accompanied his return and curiosity ran high about the contents of the wooden chest he brought with him. Moreover, his return with a tohi (book) had been predicted by Kilipaula, a respected elder and priest at Mutalau (Niue Education Department 1979). Gradually, Peniamina won the people's trust and began converting Niue into a Christian realm.

Soon Niueans began to demand teachers to instruct them in reading and writing for they realised that literacy went hand-in-hand with the possession of material goods. Like peoples all over the Pacific, Niueans coveted the wondrous material possessions of the whiteman but they couched their desires in acts of fervent new religiosity, as in pagan days when propitiation of the Gods led to the acquisition of desired ends.

### Samoa Pastors And Social Change

Samoa eventually supplied teachers. The first, Paulo, arrived in October 1849 and took over the mission station at Mutalau (Fifita Talagi 1982). Four other Samoan pastors arrived during the early 1850's: Samuela went to the mission station in Avatele; Sakeria to Tuapa; Moose to Alofi, and Amosa to Hakupu.

Between them in just ten years the Samoan pastors completely re-ordered Niuean society. When Dr Turner visited Niue in 1859 he reported that the traditionally warring factions of Niuean society were living in peace. Many Niueans could read and write and substantial portions of the Bible had been translated into Niuean. People gathered into coastal villages, leaving aside their traditional scattered hamlets in the bush, and a road was made to connect all the villages. A new system of justice and a weekly cycle of work and prayer prevailed. Throngs of up to 1,000 eagerly attended Sunday services to hear the gospel message. Old monarchical political structures were quickly disposed of

(Fifita Talagi 1982; Niue Education Department 1979; Ryan 1977).

As in Samoa, the church literally and figuratively dominated these new villages. The pastor, too, came to occupy a new, more central position in the social order, quite unlike that which the indigenous Niuean priests had hitherto occupied but remarkably similar to that which pastors in Samoa enjoyed.

Still the people clamoured. Now, for European missionaries to be sent. Their new found faith in Europeans was not diminished by incidents such as that in 1853 involving the British warship "Calliope" which was seeking survivors from a Spanish-Portuguese shipwreck off the southwest point on Niue. Not believing that the surviving crew had already left for Samoa, the British created a skirmish which left several Niueans either shot or drowned. Despite this incident, the damage to Christianity was only temporary and the people's enthusiasm for a European missionary dampened not at all (Fifita Talagi 1982:116).

#### **EUROPEAN MISSIONARIES AND AN ERA OF DISILLUSIONMENT**

The first of several Europeans who were to arrive on Niue for more than a temporary sojourn was W. George Lawes, a European missionary, who arrived in 1861. He, too, had a great impact on Niuean society, consolidating the changes wrought by the Samoan pastors and introducing yet more new ways.

The oval, thatched falepola houses were changed to a wattle-and-daub type wall construction, using native timbers and puga or crushed limestone, and a thatched roof. The local populace were encouraged to dress in European clothing. Lawes strengthened the move to peaceful co-existence of the various factions by creating an island-wide Fono or council of elders to regulate Niuean life. This replaced the individual fono which ruled each village. In this way he hoped to reduce allegiance to particular villages and make elders responsive to his persuasion about what was good for Niue as a whole. In addition, the central Fono set up a native constabulary with power to fine people for misdemeanours or to incarcerate them in stocks for more serious offences.

During this time, more and more passages of scripture were being translated into Niuean. At various times between 1865 and 1874, Niueans themselves left for the New Hebrides and Papua New Guinea, taking the gospel message and converting the people to their new religion. When 3,500 copies of the New Testament arrived in Niue in 1868, some 500 were sold within a few days (Fifita Talagi 1982:120).

This was the end of an era, however. By 1868 when Lawes's brother Frank arrived to continue the mission, a decrease in Christian fervour became evident. The numbers of people attending schools and church services dropped considerably and dissent grew between the elders and youth. The latter part of the 19th Century, then, was a period of growing disillusionment with the gospel message.

In part, disillusionment was due to a realization that the missionaries were just men and not demi-Gods or heroes, and as men they did not always practice what they preached. The amount of property and wealth aboard the missionary vessel "John Williams" which was wrecked off Niue in 1870, for example, shocked the Niueans who had previously imagined that missionaries lived up to their messages of poverty and charity (Tafatu & Tukuitoga 1982:123). In part, the disillusionment was a turn from the sacred to the secular aspects of European ways as traders and labour contractors began to visit Niue more regularly.

#### The Influence Of Traders And Labour Contractors

Before about 1865, trade had been conducted intermittently with passing ships. By 1870, however, permanent traders had settled on the island, with far-reaching effects on agricultural practices and the economy.

The changes introduced by the missionaries indirectly benefitted the traders for it was they who supplied European clothes, gardening and fishing tools, furniture and other household items, and, even, Bibles. Moreover, the Niueans needed to trade in order to get money to support their church and its charities, and to buy the previously mentioned goods. Niueans took to trading crops for cash: fungus, arrowroot, copra, and, especially, cotton crops were exchanged as well as woven basketry. The native planters harvested 160kg of cotton in 1865, the year the first trader

settled on Niue. In only five years though that harvest had increased to over 4,500kg (Taftau & Tukuitoga 1982:122).

The first traders often represented big overseas interests; for example, the first trader, H. W. Patterson, worked for the German company of Godeffroy & Sons, in Samoa. Some traders--Rex, Nicholas, and Head, for example--settled permanently on Niue, married local women, and established businesses and families which are still important in contemporary Niue.

Along with the traders came an increase in shipping contacts. Vessels plying South Pacific waters were not seeking crops or goods alone, however. Labour had become a valuable commodity as European capital poured into plantations, mining, milling and other commercial ventures exploiting the natural resources of this vast and exotic southern Pacific region.

Toward the end of the 19th Century, when the labour trade was well-established and regulated by outside authorities, particularly the Naval forces of the Great Powers, labourers received proper contracts from recruiters. The first labour recruiters, however, were none too scrupulous about the methods they used to "persuade" Pacific islanders to work elsewhere.

Niuean youth were in the habit of paddling out in their canoes to meet the ships which called. This made it easy for vessels to "blackbird" the men by simply sailing away from the shores of Niue while the natives were on board. In this fashion, between November 1862 and March 1863, three

Peruvian vessels, the "Trujillo", "Rosa Patricia" and the notorious "Rosa y Carmen" abducted 109 Niuean men to the horror and sorrow of the community. Those kidnapped were destined either to die of disease or starvation in holds overcrowded with others similarly captured from other Pacific islands or to become slaves on Peruvian plantations. Only one Niuean, Taole from Avatele, escaped from Callao aboard an American whaler whose Hawaiian crew helped him. He did not return to Niue but stayed in the Pacific as an itinerant sailor (Maude 1981:55-62).

Such tactics apparently did not dampen for long the lure of the outside world. The strict, rigid and confining social order set up by fervent Christian converts on Niue "pushed" young men into selling their labour as strongly as offers of wealth and adventure "pulled" them from their homeland. Lawes in 1868 called this eagerness among young men for overseas work a "mania" and tells of having to discourage several hundred from signing labour contracts. Village leaders, too, did not want young men to leave for, like Lawes, they feared the returning labourers would disrupt Niuean life (Tafatu & Tukuitoga 1982).

Neither church nor Fono (Council of Elders) was able to completely stem the tide, however. Soon Niueans were to be found in plantations and mineral works across the Pacific, in Samoa, Queensland, Tahiti, Fiji, and the Maldens. There, they quickly gained a reputation as hard and reliable workers, which made labour contractors even more eager to

recruit Niueans. By the turn of the century, then, it was estimated that some 400 men--nearly 10% of the population--were working overseas (Fifita Talagi 1982:119; Tafatu & Tukuitoga 1982). Some men chose not to return to Niue, so that by 1900 small enclaves of Niueans were to be found all over the Pacific.

### Events Leading To Annexation

By 1875, it was evident to the Niueans that they needed protection against the influences of the outside world. They needed to wrest control of their own society away from the Godless world of trade and commerce and from the Church which was increasingly ineffectual in controlling secular influences, especially those arising outside Niue. This conclusion was based on several things--fear that annexation by a foreign power would deprive them of their land; disillusionment about the efficacy of foreign political structures for solving Niue's problems; disapproval of the moral laxities of returning labourers, who became drunk, lived "in sin", and were generally restless and scornful of Niuean life; anguish over the increasing mortality because of new diseases against which they felt powerless; and, economic insecurity, stemming from falling prices and closing markets, particularly for cotton and copra (Rex & Vivian 1982; Tafatu & Tukuitoga 1982).

Using both the pulpit and the Fono, Frank Lawes tried to control the populace but he realised that he did not have the personal powers of his brother nor was he acting in a

period ecstatic change. Eventually, a larger more powerful force than local church or native council would be needed to administer Niue. In an attempt to set up a strong, traditional form of political control that would back the Fono's decisions, such as those banning alcohol and regulating sexual liaisons between unmarried people, the Niueans in 1876 re-introduced the Kingship, which had earlier fallen into disrepute. This, however, turned out to be a rather weak administrative force dependent upon the charisma of the incumbent rather than the power of the office.

So, long after the Great Powers had annexed Niue's nearest neighbours, introducing via gun-boat diplomacy law and order into the labour trade and harnessing indigenous resources for their own use, Niue was an independent nation struggling for survival. No Great Power was very interested in her (McDowell 1961).

#### FROM ANNEXATION TO INDEPENDENCE

When Sir Arthur Gordon, the British High Commissioner resident in Fiji, visited Niue in 1879 he discussed British protection with the Fono, offering to make the trader and leading European, R. H. Head, the British Agent. The Fono apparently liked this idea but it would seem the British were not too eager to acquire Niue as no letter of appointment reached Head until 23 years later (Tafatu & Tukuitoga 1982:124-126).

### Niuean Pleas For Annexation

The Niueans, however, remained concerned about their fate and firm in their intention to become a British possession. In 1887 and again in 1895 the patuiki, King Fataaiki, petitioned Queen Victoria for protection in order to secure Niuean control over their land:

"we desire to pray Your Majesty and Your Majesty's Kingdom if it be your pleasure to stretch out towards us your mighty hand that Niue may hide herself in it and be safe ... afraid lest some other powerful nation should come and trouble us, and take possession of our island, in the way that some islands in this quarter of the world had been taken by great nations."

(Tafatu & Tukuitoga 1982)

The disappointing reply said the Anglo-German Convention did not permit further annexation by the Great Powers in that area of the Pacific.

King Togia, succeeding to the throne after Fataaiki's death and a two year interregnum, again petitioned in 1899 requesting the British Queen to "stretch out her strong arm that Niue Fekai may lean upon it" and to appoint a British Representative "to reside on our island, to preside over the Government of the island ... that the laws may be obeyed and the land enjoy peace and prosperity" (Tafatu & Tukuitoga 1982:125).

### British Response--Annexation And Donation

That this petition had the desired effect was due neither to Niue's eloquence nor to Britain's magnanimity. A

month after this letter was written, the Anglo-German Convention became void whereupon Britain and Germany hastily scrambled to carve up this region of the Pacific so each acquired as much new land as possible. The Samoan Convention of 14th November 1899, then, put Niue (and some other islands) under British control, leaving Samoa for the Germans (Tafatu & Tukuitoga 1982).

Britain formally annexed Niue on the 21 April 1900 when Sir Basil Thomson arrived from Tonga to sign a Treaty of Cession and hoist the British flag (Thomson 1902; Tafatu & Tukuitoga 1982). But Britain was not destined to control Niue for long.

At this time, New Zealand's Prime Minister, Richard Seddon, was especially anxious to forward his fledgling nation's influence in the South Pacific. Not only did he make a tour to Niue and other Pacific islands in the latter part of 1900 (Anon 1900), assessing their trading potential, but also he voiced to Britain his nation's disappointment at not being given any islands to govern. Britain wished to reward her far-flung colony of New Zealand for her loyalty and support during South African campaign which was then pre-occupying Britain. The British Government acquiesced to New Zealand's desires for a "coconut empire." Thus, Lord Ranfurly, as Governor of New Zealand, proclaimed British sovereignty over Niue on 19 October 1900, thereby paving the way for a complete New Zealand takeover.

### New Zealand Administration

In early 1901, New Zealand sent a Government Resident, S. Percy Smith, to the island (Smith 1983:1). Smith reconstituted the Fono, dismantled the kingship by "retiring" the elderly Togia, imposed a revenue tax on goods imported into Niue and upheld previous regulations prohibiting the importation of liquor into Niue. He also warned that Niueans would not approve of being thought to be a part of the Cook Islands (Rex & Vivian 1982). Nonetheless, formal annexation of Niue as a part of the Cook Islands by New Zealand was made under Proclamation by HRH The Duke Of Cornwall and York at Auckland on 11 June 1901. This completed Britain's donation of Niue to New Zealand, an act achieved without ever once informing the native populace.

New Zealand's official administration on the island began in 1902 when Resident Agent Maxwell arrived to continue the reforms introduced by Smith. Soon thereafter, in 1903, a party of Parliamentary representatives from New Zealand visited, inspecting their newly acquired Pacific territories. The Niuean natives were outraged to learn not only that they belonged to New Zealand and not Britain but also to think that they were regarded administratively as a part of the Cook Islands, a society with which they felt no affinity at all (Rex & Vivian 1982; AJHR 1903).

The great distance between the Cook Islands and Niue proved unworkable, so eventually a separate administration was established for Niue under a Resident Commissioner. This official was, however, still responsible to the Minister for

the Cook Islands first and, in turn, to the New Zealand Government (Naval Intelligence 1943:569).

The power of the Fono had been weakened by King Togia but it acquired new--albeit, often puppet--influence after annexation. By 1914, the Resident Commissioner had drawn all formal law and order under his control and occupied the positions of magistrate, controller of Customs, postmaster, and President of the Island Council (Rex & Vivian 1982). The Resident Commissioner had a veto that effectively neutralised native decisions contrary to administration policy and reduced the Fono to a powerless body.

It was some time before the New Zealand administration was able to effectively deal with the indirect power of the Church. Frank Lawes had been the undisputed leader of public opinion in Niue for decades and he spoke with a voice that could not be silenced by administrative veto. Lawes left Niue in 1910, however, after the completion of nearly 40 years service on the island. The London Missionary Society or Congregationalist Church's power began to erode thereafter as the administration gradually took over more and more civil functions previously performed by the Church.

#### 1900 to 1950: Minimal Change

There was little substantial change on Niue between 1901 and the Second World War. The New Zealand administration was more concerned with keeping things going than with progress or change. Balanced budgets and trouble-free, sound if not brilliant or sympathetic administration

was the objective of the Department of Island Territories in New Zealand (Rex & Vivian 1982:129). The New Zealand administration nevertheless made some changes but their impact was muted and slight.

The provision of education and other services was taken over from the Church. In 1909, for example, the first Government school was established at Alofi; a second was opened in Hakupu in 1920. From 1927, primary education was given in the vernacular rather than in English as it had been, a change that was to have some influence on the later development of Niue. Though the first European physician arrived in 1912 there was no hospital until 1921. A Chief Constable arrived from New Zealand in 1914. A small rival Christian sect was established--the Seventh Day Adventists, introduced by Malama Head in 1915.

With the dramatic fall-off in trade in the last quarter of the 19th Century, by 1900 Australian schooners had stopped making regular bi-weekly trips. The Great War of 1914-1918 ushered Niue into yet another realisation of the ways of the wider world. After training in New Zealand, the 150 Niuean volunteers were shipped in 1916 to Egypt and thence to France where they saw little combat but suffered enormously high casualty rates, mainly due influenza and other respiratory diseases.

Niue was visited only intermittantly by itinerant steamers until 1924 when the Hinemoa began regular visits. Soon the Maui Pomare was making monthly trips between Samoa, Niue and New Zealand mainly because of the banana trade

which flourished between 1930 and 1950. A wireless-transmitter, built in 1924, brought Niue even further into the modern world (Rex & Vivian 1982).

Despite these changes, little in the way of fundamental change in Niuean life or destiny occurred between 1900 and 1950. These re-organizations were essentially superficial, aimed at creating an efficient administrative structure more than at altering the basic relationship between colonial ruler and subject race.

Even the Second World War had little impact on Niue. Because of the dismal fate suffered by the Niuean contingent in the Great War, no volunteers were solicited on Niue, though some men did go to New Zealand to volunteer. The Administration's main concern about Niue in this war resulted in seemingly interminable secret debates about whether or not a single machine gun ought to be sent to the island to defend it in the unlikely event of an enemy attack (Rex & Vivian 1982:130).

#### 1950 to 1960: Destructive Events, Constructive Results

The quiescent first decades of the 20th Century were abruptly ruptured by two separate but powerful forces of destruction. The consequences served to catapult Niue into the modern world.

On the night of 14th August 1953, three prisoners escaped and murdered the Resident Commissioner, Mr C.H.W. Larsen, apparently as an act of personal revenge for what they perceived to be a harsh and unjust punishment given

them by him. Larsen was a forward-thinking but abrasive character who consistently ignored Niuean views and created considerable strife in so doing (Anon 1953). In particular he threatened the delicately balanced relationship between the administration and the Church, the Ekalesia. Not only did he allow the Mormons to establish a mission on the island in 1952 (and the Roman Catholics in 1955) but in the name of efficiency and economy he also championed the idea of Sunday work, anathema to the devout Niueans. Larsen feared ships would not maintain a regular schedule if they could not unload when they arrived on a Sunday but this concern failed to move the native population who made even more rigorous their opposition to work on a Sabbath. For all that, he improved the quality of education on Niue, organized the medical and dental training of selected Niuean youth, and modernised agricultural services on the island, all with a view to eventually having these services run by local persons rather than ex-patriots (Rex & Vivian 1982).

The response to this act of murder was swift and decisive. The recaptured perpetrators were tried and sentenced to death, eventually only serving lengthy prison sentences. Newspapers widely publicized the event and scrutinized the activities surrounding it, making the general public in New Zealand aware of the existence of their colonies and of their responsibilities towards them. The most telling response, however, was at governmental level where the administration wisely appointed a successor

to Larsen who was not only an able administrator but an academically well-qualified scholar of Polynesian societies and languages.

J.M. "Jock" McEwen was sympathetic to Niuean views. He learnt their language and was intensely interested in their culture, and his style of interaction was less controversial, dogmatic or rigid. McEwen, too, was a man with a vision of the future, a future in which Niue would be self-sufficient, self-governing, modern, and proud. Continuing Larsen's reforms but without generating strife, he laid the groundwork for new administrative structures that would eventually put real power back into the hands of the people (Rex & Vivian 1982; Chapman 1976, 1982).

Thus, when the second destructive force, in the shape of severe hurricanes, devastated Niue in 1959 and again in 1960, it came at a time when the administration had already been transformed from a sluggish and unresponsive colonial patronage system into a revitalised and progressive bureaucracy. Though there was very little loss of life, the two hurricanes did enormous damage, destroying all fishing canoes, damaging plantations, and demolishing every building on the island--houses, hospital, schools, stores and government offices.

New Zealand immediately poured aid and relief supplies into Niue in the form of food, clothing, equipment and, most significantly, capital. Along with those monies came experts, in architecture, planning, public administration, banking, public health, and social services. From the rubble

left by the hurricanes rose a new Niue with modern civil and social services, permanent buildings, and a new attitude.

For the first time, decisions about the future genuinely involved the Niuean people. The powerless Fono or Island Council was reformed into the Niuean Assembly, which undertook responsibility for allocating house loans and watching over re-building (Keating 1960). Most of the work was done on a voluntary basis but even so the government had to create more paid jobs to control the ordering, importation and distribution of housing materials, motorised transport, and associated goods and services. This was good preparation for the final moves already being engineered by New Zealand to wean Niue from colonial dependency to self-government (Chapman 1976, 1982; Rex & Vivian 1982).

### The Threshold Of Independence

It was not just the events of the 1950's that spurred New Zealand into modernising her relationship with her colonies. This was also a time during which the United Nations was beginning to stress the "decolonization" message. New Zealand saw this as a way of both removing the burden of her "coconut empire" (Niue, the Cook Islands, Western Samoa and the Tokelaus), which had never been a source of wealth but rather an enormous financial drain, and complying with international opinion. She did not, however, correctly anticipate Niuean response to the idea of independence and she repeated the errors of the turn of the century (Chapman 1976, 1982).

New Zealand established a timetable for independence based on a survey previously carried out in the Cook Islands and never solicited Niuean opinions. Niueans resented this as much in 1961 as they did in 1901. New Zealand presented the Niuean Assembly with an apparent choice between four options: complete independence; complete integration with New Zealand; establishment of a Federation of Polynesian States; or, full internal self-government. In fact, New Zealand had already decided that the last option was best and had developed a timetable to give Niue internal self-government by 1966 (Chapman 1976, 1982; Parsons 1968).

They did not reckon, however, with Niuean character. Unlike the Cook Islands which accepted New Zealand's timetable, Niue firmly rejected it, asking for additional time so that all Niueans and not just the Assembly could study the implications and for consultation with experts on constitutional law. The New Zealand government despatched McEwen once more to Niue, along with Aikman, a constitutional lawyer. Three fears were held by the people. First, that Niue could never be economically self-supporting; second, that the level of minimum education was still too low to ensure successful self-government; and, third, that Niue's ties with New Zealand would be severed once self-government was obtained. McEwen and Aikman recommended intermediate steps before full internal self-government, ideas accepted in principle by the Niuean Assembly early in 1966 and then by the New Zealand government.

Ignoring the United Nations which was breathing heavily down both Niuean and New Zealand necks, the task was begun of educating the Niuean people about modern political process. Elected Niuean officials were given executive responsibility under the guidance of a New Zealand Resident Commissioner whose task was to delegate more and more powers to local control.

In 1966, for example, the Niuean Assembly established the Niue Development Board and set forth the first Five Year Economic Plan. Both were based around a scheme to revitalise coconut plantations and exports of copra, coconut cream and other vegetable products (Chapman 1976, 1982).

The time given to the Niuean people to think about the process of elected democratic government paid off. Elections in 1969 saw two young career civil servants in office, one a doctor, one a teacher, both educated outside Niue. This was a radical departure from traditional government which relied on the wisdom of the elders, the ulu motua or "grey haired." A concept entirely foreign to Niueans was that of a single leader of a nation. Not only did Niueans have a poorly developed concept of Niue as a nation, primary allegiances being to one's village (Challis 1953), but each senior married man was regarded as an elder or leader. After considerable debate, Robert Rex, descendent of one of the original traders on the island, was elected leader of the Assembly (Chapman 1976, 1982).

## SELF GOVERNMENT

By 1970 the Niuean Assembly had sufficient confidence in its abilities to begin talking about the next stage in self-government. The control of the church, too, the Ekalesia Niue, now devolved to a Niuean. Further discussion about constitutional issues ensued between the Assembly and overseas experts. A United Nations Mission which visited in 1972 finally accepted that decolonization would occur at a Niuean pace and not according to a timetable imposed from without. Mr Rex told the United Nations Fourth Committee in 1973 that Niue had resolved its fears and would achieve independence through an agreement of "free association with New Zealand", whereby Niue would be completely self-governing in internal matters but her people would retain New Zealand citizenship and New Zealand would continue to provide economic aid and administer Niue's foreign relations (Chapman 1976, 1982).

These ideas were incorporated into the Niue Constitution Act 1974 which provides for a Westminster type government with a non-elected Speaker and a Premier elected by absolute majority of the Assembly. A Cabinet consisting of the Premier and three Ministers chosen by him from the elected officials is responsible to the entire Assembly. There are to be 20 elected Assemblymen: one from each of the 14 villages and 6 elected by the entire nation. Thus each adult over the age of 18 years has two votes, one on his or her village roll and one on a common roll.

An unusual position, the Secretary of Government, was created for the chief administrative officer who also acts as the Head of the Niuean Public Service. As the Niue Government is the island's largest employer, the Secretary of Government occupies an unusual yet vital role in public life. The Secretary of Government is entitled to attend and speak at Assembly meetings but not to vote.

Where criminal or judicial matters exceed the authority of the Niuean Commissioner of the High Court, a Chief Justice, shared with the Cook Islands, is available. New Zealand's Appellate Court also serves Niue. Traditional land usage and ownership laws were incorporated into the 1974 Act so that sale of land was strictly prohibited. Ownership of land is primarily a matter for individual families to decide, based on traditional values, customary behaviours and previous inheritance rights and obligations (Chapman 1976, 1982).

On the 3rd September 1974, this Constitution was put to a referendum requiring a two-thirds majority to pass, a stipulation consistent with the traditional republican nature of Niuean society where tribalism or rigid chiefly structure was absent and where decisions were made overtly on an egalitarian basis. In all, 887 people voted for self-government with free association with New Zealand and 469 voted against. One reason why many rejected self-government was the alleged impartial nature of New Zealand administration, traditional family ties and village enmities not influencing their decisions. Niue became a self-

governing state on 19th October 1974. Elections in April 1975 saw (now Sir) Robert Rex voted in to the Premier's role, a position he still holds, to guide Niue into the modern era (Chapman 1976, 1982).

## CHAPTER III

### CONTEMPORARY NIUE

By the agreement of Free Association made with New Zealand in 1974, Niue remains politically independent except in foreign policy, her people are citizens of New Zealand, and, most importantly, she receives several million New Zealand dollars per year in aid. Niue also receives considerable aid from other international organizations, such as the World Health Organization, Food and Agricultural Organization, South Pacific Forum and the South Pacific Commission. By virtue of all these arrangements, Fisk (1978) estimates that Niue receives probably the highest per capita amount of aid in the world, aid that substantially improves the standard of living enjoyed by this tiny nation compared to its more populous Pacific neighbours.

#### SERVICE INFRASTRUCTURE

Niue has a well developed and highly centralized service infrastructure which also contributes to the very high standard of living enjoyed by this tiny underdeveloped nation (Fisk 1978). Unlike many newly independent nations, Niue inherited sound administrative and public service buildings and roads, courtesy of the hurricanes of 1959 and 1960. She has, therefore, had to lay out very little capital

to create basic services and has been able to use her aid monies to maintain and improve existing ones.

Aid monies provide the wealth of modern services on Niue. For 1983-84, the amount of aid monies from New Zealand was \$NZ 5.9 million (Connell 1983:4). Moreover, as this money and these services are spread across a very small resident population, making it obvious why the standard of living on Niue is so high compared to other Pacific island nations.

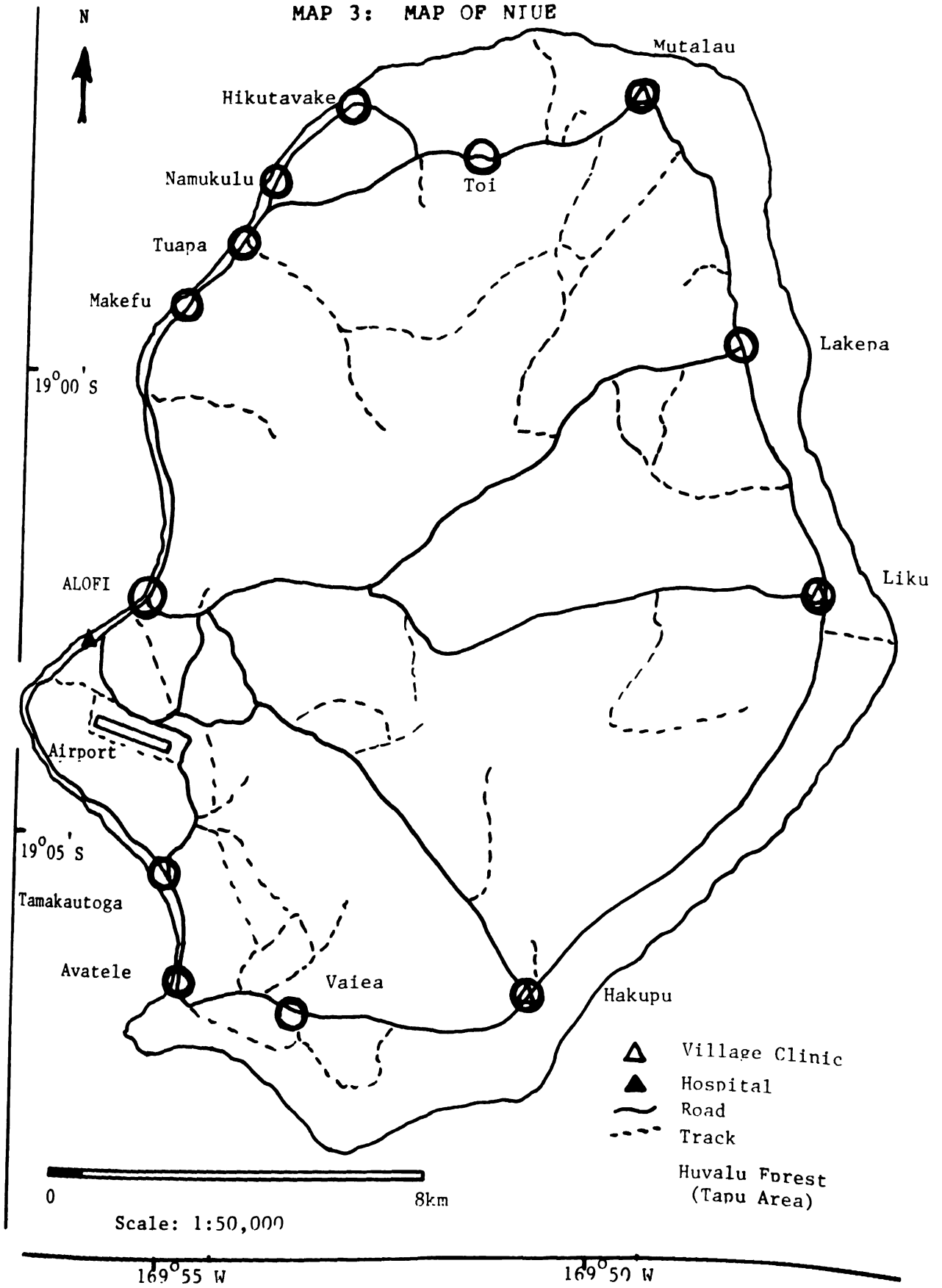
### Village Organization

There are thirteen distinct villages in modern Niue (see Map 3). The principal village is Alofi, where the Fale Fonu (parliament), administrative offices, wharf, High School, hotel and hospital are located. Alofi is often split into two separate villages, Alofi South and Alofi North, each with its own parliamentary representative and traditional character.

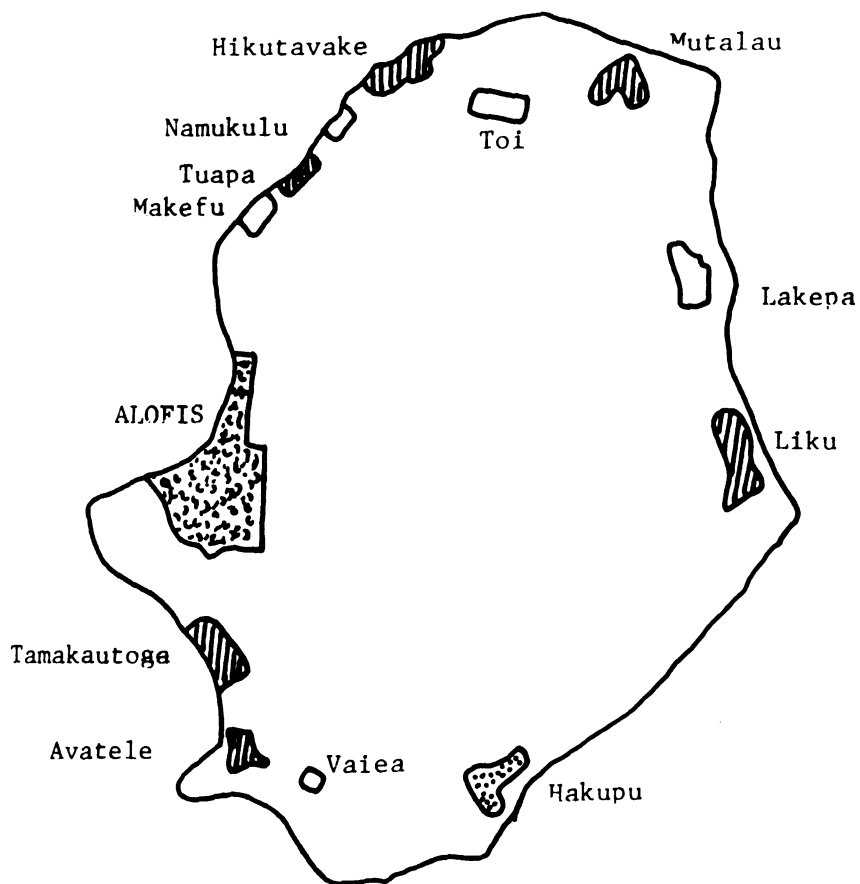
About 20% of the total population resides in or close to Alofi, the bulk being in Alofi South where the majority of ex-patriates live in Government provided housing. The other villages are smaller, often having only around 5% of the total population living in them (see Map 4).

Each village is composed of a number of related, extended families or magafaoa who occupy and use the surrounding lands. Although the exact details of kin connections between particular magafaoa are not always remembered exactly, people, nevertheless, do acknowledge

MAP 3: MAP OF NIUE



**MAP 4: DISTRIBUTION OF POPULATION ON NIUE, BY VILLAGE, 1981**



- 0 - 5% Population living within village
- ▨ 6 -10% Population living within village
- ▩ 11-15% Population living within village
- 16-20% Population living within village
- ▣ 21-25% Population living within village

some relationship with other villagers, often by asserting descent from a common ancestor, who frequently is said to be one of the five tupua or Gods who founded Niue. Particular magafaoa live in clusters of neighbouring houses within the village area. Dwellings flank the roadway through the village or surround the village green, a large, cleared central space used for sports and recreation. The largest structure in most villages is the Ekalesia Niue's church, usually sited in a prominent central position near the green.

Villages are further divided conceptually, into at least two parts, usually on some geographic basis. Tamakautoga, and Tuapa, for example, split into North and South divisions, while Mutalau divides between those households which occupy the seaward side of the road and those on the inland side. These distinctions are usually unimportant outside the village; inside the village they are ways of creating teams for playing cricket (kilikiki) in the evening or for creating friendly rivalries about the upkeep of the church, fishing prowess, or the like.

### Public Utilities

Each village has a supply of electric power, generated by an oil-burning power station at Tuila, near Alofi. Deep bores tap the fresh water lens beneath the coral rock, filling communal water tanks and providing a supply to each house, as well as irrigating the Government farms and supplying water for industry and government services. Most

houses, in addition to being connected to the village water tank, collect rain run-off from the roof.

Houses are constructed of timber frame walls and concrete floors topped by a galvanised iron roof. Many simple three room structures put up after the hurricanes in 1959-60 are in service today, either as complete units or as the basis of newly extended, modern houses. In older dwellings, the cooking area is a separate structure behind the house but modern homes include kitchens within the same building. Very new houses and the homes of the village pastor and senior Government officials have a toilet and shower inside the house. The majority of homes, however, have a water seal toilet in a separate structure at the rear of the section, and use outside taps with shower attachments or buckets to provide washing facilities.

### Communications

Transportation to and from an isolated island such as Niue has never been easy. Though four landing points exist, all on the leeward side of the island, only one at Alofi is now used. Most ships are forced to anchor about 2km offshore and to use lighters to ferry cargoes to the wharf. This limits the size and weight of cargo able to be landed, a problem particularly affecting the Public Works Department which needs heavy machinery for much of its work. Despite the difficult access, there is a regular monthly shipping service. Bad weather, particularly high winds, heavy sea

swells, and threats of hurricanes, still occasionally delays cargo transfer between ship and shore.

Air transportation, possible since the construction of a runway in 1971, is limited. One plane a week, run by Polynesian Airlines, connects Niue with Western Samoa, the Cook Islands, Tahiti and Fiji. Another airline, Air Nauru, began operating a once a week service late in 1982, between American Samoa, New Zealand and Tuvalu. Despite this, transport to other South Pacific nations can be a time-consuming business. Connections by air, from Fiji to Niue for example, can still take ten days to complete because airlines serve particular islands on a very limited basis, connections between airlines are few and often irregular, due to unforeseen delays because of weather, maintenance problems, or unannounced scheduling changes.

Postal services are available, by airmail or by sea, through a branch of the New Zealand Post Office on the island. Because Niue is not widely known about, however, mails originating outside New Zealand or the South Pacific are subject to long delays or, quite often, with loss.

The first Niuean stamps were overprints of Cook Island or New Zealand stamps issued soon after Annexation (Goffman 1971). Nowadays, however, as in many small states worldwide, a substantial proportion of Niue's income comes from the sale of her own postage stamps. Indeed, in 1978-79 the value of stamps sold, \$NZ 118,840, significantly exceeded that of any other product, making it Niue's principal 'export' item (Connell 1983:4).

Modern telecommunications services keep Niue in verbal contact with the external world but internal communication services are not extensive. The local radio station, set up in 1966 (Coleman 1969), broadcasts news and local announcements for a few hours morning and evening. While there is no newspaper there is a weekly brochure, Tohi Tala Niue, detailing local events. The island also has a primitive telephone system which links the villages together.

About 130km of roads made of crushed makatea or limestone connect the coastal villages with each other and with the "urban" capital, Alofi (see Map 3). Except for in Alofi, the roads are not sealed. In the dry season, enormous billows of dust envelope the villages whenever trucks pass through. The population is too small and scattered to support a regular local public transport system. A private bus service operates along the west coast on an irregular schedule depending on demand. Government employees are ferried to and from their home villages on trucks owned by the Public Works Department; high school pupils are taken to Paliati in buses operated by the Education department; the Health department operates both a mobile clinic service which goes to the villages and an ambulance service which brings patients to the hospital. A few cars and utility vans or pick-ups are owned by private individuals but the most popular means of transport is the motorcycle, which has replaced the once common push-bike. Nearly every household on the island has at least one motorcycle. This is a clear

indication of the relatively high standard of living enjoyed on Niue, compared to her Pacific neighbours.

### Social Services

In addition to six primary schools at various points around the island there is a secondary school. Education is free and compulsory for all children between the ages of five and fourteen years. It is conducted both in the vernacular and in English for the first few years and thereafter in English. The public examinations of the New Zealand school system are used at High School level. Particularly able youngsters are sent on Government scholarship to secondary schools in New Zealand. Trade schools or universities in New Zealand and Fiji provide specialist training at the tertiary level.

The Health Department offers free medical and dental services to all Niueans. The hospital in Alofi South is supplemented by three village clinics at strategic points around the island and by mobile dental and medical clinics. Specialist or emergency services beyond the scope of those regularly supplied on Niue are available in New Zealand. Medical emergencies are flown, usually to New Zealand, by flights specially arranged by the Royal New Zealand Air Force.

The Niuean Government operates a pension scheme for the elderly and the handicapped, paid out of local taxes and general aid monies. Payments are small but nonetheless help

supplement the cash income of the adult family members who accept responsibility for these people.

## COMMERCE AND EMPLOYMENT

Niue's high standard of living and quality service infrastructure are matched by high aspirations for economic and technical success. Unfortunately though her aid-dependent economy is essentially without any means with which to support or achieve these desires (Pollard 1978).

Commerce is severely limited by the absence of a trading bank on Niue. All monetary transactions between overseas interests and the Niue Government, commercial establishments or private citizens on Niue, pass through the branch of the New Zealand Treasury present on the island. Treasury disburses aid monies and provides accounting, auditing, and storage facilities. Virtually all commercial transactions are routed through New Zealand, creating an extremely strong post-Independence reliance upon a former colonial administrator. This situation is not unique to Niue, but is also found in the Cook Islands and the Tokelaus, the other "parts" of New Zealand's former Pacific dominion (Connell 1983:4).

Although the Post Office offers very limited savings and loan facilities and the Niue Public Service Credit Union provides very small loans to members, no possibility exists for extensive capital investment by private citizens. This severely hampers the development of private enterprise.

A handful of private sector businesses, all in Alofi, serve as outlets for retail goods or offer services. Two locally owned and operated retail stores vie with the multinational giant, Burns Philp & Co., for the supply of groceries, clothing, motor vehicles, household appliances, and recreational goods. Small branch stores in each village sell foodstuffs, tobacco, and miscellaneous household items. Vehicle maintenance, plumbing or electrical work are undertaken by local firms.

### Employment

" ... the structure of employment in Niue is quite different from that of other non-American dependent territories or independent states in the region and quite different from other parts of Polynesia"  
(Connell 1983:6).

Quite unlike any other Pacific state, full-time primary producers, whether planters or fishermen, constitute a small and declining proportion of the total population (Connell 1983; Ryan 1981). A few light manufacturing industries and factories, both Government-assisted and private, provide employment, often on a part-time basis only, for a small proportion of the adult population.

The major employer, however, is the Niue Government which employs some 78% of all persons receiving wages or salary (Connell 1983). The vast majority work in the Public Works Department, maintaining and improving roads, public buildings, wharf and airport facilities. The Departments of

Education, Health, Justice, Agriculture and central Administration employ most of the other public servants.

#### LAND USE

Despite regular wage labour employment, subsistence cropping remains important for most families. So that people have sufficient time in the late afternoon to tend their bush gardens, Government work hours are 7am to 3pm.

By law, non-Niueans cannot acquire land other than by time-limited leases. Five percent of all land on Niue is set aside for "public" use: for the experimental farms at Vaipapahi and Vaiea, for the administration's quarters and public buildings, for the airport and wharf, for sanitary rubbish dumps, and for roads. The rest of the land is owned by individual families who cultivate as they need (Bissell 1965; Crocombe 1977).

Nestled between the crags and chasms of the limestone outcroppings, the soil is sparse but fertile and responsive to careful hand tilling. Because the soil nutrients and organic materials are rapidly depleted, planting has always followed a slash-and-burn shifting agriculture pattern with 10 year fallow periods between successive crops on any plot of land. Niuean farmers have been credited with "good soil sense" for they have carefully planted and harvested for centuries without destroying the very fragile ecosystem of which the soil is a central part (Fieldes 1972; Miller 1980, Wright & van Westerndorp 1965). The soil on Niue has an

extremely high natural radiation level which apparently produces no ill effects on crops or populace (Marsden, Ferguson & Fieldes 1958; Fieldes et al 1960).

Original food crops probably consisted of just taro, banana, coconut and arrowroot (Ryan 1977). The range of crops grown today, however, includes introduced plants such as breadfruit, kumera, yam, mango and pawpaw plus the giant taro and tapioca which are drought resistant crops grown to ward off famine during periods of drought. In addition to subsistence, crops are now cultivated for export as frozen taro, copra, coconut cream, lime juice, passionfruit and pawpaw juice. Both subsistence and cash crops are important supplements to the income from wage labour.

The best land, however, is not evenly distributed across the island. The north-eastern sector is richly endowed with good land while other coastal villages are not so fortunate. Bananas grow reasonably well on the poorer coastal soils but many cash crops do not thrive on the narrow lower terrace encircling the island. Moreover, many well-paid government administrators come from the north-eastern villages and so own the best land yet do not need it for support to the same degree as a planter from a coastal village.

These inequalities in access to good land are exacerbated by absentee owners who often refuse other family members use of their land (Kalauni 1977 ). Customary ownership rights to land have been very slow in changing. In some Polynesian societies, sustained absence now implies

forfeiture of rights over land and re-distribution of access to that land throughout the kin remaining on the island. Niueans resident off the island, however, have fiercely clung to their ancient land rights, thereby paralysing economic (agricultural) development on the island.

## DEMOGRAPHY

The highest estimates for the size of the pre-contact population of Niue do not rise above 5,000, a figure based on the first informal census conducted by missionaries in 1859 which shows a population of 4,300 living in 12 villages. Constant warfare between groups, the difficulty of garden cultivation, famine as a result of periodic severe droughts, hurricanes, repulsion of strangers or invaders, and endemic diseases are factors which probably kept population numbers low and stable (Bedford, Mitchell & Mitchell 1980).

Official censuses, first conducted by the New Zealand administration in 1901 and thereafter at five year intervals, have produced more high quality population data for Niue than for any other Pacific nation. However, because population numbers are so small they are subject to severe chance fluctuations which make analysis difficult. Indeed, analysis of population trends on Niue have only recently been undertaken (Bedford, Mitchell & Mitchell 1980).

Unlike other Pacific islands, Niue's most recent pressing population problem has been de-population. The latest formal census in 1981 gives the island a total population of only 2,937 Niueans--a 23% decrease in population in both the 1971-1976 and the 1976-1981 intercensal periods (Niue Planning Department 1982). This de-population is the result of out-migration, a major force which has been shaping Niue's population since the late 19th Century (Bedford, Mitchell & Mitchell 1980).

#### **MIGRATION--A CENTRAL FEATURE OF POPULATION HISTORY**

Niue's recent concern over de-population is not the first time such anxieties have existed on Niue. Migration, leading to rapid and severe demographic change, has always played a major role in Niue and has often generated anxious comments over the eventual fate of this tiny island nation. Enclaves of Niueans are to be found not just in New Zealand, where they go in large numbers, but all over the Pacific: in Tonga, Western Samoa, American Samoa, Hawaii, the Cook Islands, Australia, Fiji, Papua New Guinea, Vanuatu and Tuvalu.

#### **1900 to 1920: The Marked Influence of Labour Migration**

Labour migration was a feature of the late nineteenth and early twentieth centuries. Even as early as 1880 it was estimated that about 10% of the Niuean population was in fact resident overseas, and the proportion of Niueans living

outside the island rarely decreased thereafter. Men, especially young men, left to work on neighbouring islands, such as Western Samoa, the Line Islands or New Zealand. Tonga was a popular destination at this time because, unlike Niue, liquor was available there.

Between the first census in 1901 and the next in 1906 there was a 6% decrease in population, to a total of 3,822 persons, a decline the size of which was not seen again until the mid-1960s. This spurred an anxious new administration into enacting legislation about the recruitment of labour in an attempt to prevent or at least reduce out-migration (Bedford, Mitchell & Mitchell 1980).

Declining numbers were but one aspect of the effect of out-migration at this time. Radical change in population structure and distribution, due essentially to mobility, occurred by 1920.

The total population in 1921 was 3,750 persons. A great imbalance in the sex ratios, however, meant that there were only 70 men for every 100 women. This led to a drop in the number of marriages and an increase in divorce during this period and contributed, along with venereal diseases such as syphilis and gonorrhoea which were rife at the time, to a decline in fertility (Bakker 1980b,c). Moreover, during these first decades of the twentieth century there was high mortality, especially infant mortality, because of various epidemics of newly introduced diseases (measles, whooping cough, influenza, dysentery, hepatitis and tuberculosis). The proportion of children, especially those under five

years of age, decreased precipitately (Bedford, Mitchell & Mitchell 1980).

These changes in population structure did not affect all villages equally. Greatest losses of young men were from the Southern villages (Tamakautoga to Hakupu) which also had the lowest numbers of infants. The Eastern villages (Liku to Mutalau), farthest from the government station in Alofi and having the largest proportion of the population living within them, declined least in numbers and in age-sex proportions. The Western coastal villages (Hikutavake to Makefu) suffered greater losses in the 15-to-44 age group than did the other villages (Bedford, Mitchell & Mitchell 1980).

#### 1921 to 1950: Demographic Transition

From 1921 on, however, Niue's population showed slow but erratic growth. By 1956 the total Niuean population had reached 4,593 in number (Bedford, Mitchell & Mitchell 1980).

Labour recruiting on Niue was finally prohibited, in 1920. Throughout the period of demographic transition, 1921 to 1950, out-migration still took place but at a much reduced rate and in a slightly different form. Administrations all over the Pacific gradually tightened their control over population movements, especially as their economies "boomed" and "crashed" in response to the wider world economy. Instead of being a relatively temporary absence for work, out-migration now tended to comprise those leaving to join relatives overseas or moving permanently

from the island. Outward migration peaked after the introduction of the regular monthly steamer service by the "Maui Pomare" in 1925 but slacked off during the Great Depression and the subsequent war years (Bedford, Mitchell & Mitchell 1980).

With this slowing in migration from Niue, fertility slowly began to increase as the sex ratios gradually balanced out and as venereal diseases were brought under medical control. Mortality gradually declined after 1921 but it was not until a few years after World War II that it took a "final" dramatic and steep downward turn. The greatest drop in infant mortality occurred between 1945 and 1955. Mortality of adult females in the reproductive ages reached the same, low, level of male mortality by 1961 (Bakker 1980d). Life expectancy, too, gradually increased during the period 1921 to 1955 (Bedford, Mitchell & Mitchell 1980).

With fertility increasing and mortality dropping, especially infant mortality, there was a "rejuvenation at the base" of the age/sex pyramid from the 1920s to 1940s., i.e. the proportion of infants and under five year old children in the population began to increase. Total dependency increased sharply, too, from 69 (per 100 persons in the population aged 15 to 65 years) in 1921 to 93 in 1945, due in part only to the greater number of children in the population. Out-migration, though slower than before, also played a role in increasing dependency as most migrants were adults, men from the 15-to-44 age group. This clearly

shows in the age/sex composition of Niue's population in 1945 when adults comprised only 39% of the total population and the male/female sex ratio was again out of balance at 88/100 (Bedford, Mitchell & Mitchell 1980).

Thus by 1950 to 1955, demographic transition was well established. The usual upshot of such a change is an extremely rapid growth in population. Niue, however, did not undergo the usual experience.

#### The 1960's and 1970's: Family Migration

Between 1921 and 1966, Niue's average annual rate of growth was only 0.7%, quite unlike the high growth rates of her Pacific neighbours, because of the considerable gap between rates of natural increase and growth on Niue. Consider 1956 to 1961, for example, when the average annual rate of natural increase was 3.60% while the average annual rate of growth was only 0.66%. Or 1971 to 1976, when natural increase had tapered off slightly to the more modest but still substantial figure of 1.96% yet growth plummeted to -5.22% --because of renewed out-migration (Bakker 1980a).

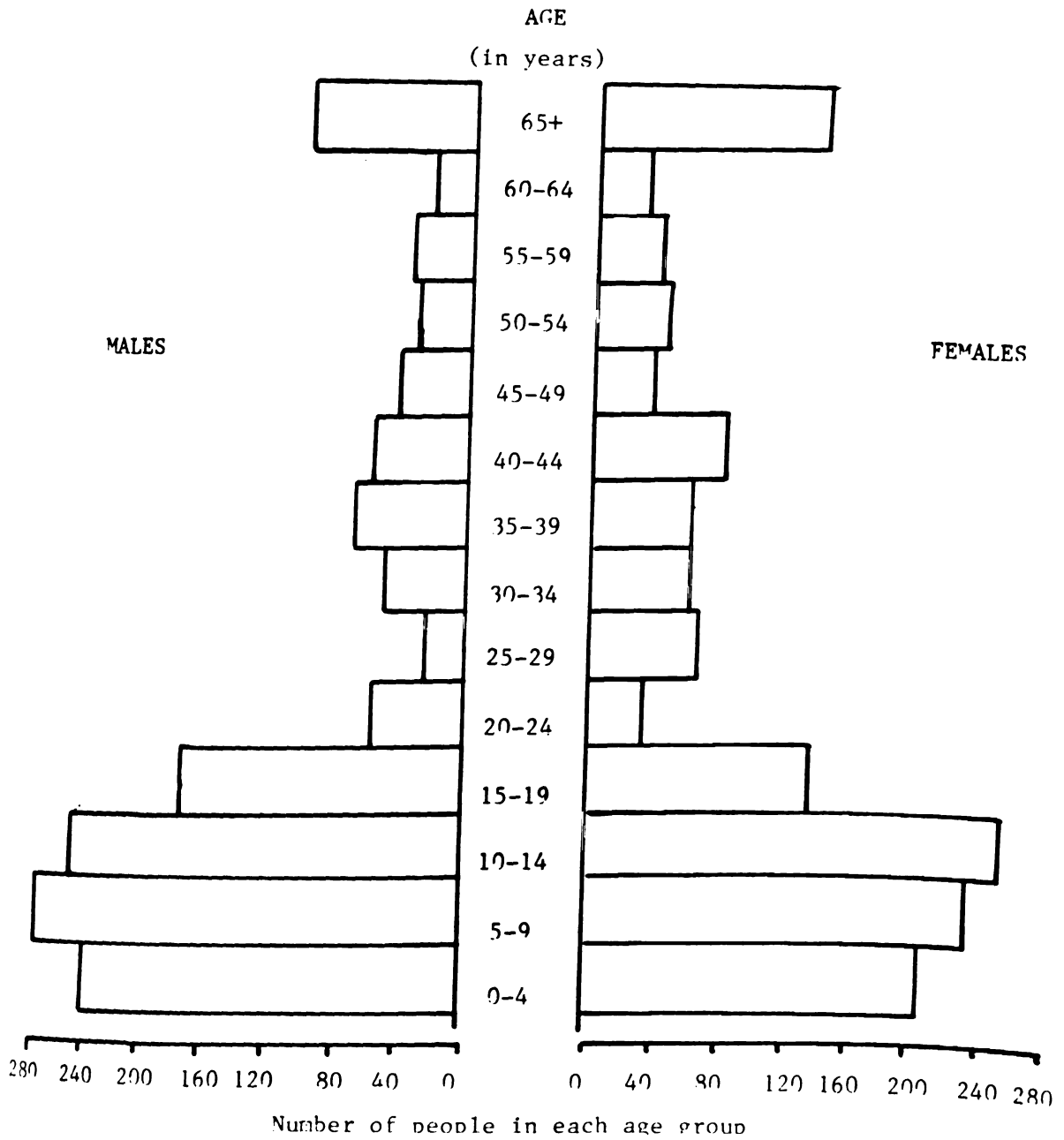
Rates of out-migration depended upon local conditions on Niue and in New Zealand but gradually increased from the early 1960s through to the late 1970s when staggeringly high rates were reached, -23% in both 1971-1976 and 1976-1981 intercensal periods. Hurricanes in 1959 and 1960 and the opening of the airport on Niue in 1971 led to increased out-migration whereas depressions in the New Zealand economy in 1968 and again in 1979-1981 slowed the outflow (Walsh 1980).

Now, however, it is not just men seeking work but also entire families and young single women who are leaving. Most intend to reside permanently overseas, the majority in New Zealand (Bakker 1980b; Bedford, Mitchell & Mitchell 1980). Family movement is suggested by: a 20% loss of males in the 20-to-49 year age range, a 20% loss of females in the 20-to-39 year age range, and a 33% drop in the number of under-10-year old children. Loss of young men in the 10-to-19 year age range continues and is supplemented by some loss of females of the same age (Walsh 1980).

#### **CURRENT POPULATION STRUCTURE**

The previous "rejuvenation" at the base of the age/sex pyramid for Niue, therefore, has given way, since 1966, to an even more rapid "aging at the base", due somewhat to a decline in fertility but mainly because of changes in the age/sex structure of the migrants (Bakker 1980b; Walsh 1980). Although still a relatively youthful population, with nearly half under age 15 years, Niue has a very small proportion of adults of working age, especially males in their 20's and 30's. There is an excess of females, particularly in the older age groups, and the proportion of elderly (those aged 60 years or more) has also increased, to 11% of the population (see Figure 1) which by late 1982 totalled only some 2,937 persons. In combination, these factors create a very high dependency ratio, of about 125 per 100 persons in the population aged 15 to 65 years.

**FIGURE 1: POPULATION DISTRIBUTION, BY AGE, NIUE, 1981**



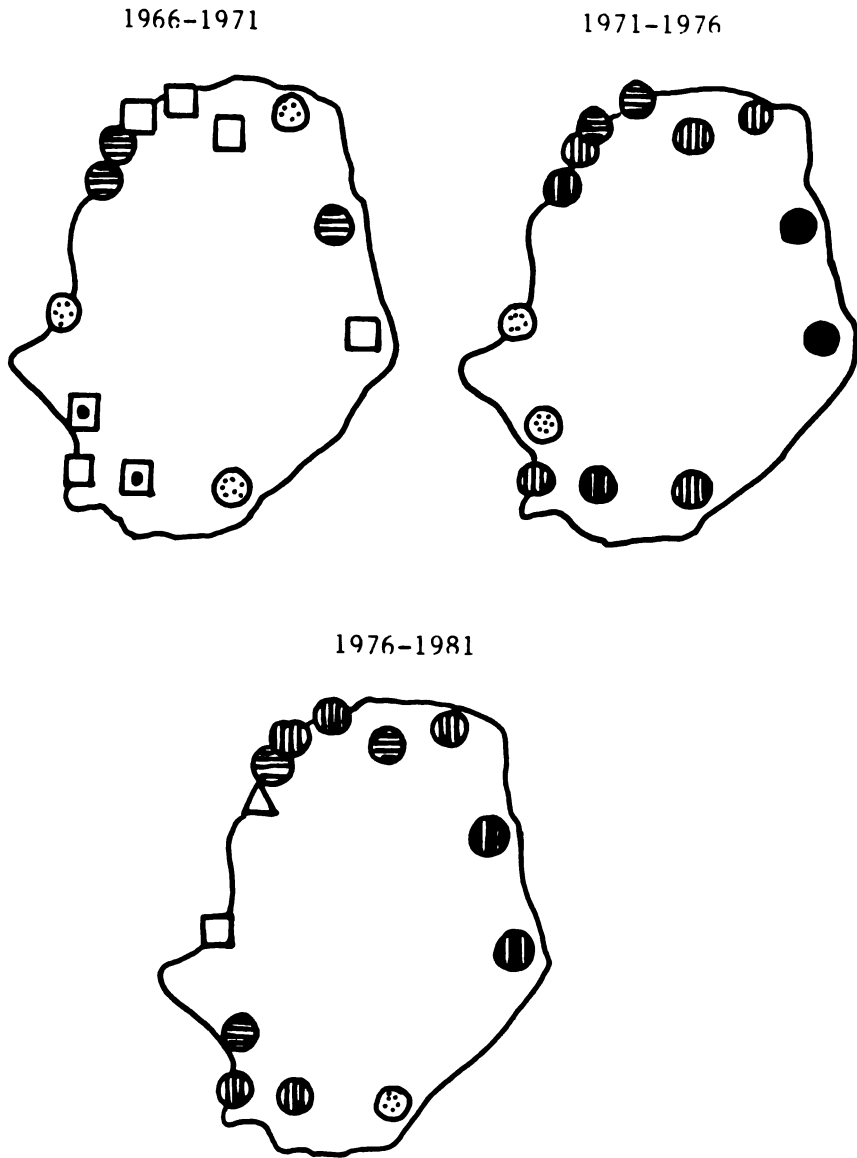
The long term effect of these changes in age/sex structure of the population is to limit reproductive capacity and to further increase age dependency (Walsh 1980).

#### THE EFFECTS OF RECENT MIGRATION AT VILLAGE LEVEL

Increasingly, all villages have been affected by migration but not uniformly so. Village populations differ by size (see Figure 2) and age/sex structure. Each village responds differently to various "push" or "pull" migration factors, both with respect to internal migration and out-migration (Walsh 1980).

Figure 2 gives details of the change in village population numbers for the periods 1966-71, 1971-76, and 1976-81. East coast villages--Mutalau, Lakepa, and Liku--are most migration prone: between 1971 and 1976 each of these villages lost 30% or more of their population. Mutalau shows "residual" family losses, of adult females and young children, whereas the other two villages display "recent" family loss, sex-balanced adult loss accompanied by a high loss of young children. Hakupu, Avatele, Tuapa and Toi show losses, of the residual family type, above 20% for the 1971-76 period with a smaller proportion of village residents leaving in the 1976-81 period. Makefu had a greater than 30% recent family loss between 1971-76 but shows no further losses. The "front" villages have been least affected by recent migration, especially Namukulu, Hikutavake, and

**FIGURE 2: VILLAGE POPULATION DISTRIBUTION, NIUE, 1966 TO 1981**



- |   |                |   |                |
|---|----------------|---|----------------|
| ◻ | Gain of 11-20% | ⊖ | Loss of 11-20% |
| ◻ | Gain of 0 -10% | ⊖ | Loss of 21-30% |
| ▲ | No change      | ● | Loss of 31-40% |
| ⊕ | Loss of 0 -10% | ● | Loss of 41-50% |

Tamakautoga, though the latter is beginning to experience recent family loss.

### In-Migration

The Alofis have quite disparate migration experiences. A slight loss in 1971-76 has given way to a small gain between 1976 and 1981. Internal migration, from other villages into Alofi, for employment or because of marriage, and in-migration accounts for this.

Alofi South is particularly affected by inward movements, as it is the region of Government Housing for expatriates, who arrive under various Aid schemes, and the site of many government services requiring staff on duty 24 hours a day (e.g., the hospital, hotel, and telecommunications).

In addition, a small number of people from neighbouring Pacific islands, usually those with some claim to kinship through Niueans who settled elsewhere decades ago, have recently moved to Niue. There is now a small number of Samoans on Niue, in Avatele, Hakupu and Alofi, and slightly greater numbers of Tongans, around 100 altogether, in Tuapa, Tamakautoga and Alofi. As access to land has become more difficult in their home countries, these people are drawn back to Niue; their Churches (predominantly Mormon and Jehovah's Witness) also support their move, as a way of bolstering their denomination on Niue.

### Internal Migration

Internal migration has also produced differences in village population distribution, an effect most noticeable between 1956 and 1976 (Walsh 1980). The proportion of total population residing in the "back" villages declined by 7% while the southern front villages and Alofi gained by this amount. The small villages of Vaiea and Toi have been most affected by people moving out to other villages, whereas Tamakautoga and the "back" villages have been the most stable, probably because they have maintained as far as possible the traditional marriage pattern of village endogamy. Villages already have unequal access to resources, particularly land, employment and money income opportunities (Walsh 1980). These internal population movements have potential for exacerbating inequalities around land tenure, agricultural reform, employment, social services, and legislative representation.

### The Link Between Income And Out-Migration

Recent out-migration has not caused imbalances in the age/sex structure of villages but it has caused problems in the work force and, subsequently, in income disparities within and between villages. The number of adult males in the work force, and the number employed for wages or salary, varies considerably and constrains the level and type of agricultural development possible.

There is no lineal relationship between village income and out-migration but there probably is such a relationship

between individual household income and out-migration (Walsh 1980). In 1976, for example, households with less than \$200 cash income per year were categorised as "deprived." An average of 37% of households in each village (range 24% to 53%) was so labelled (Walsh 1980). Most such households consisted of elderly persons and widows, especially those with dependent children, or single mothers, and in 65% of the cases the household had been reduced to this constitution by out-migration of family members who previously helped support it.

#### **SOCIAL RESPONSES TO DEPOPULATION**

Some changes in social organization have occurred both as a result of and as a response to depopulation in modern times. Everyone on Niue is very aware of the extent of modern depopulation. By 1981, one-third of the dwellings on the island were unoccupied. Every villager daily confronts those empty houses and remembers that only a few years ago they were filled with kin.

#### **Marriage And The Family**

There has been a general decline in the number of marriages since 1950, especially marriages conducted within the church. Divorce rates, too, are high but divorced men and widowers are more likely to remarry than are widows or divorced women (Bakker 1980c). With such heavy migration losses in the young adult ages for both sexes, this downward

trend in marriage is hardly surprising. Despite these trends, however, marriages do still take place although the age at first marriage remains relatively high: 24 years for males, and 23 years for females.

Also, there has been a rapid increase in the number of out-of-wedlock births: 20% of births in 1960 were classed as ex-nuptial whereas 56% of births in 1978 were so categorised (Bakker 1980c). The average age at which females have their first child is 20 years, much lower than their age of first marriage. It is now common for women to have one or two children, called "own" children, before marriage either from casual liaisons or a de facto relationship. The woman's eventual marriage might be to a child's father or to another man.

While not being pleased about these trends, many Niueans accept them. Better that the future of Niue--indeed, its very existence--be in the hands of these "illegitimate" children than there be no future at all.

Indeed, the Niuean Government, very concerned with the depopulation issue, has recognised and institutionalized this feeling by making it illegal for contraceptive devices to be given to any unmarried woman, so that the proportion of ex-nuptial children born in any year will remain high and the greatest possible number of new Niueans will be produced to perpetuate the society. Niueans, too, are perfectly content to claim as Niuean any child born to an adult acknowledged to be Niuean. Thus, liaisons between young Niueans and persons from other ethnic backgrounds will

produce children recognised and accepted as Niuean, especially if the child remains on Niue and is brought up to be Niuean.

## **GOVERNMENTAL RESPONSES**

Restricting the availability of birth control is but one conscious attempt by the Niuean Government to re-populate Niue. Making Niue attractive to out-migrants in the hopes that some return migration will occur, has been another strategy.

### **Modernization Schemes**

The Government has deliberately set out to modernise Niue so that the alleged attractions of New Zealand, the labour saving devices so lauded by kin returning from a visit to relatives in New Zealand, are available on Niue too. Extension of electric power to all the villages was one modernization scheme, successfully completed by late 1978. A new water reticulation scheme is planned to pipe water into every home rather than to communal standpipes and to reduce the impact of droughts on domestic water availability. Improvements in the telephone system are also planned.

Despite the fact that Niue is only 19° South of the equator in the tropics, the Niuean Government, on advice from experts in countries which donate monetary aid, has not investigated solar-generated power. And the price of oil-generated electricity is no longer cheap. Refrigerators,

washing machines, electric stoves and sewing machines are found on Niue, but still only in the homes of those who are relatively well-to-do. The majority of the people cannot afford to buy or use such items. Some rely either on working a while in New Zealand, buying consumer goods there and shipping them to Niue. Others rely on relatives remitting money to help pay for such goods. Unlike in other parts of Polynesia, for example Western Samoa, however, remittances to Niue are not high and families in New Zealand do not always heed requests from relatives.

Modernization has been a mixed blessing for Niue. The construction of the airport, for example, made it easier for people to arrive at Niue--and easier to leave. Similarly, the introduction late in 1982 of a second airline with a direct service between Auckland (New Zealand) and Niue, made it easier to move air freight and for out-migrants to return, even if only for short personal visits or as part of a sports team, as commonly occurs around Christmas-time. But it also made it cheaper and more convenient for those who wished to leave.

In order to have modern appliances and conveniences, one also needs a work population capable of installing and maintaining them. This has led to a general improvement in the educational level of the workforce remaining on Niue, an improvement which, ironically, has not succeeded in preventing migration away from Niue but has in fact encouraged it.

## Education and Employment

Migration has already taken from Niue many able people. So now training reaches people otherwise unlikely to have ever been so highly educated. With the help of aid from a variety of sources, many of the young adults remaining on Niue have been sent to Fiji, New Zealand or Australia to receive technical or professional training to equip them to serve a modernized Niue. Frequently, they are taught many more skills than they need on Niue so upon return they become frustrated, yearning to show what they can really do. Upon their return to Niue, some people are given completely different jobs, ones not using any of their newly acquired skills at all. Furthermore, as the number of people on Niue decline, so does the amount of work necessary to maintain the system but the Government cannot afford to lay off large numbers of employees for it is the largest, and usually sole, source of income for the populace. Hence, there is chronic under-employment--a large number of persons engaged full-time on "busy work" tasks for a small income which has to be supplemented by burdensome subsistence gardening. Moreover, on Niue employment opportunities are limited, not only in number, type and scope, but also in terms of advancement or career structure. All these lead to further frustration.

Those trained overseas know that elsewhere they could make more money, eliminate the burden of gardening, enjoy a career and enlarge their skills. Ironically, with skills and diplomas acquired abroad, those people now have assets

marketable outside Niue so when the frustration levels become too high they, too, join the migration stream away from Niue. And so Niue's efforts to modernise and attract migrants back from overseas sometimes achieve the opposite effect.

### Land Reform

Another area in which the Niue Government has attempted reform, so far without notable success, is the thorny issue of land reform. Without substantial change in customary rules regarding land owned by absentee migrants little can be done to substantially improve agricultural production on Niue (Kalauni 1977).

It took the Government eight years to negotiate the acquisition of land for the airport. No doubt it will take even longer for some agreement to be reached between land owners on Niue and absentee owners on the question of access to long-fallow lands and ownership of crops grown thereon. Until such agreements can be reached, the outlook is gloomy for agricultural improvement.

The lease of land, for the experimental farms or by the Niue Development Board, is always fraught with difficulties too, especially if various customary expectations or "conditions" get attached. Examples of such difficulties are: the demand that members of the magafaoa (family) whose land is leased are hired to work for the Department using the land; or, threats to withdraw from lease agreements

unless an unpopular decision by another branch of government, say the judiciary, against a ~~magafaoa~~ member is overturned.

The arbitrary introduction of new written laws to "solve" dilemmas created by the populace's recourse to customary law and ways of living are not likely to succeed but merely to generate intractable hostilities. Still, despite decades of access to written, constitutional law, Niueans tend prefer customary law and understanding to resolve disputes (Commonwealth Magistrates Association 1977).

## CHAPTER IV

### NIUEAN ETHNOGRAPHY: TRADITIONAL AND MODERN

In comparison to the richly detailed and numerous accounts of life and customs in pre-contact times for many Polynesian societies, very little is known about traditional Niue. The few glimpses we have of Niue before the turn of the twentieth century are tantalizingly brief, incomplete, and difficult to find (see Ryan 1984).

#### SOURCES OF KNOWLEDGE

That little is known of aboriginal Niue, the Niue before the Samoan pastors arrived, is not surprising as no written sources were available. The early travellers who encountered Niue were, unfortunately, more concerned with recording for posterity accounts of their own actions and findings rather than with documenting the native way of life (see Ryan 1984). These chroniclers, however, left us valuable sketches of life on Niue before the latter part of the nineteenth century.

What is unusual is that Niue was "blessed" with literate European missionaries and traders of uncharacteristically laconic natures. These people, the Lawes brothers, and the traders Head, Rex and Nicholas in particular, unlike their counterparts elsewhere in

the Pacific, rarely made written observations about life in mid-nineteenth century Niue.

"... George Turner is of course still recognised as the author of important historical and ethnological studies of Samoa, where he spent the best part of his life. Frank Lawes, by contrast, personally wrote very little regarding the four decades he spent observing and participating in Niuean life, though it could be argued that most visiting writers between 1870 and 1910 devoted much of their energies to recording what he had told them. His brother, George, the only other missionary to spend a long time on Niue in the nineteenth century also left very little to posterity ... his personal papers in Australia ... do not contain much ... Likewise, the private records of Henry Head, the main Palagi trader on Niue through this period, are said to have been destroyed by fire. Consequently, there seems to be very few accounts--either published or unpublished--left to us by missionaries, traders, or other European residents on Niue during the second half of the nineteenth century."

(Ryan 1984:xi)

### The Standard Ethnographies

Two standard ethnographies exist (Smith 1983; Loeb 1926). They, too, are inadequate. Not only were they written long after massive social change had occurred, through mission activity, trading, and colonization, but they were based upon very short periods of fieldwork.

Smith, for example, spent "nearly four months" on Niue in 1901 and published his findings in the Journal of the Polynesian Society in 1902 and 1903. These articles, reprinted in 1983, are the first scholarly works which attempt to give a broad overview of all

aspects of Niuean culture and, as such, have greatly influenced all subsequent writers, including Loeb (1924, 1926), who, in turn, stayed on Niue only some seven months.

To compound matters even further, Niueans are not great oral historians as are many other Polynesians. Indeed, as long ago as 1929 scholars complained that Niueans were negligent in recording their traditions (Ryan 1977:33).

Thus, few traditional Niuean myths, legends or histories remained to be collected by the ethnographers of the early 20th Century and the accounts they received about pre-contact rites, beliefs, social organization and lore were scanty and incomplete (Smith 1983:46). Nevertheless, it is possible to get some idea of Niuean customs and beliefs in ancient times from these texts.

#### **NIUE IN LEGEND**

A mountain of lava topped by coral, thrusting its way above the surface of the ocean in the aftermath of an underwater volcanic eruption is our explanation of how Niue came to be. Niueans have a very different but equally momentous account of the birth of their island.

Long ago, two ancestors, Fao and Huanaki, landed at Motu in Lakepa. There they laboured mightily, day and night, desperately trying to raise dry land by

bailing water from the reef. At first, they did not succeed. Then three more ancestors, Lagiataea, Lageiki, and Talimainuku, arrived to help and soon dry land was formed. These five beings from Fonuagalo (The Lost or Unknown Land) or Lalofonua (the Underworld) settled on this strange and isolated place that they had created. They were followed by several females from Fonuagalo who married these ancestral heroes and so were born the tupua, the ancestors from whom all Niueans claim descent (Smith 1983; Loeb 1926; Kunitau & Hekau 1982:85).

The character of Niue, an island of scant foliage isolated in the vasts of the ocean, is reflected in the many traditional names for the island, names given by the tupua. Nuku-tu-taha, one such name, means "island that stands by itself" and Motu-te-fua, another traditional name, translates as "island of sterility" (Smith 1983:2-3). A name by which Niue is sometimes called, even today, is Niue-Fekai. Said to have been given by some Tongans who visited the island and were greeted with hostility, the name means "wild Niue" (Kunitau & Hekau 1982:90).

## PREHISTORY

To date, few archaeological explorations have been undertaken on the island (Trotter 1979). Moreover, wooden clubs or utensils, woven mats, coconut fibre

houses, bark-cloth, feather and shell ornaments, the articles of material culture employed by ancient Niueans, were few and not of durable materials. The very high background radiation on Niue makes difficult the carbon-dating of any remains that happen to be found (Ryan 1977).

### The Peopling Of Niue

It is not known if Niue was settled deliberately by voyaging canoes or by chance from drifting vessels. Both were likely events (Finney 1985). Recent archaeological findings support an initial peopling of Niue around AD120 (Ryan 1977:46; Trotter 1979), much earlier than the previously accepted time of AD500 to AD700 (Smith 1983:79; Kunitau & Hekau 1982). While the exact place of origin of the first settlers on Niue is unknown, those settlers were indisputably Polynesian. Niuean language, physical appearance, social organization, and traditional beliefs amply attest to that.

Authors remain divided on the source of the initial inhabitants but modern opinion inclines towards a Tongic rather than Samoic origin (McEwen 1970; Ryan 1977; Pawley 1967; Loeb 1926; Smith 1983). Legends amply attest to the frequent and purposeful voyaging that took place among the islands of Tonga, Samoa and Niue (Smith 1983:83-86; Loeb 1926). The question of

whether or not there were several settlement periods, separated by several hundred years, has not yet been resolved (Smith 1983; Ryan 1977; McEwen 1976; Kunitau & Hekau 1982). All sources agree, however, that migrants from both Samoa and Tonga arrived at some distant time, forming the basic stock from which Niueans sprang.

At the time of first contact with Europeans, Niueans comprised this basic Western Polynesian stock supplemented by a small contribution by Pukapukans from the Northern Cook Islands who had arrived on Niue about AD1700 (Tahafa Talagi 1982:109). All these places of origin had extensive contact with Fiji, too, and by the late 18th Century, some Melanesian link was evident in that some Niueans sported the kinky hair so typical of that region.

### Physical Appearance

In physical appearance, modern Niueans are like their Polynesian neighbours, with smooth brown skin, dark eyes, and black hair, usually straight or slightly wavy. Skin colour varies from a very light brown, to a deep chocolate; men in general are lighter skinned than women. Though definitely Polynesian in mien, Niueans tend to have straight noses and thin lips rather than the flatter noses and full lips of the Eastern Polynesian or Samoan. Not as tall as their Tongan counterparts nor as broad as their Samoan neighbours,

they are a slight, well-muscled people, active and lithe (Smith 1983:49).

### Distinctive Aspects Of Niuean Language and Culture

The Niuean language has obvious affinities with but is distinct from other Polynesian languages, even from Samoan and Tongan, the two closest related languages. Though particular items of vocabulary are common to Niuean and other Polynesian tongues or can be derived by simple rules of linguistic change (e.g. elision of the "l" so common elsewhere), Niuean grammar is sufficiently different to make it distinct and unintelligible to speakers of other Polynesian languages. Niuean, for example, is the only Polynesian language where possessives have only one form (McEwen 1970), lacking the form which implies subservience to certain objects or persons.

Ryan (1977:45) links this linguistic feature with a peculiarity of Niuean social structure. In contrast to other Polynesian social systems, Niue lacked hereditary chiefs, priests or others before whom ordinary people were subservient. Such egalitarianism, he says, not only resulted in the loss of one possessive form in the language but also became a central and distinctive feature of Niuean social organization.

Egalitarianism was but one unique feature of Niuean culture. There are a number of additional

features which further differentiated Niuean culture from its Polynesian relatives. Niueans did not tattoo, and even today remain somewhat scornful of other societies in which this is prized. They also had no tradition of cannibalism nor of brewing kava (alcoholic or mild narcotic beverages), not even for ceremonial purposes. They did, however, have a circumcision ritual (in addition to the actual and unmarked event). Perhaps the most curious feature is the unusual archaeological remains--ovoid stone structures whose purpose is unclear, perhaps grave markers or floors for buildings (Ryan 1977:60).

## **SOCIAL ORGANIZATION**

Although we have very little knowledge of the origins of the Niuean people, we do have a better idea about the organization of their society in pre-contact times. Niueans had a social organization similar to other Polynesian societies yet distinguished from them, by a distinct language, a weak system of social stratification with a concomitant emphasis on egalitarianism and individual achievement.

### **Social Stratification**

Legend also has it that modern Niueans are descended from one of five types of "family line" (mataohi) or classes of people: a line of chiefs iki, a

line of heroes or warriors toa, a line of famous men talahaua, a line of lazy men teva, or a line of thieves kaiha (Vilitama 1982:92). Of these, only the first two lines were considered to be high class, the other lines constituted the lalo tagata (=low people). Inter-marriage across these class lines was rare but occasionally a high status man would marry down.

Though this awareness of class existed in traditional Niue, it was offset by an equally strong belief that personal achievement could overcome any deficit of birth. Fundamentally, all had equal potential and individuals who excelled in certain spheres could increase their social rank. Hence, any man, if he were strong and brave in battle, could achieve the prized status of toa, a warrior. Or a particularly able younger son or nephew could become the family leader in place of the eldest son.

The emphasis on egalitarianism combined with this additional feature of Niuean culture, the encouragement of personal achievement, to create a relatively weak system of social stratification. A system that was essentially out-moded by the time of European contact.

### Political Organization

Oral histories, from Niue and Tonga, tell of an invasion of Tongans on Niue around AD1500 (Tahafa Talagi 1982:107, though Smith 1983:39 gives a date of

AD1700). The invaders were defeated at Ana Tonga (at least in the Niuean version of the tale!) and driven back by warriors from the north. This is said to be the beginning of the division of the island into two halves or moieties, Northern and Southern. The Northern, Motu, claim to be the original inhabitants while the Southerners, Tafiti, are alleged to be the more recent arrivals. Warfare between these groups was endemic, up to the Mission era.

Fighting, which probably consisted as much of threats and bombast than actual combat or killing, seemed to center about the control of the one freshwater cave on the island, that at Tukuofe (Ryan 1977:98-102; Vilitama 1982). In times of drought and famine, honge, it was important to have easy access to water and control over large tracts of land on which to hunt for small land animals or to gather root vegetables. And famine and drought were all too common.

On a local level, each community held its own meeting or fono to discuss various issues. Every married man or patu had a right to speak at such community forums and to influence the decisions of the group. Unmarried men, even if they had fathered children, were not regarded as elders and so had no rights at the fono.

The iki (chiefs) and toa (warriors) residing in a particular locality had considerable influence over the decisions of the fono, and the iki or chiefs

represented their community at larger forums. One such forum was that which elected the patuiki or king.

### The Patuiki.

Despite the basic egalitarianism of Niuean culture and this fundamental split between the moieties, there was for a period a very weak over-arching political structure in the form of a patuiki or King. Opinion is divided about whether or not this was an indigenous Niuean concept.

Ryan (1977:162) thinks it is. Tahafa Talagi (1982:107) and Smith (1983:39) think it is not, but differ in their attribution of origin. A Tongan introduction around the time of the Ana Tonga fracas is one alleged source (Tahafa Talagi 1982); a possible legacy from the Pukapukan contingent, whose own indigenous Kingship was very similar to the Niuean system, is the other suggested point of origin (Smith 1983:39).

The names of only seven Kings are known. Perhaps because this was a very short-lived institution. Or, because there were long periods of time when one man had too little standing or political clout to rule (Vilitama 1982:93-94). Or, because the other kings were less memorable so their names were quickly lost in the weak oral histories of Niue.

Political power was not hereditary but, rather, associated with leadership and skills displayed in

battle. Kings were elected, with much dissension, from among various famed but rival warriors, by a council of elders (Tahafa Talagi 1982:108). Each patuiki was assisted by an alaga yaka ne mua (=head of the canoe or Prime Minister) and a phalanx of minor political figures, most of whom had been rivals for the title. In addition, every community had an alaga yaka from the King who was to represent it at any fono though other iki from the village usually also attended any meeting. Thus the patuiki's position as "chief of the chiefs" was far from absolute and depended to a great degree upon his own personal powers, to persuade not just his own assistants but also the chiefs.

Kings were charged with two essentially impossible tasks: keeping the peace between warring factions and ensuring the prosperity of the people by preventing droughts and famine. No King reigned for long. Factionalism was rife. Every toa and iki believed himself to be at least equal if not superior to the incumbent monarch, and was not bound by any ties of fealty. Some patuiki were inept at controlling political dissent among proud and ambitious rivals. All were unable to prevent droughts. Their punishment for these failures was death (Etuata & Tanaki 1982:100).

Not surprisingly, it often was impossible to persuade a favoured warrior to accept the title of patuiki or to choose among iki or toa who vied for the

title (Smith 1983:39; Tahafa Talagi 1982). Thus the institution fell into disuse some 100 years before European contact. There was a brief and ineffectual revival of this institution in the late nineteenth century but it passed into permanent extinction with the arrival of a colonial power.

Names live on, however, particularly those associated with certain episodes in the histories of the various Kings and their rivals: for example, Mohelagi, Helagi, Tuitoga, Tagelagi, Palalagi, to name but just a few. By the time Smith visited in 1901, however, few remembered details about the anointing of the Kings or the precise meaning of the stone stools at Tuapa (Smith 1983:38-46). Much of the chiefly language used when addressing the patuiki was no longer known. Likewise, customs signifying deference to those of higher rank, such as sitting or squatting in their presence, were also beginning to be lost.

Land and food resources were most important in the harsh environment of Niue. The politics of warfare was but one social undertaking around land. Virtually all Niuean social actions involved land or the access to resources in one way or another.

#### **FAMILY ORGANIZATION**

Numerous cognatic descent groups existed, the various magafaoa or families, whose essential function

was that of land holding. Each magafaoa or extended family unit, usually named after the oldest living male, who was the takitaki or controller of the group. This position was often, but not always, inherited by his eldest son, the matenui (Vilitama 1982). In order to claim rights in any magafaoa, a member had to reside with the group. A man living on his wife's land, a nomaea, however, had no part in her magafaoa's affairs.

It is no accident that fouua means both "placenta" and "land." Every child's membership in his/her father's magafaoa and thus his/her inalienable right to land held by that group, was established by having his/her placenta buried on the family's land (Smith 1983:55) and a tree planted above the spot in commemoration of this event. Thus, by the supernatural powers inherent in the land and by the act of burial, the child and the land were inexorably linked and mutually identified.

Even death did not sever the link between land and social identity, for burials, too, always took place on family land (Smith 1983:58-60). Bodies were either placed in caves or in graves at a site used for no other purpose. Every Niuean knew his genealogy, his links to the land, for he was surrounded by it, by his forebears, preserved and displayed in gravestones.

## Kinship Terminology

Niuean kinship reckoning is typically Polynesian, in that distinctions are made on the basis of generation, sex, and relative age. Terms are broad and concerned with collateral kin rather than lineal relations. The kinship term by which a person is addressed elicits the behaviour expected. Hence, a woman who calls a male cousin tungane will receive the care, protection, and respect proper to the brother-sister relationship.

Matua, parent, is applied not just to one's mother and father but also to their siblings. If need be, father, matua tane (=male parent), can be distinguished from mother, matua fifine (=female parent), and biological parents, matua fanau (=birth parent), from their siblings.

A man's brother or a woman's sister are matakainaga. A man's sister or female cousin is mahakitanga while a woman's brother or male cousin is tungane. Siblings (including cousins) of the same sex as the speaker but older than him/her are called taokete while those younger are referred to as tebina.

The terms matua and tama (=child) are frequently used for grandparents or grandchildren, respectively, especially if day-to-day relationships are still close. More distant generations or formal reference to the first ascending or descending generations sees the use of global terms, grandparents being called tupua

(=ancestor) and grandchildren being mokopuna  
(=offspring of one's children).

### The Life Course In Traditional Niue

Detailed knowledge about the rituals of childhood does not exist. It is known, however, that the birth of a first child was cause for celebration. Prayers were offered to the gods--to make a boy active, brave, strong, and generous; to make a girl skilled in weaving, food preparation, and foraging (Smith 1983:55-57). A few days after a child was born a mock circumcision ritual, matapulega, would be held and then the child ceremonially "baptised" or accepted into the group (Smith 1983:55). Children were desired and generally well-treated in Niuean society for much of the work of the household and plantation could be successfully performed only because youngsters were around to help pull weeds or plant crops.

But children were also a liability, especially in times of war or famine. A crying child could lead an enemy to one's hide-out. Moreover, women accompanied their men on raid but could not manage a child at such times (Smith 1983:57). A hungry child consumed precious food without directly contributing to the welfare of the group. At such times, then, very young children and infants were killed. The usual method of infanticide was by fakafolau, setting the child adrift in a canoe,

or by hurling the child over the cliffs at Tuo (Smith 1983:57; Loeb 1926).

Loeb (1926) claims that there were few unwanted pregnancies or illegitimate children born. Abortion, by violent kneading of or jumping on the abdomen or by use of herbal concoctions, was common. The major threats to life once a child was past infancy, were war, famine and disease.

Although warriors were killed in battle or on raids deep into enemy territory, it is unlikely that the death toll was ever extensive, else the population would soon have been extinct. Stories exist about the death of particular individuals due to starvation, for example, the King Pakeito. It is not known how many actually died from famine but, again, it cannot have been too many or the culture would not have survived. Disease was probably a bigger threat to life than either war or famine.

Apart from these accounts of formal institutions, we have but hints about the daily life of Niueans in pre-contact times. The daily domestic pursuits of adults are essentially unknown. Apart from knowing that old people were generally respected for their great experience of life and their wisdom, little else is known about the place of the elderly in aboriginal Niue.

## Marriage

Marriages were arranged by the parents of the couple. The males of one magafaoa would make a formal visit to the brothers and other male relatives of the chosen woman and propose marriage. If the match were acceptable, a series of wedding feasts would be instituted and the marriage declared. The power of veto resided, not with the bride's father but with her brothers (Smith 1983:58-60).

As is common in many Polynesian societies, the spousal bond in Niuean culture was weak. Each partner retained rights in their own magafaoa and land, and their primary allegiance was still to that group. The link between siblings, especially that between brother and sister, was the strongest social bond (Vilitama 1982). A brother was expected to protect his sister, against abuse or neglect by her husband and his family. There was a social rule which clearly demonstrated the relative rights of the wife and sisters of a man. If a man were suddenly called to war, his wife had no right to eat the food left on his platter; that right belonged to his sisters (Vilitama 1982:92). The competing expectations inherent in spousal and sibling bonds were frequent sources of marital conflict.

Informants told Loeb (1926:82) that incest, tiki, occurred in two instances: when a small family was surrounded by hostile groups and when a family wished to keep property especially land intact. He failed,

however, to find any proof for these claims. Thomson (1902) noted that marriage between first cousins (i.e., siblings in this kinship terminology ) was abhorred although a liaison between the children of brothers was accepted more easily than a similar relationship between the children of two sisters.

In most marriages the bride moved to reside with her husband and his people but Loeb (1926:80) claimed that one-third of all marriages were uxori-local. A man would move to his wife's land when it was larger or of better quality than his own. From that land he would support his children without relinquishing his rights to his magafaoa's land. The children, however, often had to move back with their father's people before they could claim their right to be assigned land for their use.

To minimise the influx of wives from "foreign" areas and to keep the parcels of land given to each member of the magafaoa as close to the dwelling site as possible, there was a strong preference for men to marry within their own magamotu (=district) (Ryan 1977:163). This rule of district endogamy was maintained after the arrival of the missionaries and led to a preference for marriage within the village, providing the couple were not matakainaga.

### District Character

Each district had its particular characteristics which set it apart from, and in the eyes of its inhabitants, above, all others (Smith 1983:8). So, for example, Mutalau, where the culture hero of that name made his home and played out his political ambitions, was referred to as Ulu lauta (=head of the island). The Kings made Tuapa their base giving that district a feeling of supremacy over others. And in the east, Hakupu was proud of its many famous toa.

This rule of district endogamy, combined with the special character of each district, led to the development of fierce allegiances to particular locales. Today, still, a Niuean's primary allegiance is to his village of birth. Everyone can and does cite the litany of characteristics that distinguish villages, one from the other, and that make one's natal village "the best". The concepts of Niue as a nation, and of its inhabitants as Niueans, are still very secondary, far behind this "village consciousness" (Challis 1953).

### **ECONOMIC PURSUITS**

The people of each district lived in hamlets, kaina, scattered throughout the bush. Each hamlet roughly corresponded to one extended family or magafaoa. Families moved their dwelling sites in accord with their slash-and-burn agricultural cycle. Houses,

fale, clustered round the gardens under cultivation leaving unoccupied old crop sites. With a fallow period of upwards of 10 years, each family needed access to a large amount of land if it was to survive, especially in drought years.

The indigenous inhabitants of Niue not only cultivated crops but also foraged, hunted, and fished. At first, the cultivated crops were probably only taro, talo, and banana, fusi. Plants such as tapioca, breadfruit, and the sweet potato, were introduced later (Ryan 1977). According to legend, the coconut, niu, was introduced by a returning demi-god or culture hero long after the island was first settled. Because the coconut eased the burden of life considerably, it is said the grateful populace named their island after it (Smith 1983:20-22; Loeb 1926; Kunitau & Hekau 1982:90).

Fern shoots, luku, were an important dietary item foraged from the bush. Although, as now, regarded as "second class" food, arrowroot, pia, and the yams, kape and hoi, were important foraging crops, especially during periods of low rainfall as they are more resistant to drought than are cultivated crops. Moreover, the preparation required before these plants can be eaten involves considerable co-operative effort and is accompanied by ritual and food exchange. During periods of famine, honge, then, these starchy crops staved off hunger and, most importantly, helped

maintain the social integration of the group (Ryan 1977).

Hunting was also undertaken: of the now extinct vegetable eating rat, kuma; of peka, the bat or flying fox; of the native pigeon, lupe; and, most importantly, of the coconut-eating land crab, uga.

Fishing, too, though an arduous and dangerous pursuit, was vital for the well-being of the family or magafaa. Deep sea catches were supplemented by fish caught on the reefs at certain times of year or by shellfish and other marine life gathered from whatever tide pools existed. More than other forms of subsistence activity, fishing pursuits were disrupted by adverse weather

### The Division Of Labour

The division of labour in indigenous Niue, except for that between the sexes, was never very extensive, (Ryan 1977:95; Smith 1983; Loeb 1926). Men assisted women to plant and to weed gardens, and prepare the earth ovens or umu for cooking. Men hunted and fished while women gathered seafoods and foraged for vegetables. Women's tasks included weaving articles of clothing, particularly items worn by men in battle, and making hiapo, bark cloth while the particular crafts of men were the making of canoes, clubs, or fishing equipment.

There was no group of permanent professional

craftsmen or specialists. Some workers gained reputations as craftsmen (tufunga) for their technical skills, for example, in canoe building, in healing, or in weaving, but none laboured solely at these tasks. Even the iki or the priests, taulaatua, had only occasional important political or sacerdotal duties, the rest of the time they performed the same tasks as other men.

### Leisure Activities

Niue was a tough island to live on. Not only was the ground extremely difficult to till but crops needed constant and careful nurturing. Drought and the prospect of famine, honge, was an ever-present threat. Niueans worked long and hard to ensure their survival. Even so, there were times of leisure.

Men engaged in sporting contests that honed their military skills (Smith 1983:73). Competitions were waged to see which man could throw furthest a wooden spear-like item, a tika. In addition to this game, children had a number of amusements, such as surfing, walking on stilts, the throwing and catching various items.

Marriages, deaths, or victories called for celebration. Amidst feasting people would dance and sing, often throughout the night. Skill in composing new tunes or verses to commemorate the events or grace in dancing were sources of pride and status. Skill in

oratory and speech-making was also an important social accomplishment for men (Smith 1983:72).

### Social Control

Any surplus, be it a bountiful harvest or an extremely good catch, was not stored but, rather, re-distributed among the members of the magafaoa. Any hunter or planter who now shared his catch or crop would thus be certain to receive a portion of the catches others made in the future. A fisherman who caught little today or a planter whose new plantings withered, would not have a hungry family. As long as he maintained his diligent pursuit of food to the best of his ability and shared with others, the magafaoa would look after him and his family during lean times.

One could never be too generous, too willing to share but a man who relied too much, or without reasonable cause, on the generosity of his family and neighbours ran the risk of being negatively sanctioned. Labelling such a person a tangata teva (lazy man), thereby asserting his descent from a low and undesirable class of ancestors which no one would normally claim as kin, was a powerful means of control. Gossip would soon spread this reputation afar. Others would stop sharing their goods as no one shared with a person chronically unlikely to pay back their debts.

It was acceptable to use any goods that belonged to another if one had urgent need. So a man journeying

across another's land could slake his thirst with a coconut growing there without first asking the permission of the owner. But a man who was not in need who took or used the belongings of others was despised. Such a person was said to be a descendant from a class even lower than that of lazy men, from a class of tangata kaiha, or thieves. Major thieves were sometimes punished by death, by fakafolau, the setting adrift in a canoe devoid of paddles or food (Smith 1983:59).

The importance of hunting and fishing to the survival of the group was well recognised. At times these activities were the focus of religious sanctions as well as social norms of reciprocity. Hunting ceased during the breeding season, for example, because at the appropriate time a tapu was put on the animals or on the area in which they bred. When a man died, then a fono was placed over his land so that no one could harvest the produce nor plant a new crop there until a year had passed. Likewise, a twelve-month fono on the area of ocean in which a drowning occurred, prevented fishing in that area for that time (Etuata & Tanaki 1982:101).

Placing a tapu or a fono on some region or item rendered it sacred. Took it from the realm of human existence and placed it under supernatural protection, making it outside the scope of human action. People were thus forbidden to approach near, touch, or enter any tapu object or locality. Whether wilfully or

unwittingly, any person who broke a tapu or fono was subject to supernatural punishment, swift and terrible, often death.

## RELIGIOUS CONCEPTS

Ancient religious ritual and belief are areas about which little is known. Because this was the area so condemned by the missionaries, Niueans perhaps felt they ought to extirpate such knowledge from their society. In combination with their weak tradition of oral histories and story-telling, all but the very central tenets of their thought had gone by the time the first systematic collection was made by Smith in 1901.

### The Niuean Pantheon Of Gods

We do know, however, that supernatural beings, spirits, or gods were said to inhabit every living thing and oversee every human action (Etuata & Tanaki 1982). Niueans worshipped a pantheon of deified ancestors and supernatural spirits. Particular localities or features of the landscape had their own spirits, which "protected" that environment and were worshipped by people who lived nearby. Certain parts of the island, especially caves in which the dead were buried (as, for example, at Anaana) were particularly tapu and so were avoided.

Only while these beings, these deities, are content or somnolent could humans justly exploit natural resources. If a spirit or god were somehow angered or awoken, either by some profane human act or simply because of its inexplicable nature, then terrible things could happen. Men could drown at sea. Crops could fail. Disease could strike. Actions most wont to disturb the orderly relations between the world of the spirit and the world of humans, were those stemming from greed, carelessness, or wanton destruction of the environment. Thus rituals abounded, to ensure that the protagonists acted with due propriety.

Fishermen at Aliutu, for example, were to be as silent as possible lest the God of the Sea who resided there should hear them, awake and devour them. To propitiate the gods so that the sea would be safe again when the fono was lifted from the site of a drowning, the family of a drowned man would cast gifts on the waters. Before any war dance or takalo or before a party of warriors left on a raid, prayers and rituals would be offered to the gods to ensure the success of the venture. Any toa who had slept with a woman before such an undertaking risked the lives of all. Those who handled the dead had to purify themselves by ritual baths before coming in contact with others (Etuata & Tanaki 1982:99).

Such ritual customs were, of course, intended to

appease the gods or spirits which inhabited and controlled various aspects of the natural order but they had other effects, too. They moderated the degree to which humans altered their environment or risked their lives in dangerous situations, and they allowed the regeneration of natural resources. Excessive destruction of the native flora or consumption of fauna was, thus, prevented. And the ultimate survival of this society on this tiny, isolated, and fragile ecosystem was enhanced.

Not surprisingly, on this drought-ridden island, the most sacred, powerful, and dangerous, the most tapu deities were those which involved rain. Tagaloa, the Rainbow, was the principal and powerful god, or atua, worshipped all over the island. If one even pointed a finger at him, then one's body would rot (Etuata & Tanaki 1982:98). A sacred wooden fetish, Tokamotu, generally regarded as a rain-making object, was kept hidden in a special building in an area of tapu land at Fatuaua, near the Kings' throne at Tuapa. This fetish is said to have ultimately been buried at some unknown spot near Hakupu after the coming of the missionaries. During droughts, this fetish apparently was the object of "rain-making" ritual by priests and the Kings (Smith 1983:44; Etuata & Tanaki 1982: 98-99). In addition to its more usual meanings, Niueans extended the term mana to mean also "shower of rain" (Ryan 1977:68).

## The Twin Concepts of Mana and Tapu

Two linked ideas, central to Polynesian systems of thought, are those of tapu, which we have already encountered above, and mana, a notion of quality, of power, of force, and of generativity inherent in an object, person or event. Mana inheres in any kind of efficacy, particularly social efficacy; it is impersonal but attaches to persons. People who are exceptionally able or good, who are of high status, who are capable, who are leaders, exhibit much mana, this quality of beingness that sets someone aside from the ordinary. Mana can flow from those with much of it to those with little, up-lifting the latter without draining, indeed enhancing, the power of the former.

Everyone has some minimal amount of mana without which they would not be human. Beyond this, some mana attaches to being born into high rank but the most important means to acquire mana is through personal actions and attributes. If a person has mana then he can use it, to supercede his ascribed social position and take up the social role befitting his inherent abilities. A noble deed, exceptional courage, great skill in certain crafts, general excellence in the social or political arena, may suffice to increase one's stature, and display one's mana. Of course, an ignoble defeat, failure, or inability, all serve to do the opposite, to reduce one's social standing. Loss of mana was far worse than lack of it.

A person's social influence depends on the impression he makes on others, that is, on their assertion that he has mana and therefore social power. All conspicuous success is proof of mana.

As one increased in social standing so one increased one's social distance from ordinary mortals. The more mana one possessed, the more tapu one became, the more one was like a spirit or god. Those of very high rank and of great age were considered to be very close to the gods; the former because of their mana, the latter because they were close to death, close to rejoining the ancestors and spirits in the netherworld. Kings, leaders, warriors and priests all have more mana than ordinary mortals. Spirits, supernatural beings and dieties have even more.

That which has enormous mana is awesome. It is treated with deference and reverence. A reverence tinged with suspicion, however, for anything so powerful is automatically extremely dangerous, virtually outside the realm of human control. Hence, one avoids very powerful objects or persons, things with great mana, lest they should unleash their power, a power against which one is almost helpless. Only those of equal mana can deal with an extremely powerful being.

Rendering tapu an object or person with enormous mana, was a way to neutralise its power. To sanctify the object or person was to remove it from the ordinary

realm and to place rigid strictures on conduct permissible in its presence, with known penalties for transgression of the rules. Special honorific terms and actions, which displayed human awe and reverence, were reserved for use with the extremely tapu.

### The Priesthood

An intermediary was necessary between humans and gods. Someone with enough mana to match the mana of the spirits, someone favoured enough by the inhabitants of the spirit world to be able to interpret the will of supernatural beings for mankind and to negotiate with the atua on behalf of humans. Such intermediaries were the priests or taulaatua (Etuata & Tanaki 1982:100).

Only a small amount of conflicting and unclear information exists about the priesthood. All sources agree that priests did not constitute a privileged nor full-time specialist class. Smith (1983:49) claims that the principal function of the taulaatua was to bewitch, to curse enemies. However, most other sources (Loeb 1924, 1926; Ryan 1977:95-98; Vilitama 1982) insist the role of taulaatua was more complex, involving healing, prophesy, and divination as well as maleficence.

To limit the concept of mediator between humans and gods to a malign role seems unnecessarily restrictive. Polynesian gods were generally reckoned to have neither wholly good nor wholly evil designs for

the humans in their power. Depending on circumstance, any atua could help or hinder the desires of mankind. Thus it makes logical sense to have a priesthood which could interpret and perform both malevolent and beneficent actions on behalf of the atua.

#### MODERN NIUEAN ETHNOGRAPHY

Contemporary Niue maintains many of its old values, particularly those of egalitarianism and individual achievement which are such notable features of Niuean society. Modern Niue is very like its former self, especially in matters of family organization, politics, land use, economic pursuits and moral values.

Niueans themselves like to discuss what it is that makes a Niuean, what it is that sets Niue apart from other Polynesian nations, what it is that makes Niue and being Niuean the best possible thing in the world. One young pastor encapsulated the Niuean world view thus:

"the land and the sea, that's what makes Niue, without those we'd have nothing, be nothing. Every Niuean is a planter and a fisherman. It doesn't matter what else he does, unless he grows taro and catches paala [a kind of fish] he's a nobody. Everybody here [on Niue] plants and fishes, no matter who they are, even the Assembly men; if they didn't they wouldn't be Niuean."

Yet another young man, extolling to me the virtues of Niue:

"Niue was born a dwarf--but she's got a big heart and brain. There's nothing Niue--and we--can't do if we put our mind to it."

## EGALITARIANISM, SOCIAL HIERARCHY AND ACHIEVEMENT

Because of the small size of Niuean society, the relative lack of rigid social hierarchy, a muted reliance on nepotism and, most of all, a belief in individual achievement, a strong egalitarian ethic is possible.

"Egalitarianism is a mark of Niuean society which differentiates it from other Polynesian systems, particularly the three-rung stratification of Tonga and the matai system of Samoa" (Pollock 1979:142).

### Social Hierarchy

This does not mean, of course, that there is no social hierarchy, for there is, the upper echelons being filled by new style chiefs and warriors, those with diplomas and prestigious jobs rather than spears and war-girdles, those who have proved they can play and win in the white man's world. This rather small segment of the populace wavers precariously on the thin line between not acting with too great a display of power and privilege proper to the higher ranks and of taking unto itself too many privileges. It is not shameful to be powerful, to have mana, or to use it to the betterment of all; indeed, it is proper for those with power to act accordingly. But excessive boasting is unseemly.

The position of the upper class is by no means secure. A strong co-existent egalitarian ethic on Niue asserts that every man is inherently just as good, just as worthy as

those now at the top, and given the right circumstances, he too could be just as successful, just as powerful. There might still be leaders and tangata lalo (low people) on Niue but by dint of personal skill, charm, and ability and a big enough family to back one up, any one can make it to the top--and many will try.

So, the lower class scrutinises carefully the actions of the upper class. So every village keeps an eye on every other village. So every man watches his neighbours. To ensure that all are treated equally and fairly, to ensure that each gets what they are entitled to and no more.

Thus, stratification into social classes is fairly weak and membership in the upper echelon is fluid. Differences of wealth and life-style are not extreme and there are no unambiguous markers of social class. Niueans themselves acknowledge two classes exist but cannot agree on what differentiates these. One evening, for example, five or six "up-and-coming" young men got into a discussion of what constituted markers of social class on Niue. Suggestions ranged from the possession of an aluminium fishing dinghy and outboard motor through re-modelled hurricane houses to the number of vehicles a household possessed to educational attainment to leadership in community activities. For every marker suggested, these men could always cite the names of several eminent people that all agreed were undisputed community leaders and yet did not fit these criterion. They concluded their discussion by claiming members of the upper echelon had social prestige due not just to family of origin

but, more importantly, to an ability to appropriately display that prestige; in short, to have mana.

It is no accident that the positions of power and authority are currently occupied by descendants of the original European traders who settled on the island. From early on these people had more advantages, in finance, in education, in social standing within a colonial system, than did the Niuean of pure Polynesian descent. Through nepotism and skilful political manipulation of social bonds, these families have maintained their social standing. But, with recent advances in education and changes due to massive out-migration, the pre-eminent position of these families is under constant threat and erosion, by members of other families, especially by those people receiving training outside Niue.

### Achievement Orientation

Acceptance of, even push for individual achievement is another mark of Niuean society that distinguishes it from many other Polynesian cultures. Frankovich (1974), in her examination of school versus societal [family] values on Niue, noted that "the authoritarian nature of homes may lead to success achievement, different from but probably no less effective than the 'individuation' in the European pattern" (Frankovich 1974:56). Despite the fact that many Niuean parents realised that individual achievement was a threat to the societal goal of harmonious social relationships, most parents actively encouraged their children to succeed at

school because of the high status jobs and social prestige it could bring (Frankovich 1974:2, 55).

On Niue, school and social success reflects well not just on the individual but on his or her entire family. Through participating in food exchanges, major rituals and ceremonies, and in planting and fishing, however minimally, the achieving individual maintains his or her standing in the family. Though success might lead to an increase in social status it rarely leads to drastic change in lifestyle.

Niueans are not just achievement oriented but also incline to individualism, so, for example, severe differences of opinion in adulthood between, say a father and son, might lead to the son doing as he wants anyway despite his father's wishes. This might cause some unpleasant scenes in the family for a while but providing the son upholds his obligations in other areas this deviation from parental control will result in no lasting resentment or enmity. This is unlike other Polynesian societies where, even in adulthood, the wish of the individual is bent to the will of the head of the family and where such defiance would not be tolerated to any degree.

## THE CHURCH

As in most Polynesian nations, the Church plays a central role, literally and figuratively, in modern life. The church building is in the centre of the village,

surrounded by a green open space on which games are played. The church, often the biggest building in the village, is constructed with money and labour donated by the local inhabitants. The size and splendour of the church indicates the village's commitment to God.

Next to the church is the pastor's house, usually one of the very few dwellings in the village which has a flush toilet, a phone, a refrigerator, a washing machine, an electric stove, and water piped directly into the house. The house is provided by the village for the pastor's use, the pastor sometimes hailing from another village and being incumbent in the position for only two to five years. The pastor occupies a high position in the Village Council, the elected group of elders who oversee all aspects of village life. Becoming a pastor is another way of achieving prestige and social standing, a way open to those boys not able to secure scholarships to learn a secular trade or profession.

Attendance at Church is major activity on Sundays. Everyone goes to the services, which are up to two hours long, to see and be seen as much as for the religious instruction. The church is the prime mover behind many youth activities, such as Girls' and Boys' Brigade, Scout-like organizations adopted by the Congregationalist church, parent church to the Ekalesia Niue. Community leaders are usually respected elders or lay preachers and all must play an active role in the church before they can attain a position of authority in the village.

The Ekalesia is the predominant church on Niue but

other religious organizations do exist. Mormonism, for example, has quite a large following as does Roman Catholicism while sects such as Seventh Day Adventists have small congregations. Niueans are a sincerely devout people, and religious principles govern many of their decisions and actions. All formal and many informal gatherings of people begin and end with a prayer. The only book in many homes and the only one most older folk have ever read is the Bible.

One of the big events on the Church calendar is White Sunday, a concept said to have originated with the initial Samoan pastors (see Filoiali'i & Knowles 1981). Certainly, in all of Polynesia, it is only Samoa and Niue who have this custom. Each year, on White Sunday, on the first Sunday in May, every child in the village puts on a performance in the church, a performance aimed at showing parents and the village at large what has been learned at Sunday school during the year. It is perhaps the sole occasion upon which children in this adult-dominant society can display their skills (Filoiali'i & Knowles 1981).

Household by household, all the children of each household, those over two years of age, dressed all in white, are called on to sing, read, or act in Bible stories. After each performance a collection is taken up in that household's name, the amount collected reflecting the wealth of the household, the pride of the parents and related kin in the community, and the success of the performance by the

children. After the service, the participants retire to a feast prepared earlier in the morning.

### **Old Religious Concepts In Modern Times**

The pantheon of old gods is all but forgotten in favour of the Christian God yet vestiges of former beliefs remain, especially in the role of sin in causing sickness, in the belief in aitu, in the power of tapu, and in the ability of the taulaatua.

Theft from plantations or houses is prevented by a variety of ritual curses and signals. Still, occasionally, when a death occurs, the deceased's land and property is put under fono mate for six months or more. Drownings lead to the placement of a fono in the locality for a year. Huvalu forest is sacred territory, the breeding place of many species, and is protected by tapu (Pihigia 1977).

### **FAMILY AND LAND**

Most Niueans still live in large, extended households or magafaoa, the family land-holding unit. Each married man, patu, has rights to speak and act within the village council and each has access to four or five small plots of family in various places, land totalling several acres, plots which he use on a rotating base to grow the major subsistence crops on which family depends, especially taro. Fishing, too, remains important as does hunting, particularly for uga and peka, and foraging. For a while after marriage, the couple

will live in the bride's parents household, usually until they have several children and can afford to build or move into a house on their own.

### Marriage

Marriages are no longer a formal arrangement between families, as was common even 30 years ago, but are now the individual choice of bride and groom. Many elderly folk still feel the old custom was best and they frequently campaign for its re-introduction, especially as the divorce rate rises. Men still prefer to marry women from the same or nearby villages, though the High School has been contributing to a break-down in this pattern in recent years.

Continued high rates of out-migration, spurred by arduous "bush" work on the island and thoughts of "fast money" in New Zealand (Pollock 1979), have reduced the number of potential marriage partners on the island. This has spurred some youth to migrate; it has led others into unusual, even illegal, liaisons. Incest is no more liked now than formerly but the few examples of incestuous union present on Niue are now less stringently ostracised than previously.

Although Niueans are a proud people, believing that to be born Niuean is the best possible thing in the world, they realise that not everyone can be Niuean. So, marriages and liaisons with non-Niueans, even non-Polynesians are accepted. The children of such unions are, however, deemed

to be Niuean. This is one successful strategy for ensuring the continuance of the Niuean population.

The spousal bond, however, remains weak while the brother-sister tie is as strong as ever. The bond between husband and wife is strengthened by the addition of children. Families are slightly smaller in size than formerly but it is by no means uncommon for there to be 10 or more children borne to one couple. Once the children have reached adulthood and left home, the spousal tie frequently withers to the point where husband and wife live apart, often for years, while maintaining an amicable relationship.

#### Kinship Terminology

Traditional kinship terminology is intact but added to it are several palagi terms which cover a variety of kin relations in succinct form.

Thus, aunti is used by a child to refer to a distant female relative who is older than him or her. Such kin include a father's half-sister, a grandmother's sister, a mother's first cousin, and so forth. In turn, these people would refer to the child as a "niece" or a "nephew." The term "cousin" is used as in English, but frequently it is extended to refer to a multitude of same-age or younger children who are the offspring of "aunties" or "uncles", of half-siblings, of parents' siblings, or some other distant kin. In a delightful twist on English usage, grandchildren are sometimes affectionately referred to as "grannies."

## NATIONAL CONSCIOUSNESS

Challis's (1953) remark remains true: Niueans do not have a clear concept of or loyalty to Niue as a nation, but rather to their village of birth and to their kin. This unawareness of national identity has diminished as Niueans have encountered others who insist on calling them Niueans, as they have had to differentiate themselves from other Polynesians, as they have become independent and aware of the rest of the world, as they have set up a Niue Consular Office in Auckland, New Zealand, to represent their interests abroad.

Niuean sensitivity to nuances of locale is still evident. One frequently heard phrase on the island is "Niue is not New Zealand." This is used to explain that things are done differently in each place and that one must not transport ideas or customs from one place to the other and expect them to automatically fit. The old adage is given a new flavour: when in Niue, do as Niue does. Interestingly, unlike many other Polynesian societies which stress the maintenance of their ways after migration, most New Zealand-domiciled Niueans exhort newcomers from the island to "leave their old ways on Niue and do in Auckland what New Zealanders do; Niue is not New Zealand."

Such feelings about the subtleties of place are not limited to differences between nations. Each village has its own reputation, too. The reputation each village enjoys in the eyes of the other villages still, to some extent,

governs social relationships between members of various villages. Competitive leisure activities, such as games of rugby, soccer, netball, softball or cricket, are taken very seriously. Ritual injunctions still surround the men who participate in these activities, particularly strictures about sleeping with their wives the night before important matches. The village hosting a game provides a feast for its rival and when the time comes for a return match on the other village's turf, that village must provide a feast of equal or superior standing.

#### CEREMONIES OF CHILDHOOD

The sharing of food is an important symbol of community and family support. Hospitality is a measure of a man's stature in the community. A man of some standing ought be able to entertain lavishly when the occasion calls for it. In order to do this, of course, he has to not merely be able to buy necessary items but also to be a good planter, fisher and hunter. In addition, he has to be able to command the resources of his kin and household, to have other men help him provide the food and have the women prepare, cook, and serve it.

Any important event, such as a wedding, a funeral, the birth of a child, or a major Church celebration, as at Easter or Christmas, is marked by the giving and receiving of food. Not just between kin but neighbours and friends, too.

Ceremonies of childhood are marked by feasts, too. This, however, is one area in which there is a marked division according to the sex of the child. Girls have far fewer, and less publically acknowledged, ceremonies than boys.

Birth and, for boys, circumcision, feasts are more or less private family affairs. A few days after birth, boys usually have a ritual circumcision or matapulenga performed by the elders in the family but their actual circumcision, sometime between eight and twelve years of age and done by the physicians on an out-patient basis, is essentially unheralded. Details of the traditional and modern matapulenga ceremony are very sketchy (Smith 1983; Loeb 1926) and the exact meaning of this ritual is virtually unknown.

Around puberty some girls undergo a public ear-piercing ceremony, huki teliga, as in olden times (Smith 1983; Loeb 1926). An older woman uses a thorn to pierce the girl's ears after which she wears a newly-donated pair of ear-rings. Not all girls wait to have this ceremony performed; some simply pierce their ears themselves without much notice being made of the fact. Girls from families which have no sons, however, usually do wait and have a ceremony performed. Though this is said to be equivalent to a boy's hair-cutting, the major traditional ritual on Niue, it is not nearly as elaborate, expensive, or valued.

## HIFI-ULU--A BOY'S FIRST HAIR CUT

Niueans are very proud of the fact that they have maintained what they regard as a truly traditional Niuean custom: a boy's first hair-cutting, which can occur any time between about four and 15 years of age. Interestingly, neither Smith (1983) nor Loeb (1926) make much mention of this ceremony which suggests either that it was secret, or that it had not occurred during their short stays on the island (though it is not clear why people would not have mentioned it if it were not secret), or that it is in fact of more recent origin or introduction.

Ex-patriates on Niue have a hard time at first distinguishing young Niuean girls from boys, for both are often dressed alike and, moreover, generally look alike. Many two- and three- year old boys have heads covered in masses of soft, dark curls or long thick plaits of straight black hair, making them look just like their sisters. They act differently, however; no matter how angelic a boy looks with his face framed in curls, he is far more rowdy, agile, and cheeky than his female kin of the same age. Not until after his hair-cutting ceremony, his hifi-ulu, will a boy look like boys in many other places.

Often said traditionally to involve only the oldest son, the ceremony is now extended to all boys in a family, who might have their hair cut together or singly. In former times, the hair cut off was braided by female relatives into a war girdle that the boy would wear when he was an adult

and a warrior. Now the locks distributed as keepsakes to all who cut them.

### Involvement of Kin

The hair-cutting ceremony involves the child's parents and extended kin in much extra work and expense, as the feast or ngalue cannot be planned or executed by one household alone. All members of the extended family must agree that it is time for a particular boy's hair-cutting as the feast takes at least nine months of preparation, with much extra planting of taro and fishing at nights, by the boy's father and his parents' kin. Relatives help, too, to raise pigs or buy frozen sheep carcasses and kegs of salt beef, essential parts of the feast.

### The Ceremony

Guests to a hifi-ulu can be either invited specially or casual passersby. Around mid-morning on the day appointed, those invited and those passing-by who wish to contribute to the ceremony, appear at the boy's parents house and make a donation (usually though not always money) to the book-keeper. Donations are often made in the name of the children of the invited guests.

Throughout the ceremony the boy sits demurely in front of the guests, dressed in a new lavalava adorned with money, his hair separated into locks tied with small bows, and surrounded by gifts of cloth that have been given him. As is common on ceremonial occasions, male guests gather at the

back of the house, drinking beer with and chatting to the male relatives who are to later distribute the feast, while the women and children sit in front of the house, providing the main audience for the ceremony. The children of each invited guest are given a bag of small items and cooked food to nibble while the hair-cutting proceeds.

The pastor, recounting the tradition and meaning of hair-cutting, blesses the occasion. He exhorts the boy to remember God, to realise his indebtedness to his parents and to his kin who have brought him up, to always act in a courageous but kindly fashion. Then the address turns to the watching girls and their mothers, speaking of how they are creating a man who will be worthy of them and will protect them and will eventually be married to one of them (Anon 1983). Finally, the pastor snips off the first lock of hair.

Then, in turn, beginning with the father's kin usually, the parents and grandparents each cut a lock of hair. This is followed by the father's sisters, mother's sisters, next closest female kin, including, sometimes, children till, finally, special friends of the parents and playmates are called to cut a lock.

Now, the boy, who looks very different, is truly a boy and his part in the ceremony is over. After speeches by the father thanking everyone for their gifts and wishes, attention turns to the distribution of the feast. This feast is unusual in that it is the only occasion on which uncooked food is given to the participants; weddings, 21st

birthday parties (an event imported directly from the West), and such like gatherings all provide guests with cooked foods.

### The Feast

The amount, type, and quality of feast food given to each person who donated money or gifts is in direct proportion to the value of that gift. The basic feast food which everyone receives is taro but added to that are varying proportions of pork, mutton, fish, salt beef, bananas, giant yams, and extra taro. The division of the ngalue or feast takes several hours, with minute adjustments being made to each pile of food to ensure that fine gradations in social prestige, kinship, and size of donation are correct. Finally, the name of the recipient of each pile is called and steps forward to claim it. Thus, it becomes public knowledge how much each gave in relation to others and what each received back. As donations are frequently made in the name of children, so it is the children who are called to collect the feast at the end of the hifi-ulu.

### The Economics Of A Hifi Ulu

Late in the ceremony, just before "the calling of the feast", the amount collected via donations is announced. Usually this is in the order of \$NZ 2,000 to \$NZ 3,000 but at least one hair-cutting on Niue in 1982 brought in \$NZ 11,000--on an island where the annual average income is only \$NZ 2,500! The amount donated and the size and quality of

feast displayed is not just an indication of the wealth of the boy's parents but it is also a public display of his father's planting and fishing prowess, the importance of that family to extended kin, and his family's general esteem in the community.

The money collected at a hair-cutting goes to pay some of the costs (usually in the order of \$NZ 3,000 or more) of staging the event and to the boy's immediate family who may use it, for example, to buy a motorbike or an aluminium dinghy. Only occasionally is the total sum put aside for the boy's later use.

At first sight it appears as if the staging of a hair-cutting is an enormous economic boon to the boy's parents. And thus an incentive to have many sons as one road to economic success.

But the parents are now obligated to assist at every hair-cutting staged by any who helped them. They are obliged to put in the same amount of time plus a little more, to provide the same number of fish and taro plus a few more, and to donate the same amount of money as they received plus at least 20% more to every hair-cutting in the future. So while hair-cuttings are short term economic boons, they long term social and economic obligations. In five years or so, having to contribute a substantial sum to the hair-cutting of a boy now only a few months old could well be an inescapable economic burden. Despite this, hair-cuttings are popular ways of affirming family solidarity, of creating and

## CHAPTER V

### TRADITIONAL MEDICAL BELIEFS AND PRACTICES

Though no extensive accounts exist of traditional Niuean beliefs or practices with respect to medicine, some mention was made of this sphere of life by many early chroniclers (Becke 1897; Brenchley 1873; Goodenough 1876; Gordon 1904; Hood 1863; Moss 1889; Murray 1863; Thomson 1902). From their information it would seem that Niuean thought on this topic was very similar to that found in other Polynesian societies.

Unfortunately, the London Missionary Society discouraged its missionaries from inquiring deeply into or taking any part in traditional healing efforts. Thus, missionary accounts, too, of the healing sphere of life in aboriginal Polynesia, are incomplete and often fraught with error (Crawford 1977).

The following account of traditional medical belief and practices on Niue, then, takes the available information and combines it with comparable ideas extrapolated from related Polynesian societies, to develop an overview of what aboriginal Niuean medicine was most probably like.

#### THE INFLUENCE OF THE SAMOAN PASTORS ON NIUEAN MEDICINE

By the time George Lawes arrived on Niue in 1861, for example, people no longer lived in hamlets scattered

throughout the bush but in coastal villages, connected by a road which circumscribed the island. An arrangement which facilitated the rapid spread of infectious disease. Infanticide was outlawed and Christian marriage and burial encouraged. The Church enforced a new system of justice and a new economic order with a very Protestant work ethic. Despite its patent unsuitability in a tropical climate, European clothing was encouraged as a sign of reform and belief in the new order. Made of thick, close-woven woollen fabric, such clothing was not only heavy, hot, and difficult to launder on an island with few water resources, but also an excellent harbinger of parasites and other disease agents.

Undoubtedly the Samoan pastors substituted the Christian God for the Niuean pantheon of naturalistic spirits which visited sickness upon humans, and a few, hardly revolutionary, alterations were made in the realm of traditional therapeutics. The notion of sickness as biological disorder rather than spiritual or communal distress, however, came to Niue much later and from other sources.

New words to describe certain kinds of diseases, Samoan words, were introduced, probably in the mid-nineteenth century. The filarial disease commonly called elephantiasis, for example, is today known by two names, the Niuean fakafekefeke or fekefeke, both taken from the Samoan fe'efe'e. Techniques for dealing with sickness were also

probably expanded or refined by the Samoans. Massage, for example, a central therapeutic technique in the Samoan and to a lesser extent in other Polynesian medical regimens, is known on Niue by several terms including the Samoan fofo. Undoubtedly, too, the Samoan pastors brought with them their own favourite recipes for herbal medications. These changes, however, were superficial. They did not involve a restructuring of fundamental beliefs about illness.

Thus, when the European missionaries and traders arrived on Niue they were to find much of Niuean traditional life altered but indigenous medical beliefs intact. The Samoan pastors had turned the rest of the Niuean social order upside down yet, curiously, they did not have much influence on medical endeavours.

How was this possible? How could the Samoans arrive on Niue with their indigenous medical ideas untouched? with a traditional medical knowledge akin to the Niuean indigenous system? Given that they had absorbed missionary teachings in virtually every other sphere of life, how could they have had little knowledge of European medicine or little reason to suspect it was based on radically different assumptions about etiology and therapy?

Examining this puzzle will help explain why Niuean ideas were not radically altered on European arrival and why they persisted long afterwards.

## EUROPEAN MEDICINE AND THE RETENTION OF INDIGENOUS BELIEF

Few missionaries left Europe with any form of medical training (Shineberg 1978). Most were equipped only with a manual or two and a handful of Victorian pharmaceuticals, some of which were powerful drugs, often woefully over-prescribed, but many of which were ineffective nostrums (Owens 1972:421). Their experience in the diagnosis and management of disease, too, was limited. Within a short time of arriving at their mission sites, however, few missionaries refused to attend the sick. Some, unabashed by their lack of formal training, quickly became practised at offering diagnoses or at dispensing drugs or advice, appropriate or otherwise (Shineberg 1978). Dieffenbach, the surgeon/naturalist to the New Zealand Company castigated missionary medical efforts as an "unprofessional system of dispensing, bleeding and blistering" (Owens 1972:420).

### The Limited Success Of Mission Medicine

Not only was the medical repertoire of the Europeans extremely limited but, as the Polynesians quickly realised, it had little notable success. Neither against diseases endemic to the South Seas nor in keeping missionaries themselves healthy (Macpherson 1985; Owens 1972; Shineberg 1978).

Healing practice was a flexible business as far as most Polynesian societies were concerned. Any available medication or activity could be tried in the hope that it

would prove effective. This basic pragmatism allowed the natives to approach the missionaries for help and to try their new pills and potions (Shineberg 1978; Macpherson 1985), but the inability of most missionary medicines to cure disease did not encourage the Samoans or other Polynesians to change their beliefs.

Indeed, two aspects of mission medicine mimicked central features of indigenous Polynesian medicine, thereby playing a role in maintaining traditional ideas about disease, unbeknown to the missionaries and contrary to their hopes. One aspect, a practical matter, concerned the drugs employed by the missionaries. The second involved fundamental ideas about disease etiology and the relationship between etiology and therapy.

### Secrecy

The missionaries firmly believed, not only that their system of medicine was far superior to the native one, but also that only they could properly handle the drugs involved (Shineberg 1978). Also, the missionaries had to replenish many of their supplies from abroad, from sources unknown to the native populace. This strict control over who could use the medications and the apparent secrecy over its source and contents fit with Polynesian traditions. There, medicinal efficacy was linked to the power and standing, the *mana*, of the individual healer, through his/her ability to intervene directly with the source of illness, with the gods. Divine revelation informed the healer of the proper ingredients.

Secrecy surrounded practical therapeutics in Polynesian medicine and guarding knowledge about the source and contents of medications to ensure their continued efficacy was a proper action for a healer (Mackenzie 1973; Hooper 1985; Feinberg 1979). The European missionaries's actions, thus, unwittingly conformed to Polynesian ideas.

### Prayer

Furthermore, an important part of missionary therapy was an injunction to the family of the sick to pray for recovery (Shineberg 1978). This appeal to a god to remove sickness, to ease suffering, also fit traditional Polynesian ideas. For Polynesians, illness resulted from transgression of the proper social order between humans and gods, much sickness was of supernatural origin, a sign of divine wrath. Effective therapy, then, involved propitiation of the offended god. Propitiation through the intermediary of a powerful healer who knew the potions a god would find acceptable and through personal, familial and communal acts of humility, contrition and supplication.

Only a very subtle and slim difference separated Christian prayer in the event of illness and native propitiation of the gods, the agents of sickness; a difference not readily apparent in the manner in which the missionaries healed. Once again, the missionaries unwittingly conformed to indigenous ideas about disease and the proper means for combatting it.

Missionary medicine then offered little intellectual

challenge to the Samoans or other Polynesian peoples. It was not obviously any more successful at curing sickness than was aboriginal therapeutics, and it operated in a framework familiar to the native peoples. A framework where only the healer had access to the correct, secret ingredients and where prayer was an integral part of the cure. Under these circumstances, it is easy to see why the Samoan pastors arriving on Niue did not bring with them a new medicine, why the old beliefs persisted.

#### INDIGENOUS NIUEAN MEDICAL BELIEFS

On Niue, then, the Samoan pastors found medical beliefs, techniques and diseases similar to their own indigenous practices and disorders. Minor illnesses and casual wounds or hurts were accepted as facts of life but serious sickness was viewed, as in most Polynesian societies, as being of supernatural origin.

#### Spirits in Life and Death

Like most Polynesians, Niueans believed in the existence of spirits which resided in natural things, enlivening them. Humans not only had a life force, moui, but also an immortal soul, agaaga. The life force or moui was extinguished at death but the soul, agaaga, was released and travelled to its final resting place, its mythical ancestral home.

According to Smith (1983:49), the final resting place

for the soul was determined by the kind of person one had been, whether or not one was good or bad. Smith notes that dual destinations for the soul was unknown in other Polynesian cultures yet does not doubt that this was an indigenous Niuean concept. Recall that he did not collect his data until decades after the introduction of Christianity, so this idea is far more likely the result of the application of Christian notions than a traditional Niuean belief.

The loss of one's agaaga or soul could also cause sickness. Loeb (1924) describes how deified ancestors, tupua, would induce seasnakes to abduct souls and so cause illness. Soul loss and illness could also result from transgression, either wittingly or otherwise, of some tapu or fono. It was believed that taking produce from a dead man's land before the fono mate had been lifted, for example, or breaking tapu by hunting in the scared forests, would cause instant devastating illness if not death.

Thomson (1902) described how the first insect to alight on the body immediately after death was said to be the deceased's moui, and so it was captured and buried with the corpse. Burial took place on family land, large stones being placed on top of the grave to ensure that the body and its associated spirits remained quiescent and underground. If the moui were not captured after death or some other misadventure befell it then it would likely become a ghost or aitu which would continue to plague the living, even on

occasion causing sickness (see also Goodman 1971, who describes similar beliefs in Samoa).

### Ghosts And Their Activities

The improper handling of a person's life-force or moui upon death could result in the creation of a ghost or aitu. Sudden, unexpected or violent deaths release malevolent aitu bent on revenging themselves on the still-living. Any offense against an ancestor, such as defiling their grave or bad-mouthing their memory, would result in aitu attack. The ghosts of the dead, the aitu, are often said to belong to a dead grandmother or other close kin of the afflicted. These visits are particularly troublesome.

Aitu are angry at leaving the realm of the living, they are annoyed by some action or omission on the part of their relatives, they want revenge for their death. Aitu are wont to visit people, especially at nights, talking in whistling voices, or sending their familiars to pester some relative, trying to cajole someone else into the netherworld with them or sending illnesses to afflict the living. On Niue, these familiars are said to take the form of screech owls or cats, animals which can make sounds like humans. Night-time encounters with such animals are very unsettling events as they are deemed to be harbingers of misfortune or death. No one walks alone at night lest they be visited by aitu and succumb to its predations.

Inveigling their way into a person, the aitu harangue the living therefrom. Causing the afflicted person to speak

in a strange voice quite unlike their normal tones, the aitu reveal secrets about who is having improper sexual liaisons with whom, about who cheated or stole or lied, about who transgressed what norms when, about who broke what tapus.

Much of the healing work of the taulaatua consists of identifying which aitu is present, how to send it away, and why that particular person is being bothered. Healers first go into trance or a state of ecstatic possession to identify which ancestor was causing the trouble. Once the ghost is identified, the healer outlines to the patient and community the reason for the sickness and the steps for proper propitiation.

These aitu, these supernatural agents, oversee all human activities. When the behaviour of particular persons offends, illness is inflicted upon them as a sign of displeasure in the supernatural realm. The more serious the infraction of spiritual rules or the longer the person or community takes to acknowledge their misdeeds and offer proper atonement, the more desperately ill the patient becomes. When the aitu have been correctly appeased then the signs of their displeasure--the illness--is removed and the community is free to resume its normal life.

### The Social Role Of Ghosts

It is possible for a person to suffer for another's sins. Thus, a stillbirth can be credited to an unatoned misdeamenour by a grandparent, perhaps a sin committed decades previously. A sinful parent can be brought to task

by visiting illness upon their child (cf. Feinberg 1979:22; Firth 1959:134-135). Thus, the patient who manifests the illness is not necessarily directly responsible for causing it and proper healing is not limited to the patient alone but involved his entire family or community. In choosing an "innocent" victim, the aitu ensures that the wider community was involved in the healing process.

A person in life has not just a life force and a soul, however, but also mana, a powerful internal quality of being or spirit. The social power of people, the influence of their mana, is not eliminated at death, for ghosts and spirits also carry mana. Thus ghosts and spirits of the dead continue as important social figures in the world of the living. The more important a person in life, the more troublesome or powerful their ghost or spirit after death, the more meaningful the revelations made by the aitu of powerful ancestors.

Credited with "social omniscience, particularly in relation to surreptitious socially censured behaviour", ghosts are "socially marginal, cognitively ambiguous" entities (Shore 1978:178). When aitu enter a person and speak through them they touch on topics otherwise forbidden. Aitu voice hostilities, make accusations and discuss discord. In this way, social conflicts are made manifest and opportunity presented for breaches in social relationship to be healed.

In addition to administering herbal preparations or

massaging the sick person, the taulaatua chant and converse with the aitu or spirit of the dead who has invaded the body of the sick person. The healer's job is to convince the aitu that it could depart as appropriate amends will be made. The aim of treatment is, of course, exorcism of the spirit from the patient, usually by encouraging the ghost to have its say, to literally and figuratively talk itself out.

### THE TAULAATUA OR TRADITIONAL HEALER

Management of the sick and restoration of the proper social order between the human world and the spirit world was one of the prime functions of the indigenous healer or taulaatua (Loeb 1926; Smith 1983). But they could also prophesy, detect thieves, and curse.

The title taulaatua has been given various translations. Loeb (1924, 1926), and McEwen (1970) in his Dictionary of the Niuean language, derive the word as taula = anchor and atua = God, whence the meaning "anchor of/for the Gods." This accords well with other Western Polynesian languages. Samoan, for example, gives indigenous healers several names, one of which, taula-aitu, is usually translated as "anchor of the spirits" (Macpherson 1985:7-13), another of which, taulasea also means "anchor" (Kinloch 1980).

Another translation of the Niuean word for healer was given me, however, by a Minister of the Ekalesia Niue (Church) who has a particular interest in traditional

healing. He says the title can also be understood as tau = a word with various meanings including "a cluster" [particularly of flowers], "to pick leaves" and "to fight", combined with la = "a [tree] branch" or [connecting] "strand" [as in a rope], and with atua = God. Whence come his translations of taulaatua as "possessor of herbal medicines which come from God," with a secondary implied meaning of "divinely revealed means for fighting sickness." Both these interpretations elaborate but do not contradict the more usual translation.

#### Recruitment And Training Of Healers

The role of healer could be taken by either men or women, providing they displayed through dreams or trance, a gift for divination or prophesy or an ability to discern and soothe impaired social relationships among people. The ability to heal ran in families, the requisite secret knowledge being passed from generation to generation through apprenticeship. Healers, unless very powerful figures, specialised in treating particular disorders from a limited repertoire of herbal recipes that belonged to their family.

Before being admitted to the secrets held by a mother or grandfather or some other close relative, recruits to the profession had to have had the right kind of dreams or have been cured of some serious illness or be able to go into trance. Most healers specialised in particular kinds of disorder and the "recipes" for various herbal medicines were

close guarded secrets, revealed only when the occasion called for it.

Female healers probably also acted as midwives. Male taulaatua were also important functionaries in the wars between groups, preparing the warriors for battle and predicting outcomes (Loeb 1924, 1926; Smith 1983).

### Therapeutics

In a letter written in 1904, J. Davies, a missionary, described some of the therapies used by Niueans:

"Internal and obscure ailments are generally regarded as cases for the taulaatuas, and in abdominal diseases or pains violent kneading with the hands or standing on the abdomen form routine treatment."

(quoted in Ryan 1977:96-97).

Davies blamed punctures made with shark's teeth in the affected part, the harsh treatment meted out especially violent abdominal kneading, and the taulaatua for the deaths that not infrequently occurred. While, undoubtedly, such violent actions did not enhance a patient's chance of surviving, the impact of taulaatua upon biological disease was probably minimal. Seriously ill patients would die even if he did nothing and those with self-limiting illness would recover despite his ministrations.

Hence, therapeutic techniques, apart from the psychologically beneficial act of allowing the ghost to speak out, were somewhat crude and limited. The application

of herbal medicaments and massage were the most common forms of treatment.

Many of the herbal medicines used had few, and then only mild, pharmacologic effects (see Tamson 1973). Introduced medicinal herbs, from Tonga or Fiji, were often tried out to see if they were superior to local Niuean herbs and leaves (Loeb 1924; see also Shineberg 1978). The proper ingredients for the various potions used by the healers were revealed in dreams or during periods of trance. The power to heal resided not in the composition of the herbal concoctions so much as in powers vested in them through social transactions, between the ancestors, the healer, the patient and the community (Firth 1959: 133-135; Feinberg 1979:17), in the power the healer gave them when he prepared them properly. Improperly prepared herbal potions, such as those prepared by someone whose family did not "own" the recipe, cannot work as the proper social transactions, between healer and spirits, have not been performed (Feinberg 1979:18).

Social transactions were also important in the other major therapeutic mode. Massage, when successful, worked as much because of the flow of mana from healer to patient, because of "the laying on of hands", as any other reason such as the stimulation of circulation or the inducement of relaxation (Firth 1970:52, Feinberg 1979:19).

The social transaction involved in medicine is complex, concerning as it does the very essence of the healer, and his relationship to the inhabitants of both the supernatural

and natural world. People in the natural world gave him gifts--some call them payments--in return for his healing work, both to compensate him for his efforts on their behalf and to strengthen the mutual social obligations that now exist between the taulaatua and the family of the patient. Because of these deep, complex and multiple ties to all members of the community, the traditional healer was a socially powerful and respected, albeit frequently feared, figure.

In conceiving of illness as a breach of proper relations between the human and the divine social orders, Niueans were able to give meaning to the limited set of diseases which they encountered, those endemic to the island. This meaning consisted of understanding why this disease struck whom it did, when it did, and it offered a clear course of therapeutic action. Undoubtedly, the greatest influence of the taulaatua was in healing breaches in social relations between village members, in counselling those who were psychologically disturbed, and in providing explanations for the periodic famines which beset the population. The taulaatua, in providing explanations, reduced anxieties arising from the apparently of the random nature of outbreaks of illness or misfortune. The activities of the taulaatua reduced sickness to reasonable occurrences of limited etiology and with a small number of predictable outcomes.

## DISEASE IN PRE-EUROPEAN TIMES

Because of the paucity of information, it is difficult to construct a notion of disease endemic to Niue in pre-European times. Assuming, however, that the people would have used words to label particularly troublesome or common types of disorder, examination of the Niuean vocabulary affords some insight.

Disorders which have specific Western diagnoses or names have been transliterated into modern Niuean, e.g., gagao suka (literally, "sugar sickness") is used to designate diabetes, unfortunately a common problem nowadays. Diseases with specific Niuean names, however, such as kai-ifo = "asthma", presumably afflicted the populace before the arrival of Europeans and their names for diseases became known.

### Vocabulary

Apart from several terms generally indicating "illness" or "wound", there are Niuean terms for differentiating burns, strains, and injuries from other types of sickness. Seven words were available to describe the notion of healing or various therapeutic procedures, which included the application of hot poultices, massage, lancing or the administration of herbal medications. All external parasites were known by one name, kutu, a term common throughout Polynesia.

Most commonly, Niuean words associated with illness

refer to individual symptoms and signs of illness; for example, dizziness, vomiting, pain, bleeding, fever, pus, inflammation, diarrhea, coughing, paralysis, and so forth. These symptoms and signs, generally neurological, gastrointestinal or respiratory in origin, are rarely further differentiated. Pain is an exception as a variety of different types are distinguished, e.g., throbbing, stabbing, general, localized. This is an interesting elaboration in a people who pride themselves on stoic acceptance and dismissal of all but extreme pain.

Nor are symptoms often grouped together into clusters typical of particular diseases. Hence, the number of specific disease names is limited. The majority of specific disease names refer to skin disorders, e.g., boils, fungal infections, or abscesses. A few refer to particular respiratory diseases, e.g., asthma.

This leads to a conclusion that skin and respiratory problems were probably sufficiently common in aboriginal times to require specific terms whereas other forms of sickness were simply referred to as a collection of signs and symptoms. This, too, is consistent with Niuean beliefs, that the nature of the disorder was secondary to the cause of the affliction and the re-establishment of harmonious relations.

Several interesting examples show the multiple-meaning quality of most Niuean words, and display the ancient understandings of sickness, understanding that is still present in Niuean thought. Fakakaikikoa, the word for

headache, also means "to be consumed by ghosts." Now restricted in use to mean herbal medicine, mamakava formerly also meant "an act in performance of a vow to God" (McEwen 1970). Moreover, the words used nowadays for medicine, vai-lakau, and pill, toga-vai, reveal their ancient origin. Lakau means shrub or bush while toga is a word for seed.

### Early European Accounts

European visitors to Niue in the latter half of the nineteenth century sometimes commented upon the state of the people. Brenchley (1873:27), for example, said that generally Niueans were free from skin blemishes, and that he has seen eight cases of elephantiasis on the island, as well as a couple of albinos. Commodore Goodenough (1876:109) reported that he "did not see one scabby or leprous-looking man or woman, nor any with elephantiasis. There was one woman with goitre." These contradictory reports (about the presence of elephantiasis) might be due to landing at different ports and staying different lengths of time not to mention different familiarity with the condition. Generally, though, they present the picture of a fairly healthy population.

Hood (1863:20) noted that Niueans had a great dread of imported disease and interestingly, there is a word for epidemic, hahapulu, which suggests that problems arising from introduced disease were either so common or so devastating in pre-contact times that a special word was

needed. In pre-contact times, Niueans were said to want little contact with the outside world, a world which they not only thought was hostile but also a source of devastating epidemics.

#### Quarantine in Aboriginal Times

Possibly on the basis of drastic experience, Niueans realised that strangers brought with them new diseases and a terrible potential for destroying the unique but fragile society of 5,000 which inhabited the small, isolated island. To prevent the introduction of new diseases, Niueans early adopted a fierce system of challenging outsiders and developed a reputation for savagery and ferocity.

Drifting canoes, shipwrecked sailors, visiting European ships and returning Niueans were greeted in similar style. Warriors would attack, either over-powering the visitors and killing them or at least scaring them off, to take away with them word of Niuean hostility and savagery (Thomson 1902). History attests to the success of these tactics.

An East coast tradition, for example, tells of the arrival of a drifting canoe, loaded with several men and a woman. The men were killed and the woman captured for a wife. The success of the "scare" tactics is confirmed by Cook whose attempts in 1774 to land on Niue during his second voyage to the Pacific were rapidly curtailed after such greetings. The next white men to reach Niue after Cook were American whalers. One, thrown overboard from the Beaver by shipmates in the early 1800's, caused considerable debate

among the Niueans who had several plans, including death, for dealing with this unwanted visitor. Eventually, he was set adrift in a canoe but managed to land again in an isolated spot until his rescue by another ship (Niue Education Department 1979; F. Talagi 1982; Thomson 1902:75-76; Ryan 1984; McLachlan 1982). The missionary John Williams was repulsed in June 1830 when he tried to land. Shortly after the two lads he had kidnapped, returned to Niue an epidemic broke out, spreading quickly and killing many. Angered, the Niueans killed one of the boys and his father but the second lad escaped. Unsuccessful at his first attempt to return in 1842, Peniamina finally landed in 1845 but not without considerable hostility and suspicion lest disease broke out. The possessions he brought with him hung in the forest for weeks before being used (Luomala 1978:146-147).

The term "quarantine" was applied by early European visitors to such behaviours as hanging alien objects in the bush for weeks or preventing strangers from landing. The first chronicler to use this concept of quarantine to explain these behaviours apparently was the medical missionary Turner after his brief encounter with Niue in the early 1840s (Turner 1861). As Luomala (1978) so eloquently points out, however, another, more interesting, more compelling, explanation exists for these customary actions:

"By using a merely rational [quarantine] explanation, these writers [Thomson 1902; Loeb 1924, 1926 and others who took up Turner's term] overlooked the possibility that these epidemics

merely intensified an older fear, reported elsewhere in Polynesia and other parts of the world, of foreign spirits and foreign magic that belong to strangers and returning residents. Varied misfortunes would afflict land and people because of local magicians' inability to counteract foreign mana ...

The old custom for anything ritually unclean was to destroy it or impose a long tapu [as in the fono after death]. Turner's medical term 'quarantine' surely refers to a ritually neutralizing period for foreign objects to divest them of their foreign sanctity."

(Luomala 1978:147).

That the ritual de-sanctifying action of imposing restrictions on the movement of foreign people and the use of alien objects successfully prevented the spread of some contagious disease was fortuitous but not the primary object of the exercise.

Through logical extension of this ritual action, Niueans treated the seriously ill. They left them on their own in the bush (Etuata & Tanaki 1982:101).

"The treatment of the sick was very barbarous. They were removed into the bush and placed in a temporary hut where they were left until they might recover or die. Their relatives took food to them, but no one remained with them; this practice was owing to the great horror they had of disease."

(Murray 1863:367)

Where else would one place someone who had offended the gods and was involved in a literal life-and-death struggle with them? No matter how important the person, would one seriously endanger others, invite divine wrath to descend, by having a gravely ill person remain in the community? No doubt Niueans had a dread of disease but Murray, typical of

his peers, could think of no reason other than "quarantine" to explain such action. So was invented and perpetuated the idea that Niueans maintained their health through murderous and barbarous quarantine measures. Actions that were far more likely carefully calculated ritual poses than real threats to life-and-limb (see McLachlan 1982).

#### TRADITIONAL MEDICINE ON NIUE AFTER ANNEXATION

European medical practice in the early twentieth century had a few efficacious remedies, mainly for the control of pain, reduction of fevers, and cleansing of wounds. It was powerless, however, against the plethora of introduced diseases which was then scourging the South Pacific: dysentery, measles, chicken-pox, syphilis and gonorrhoea, influenza, and tuberculosis. Surgery, too, was a risky business, especially in a hot and humid tropical climate. Nevertheless, the Europeans arriving on Niue brought with them and used the medical beliefs, practices and paraphernalia of the mid-Victorian era, all of which they felt were superior to native ideas, medications and practices.

These devastating diseases, introduced by fleeting strangers, were previously unknown to Niueans, being very different in manifestation and outcome to endemic disorders which could always be found to have a supernatural aspect. Offences against the supernatural presumably always led to particular and well-known forms of disease that could then

be managed by suitable propitiations. These new diseases with their unusual manifestations, though, did not occur because the gods were offended but for some other reason, a reason outside Niuean experience.

When Europeans arrived and explained illness on the basis of biological disorder, the Niueans accepted that explanation--as applying to new or introduced diseases. The old explanations still made sense of the old diseases, however.

#### Duality In Niuean Thought

So began the duality of Niuean belief and experience of illness which continues even today, a duality common in many Polynesian societies (Howard 1979; Kinloch 1980; Mackenzie 1973; Metge 1976; Parsons 1985; Shore 1978). Disorders were classified into gagao fakaniue = Niuean illness and gagao fakapalagi = European illness and management strategies for dealing with diseases gradually came to be selected on the basis of etiology. Niuean illnesses required supernatural intervention and herbal potions whereas European diseases succumb to manufactured drugs or even surgery.

Just as mission medicine failed to succeed markedly in the curing illness, so the medicine of the European doctor was not noticeably effective until several decades after the introduction of physicians and a hospital, until vaccinations and anti-biotics were commonplace. By then, however, Niueans had been comfortably operating a dual

system of classification and therapy for a long time, a classification system built to withstand any success otherwise attributed to modern surgery and drug therapy.

With their basic pragmatism, Niueans did not spurn Western medicine, far from it. They would try every available treatment, albeit they would often leave Western medicine to being the last resort. The medicine that worked determined if the illness was basically gagao fakapalagi, treatable by palagi medicine, or if it was essentially gagao fakaniue.

Ideas about gagao fakaniue became refined. Specifically Niuean disorders, unknown, unsuspected even, by Western medicine and amenable only to treatment by taulaatua are Niuean sicknesses. of which there are two main types: those tractable under herbal treatment, and those due to "ghost sickness" or attack by aitu. Aitu attack or ghost sickness is a residual category, a diagnosis reached when all other modes of treatment have failed (cf. Shore 1978). This type of illness requires the services of a powerful taulaatua.

### European Response

Europeans, however, seem not to have understood the duality of Niuean thought on medical matters. They never seemed to realise that European ideas about disease did not supplant indigenous beliefs but merely complemented them.

The Europeans in colonial times believed that once the natives had the "germ theory of disease" explained to them all opposition to European medicine would cease and all

taulaatua disappear. The introduction of a free, efficient, accessible Western system of medicine was supposed to automatically dispense with taulaatua (cf. Mackenzie 1973:89) who were simply evil "witch doctors" preying on the poor benighted natives.

Indeed, one reason the New Zealand Administration supported the introduction of European medicine into her Pacific colonies was to destroy the native healers whom they saw as powerful figures of evil intent. They realised that these were influential people in the Polynesian social order and therefore capable of swaying the opinion of the populace, but they contemptuously dismissed the notion of "ghosts" as childish, they never understood the function of ghosts or healers in maintaining social well-being and nor did they comprehend the duality of thought about medical matters in Polynesian life.

They also thought the taulaatua extorted money or goods or services from their patients. Taulaatua did, indeed, receive money or goods or services but these were gifts. The giving of a gift to the healer was an important part of the social transaction involved. It was not a monetary payment for services so much as a sharing of resources, a creation of social obligation between parties that would extend well beyond the illness episode. None of this was understood by the Administration, any more than they understood why the Niueans constantly grumbled about the poor quality of the relationship--about its fleetingness, its impersonality, its

concern only with the disease and not the person--they had<sup>1</sup> with the European doctor when they did visit him .

Hence, the Administration was taken aback to discover that not only did the taulaatua not disappear but that people were sceptical of the claims made on behalf of the new system of medicine. At first, this situation was reluctantly tolerated but eventually the Administration cracked down harder and harder on the activities of the taulaatua. Eventually, the administration's attitude of persuasion to use "official" medicine gave way to increasing regulations. How rigorously these regulations were enforced, however, seemed to depend largely upon the personality of the Resident Commissioner and the Medical Officer.

#### Suppression Of Local Medical Practitioners

Following the precedent set in New Zealand itself which passed a Tohunga Suppression Act in 1907 to prevent the native Maori healers from continuing their practices (Metge 1976:92-94), the Administration on Niue outlawed the practice of native medicine in 1917. Soon after this the Medical Officers on Niue began a campaign of scorn and derision, chiding and ridiculing the people for their continued belief in and use of traditional healers. They did not seem to realise that the taulaatua were not in direct competition for patients but were treating different kinds of sicknesses or different aspects of the same disorder. Nor did they realise that multiple therapies from many healers was an accepted practice.

Few serious legal efforts seem to have been made to stamp out taulaatua-ism during the period 1920 to around 1939 but with the advent of a new Resident Commissioner on the island in the 1940s, vigorous campaigns were mounted to stamp out native healing. Traditional healing methods were prohibited and those admitting to or being found guilty of being local healers were prosecuted .

The following excerpt from the Annual Report of the Chief Medical Officer on Niue in 1950, for example, give a clear idea of the views held by European medical personnel about Niuean traditional healing beliefs. It also attests to the persistence of those beliefs in the face of massive pressures against them.

"[the people] take bush medicines made out of leaves and barks of trees which rarely are anything but make those cases turn chronic. ...

[they] still believe in the power of evil spirits. Three or four men, and women, in each village called taulaatua who are called to the sick. Usually they say the sickness is a dead grandmother angry over something ... [and trying to] kill the patient for not giving it [to her] ... or a dead uncle. ...

[taulaatua] tries to chase out the devil by using strange words in funny voices, with eyes rolling and nose discharging and even squeezing parts of the body. ...

[they] explain there are foreign diseases and native diseases--white men's medicine is not good for native diseases because it cannot drive out devils. In return taulaatua are given food, money, clothing or anything he might wish. ...

[a patient] sick, eg, with pneumonia--if not improve say he has driven out his devils but others may still be around so take to another ...

taulaatua sometimes advise patients under treatment

not to take pills [as this is] "poisoning by modern medicine" ...

more and more people seek the advices of "bush medicine men" or the "devil doctors" and only come to the hospital as a last resort.

(Annual Report, Chief Medical Officer Niue, 1950).

With information and opinions such as this bolstering their actions, the Administration undertook to eradicate Niuean medicine, to the annoyance of the local populace. Of course, what the Niueans really seemed to resent in this campaign to get rid of native healers was the elimination of choice. Traditionally, if one cure or healer did not work then one was free, indeed obliged, to use a different potion or another healer until the disease was finally conquered. The Administration, however, was telling them they had no choice, they must use the European physician and no one else, that there was no such thing as "Niuean sickness" and "palagi sickness".

This clash with a fundamental tenet of Niuean thought did not eradicate traditional healing on Niue, any more than it had succeeded in removing it elsewhere, not in Western Samoa, nor in Tonga, Tahiti, the Cook Islands, Rotuma, New Zealand or in many other Polynesian societies (Kinloch 1980; Macpherson 1985; Shore 1978; Parsons 1983, 1984 , 1985; Mackenzie 1973; Howard 1979; Metge 1976). All it succeeded in doing was driving it underground, where it continues to flourish today.

## TRADITIONAL HEALING IN CONTEMPORARY NIUE

The fundamentals of traditional medicine survive on modern Niue--beliefs in aitu and their ability to cause illness; in the power of the taulaatua, who are always highly-respected community members and prominent Church leaders; in gagao fakaniue and gagao fakapalagi; in using as many different forms of therapy (massage, herbs and Western medicine's drugs) as needed to secure relief from pain and suffering.

Most Niueans see traditional healing activities simply as an integral and important part of a single healing spectrum. It is only from an outsider's perspective that one can split medicine on modern Niue into a formal, Westernised system and an informal, traditional adjunct.

Though officially discouraged and rejected by the formal system of health care on the island, traditional medicine retains its importance. Nurses, for example, often turn a blind eye towards the traditional healing that goes on in the hospital, officially knowing nothing about it while in fact giving it tacit support. Moreover, many of the present day hospital staff come from families that have in the past or even now contain well-known local healers, causing many Niueans to claim that the Health Department works well now only because its employees have the proper background, are in fact "healers born."

## CHAPTER VI

### HISTORICAL DEVELOPMENT AND CONTEMPORARY ORGANIZATION OF HEALTH CARE SERVICES ON NIUE

Four distinct periods of organization with respect to medicine can be discerned: (1) the pre-contact period with traditional methods; (2) the arrival of the first European physicians and public health efforts; (3) the construction of a hospital and the subsequent entrenchment of cosmopolitan medicine; and, (4) the modernization and decolonization of health services. The first of these phases has been discussed extensively in the previous chapter. Here, each of the other phases will be discussed, with a view to understanding the development of the contemporary health care system on Niue, especially as it applies to children.

#### THE BEGINNING OF EUROPEAN ERA

Contrary to many expectations, in the latter part of the nineteenth century when Europeans first settled on the island, Niueans were not confronted with a choice between continuing to hold their traditional medical beliefs and adopting new, Europeanized ideas about illness and disease. In Niuean minds, sickness as a biological disorder was not necessarily incompatible with the idea that illness resulted from offences against the supernatural order.

From their pragmatic disposition towards therapy, Niueans willingly accepted the pills and potions dispensed by Frank Lawes, the missionary, or R. H. Head, a ship-wrecked sailor turned trader (Tafatu & Tukuitoga 1982), just as they had previously tried new herbs and recipes from Tonga and Fiji (Loeb 1924). Indeed, Head imported at his own expense the drugs he dispensed without charge to the Niuean people (AJHR 1903). Though noting that drug quantities smaller than those required for Europeans seemed to work for Niueans (Thomson 1902:135), neither Lawes nor Head were notably successful in the battle to cure disease. Just as the Samoan pastors had little impact on Niuean ideas about disease and its treatment, so missionary-era medicine failed to induce the natives to forgo their own beliefs.

The booming economy of the 1870s and early 1880s, not only brought a wide variety of schooners to trade at Niue but also resulted in the introduction of new and devastating diseases. European medicine did little to alleviate escalating native mortality from these diseases. But, while the Europeans might have had little success with curing diseases, they were instrumental in preventing some epidemics from spreading throughout the island.

#### Quarantine In The Late Nineteenth Century

The notion of isolation or quarantine took on its more usual medical meaning in the latter part of the nineteenth century. Niueans readily adapted their traditional ideas of "quarantine" to outbreaks of fatal new diseases. In addition

to the traditional tactic of leaving the very ill alone in the bush, villages began to isolate themselves, refusing entry to people from other settlements if it were suspected that they carried diseases.

In 1898, for example, a labourer returning from working abroad brought an outbreak of measles which ravaged the island for the next twelve months. Each village, acting on the instructions of the elders and the Europeans present, declared itself "off limits", refusing the passage of goods and people across its borders, until the deaths ceased. In this way, the disease took a year to travel from its source, Avatele, to the other villages. Tuapa, where Head resided, was so well protected by this strategy that no death<sup>3</sup> occurred there .

#### Common Diseases Afflicting the Populace in 1900

The new diseases did not always kill people immediately. Often they were of a progressively degenerative nature, inducing considerable morbidity and creating malaise and despondancy in the community.

Becke (1897:282) said the introduction of European clothing had led to the prevalence of pulmonary and other dreaded diseases. Gordon (1904:130), reporting on his trip to Niue between 1875 and 1880, said "consumption", yaws and venereal diseases were extremely common. Frank Lawes, reporting to Sir Basil Thomson in 1900, said that the major diseases then afflicting the Niueans were: yaws; phthisis (a

progressive, wasting, consumptive disease, usually pulmonary tuberculosis); makulokuli, a urinary disease, not further described; lupus (which is actually several diseases characterised by skin lesions, scarring, and ulceration); and scrofula, a swelling of the lymph glands in the neck, another form of tuberculosis (Thomson 1902:114). Most of these were introduced diseases. Yaws, for example, called tona tabiti by the Niueans, arrived from Tahiti in the 1860s along with a mission party; by 1900 it was rife throughout the population.

#### **EARLY COLONIAL GOVERNMENT HEALTH SERVICES**

By the turn of the century, Europeans became concerned with halting the rapidly increasing mortality of their colonial charges, not least because of the diminution in labour resources that illness created. Most effort was aimed at continuing Niue's isolation and protecting her people from the outbreak of disease, by limiting contact between natives and the vectors of disease, the trading ships plying the South Pacific waters. The very ready co-operation of the native population with quarantine regulations was assured as this was both an indigenous ritual response to threats of contagion from outside Niue and had been shown to be very effective just a few years before.

#### **Isolation From Disease Vectors**

In 1900, while the first Administrative Representatives

were on the island, an outbreak of bubonic plague was reported in New Zealand and Australia. To isolate Niue from the disease, Thomson formed the nine European traders on the island into a corps of Health Officers who inspected each ship arriving at any of the four ports or roadsteads then in use. King Togia promised to punish any Niuean who visited a vessel flying the yellow flag and the administration threatened unco-operative Masters with hefty fines or imprisonment (Thomson 1902:114-115).

This also set a precedent for governmental initiatives with respect to health for the next three decades. The prime aim of the administration became the prevention of the spread or importation of disease into Niue, to continue to isolate people from the ravages of introduced disease.

In addition, the administration wanted generally to improve sanitation on the island. To this end it encouraged people to abandon thatched housing and to erect more permanent wattle-and-daub type dwellings. Rubbish dumps which harboured pests, such as rats or mosquitoes, unclean kitchens, improper food storage, and the like were also a focus. Regular household inspections were carried out by the local police force but their success was limited, partly because the men performing them were untrained in public health and partly because of resistance on the part of the populace. The lack of an official with health training hampered the Administration's efforts.

### Enter the European Physician

Dr Schumacher, a German from Western Samoa, was the first European physician to be appointed to Niue. His duties consisted of stemming further epidemics and tending those suffering from the ravages of previous ones.

Soon after his arrival in 1911, the schooner "Kereru", anchored off Alofi, was found to have a case of measles aboard<sup>4</sup>. The Resident Commissioner turned over his official residence in Alofi South for use as a quarantine facility but soon thereafter he persuaded the Niueans to give up some unproductive land at Tufukia and there built an isolation unit. Unfortunately, many contagious diseases are viral in nature (e.g., measles, hepatitis) and the precautions adopted by Schumacher and other physicians in this period--boiling clothes, spraying letters with carbolic, and the like<sup>5</sup>--were not always able to prevent the onset or spread of infection. Hence, throughout the next decades various epidemics continued to ravage the island.

Besides inspecting shipping and controlling epidemics, physicians in this era undertook regular clinic rounds, on horseback, visiting every village at least once every three weeks, to treat the sick and inspect sanitary arrangements. At various mission stations, trading posts, police houses or teachers' houses, a small supply of drugs was left, to be dispensed by the Europeans living there<sup>6</sup>. The Niueans willingly consulted the physicians, about introduced diseases or to acquire medicines found to be efficacious (aspirin, for example, was in great demand).

## FOUNDATIONS OF THE MODERN HEALTH SERVICE

Conditions on Niue and within medicine at this time, however, were such that little success was possible against the waves of fatal diseases periodically scourging Niue, diseases such as measles, dysentery, syphilis and gonorrhoea, hepatitis, influenza, whooping cough and tuberculosis (Bedford, Mitchell & Mitchell 1980). Worst affected were the children, particularly those in the first year of life.

Niue's Administration, thoroughly alarmed by the sharply rising mortality rate, especially among infants and young children, ever more stridently as the years passed from 1915 to 1920, appealed to the Government in Wellington for two things: for a hospital to be built and for a trained child welfare nurse to be sent to the island.

These appeals were eventually successful as much because of conditions in New Zealand and the rest of her Pacific territories at the time as because of the specific conditions on Niue (Schoeffel 1984). Public health remained the primary focus of the Niuean health services, however, taking the form of: a child welfare scheme; various campaigns to eradicate particular diseases (for example, yaws and syphilis); and, the continuation of environmental sanitation efforts.

### The 1920s: The Start Of Hospital-Based Medicine

The Governor-General, Lord Liverpool, visited Niue in 1920. On his return to New Zealand he made such a strong

plea for a hospital on Niue that the New Zealand Red Cross donated £ NZ 2,000 towards this goal. Named in his honour, Lord Liverpool Hospital was erected in 1921 on a piece of Government ground at Tufukia in Alofi South, next to the school there (Rex & Viviani 1982).

The hospital took in surgical cases, isolation cases, and severely ill persons, mainly from Alofi and adjacent areas, but the bulk of clinical medicine was still performed during regular rounds by the resident physician. It opened with a dispensary, a rudimentary operating theatre, several wards, and a Medical Officer but it had no nursing staff until 1922 when Miss Olivia Peers was appointed Sister-In-Charge .

### Niuean Response

To Niueans the hospital was a dreadful place, a terrible idea. Its name, fale gagao = house of sickness, implied the most serious sickness, virtually death. Niueans could imagine no worse a place than one in which the seriously ill were gathered together instead of dispersed on their own in the bush, and in which the spirits of the recently dead, the aitu, hung about in droves. If there was any hope at all that the patient would recover, then the Niuean community avoided having the sick person hospitalized for that place could only result in malevolent aitu attacks. On a weakened body and psyche these were sure to succeed and cause death. Better to avoid the place and survive the illness than visit it and succumb. This view, that the

hospital killed people, received confirmation from the fact that for a long time only severely ill patients were treated there, usually as a last resort, and of course, many of them died.

This image of the hospital and Niuean feelings about it has never been entirely dispelled. It is still a place in which to be wary, especially at night, because of the perpetual presence of death and aitu. Neither has Niuean scepticism diminished about some forms of Western treatment for disease.

In the 1920s and 1930s these Western medical endeavours often were presented as the only correct way to understand and treat sickness. The Medical Officers generally dismissed the notion that there were gagao fakapalagi (European sicknesses) and gagao fakaniue (Niuean sicknesses) and, hence, that there was a need for two systems of curing and advice. European physicians were irked at getting patients after the taulaatua (or "witch-doctors" as the Europeans called them) had already attempted a cure, and they resented having patients return to the traditional healer after receiving European medicine . Thus most physicians actively worked to eradicate the influence of the taulaatua, heaping disdain, scorn and mockery upon them.

Throughout the 1920s and early 1930s, it was common for sick persons to be hidden from the Medical Officer's view as he made his round through the villages . Because he might place a person's life in jeopardy by ordering them to go to that dreadful place, the hospital. Or because he would

ridicule and berate people for having used traditional healing methods or for believing in gagao fakanie. Or because he would coerce them into accepting painful treatments with no immediately obvious benefit therefrom.

### Administrative Problems

Persuading Niueans to use the medical services, particularly the hospital, was one problem the Administration had to face. Getting a physician to the villages more frequently, thereby exposing the population more to the influence of modern medicine was one plan to reduce Niuean suspicion.

In order to achieve this, the physician now had at his disposal a Ford motor car by which each village was reached weekly, the seven Northern villages on Wednesdays, the five Southern villages on Fridays. Pastors's houses, policemen's homes and banana packing sheds were the places people gathered, to sit together and collectively hear presentations of symptoms and see treatments. Those too ill to attend placed a red flag at the roadside and the doctor would visit them in their fale, sometimes quite a way down a bush track (Anon 1929).

Niueans were not completely opposed to European medicine. Besides using what worked, especially that which worked against "foreign" diseases, they quickly realised, too, that the hospital offered employment opportunities to enterprising youth. The hospital needed staff, particularly

nursing staff, orderlies, and dispensers, all of whom could be called upon as needed for translation. The Administration, too, realised that employing Niueans at the hospital was a good means for publicising European medicine and influencing other Niueans to use the services available there.

Considerable discussion occurred in the 1920s around the question of whether Niuean girls could be trained as nurses, and if so, where that should take place, on Niue, in Samoa or even in New Zealand<sup>10</sup>. Tightening budgets resulted in a decision to train Niuean nurses on Niue<sup>11</sup>. The Medical Officer and the ex-patriate nurse (whose job had been upgraded to Matron level) were assisted in this venture by a succession of Samoan nurses on secondment from Apia. As the years passed, however, the number of hospital admissions and total demands on the entire health system reached a point at which additional European nurses were required, to act as tutors and to cover the workload.

Nursing training was but one aspect of the health services which vexed the administration. Finding doctors suitable for tropical service was another, oftentimes more compelling, problem.

It was difficult to recruit physicians and have them remain for more than a very short time. More importantly, the calibre of medical officer attracted to a lonely, isolated outpost such as Niue, was not always high. Some medical officers treated their post as a sinecure; others were alleged to be drug addicts; some were unfit for the

rigours of a tropical climate; many had no previous experience of tropical medicine; and, some were abrasive characters, insensitive to the feelings of a colonial population and to bureaucratic necessities .

The balance of power between Resident Commissioner and Medical Officer was not always clear, sometimes to the detriment of the local populace. The campaign against yaws in the mid-1920s, for example, generated much ill-feeling between the Resident Commissioner and the serving Medical Officer. Niueans disliked and protested vigorously against the yaws campaign, which was not obviously successful and which involved a protracted series of painful injections, often forcibly given. The Resident Commissioner sympathised with the Niueans, feeling it augured poorly for the success of future public health (or general administrative) measures if this one were so unpleasant and so resented by the natives. He tried to stop the campaign or at least have it continue using alternative therapies. The then Medical Officer, acknowledging that alternative, less painful treatments were available, claimed that they were less effective and therefore unacceptable. He also argued that the Resident Commissioner did not have the power to make what was essentially a medical decision, a point never really satisfactorially resolved between the administration on Niue and in New Zealand and the Medical Officer .

## STEADY GROWTH IN THE MIDDLE DECADES; 1930 to 1960

Throughout the next three decades the Administration on Niue continued its efforts to improve available health services. Surveys were carried out, documenting the state of the populace's health and providing information on which the planning of future medical endeavours was based. More extensive and sophisticated services were offered, with concomitant increases in manpower and changes in facilities. Introduced diseases still occasionally swept the island but mortality from these was controlled, because of improvements in the general standard of health and hygiene on the island and because of improvements in mainstream Western medicine throughout this era.

### Health Surveys

Niue's health services always had access to results of medical surveys in other parts of the Pacific. Nevertheless, surveys of conditions on Niue itself were important, for documenting the success or otherwise of health procedures, for discovering the prevalence of various disorders, and for planning future services.

Surveys on Niue were performed by a variety of international, philanthropic and governmental bodies. The World Health Organization, the South Pacific Commission and the Rockefeller Foundation, were involved as were New Zealand's Departments of Scientific and Industrial Research, and Health. Besides assisting people from these and other

places, such as the Otago Medical school, perform their surveys, the medical staff on Niue carried out their own research projects, too. Problems under study ranged widely, including surveys of general health, dental hygiene, nutrition, filarial disease, intestinal parasites, trachoma, and tuberculosis<sup>14</sup> .

### Changes in Mortality and Morbidity

Between surveys and epidemics was squeezed the regular routine of health care delivery. The result of these endeavours was a slow but nonetheless real improvement in mortality rates, particularly the infant mortality rate.

From 1924 when the telegraph station was built (Naval Intelligence 1943), news of the number of cases of various types of communicable disease within nations in the Pacific area was radioed weekly to the Niue Administration by the Health Department in New Zealand. In this way, Niue knew when and what to prepare for an epidemic.

Not all the infectious diseases which travelled the Pacific via those great disease vectors, the steamers, arrived on Niue. Judicious isolation of the island, by halting the arrival of ships or carefully screening passengers and cargo, managed to prevent some epidemics from reaching Niue. An outbreak of polio, for example, in New Zealand in 1936 never arrived on Niue. Although it certainly worried officials there, so much so that a new quarantine station was hastily erected by the teachers and pupils at the Tufukia Technical School, replacing the one Schumacher

had built and that had been demolished a few years  
earlier<sup>15</sup>. Similarly, malignant jaundice in Samoa in 1940  
did not reach Niue.

Some epidemics arrived but with milder force than they  
did elsewhere. Resident Commissioner Bell in 1932, for  
example, says Niue was spared a bad outbreak of 'flu which  
came in from Samoa. His reports of a "mild" outbreak  
nonetheless speak of 50 deaths in 3 weeks, mainly among the  
elderly<sup>16</sup>.

Throughout the decades from 1930 to 1960, however, the  
island was still subject to occasional sweeping epidemics:  
"bronchial catarrh" in 1938; typhoid in 1935 and again in  
1946. The Administration began to seriously question whether  
its tactic of isolating Niue from disease was best. A  
decision was made to allow the importation of disease so the  
natives could build up a resistance to them instead of being  
devastated by them.

As a consequence of this change in policy, the early  
1950s saw several outbreaks of contagious disease. Between  
1948 and 1951, there were outbreaks of whooping cough,  
measles, infectious hepatitis, and influenza; rubella in  
1955; and, poliomyelitis in 1958<sup>17</sup>.

Epidemic disease was just one thing the medical  
services had to cope with over the years. Change in medical  
knowledge and the growth of sophisticated adjunct  
technologies made manpower a critical issue in the  
development of health services on Niue.

By the late 1940s, manpower had become a pressing

problem. Finding physicians for the island was the most difficult and urgent task, since it was still subject to occasional epidemics of fatal diseases.

The South Pacific Health Service, an organization set up in the 1940's to manage the supply of physicians to far-flung colonial islands, took over the task of finding physicians for Niue. They recruited widely, in Britain and elsewhere, and seemed to find personnel of higher quality than had previously been the case. Doctors on Niue now were interested in improving the situation and were eager to try new methods or adopt different ideas.

#### Native Medical Practitioners

By the late 1930s, the Medical Officer on Niue realised more doctors were required, not necessarily as "fully trained" as he but capable of doing routine work under supervision<sup>18</sup>. He suggested sending Niuean lads to the Medical School in Fiji, opened in 1929, to train there as Native Medical Practitioners (NMPs). New Zealand, still suffering from the Great Depression rejected this suggestion on the basis of cost but the need for additional staff was noted. Accordingly, arrangements were made for NMPs from the Samoan or Tongan health services to be seconded to Niue, much to the chagrin of the Niue Island Council which wanted<sup>19</sup> local youth to minister to them, not foreigners.

The Second World War, however, placed enormous strains on medical manpower all over the South Pacific because fully-trained physicians were in short supply, sent to the

front lines instead of the colonies. Thus, the NMPs began to act more and more autonomously, proving that they provided good quality medical services and were capable substitutes for European physicians. By 1945, the health services in Samoa and Tonga sorely needed the services of all their staff and so they demanded the return of their NMPs, some of whom Niue had kept for several years past the agreed time<sup>20</sup>. This put pressure on the Niuean Administration to train its own NMPs.

In 1948, then, two youth were sent to Fiji to train as<sup>21</sup> NMPs. Upon their return in 1952, two more boys were sent, to build up a cadre of qualified and experienced NMPs.

On Niue, unlike on other Pacific islands, these doctors were referred to as Assistant Medical Officers rather than Native Medical Practitioners, perhaps because NMP was too reminiscent of the indigenous healers the Administration was so anxious to root out, perhaps because of Niuean achievement motivation which saw the qualified Niuean NMPs wanting to acquire a more fitting title and a status more Western-like.

After a period of service under the supervision of a European physician, these doctors were sent throughout the 1960s to a variety of post-graduate training courses run by the Medical School in Fiji, by the South Pacific Commission, or by other health-oriented organizations. In this way, the Assistant Medical Officers came to specialise in important

topics, such as tuberculosis control, anesthesiology,  
22  
obstetrics and surgery .

The Inspectorate Division of the South Pacific Health Service produced biennial reports on the state of medical services in countries in which their physicians served. On the basis of these Reports, many improvements were made. Buchanan's 1947 Report<sup>23</sup> , for example, recommended Niue develop "aid posts" outside Alofi, have separate mobile clinics for general medical and child welfare work, construct an isolation unit for tuberculosis patients, and improve nursing education. By 1950 all these suggestions had been implemented<sup>24</sup> , with the "aid posts" under the control of the Assistant Medical Officers and the Chief Medical Officer (European) at the hospital overseeing the work of all.

### Nursing Education

The girls who flocked to Miss Peers's hospital in 1922 were given rudimentary training in first-aid and patient care while the bulk of nursing work was performed by ex-patriate nurses or those seconded from Samoa<sup>25</sup> . An attempt failed in 1935 to train Niuean girls as nurses in Western Samoa<sup>26</sup> . A decade later, however, a second attempt succeeded, with four Niuean girls graduating in 1953 as Apia-trained nurses<sup>27</sup> .

Few girls, however, devoted more than five years to ward work, so within a few years of their return to Niue<sup>28</sup> these graduates had left government employment . The

Niuean Administration soon realised that its own Health Department was being deprived of the major part of the services these girls did perform, namely, those during a lengthy and expensive training period in Western Samoa<sup>29</sup>. In 1951, then, a School of Nursing was once more opened on Niue, this time with an increased ex-patriate staff for both ward and tutorial work and with a rigorous teaching program based on Fiji's Central Nursing School curriculum.

### Dentistry

Emergency dental treatment, in the rather drastic form of extractions only, had been available on Niue from 1928 (Siona Talagi 1971; Williams 1968:38). Williams's survey in 1940 found a great need for a proper dental service on the island and so, in 1940, two youths were sent to Apia as dental cadets. After a period of extended field service in Samoa, gaining experience, they returned to Niue in 1945 to set up a fledgling dental service. Until the Dental Clinic was erected in 1946 they operated on the verandah of the hospital with just a small set of hand tools<sup>30</sup>.

Dental service was introduced in phases (Espie 1974; Williams 1941, 1968). First, routine service was offered to school children with emergency treatment available for all others. In the second phase, routine treatment was extended to include preschoolers as well as school children while the third and final phase saw routine treatment being offered to all.

## Public Health

The Chief Medical Officer, having less and less time to devote to daily supervision of public health inspections and such efforts, sent a couple of boys to Fiji in the early 1950s to get training in elementary techniques of public health inspection<sup>31</sup>. The maintenance of hygiene standards, mosquito control and the construction of covered pit latrines<sup>32</sup> were areas which received greatest emphasis. And were areas which had great though often "invisible" impacts, particularly on infant mortality.

Child Welfare work, the other branch of public health work, was still under the control of a succession of expatriate nurses who acted more or less independently. Their duties included: ante-natal counselling; assisting at deliveries because virtually all births still took place in the home; doing post-natal and well-baby checks until the child was five years old; distribution of skim milk powder as supplemental food to weanlings, to the elderly or others in need; and, the vaccination of children (Geissler 1962; McMillan 1960). Because tuberculosis was so common on Niue, the Administration introduced BCG vaccinations in 1952, an action that helped reduce the impact of this disease in later years<sup>33</sup>.

## Ancillary Services

As the number of medical officers increased and the level of their training improved, so increased the need for ancillary support services, such as X-ray and laboratory

technicians. The first X-ray unit was small and, after ten years of service, was not capable of producing the 1,000 per year good quality photographs needed in 1956 to keep a check on tuberculosis<sup>34</sup>. Laboratory services were provided by the Medical Officers in whatever cubby-holes or spare corners<sup>35</sup> were available, until proper facilities were built in 1957.

In 1957, Niuean youth were sent to Fiji for training as X-ray and laboratory technicians<sup>36</sup>. To ensure that services could be carried out even if one of these technicians were ill or away, each technician was trained to carry out the most basic tasks in the other's field<sup>37</sup>.

The quantity and type of drugs use was limited and the ordering and checking of stock was in the hands of the Medical Officer but Niuean lads employed as dispensers did give out drugs, under careful supervision (Anon 1929). The chief work for these lads, however, consisted of their acting as orderlies, interpreters, drivers, and general assistants<sup>38</sup> around the hospital. Dispensers who showed particular aptitude in understanding medical matters and were conscientious workers frequently were sent later for training in a variety of health care fields, e.g., dentistry, laboratory work, and public health inspection<sup>39</sup>.

#### Household Staff

The hospital did supply linens for patient use but until the late 1950s it did not provide meals or personal

laundry services for in-patients. Each patient was accompanied by relatives who attended to these needs while the nursing staff ensured basic patient hygiene and comfort<sup>40</sup>. Attendant relatives served another purpose too: they helped ward off potential attacks by the aitu which the hospital harboured. For this purpose, of course, the more people accompanying the sick, the better. It became necessary by the early 1950s, however, to limit to one the number of attendants a patient had otherwise the hospital became too crowded (Anon 1940; Monaghan 1952). To compensate for this diminution in attendants, the hospital began to provide more in the way of laundry and food services.

#### THE EFFECTS OF POLICY CHANGES IN THE 1950s

For a long time the New Zealand Administration seemed to operate under the influence of an unflattering opinion about Niueans expressed in 1902 by Colonel Gudgeon, a Resident Commissioner in the Cook Islands. For example, Niue's Resident Commissioner throughout the late 1940s and early 1950s, the ill-fated Mr Larsen, agreed with Gudgeon's opinion, using it in a report written in 1945 to explain to the New Zealand Government the difficulties he was having with Niuean reluctance to accept his reforms. Larsen quoted Gudgeon thus<sup>41</sup> :

" In character the people of Niue differ from the true Polynesian. They are at once stupid, suspicious and avaricious ... they are mentally and in so many other ways 50 years behind the Polynesians of the Cook group."

As a result of opinions like that, from 1900 to approximately 1950, the Administration concentrated its efforts on providing Niueans with a variety of social and welfare services, health and education in particular, that they felt were needed. Little effort was made to improve the economic base of the island or to prepare the people to confront the world on their own because it was felt they would always be unable to survive without a paternalistic benefactor.

Larsen dreamed of administering a nation of capable Niueans but despaired of ever doing so. In contrast, Jock McEwen, with empathetic outlook and his wide experience of many Polynesian peoples, quickly realised that while Niueans appeared shy and surly they were in fact bright, motivated towards achievement and ambitious (see McEwen 1974).

Thus, McEwen's arrival as Resident Commissioner in 1953 signalled a new era on Niue, an era of rapid reform, of educational and vocational growth. By 1956, for example, an Agricultural Officer arrived on Niue, the schools had begun to teach in English as well as Niuean, and local youth were being sent abroad for training in all manner of jobs (Lucas 1968; McBean 1961, 1962; Walsh & Trlin 1973).

Many of McEwen's plans for the future involved the Health Department--sweeping improvements and alterations in plant, equipment and staffing. He championed the training of Niueans for all types of health workers, enthusiastically commenting, for example, on the return of the first two nurses trained in Apia: "they proved to be most capable and

dependable and they have made a wonderful difference to the  
hospital staff"<sup>42</sup> .

Through steady development, then, health services on Niue grew from a total staff of six Europeans at the initial building of the hospital (Anon 1929) to over 40 some three decades later. In January 1960, for example, Health Department staff comprised: a European Chief Medical Officer and four Niuean Assistant Medical Officers; two Niuean Dental Officers; a European Matron and three ex-patriate Sisters (one Child Welfare Sister, one Theatre Sister, and a Tutor Sister) along with four Niuean Staff Nurses and 20 Niuean Nurses. Five Niuean nurses were training in Apia and there were four new appointees. In addition, there were two Niuean Public Health Inspectors, several dispensers/medical orderlies, and a handful of miscellaneous household staff<sup>43</sup> .

It was not just personnel that developed over the years. With the passage of time, the disease pattern altered, medical techniques changed and the tasks of health care became more complex. All of which put considerable strain on the physical facilities.

### Reconstruction of Facilities

When it opened in 1921, the hospital had 16 beds and 4 cots, one male and one female ward, an operating theatre, bathrooms, kitchen, linen room, isolation unit, dispensary and nurses' home (Anon 1929). It was built of puga and fitifiti--a wattle-and-daub type construction of crushed makatea limestone plastered over wooden fitifiti lathes

fixed to an internal wooden frame--topped by a corrugated  
iron roof<sup>44</sup> .

Early in the 1950s, however, it was evident that the original hospital building was no longer adequate, major extensions and renovations were needed<sup>45</sup> . The most urgently required improvements, a deep bore well to assure the water supply and a septic tank, were finished by 1954. These were followed by the construction of an isolation unit and a Sister's Home in 1955, and of a new kitchen, laundry and storage areas a few years later<sup>46</sup> . Hurricanes in 1959 and 1960 extensively damaged parts of the hospital that had not been renewed, including the roof and end walls of the main ward block<sup>47</sup> necessitating major re-construction.

Thus, by 1962 a modern new hospital building was completed at a total cost of ~~£~~ NZ 25,000<sup>48</sup> . Of hurricane proof materials, in a design appropriate to tropical areas, incorporating all the previously planned improvements and a few new ones, this building is still in use. It has concrete foundations and walls with corrugated iron roofing. The ward block is well separated from the operating theatre unit, the out-patient area and ancillary services (see Figure 3).

### Special Services

Epidemic disease during these middle decades made it imperative that primary medical resources be decentralised. The island was split into two Districts, North and South, each District having two Assistant Medical Officers. Daily clinics, births, and general medical work in the District

were under the control of these Medical Officers.

Village Clinics. Mutalau, the "base" village in the North, built a clinic in 1950<sup>49</sup>. Ten years later, Hakupu followed suit, providing a clinic to give first aid to the local villagers<sup>50</sup>. More recently, Liku constructed a village clinic building and the Tuapa Village Council is considering building one. The trained nurses who work in the clinics are not only natives of those villages but are also regular Health Department employees.

Psychiatric Facilities. In such a small population, there are very few mentally ill persons. Consequently, little in the way of permanent facilities to cope with the mentally ill were constructed. Until the 1970s, those with permanent but not too severe mental disorders were sent to the Prison Farm at Fonuakula where they received constant supervision and care. Persons with transient or mild disturbances were accommodated either at the hospital in a small out-building or in their own homes. Violent or severely psychotic patients, however, were sent to New Zealand for specialist care<sup>51</sup>. None of those patients ever returned to the island. They either remain in hospital, have died, or have been released and prefer to live in New Zealand<sup>52</sup>.

Leprosarium. Leprosy, too, was never a big problem on Niue, nevertheless there were some cases. Active cases were transferred to the Makogai leper colony in Fiji until the disease reached a quiescent state (Dempster 1949, 1953).<sup>53</sup> By 1955 there were only three Niuean patients on Makogai

and two families on Niue with leprosy, neither with active  
54  
cases .

Tuberculosis Sanitorium. Throughout the first half  
of the twentieth century, tuberculosis was an increasing  
55  
problem . It was not possible to transfer TB cases from  
Niue to the Cooks or Samoa, the best solution as far as  
Niue's Administration was concerned, as their sanitoriums  
56  
were overflowing with their own cases . Hence, the Niue  
had to construct its own facilities for the care of these  
patients. At first, this isolation unit was a rather make-  
shift affair, far from ideally placed in the hospital  
57  
complex . After the hurricanes in 1959-1960, however, a 12-  
bed isolation unit was constructed during the re-building  
58  
program on a better site than that originally chosen .  
This building was in constant use until the late 1970s when  
the Health Department's aggressive campaign against  
tuberculosis succeeded in eliminating the disease from the  
island.

### Community Development

The 1950s was also a decade of community acceptance and  
involvement in health concerns, particularly by women. The  
Rev. Beharell of the London Missionary Society, for example,  
organized church women into a group known as the Lipine Tea  
(White Ribbon Society), the functions of which included  
caring for the aged or the sick as well as general "good  
59  
works" in the community . Further, the women of Mutalau  
and Toi voluntarily banded together in 1950 to form a group

interested in receiving weekly lectures, delivered either by the Assistant Medical Officers or the Public Health Nurse, on child welfare and general health education topics<sup>60</sup>. This was the foundation of a women's organization that eventually spread to include women from all villages, essentially incorporating the Lipine Tea too, and which functions today, performing household inspections and supporting health education issues (Paka 1981).

#### HEALTH SERVICES IN THE 1960s and 1970s

For reasons often outside its control, then, the Administration over the years and in piecemeal fashion built a centralized health service on Niue, with modern permanent structures, adequate facilities and a well-trained staff. The civil authorities on Niue and in New Zealand never created a rational "master plan" to develop such a service, rather, they responded to the best of their capacity at the time to a variety of external events. Events in the form of epidemic diseases which scourged the island, endemic diseases of debilitating nature, withdrawal of staff by the neighbouring Health Services from which personnel had been seconded, demonstration of the need for services through surveys and investigations, and, destruction of facilities by natural disaster. The administration could not stand aside and do nothing to avert the impact of these events and so, morally obliged to provide services, it provided the minimum necessary to do the job.

Because the population on Niue was so small (and decreased because of continued migration) that minimal provision of health service facilities appears lavish, especially as it could potentially serve a population as large as 20,000. Economies of scale, however, are simply not possible on Niue (Connell 1983:7). Four is the minimum number of physicians to serve a hospital whose staff undertake surgery: a chief surgeon, an assistant surgeon, and an anesthetist in the operating room with a fourth physician available to perform out-patient consultation are required. Of course, if it were possible to schedule all surgery to non-clinic hours or to ensure that no out-patient emergency arises during operating times, then fewer physicians might successfully maintain the service. Given that those conditions cannot be sustained, Niue's health service runs at the smallest possible level.

#### Consolidation Of Previous Changes

Little in the way of major change to the organization or delivery of health services has occurred on Niue since the re-building of the hospital in 1962. Generated by growth of services, alterations in disease patterns, developments in Western medical knowledge, and natural disasters, the reforms in medical service were refined and consolidated throughout the 1960s and 1970s.

Health services on Niue now essentially operate exactly as they did in 1960. Of course, some differences exist. An inspection of services by the Director of the New Zealand

Health Department in 1968 led to some improvements . To improved maternity services, for example, through both the construction of a 12-bed maternity unit attached to the main ward block, and the acquisition of the New Zealand Diploma in Obstetrics by some of the physicians. The road outside the hospital was finally tar-sealed, which meant more sophisticated laboratory services could be offered and that patients in the ward could recover from their ailments without constantly being showered in dust.

Not everything needed improvement, however. Blake-Palmer praised the operating theatre, for example, saying it was of better standard than some found in rural New Zealand hospitals. Likewise, he was impressed with the level of nursing on Niue, with the coordination of services between the public health and the therapeutic sectors, and with the calibre of Niue's Fiji graduates <sup>62</sup> . A review of dental services in the early 1970s (Espie 1974) was similarly impressed with the progress made in 30 years.

The opening of the airport in 1971 made life a lot easier in emergency situations. A report in Pacific Islands Monthly in June 1958, for example, tells how atrocious weather seriously delayed the emergency evacuation of a patient by Sunderland Flying Boat from the Royal New Zealand Air Force base in Fiji. Smallpox vaccine had to air-dropped on the island in 1960 after it was discovered that a one-year old boy from Namukulu had managed, in some unknown <sup>63</sup> fashion, to contract the disease . By 1971, however, it was

possible to have planes actually land on the island to  
64  
evacuate emergency patients .

### Staffing Issues

Some earlier achievements of the Niuean Health Department became obsolete and so discarded in the latter part of the 1970s. The Niuean School of Nursing, for example, which flourished throughout the 1960s and early 1970s was defunct by 1978. A combination of factors accounted for this.

Educational standards on Niue were now high enough so girls could train elsewhere, in Fiji or even in New Zealand. This was preferred as the highest standard of nursing backed by internationally recognised diplomas was desired by the health officials on Niue<sup>65</sup> . The rapid decline in population numbers through migration meant staff had reached a ceiling on numbers required to provide a good service as well as there being a need for only a few replacement staff, especially as previously trained nurses remained in their positions, despite marriage or other circumstances which used to result in removal from the work force.

A scheme was set up whereby Niuean-trained nurses got six months post-graduate experience in New Zealand hospitals. In addition, the World Health Organization was sponsoring nurses to seminars and courses in child health, midwifery, and public health in Hawaii, Fiji, Australia and New Zealand<sup>66</sup> . With these changes there was no longer a need for a School of Nursing on Niue.

What happened to nursing on Niue in the decades just prior to Independence illustrates well the process of refinement or improvement at work during this period. Basic facilities and services were in place and functioning well but the personnel in charge of various sectors of health service provision underwent constant re-training. Physicians were sent every two years for post-graduate training. Through experience in Australia, New Zealand, Hawaii, Western Samoa, Fiji, the Philippines<sup>67</sup>, these physicians specialised in problems crucial to the well-being of Niue's populace.

The investment the Administration made in training Niueans to occupy key positions in the health services paid off handsomely. A notable feature of the training of these Niueans was the high marks many achieved.

In 1960, for example, the four nurses in training in Apia collected six merit prizes, above the many Samoan girls alongside whom they trained<sup>68</sup>. Similarly, in 1959, two Niueans completed their medical training in Fiji, one took a Gold Medal in surgery, the other was awarded Gold Medals in General Medicine and Obstetrics<sup>69</sup>. The calibre of student from Niue was sustained in the late 1960s and 1970s, with Niuean trainees taking prizes in nursing, dentistry, medical laboratory technology, radiography, public health and medicine<sup>70</sup>. The quality of Niuean graduates in the various fields of medical endeavour is well recognised<sup>71</sup>. In part, this remarkable record of excellence is due to the high

achievement motivation of Niueans and to the fluid structure of the social hierarchy on the island.

#### **MEDICAL SERVICES IN INDEPENDENT NIUE**

Since Independence several medically-trained staff have left the Health Department for the political arena. In the Niuean Assembly they use their skills in another, no less useful way, overseeing Niue's passage into the late twentieth century. These people also act as "watchdogs" on the Health Department's performance, ensuring standards remain high and services efficient.

Both those with awards for excellence and those with more modest achievements have gone on to serve their country well over a good many years. In 1983, for example, 12 nurses, some 40% of the nursing staff, had been employed by the Niuean health services for more than ten years. Of these nurses, eight had been initially trained in Apia in the late 1950s or early 1960s. The two most senior physicians had been trained as NMPs during the 1950s. An "original" dental cadet retired in 1981, with over 40 years service to the Niuean Health Department. Public health and ancillary services, too, have long-serving employees, some with over 15 years continuous service.

#### **The Disease Profile In The 1970s**

The disease profile on Niue changed between 1950 and 1970, largely as a result of improvements in public health,

especially water supply, waste disposal, and the vaccination of children against infectious disease. Most of the "tropical" diseases once rife on the island had been eradicated or at least tightly controlled. Niue is, nevertheless, still subject to occasional bouts of epidemic disease.

There was a minor outbreak of rubella in December 1971<sup>72</sup> but that was as nothing compared to the first outbreak on Niue of Dengue fever which arrived in March 1972<sup>73</sup>, causing an estimated 1,400 total cases with 9<sup>74</sup> deaths. Outbreaks of Dengue fever, with a mortality rate of about 1%, now seem to occur about once every four years, the latest outbreak being in March 1980.

Thus, largely through happenstance, at Independence Niue inherited "the best medical facilities in the Pacific" (Connell 1983:4; Walsh & Trlin 1973:67-68). Since the relinquishment of direct control by New Zealand the standard of health services available on the island has not diminished.

#### **THE ECONOMICS OF CONTEMPORARY HEALTH CARE**

At present, Niue is running within World Health Organization guidelines in allocating some 12% to 15% of her financial resources to the maintenance and improvement of the health of her people (Niue Government 1979). The Niue Government allocates the annual budget for the health

service on Niue from New Zealand Aid for Niue (Niue Government 1982).

Total health expenditures in 1982 came to \$NZ605,727, an average per capita cost of \$NZ191.20 (Niue Government 1982). This budget enabled the Department: to equip and maintain a 20 bed hospital; to provide care for a total of 648 in-patients of whom 61 had major surgery; to attend some 17,000 ambulatory and 1,500 dental patients; to buy drugs, supplies and equipment; and, to pay a staff of 70 (Niue Government 1982).

Basic medical and dental services are free to all Niueans. They pay only for chest X-rays before migration or for work as a food handler, glasses, contraceptives, dentures or gold inlay dental restorations (Niue Government 1982:2). People from other nations (except New Zealand) are charged for all services.

The Health Department justifies the provision of a free service on several grounds: that medical care is available to all; that it is an effective means of disease control, particularly against recurrent problems such as scabies or tuberculosis; and, that it is "a deterrant to witch doctor practise" (Niue Government 1982:2). So far these advantages outweigh the disadvantages of the system, the expense of the service, the varying attitudes of health workers towards non-paying clients, and a potential for abuse of services by the public (Niue Government 1982:2).

The health service does not survive on this allocation of money alone. Non-fiscal and other transactions which do

not appear in the accounts are, nonetheless, vitally important to the quality of service on Niue.

#### Other Transactions and "Hidden" Costs

"Unaccountable" transactions include small cash donations and gifts of food from various Village Councils (Niue Government 1982:2). Transactions in kind, such as donations of equipment, bedpans, drip stands, crutches, wheelchairs and the like, from charitable organizations overseas and local groups, are essential to the continued running of the hospital (Niue Government 1982:18, 21).

More extensive aid comes from New Zealand institutions such as the Auckland Hospital Board, the Department of Health, and the Royal New Zealand Air Force, which charge minimal fees in giving transport and patient care in emergency situations. International organizations like the World Health Organization and the South Pacific Commission and the medical services of neighbouring countries also help, picking up the costs of vaccines, for example, or supplying physicians to cover periods when Niue's own personnel are out of the country. Aid monies, from the World Health Organization and from New Zealand, have allowed all the trained professional staff to undertake regular post-graduate instruction or refresher courses in clinical or health-related subjects.

If these donations and neighbourly acts were included in the fiscal reckonings, Niue's expenditure on health would increase considerably. Thus essentially through external

sources of money, Niue is able to maintain a high quality of service.

#### **THE HEALTH DEPARTMENT AS EMPLOYER**

The Health Department is a very substantial source of work on Niue, particularly for women with a better than average education. With a total of 70 permanent and temporary employees, some 10% of the entire Niue Public Service (Connell 1983:4), it is an important segment in the organization of life on modern Niue.

At least one person from every village is employed in some capacity by the Health Department. Where more than one person from a particular village is employed by the Health Department, there frequently is a kin link, albeit not always close, between those persons. One disadvantage in this small society is evidenced by the competing demands of professional and of kin behaviour which sometimes create dilemmas for staff, not just in their relationships with other Health Department personnel but also in their responses to patients. An advantage, however, is that no patient is "unknown", the home and family circumstances of every patient is well-known and is taken into account when deciding treatment. Many of the staff now employed at the Hospital, especially nursing staff, had mothers, sisters, brothers, or cousins previously employed there. Thus, there is a degree of "occupational inheritance" within particular families, families that are seen as merely

continuing a long healing tradition in a new fashion, a tradition that accounts for their current success.

The average annual salary for all Health Department employees is higher than the average earnings for 67% of the wage and salary earners on the island (Connell 1983), making a job at the Health Department both prestigious and relatively lucrative.

The majority (55%) of permanent employees of the Health Department are women, nurses. Though some senior nursing staff salaries are greater than those earned by junior males, on the whole women earn considerably less than men, despite the fact that many of them train for as long or longer and have very skilled jobs (see Table 1).

. TABLE 1

REMUNERATION AND LENGTH OF SERVICE FOR PERMANENT STAFF,  
NIUE HEALTH DEPARTMENT, AS AT DECEMBER 1982.

<u>Position</u>	<u>Number</u>	<u>Average Annual Salary</u> (\$NZ)	(std dev)	<u>Average Number of Years Worked</u>	(std dev)
Total Staff	42	5,704	(2,541)	13.9	(8.9)
Males	19	6,965	(3,149)	17.7	(9.6)
Females	23	4,663	(1,189)	10.8	(7.0)
Physicians	4	11,134	(4,522)	19.5	(14.5)
Dentists					
Senior Staff	3	8,119	(1,254)	22.6	(10.0)
Other Staff	4	4,748	(344)	13.0	(5.0)
Nurses					
Senior Staff	7	6,039	(1,077)	19.7	(3.9)
Staff Nurses	9	4,540	(229)	8.8	(3.7)
Nurse Aides	7	3,446	(0)	5.0	(1.1)
Public Health Inspectors	3	5,378	(1,131)	11.0	(8.0)

These inequalities in pay structure are partly a hang-over from colonial times and partly due to the differing values the present Government places on work. Though capable women are encouraged to train for top positions and to retain these long after marriage, men are still supposed to be primary income earners. So, men are paid more.

The Health Department is important, not just in terms of the jobs it provides and the services it offers, but also for the symbol it represents. Thus far, it is the largest Government Department which has achieved one of the goals set out in the First Five Year Plan (Niue Government 1979), the goal of "localising" all jobs on Niue including senior professional and administrative positions. All persons employed by the Health Department are Polynesian and apart from one driver, one trained nurse on temporary employment, and one cleaner, all are Niuean.

Ocasionally, final year medical students from either Australia or New Zealand arrive on the island for a 12 week clinical rotation, getting some exposure to medicine in a tropical climate. These students, acting as Assistant Medical Officers under the supervision of the Director of Health, permit the permanent medical staff to leave for brief refresher courses without leaving the island short of doctors.

Every few years, the Health Department arranges for specialist physicians to visit (Niue Government 1982:1). In addition to general screening examinations, most perform specialist surgery. In 1982, for example, Niue was visited

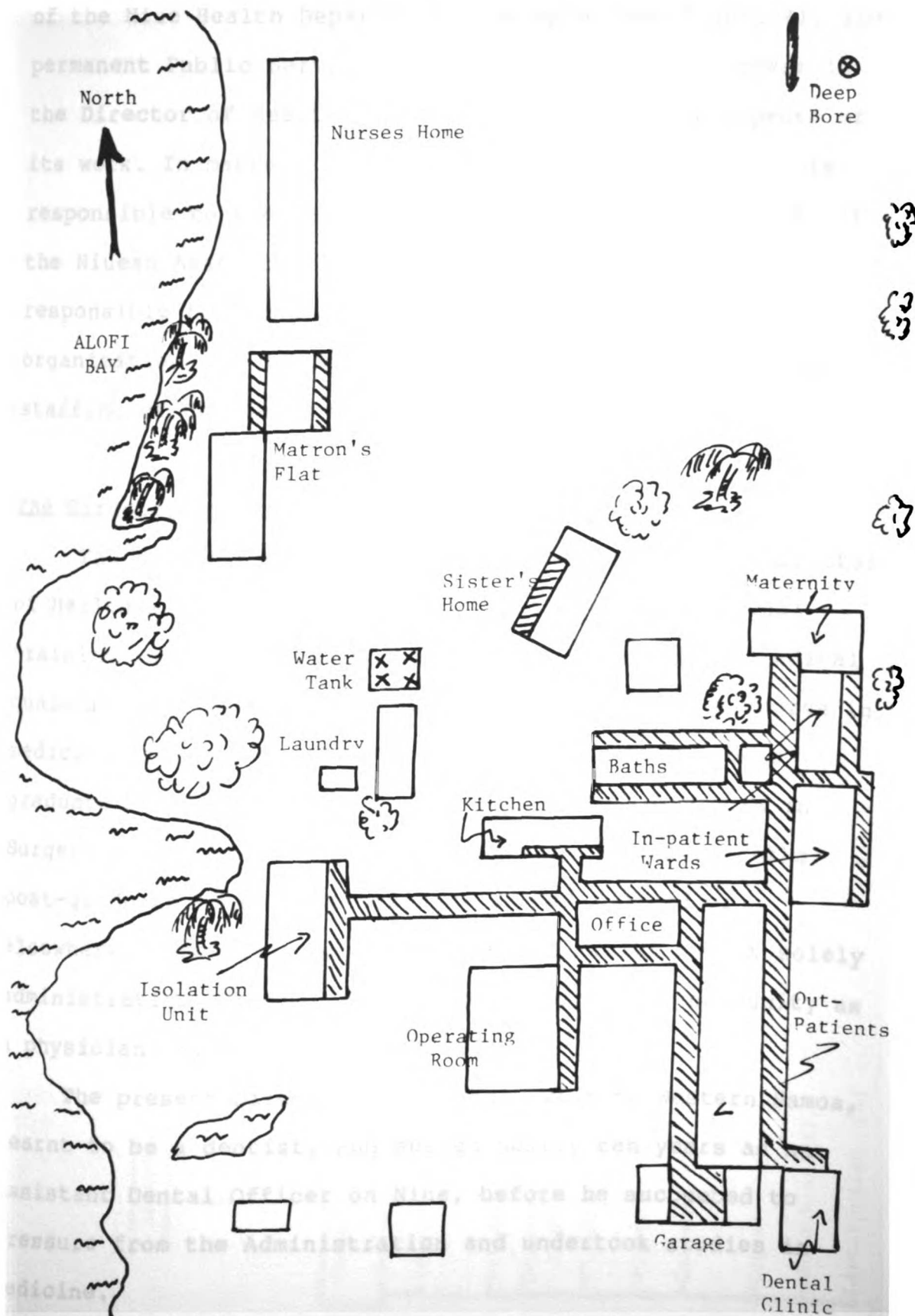
by a specialist surgeon who did five operations and instructed local staff on certain aspects of surgery (Niue Government 1982:29). An Ear Nose and Throat consultant, who saw a total of 42 patients and performed six operations, and an Eye specialist, who undertook cataract surgery on 11 patients, both came to the island early in 1983.

Emergencies or the need for facilities beyond the capacity of the staff or resources on Niue, are met through airlifting patients, generally to New Zealand, either via special emergency flights or on regular scheduled flights, depending on the patient's condition. Seven medical patients were referred to New Zealand in 1982, some for advanced surgery (e.g., the correction of club foot, or repair of damage to the hand) and some for special care (e.g., delivery following recent extensive abdominal surgery). One patient, with severe gunshot wounds, was evacuated to New Zealand aboard a specially arranged flight. "Diversions" of aircraft from other areas of the Pacific are occasionally made. One such flight took place in 1982, bringing from Pago Pago to an accident victim urgently needed drugs not normally kept on Niue (Niue Government 1982:29).

#### **ORGANIZATIONAL STRUCTURE OF HEALTH SERVICES**

The hospital complex (Figure 3) acts as the Health Department's headquarters, whence it houses the Department's administrative services and Public Health section as well as providing in-patient and ambulatory services.

**FIGURE 3: LAYOUT OF HEALTH DEPARTMENT COMPLEX, NIUE**



Comprising only three basic sectors, the organization of the Niue Health Department is simple (see Figure 4). The permanent Public Servant at the head of the Department is the Director of Health who is in control of all aspects of its work. In matters of policy the Director of Health is responsible to the Minister of Health, a Cabinet Member of the Niuean Assembly, a elected official. He is also responsible to the Secretary to the Government for the organization and delivery of health services and for the staffing of the Department (Niue Government 1982:1).

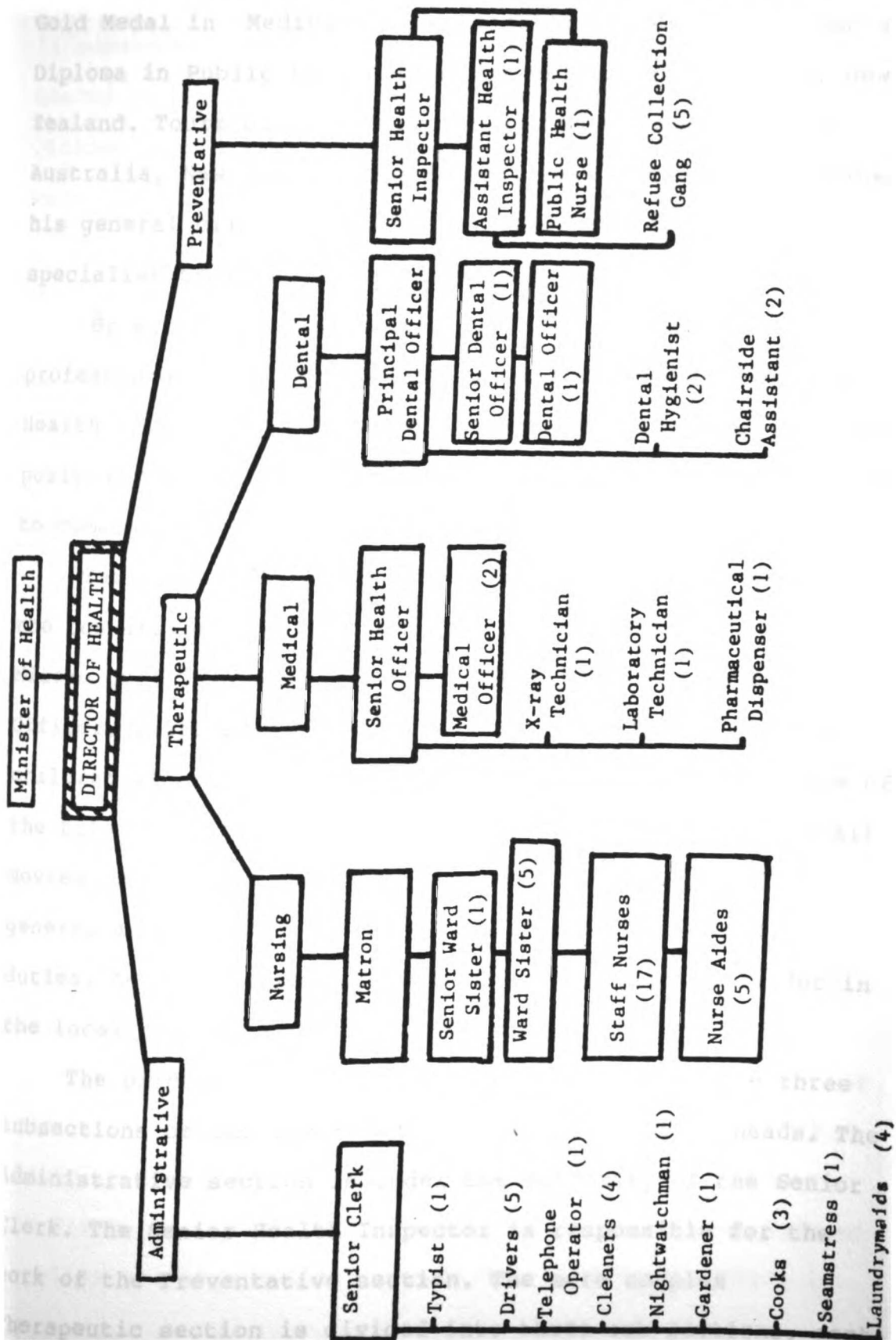
#### The Director of Health

The Niue Constitution Act 1974 states that the Director of Health must be a qualified physician with additional training in Public Health. He can have obtained his medical qualification in either of two ways: he can have a degree in medicine from a recognised university; or, he can be a graduate of the Fiji School of Medicine with Diplomas in Surgery and Medicine and have a minimum of twelve months post-graduate clinical experience in New Zealand or elsewhere. The position of Director of Health is not solely administrative, he must also actively serve the community as a physician (Niue Government 1982:4).

75

The present Director of Health went to Western Samoa, learnt to be a dentist, and served nearly ten years as an Assistant Dental Officer on Niue, before he succumbed to pressure from the Administration and undertook studies in medicine.

**FIGURE 4: ORGANIZATIONAL CHART OF NIUE HEALTH DEPARTMENT**



A 1958 graduate of the Fiji School of Medicine, with a Gold Medal in Medicine, the Director of Health also has a Diploma in Public Health from the University of Otago, New Zealand. Tours of duty for post-graduate experience, in Australia, New Zealand and Hawaii, have not only maintained his general clinical skills but also have given him specialist training in ophthalmology and general surgery.

By virtue of his position as a well-educated professional in a senior government job, the Director of Health is also a leading citizen on the island. As such the position tends to acquire several civil functions, important to community welfare, in addition to clinical ones.

The current Director of Health, for example, is also the Commissioner of Justice, the leading figure in the Niuean judiciary at lower court level, and the Adoption Officer, responsible for assessing the wisdom of placing children with particular adoptive parents. He is also one of the trio of Censors, persons responsible for previewing all movies or video tapes to ensure their suitability for general audiences of all ages. Besides those official duties, he is a respected elder in his village, a leader in the local church, and a private citizen.

The Director of Health delegates control of the three subsections of the Department to their respective heads. The Administrative section is under the authority of the Senior Clerk. The Senior Health Inspector is responsible for the work of the Preventative section. The more complex Therapeutic section is divided into three sub-sections, each

with its own Head. Nursing is controlled by the Matron, who is sometimes called Principal Nurse. The Physicians are headed by the Director himself, aided by the Senior Health Officer, while the Principal Dental Officer oversees the work of that sub-section.

#### ADMINISTRATIVE SECTION

The Senior Clerk, a graduate of a Hospital Management course run by the South Pacific Commission, oversees all housekeeping, transport, and personnel aspects of the Health Department. In addition to being responsible for the purchase and distribution of all stores, supplies, foodstuffs, and equipment, he is in charge of correspondence, finances and the provision of maintenance for equipment, grounds and buildings (Niue Government 1982:4). He is assisted by just one Clerk/Typist. Together they manage their huge and diverse tasks, largely through informally delegating authority for daily supervision to other personnel.

#### Supplies

Notified by the Dispenser or Matron or whomever of the need for new drug or material supplies, the Senior Clerk places an order with the New Zealand Government Stores via the Treasury on Niue (Niue Government 1982:1). Once ordered, supplies become a matter outside Niuean control. There is

little certainty about when orders will arrive, or the condition in which they will appear.

Delayed receipt of orders has long been and continues to be a problem (Niue Government 1982:4). In January 1975, for example, the hospital had to borrow oxygen from the heavy equipment section of the Public Works Department for two newborns in distress as no refilled oxygen cylinders had been returned during the previous year<sup>76</sup>. During much of 1982, certain commonly prescribed drugs (e.g. Flagyl--metronidazol, an anti-bacterial) were in short supply as were bandages, surgical gauzes, and strapping tape. Vaccines, packaged in dry ice in special containers, sometimes arrive damaged and unuseable because flights have been delayed or cancelled. Or else they arrive in enormous quantities just months before the expiration date, as in September 1982 when 2,000 doses of DPT Trivac arrived with an expiration date of March 1983. Niue uses perhaps 200 such doses a year. Dental supplies, too, did not arrive during 1982, severely hampering the preventive work of that section (Niue Government 1982:23).

Standardization of equipment has helped reduce the uncertainty about equipment maintenance. Buying items in common with other Departments, such as the vans for example, means parts can be bought in large quantity or moved from one item to another. Following a World Health Organization suggestion, a new X-ray machine purchased early in 1982 is the same brand as that in several neighbouring countries, which means a regular region-wide servicing routine can

established and parts "borrowed" if necessary (Niue Government 1982:18).

### Transport

Despite the large number of motor bikes on the island, transport remains one of Niue's biggest problems. Many folk, especially those who are unemployed or in exceptionally low paying jobs, cannot afford such means of locomotion. And many such folk live in the "back villages" furthest from the hospital. Hence, the Health Department provides transport, day and night, for patients to get to and from the hospital complex. There is also an ambulance, a gift from the Government of Nauru, for use in emergency situations. The organization of drivers for 24-hour service is the responsibility of the Head Driver.

Unpaved roads and a tropical climate take a heavy toll on vehicles the maintenance of which is a problem. It is not at all uncommon for one of the three vans operated by the Health Department to be out of action, necessitating changes in schedules, or the borrowing of vehicles from other Departments.

### Housekeeping

The direct control of housekeeping services is informally delegated from the Senior Clerk to the Matron, because these services impinge upon patient care to some extent. Every morning, then, Matron discusses the availability of foodstuffs with the Cooks and together they

develop meal plans. Likewise, it is she who doles out soap powder, bleach and such like, and instructs the laundresses on special requirements. The daily sweeping and mopping of the wards and adjacent buildings has to be done to her satisfaction, too.

### The Telephone System

For reasons of proximity, the telephone operator also comes in for Matronly scrutiny from time to time. In one corner of the nursing office is the telephone switchboard, a remarkably old and rather cantankerous piece of equipment. During the day, the telephone operator sits there, taking and sending all Health Department calls. At nights or on weekends, the nurses themselves field telephone enquiries. Every village is linked by telephone to the hospital so that aid may be summoned immediately it is required (Niue Government 1982:18).

### **PREVENTATIVE SECTION**

Historical precedent sees the Senior Health Inspector running a section of the Health Department that comprises two related but distinct foci. One focus is aimed at environmental sanitation and disease prevention; the other ensures welfare of children, old folks and other special groups in society (Niue Government 1982:5-10).

Through study in Fiji, the Senior Health Inspector holds the London School of Hygiene and Tropical Medicine's

Public Health Inspection Certificate. The two junior members of his inspection team are in varying stages of acquiring the same qualification. Their work ranges from inspection of the hotel, restaurant and bakeries, and scrutiny of incoming produce, through health screening of planes and ships, and inspection of villages and dwelling places, to pest control and eradication. Recently the Health Inspection Team has also been involved in policy discussions, such as the protection of sea, air and land resources from pollution, and similar topics (Niue Government 1982:5).

Although the Public Health Nurse is accountable to the Matron as well as the Senior Health Inspector, the daily management of her sector is supervised by neither. She sets her own schedule and consults with Matron and the Senior Health Inspector on a weekly basis. The Public Health Nurse has extensive post-graduate experience, in both New Zealand and Hawaii, in public health in general and child welfare in particular. While the welfare of children, the elderly, and the handicapped are her prime concerns, her duties include assisting the rest of the Public Health Team in village inspections.

### Village Inspections

Three times every year, each village on the island is inspected by the Public Health Team accompanied by the village Headman and local policeman. Sometimes the village pastor, Assemblyman, and Head of the local Women's group also undertake the inspection (Niue Government 1982:2).

People in the villages know when they are due for an inspection as the schedule is announced by radio several days in advance. Most folk, however, leave any preparation for the inspection until the day or evening beforehand--and then frenetic activity takes place (cf. Pollock 1975:18). Everyone in the household then desparately cuts weeds; repairs pig pens; removes rubbish; cleans and tidies kitchens, bathrooms, and food storage areas; and, neatens up the house and grounds.

The Nurse visits each house. Entering every room, she checks for general cleanliness and ensures that all poisons and medications are safely stored out of the reach of children, that food storage areas are ant- and cockroach-proof, that there are no signs of rodents, that floors do not have cracks which harbour vermin. Meanwhile, outside, toilets are being inspected to see they are sanitary and that all are water sealed; buildings are checked for decay; kitchen shanties are searched for signs of vermin; yards are scrutinised for weeds, rubbish, or containers which could harbour mosquitoes or other pests; pig pens are inspected to see that they are sturdy enough to confine the animals and are sufficiently far from dwellings.

Infringements of the sanitary rules are immediately pointed out to the house owner and occupants, the local policeman, and village representatives. Considerable pressure is brought to bear by the village community as a whole upon the owner to correct any problems. If the owner

does not rectify the situation within the time allowed, prosecution eventually follows.

#### THE THERAPEUTIC SECTION

The number of qualified therapeutic staff available in the Health Department per head of population compares favourably with New Zealand. As Table 2 shows, nursing, dental and health inspection services are especially well catered for. The quality of work performed by the staff is similar to that of staff in an equivalent sized institution in rural areas of New Zealand.

TABLE 2

PROVISION OF HOSPITAL BEDS AND STAFF (PER CAPITA),  
NIUE AND NEW ZEALAND, 1982.

	<u>Niue</u>	<u>New Zealand</u>
Physicians	1:720	1:645
Trained Nurses	1:144	1:164
Nurse Aides	1:221	1:254
Dentists	1:959	1:2760
Health Inspectors	1:959	1:6700
Total general beds/ 1000 population	6.9	6.9
Admissions to general beds/1000 population	243	134
Nurses per average occupied bed	1:0.4	1:1.3

Thus the level of staffing on Niue has reached an acceptable international level. Planned additions to the staff, of a physiotherapist and a woman physician (Niue Government 1979), will see the Niue Health Department

providing a complete range of therapeutic services and personnel.

### Nursing Staff

As is common in many Pacific nations, there are two levels of nursing on Niue. Qualified nurses are supported by a group of minimally trained junior staff who, acting under constant supervision, perform basic patient cares.

Both the Matron and the Senior Ward Sister are New Zealand Registered General and Obstetric Nurses with additional training as New Zealand Registered Midwives. The Matron, in charge of the entire nursing staff, does considerable administrative work, including being the elected Head of the Niue Public Service Organization, a labour union for government employees. Most of the supervision of actual patient care is undertaken by the Senior Ward Sister, who acts as Matron in her absence. One nurse, who trained originally in Apia some 20 years ago and who has had considerable post-graduate experience in theatre work, has been elevated to Theatre Sister. She is in charge of the Central Sterilization Unit, in the operating theatre complex. Besides assisting at all surgical procedures, she trains junior staff in theatre work.

The three Ward Sisters are younger women, destined to eventually take over the more senior positions. All of them trained in Fiji and obtained New Zealand Registration as General and Obstetric Nurses. In 1982 one of these women also passed her examinations and qualified as a New Zealand

Registered Midwife. The Ward Sisters assist the Senior Ward Sister to oversee the work of all nurses in the wards.

Staff Nurses are the most diversely trained group. Of the fifteen employed, a few are products of the old nursing school on Niue itself; some were initially trained in Western Samoa; a few underwent training in Fiji before the curriculum was up-graded to New Zealand Registration standards; and, a few trained in New Zealand as Enrolled or Community Nurses, a less intensive form of training than full Registration. Most have been employed by the Niue Health Department for a long time and all have some post-graduate experience in nursing outside Niue. Several have passed the Fijian Registered Midwives examinations and a couple have completed courses in Public Health Nursing. It is these nurses who perform the bulk of skilled care on Niue.

Nurse Aides are the youngest group of nurses. Most have been out of High School for just a year or two but a couple have been employed by the Health Department for a long time. While on the job during the first few months, they receive training in basic first aid and nursing skills. They then work as assistants to the trained staff, performing routine patient cares, such as bathing, grooming, bed-making, and so forth, as well as regular clinical observations, such as recording patient temperature and blood pressure at certain times. The most able of these 14 girls are encouraged to undergo "proper" nursing training, in Fiji or elsewhere.

### Organization of Nursing Shifts

The nurses are split into three shifts--Morning (6am to 2pm), Afternoon (2pm to 10pm), and Night (10pm to 6am)--with the majority of staff being assigned to the Morning shift, an average of seven trained nurses and six Nurse Aides. One experienced staff nurse is permanently in charge of the Out-Patients Department where she is assisted by Staff Nurses and Nurse Aides on rotation. The Staff Nurse who accompanies the doctor on "Island Round"--a mobile clinic which visits all villages--is not permanently assigned to that task but is given that chore on a rotation basis. One Nurse Aide usually accompanies the Public Health Nurse on her rounds. The remainder of the Morning staff is occupied in ward work, doing routine cares, medications, dressing changes, or accompanying patients for special examinations or procedures.

Afternoon shift sees fewer staff on duty. Usually, three or four Staff Nurses are on duty, at least one of whom is very experienced in all aspects of ward work, as well as the same number of Nurse Aides. The Night staff is even smaller: one Staff Nurse and two Nurse Aides. Outside normal working hours, i.e. outside Morning shift, the nursing staff on duty attends to all aspects of health care delivery--screening people who make telephone calls for assistance or who arrive at the hospital as out-patients, because of accidents or emergencies, before calling the on duty physician to attend; dealing with all ward work; and attending all women in labour.

### Midwifery On Niue

During the Afternoon and Night shifts, senior nurses with additional training in midwifery are "on call" to assist staff on duty with maternity cases. The obstetrician is notified of the arrival of a woman in labour but his services are not called for unless the woman is a primipara, is a grand-multipara, has a history of complications, or, of course, if some unexpected complication arises. Hence, most of the children on Niue are delivered by the nursing staff rather than by physicians. The doctor is called to repair any tears and does check both mother and child after the birth but is not routinely involved in delivery. Indeed, for women with histories of uneventful pregnancies and deliveries, he often does only one or two ante-natal checks himself, when the woman first attends the clinic and around nine months of pregnancy, leaving other ante-natal checks to the midwives.

Hospital deliveries accounted for 92% of the births on Niue in 1982. Of the total of 103 deliveries, two were still-births. Six infants were delivered by C-section, one by forceps, and two by Ventous extraction; the remainder were normal deliveries (Niue Government 1982:14).

### The Physicians

On Niue, the physician fulfills two roles--that of general practitioner and that of hospital Registrar. Throughout most of 1982 there were three physicians on Niue. Their numbers were supplemented by visiting medical students

and, on occasion, by doctors "borrowed" from the Western Samoa Health Services (Niue Government 1982:29).

Basic specialties vital to a modern health service are available through post-graduate training undertaken by the doctors. The Director of Health specialises in ophthalmology and general surgery; the Senior Medical Officer has extensive training in tuberculosis control and in anesthesiology. The other physician successfully passed the examinations leading to the New Zealand Diploma in Obstetrics; he had previously completed post-graduate training for the Diploma in Paediatrics (Niue Government 1982:11,27).

The fourth physician was overseas for most of 1982, receiving post-graduate instruction in surgery and taking the first part of the examinations for membership in the Royal Australasian College of Surgeons. His training was sponsored by the World Health Organization (Niue Government 1982:27).

### The Daily Round

Every weekday morning the physicians on duty make ward rounds of their patients, those that they themselves admitted or those given into their care because of their specialist interests. The admission rate on Niue is much higher than in New Zealand (see Table 2), reflecting several things: prudent caution on the part of physicians were no consultants or special services are immediately to hand; the prevalence of particular, common but quickly controlled

disorders needing short hospitalization (such as, asthma, or wheezing bronchitis in children); fewer extra-mural support services in the community, such as visiting nurses; and, a climate in which infections rapidly become rampant. The high admission rate is reflected too in bed occupancy rates. In 1982, the daily average of occupied hospital beds was 18, a bed occupancy rate of 90%.

Thus, physicians on Niue manage a hospital which is generally full. With 61 operations being performed in 1982, there is usually a post-operative patient to care for as well as people admitted for medical or social reasons. A few geriatric admissions, for example, are primarily for respite or nursing care rather than for severe illness.

After the ward round, the doctors attend out-patients, both those who have "dropped in" for a consultation and those scheduled for follow-up examinations or special services. On Mondays women arrive for their ante-natal checks, while Tuesdays are given over to post-natal examinations of mother and child, and to follow-up examinations of patients with diabetes and hypertension. Tuesdays are also the days on which pre-surgery investigations take place and, if surgery is decided upon, the patient admitted. Wednesdays are scheduled for surgery but emergency cases are handled as necessary. Thursdays and Fridays do not have regular scheduled clinics except for routine out-patient consultations.

Usually at least two physicians are on duty on weekday mornings, the third having been "on call" in the afternoon and night. During weekends, the on-duty physician undertakes a morning ward round and attends out-patients when he is notified that he is required by the nursing staff on duty.

### Island Round

One other important weekday event in the physician's working life is the clinic known as "Island Round". This is the modern version of the moving clinic round that commenced with the arrival of the first European physician. From visiting each village just once every three weeks in the 1910s, the round has been extended to four days a week.

Every day except "surgery day", Wednesday, when all the physicians are needed at the hospital, a van leaves the hospital to visit each village. In addition to the driver, the van carries a physician, a Staff Nurse, and a basic supply of medications and equipment needed in general practice. Island Round calls at the village clinics where patients gather or, in villages without clinic buildings, it will stop at particular homes or schools. Continuing a system begun decades ago, people summons Island Round to their home by displaying a red flag at the roadside (Monaghan 1952; Niue Government 1982:19).

### **DENTISTRY ON NIUE**

Three Dental Officers provide a complete dental health service. They are assisted by a Dental Hygienist, a

Technician and two Dental Attendants. All dentists on Niue are graduates of the Fiji Dental School and all have post-graduate experience in either Australia or New Zealand. Similarly, the technicians have been trained in Fiji. In 1982 an award was given to a girl to undertake training in New Zealand as a Dental Nurse (Niue Government 1982:22). It is intended that she will return to do dental health education in the schools as well as regular inspections of child dental health.

The Principal Dental Officer was stationed in the main clinic in the hospital grounds, treating mainly adult patients. Working in a mobile clinic, the Senior Dental Officer attended to the pre-school and school children in all places outside Alofi and, when time permitted, also dealt with adult patients. The third Dental Officer saw patients from Alofi's primary school and the High School as well as treating the town's preschoolers (Niue Government 1982:23).

The dental health of the Niuean population diminishes once children leave primary school where they have a "toothbrush drill" given them daily by the teachers. For this reason, a survey of dental health among the teenage High School population is planned as a part of the South Pacific Commission's intent to undertake a study of the prevalence of various kinds of dental disorder on Niue (Niue Government 1982:22,25). A campaign to get fluoride tablets to pregnant women and preschool children, via the Public Health Nurse, as well as to school children, via their

teachers, has not been completely successful, due partly to the non-arrival of supplies (Niue Government 1982:25).

Table 3 presents a comparison of the type of dental work performed in 1981 on all adult and all child patients, aged 2-to-15 years. An effort to conserve children's teeth by filling and prophylaxis is evident. As many adult teeth were extracted for periodontal reasons as for cavities.

**TABLE 3**

**TOTAL NUMBER OF DENTAL ATTENDANCES AND TYPE OF WORK PERFORMED, NIUE DENTAL CLINIC, 1981.**

Month	All Adults		All Children	
	Number of Attendances	Fillings/Extractions	Number of Attendances	Fillings/Extractions
January	142	57/57	246	190/3
February	104	62/42	245	108/4
March	--	--	201	326/16
April	91	65/49	72	290/0
May	--	--	35	15/3
June	88	29/50	61	43/6
July	110	61/32	55	9/8
August	135	75/62	156	130/16
September	119	77/57	71	78/2
October	116	47/61	49	45/5
November	123	43/39	190	307/15
December	101	60/27	93	98/5
	-----	-----	-----	-----
	1129	576/476	1472	1539/83

#### **ANCILLARY SERVICES**

Ancillary services on Niue underwent a renewal in 1982 and 1983 with new equipment and staff arriving. Not only was a new X-ray machine purchased from a Fijian company but the Technician who operates the X-ray service trained the Dispenser to undertake simple chest and bone X-rays on it so

that there are "back-up" staff available for investigative and diagnostic services. A relatively large number of X-rays are taken each year, as Table 4 shows, due to the high accident and injury rate on Niue, the high prevalence of respiratory diseases, and the requirement that out-migrating Niueans have a medical examination and chest X-ray before leaving the island.

**TABLE 4**

**NUMBER OF X-RAYS TAKEN AND PHARMACY ITEMS DISPENSED,  
NIUE HEALTH DEPARTMENT, 1981.**

<u>Month</u>	<u>Number of X-rays</u>	<u>Number of Medications</u>
January	114	277
February	179	349
March	105	1361
April	97	489
May	80	321
June	85	413
July	140	485
August	87	325
September	109	419
October	62	431
November	80	422
December	117	369
	-----	-----
	1255	5661

The laboratory was staffed for two years by a trained Pilipino Laboratory Technologist, provided and paid for by the United Nations Development Program in Manila. But late in 1982 a Niuean graduated from Fiji as a Laboratory Technician so he has returned and taken over the running of all medical laboratory services on the island. Further, a trained pharmacist, the first on Niue, is expected to

graduate from the Fiji School of Medicine in late 1983. He will assist the current Dispenser, who has had only practical training from the Health Services in Apia (Niue Government 1982:17). A new ancillary service will begin soon, too, with the expected graduation from New Zealand late in 1983 of a physical/rehabilitation therapist.

## CHAPTER VII

### GENERAL AND PEDIATRIC MORTALITY AND MORBIDITY ON MODERN NIUE

Niue has had considerable success in the last few decades in reducing the burden disease places on her populace. Many diseases have been completely eliminated, most notably: tuberculosis; venereal diseases; various so-called "tropical" disorders, such as leprosy and filariasis; and, that scourge of childhood, the "unholy trinity" of malnutrition, dysentery, and infectious disease. In many ways, the diseases prevalent on modern Niue are the same as those afflicting the wealthy urbanised West.

Niue has reduced mortality to very low levels and has achieved a level of personal and community hygiene comparable to that in industrialized nations in temperate zones. Even so, people still get sick and some still die.

This Chapter looks briefly at general mortality and morbidity on Niue and then focuses on children's health status. After a brief overview of childhood mortality, including infant mortality, the chapter focuses on pediatric morbidity. Extensive consideration is made of pediatric hospitalization, by age, sex, reason for admission, length of stay and village affiliation. This is followed by a shorter look at under-16-year-old children's use of out-patient services on the island.

## GENERAL MORTALITY

Mortality has reached a low level on Niue. In 1982, the crude death rate per 1,000 population was 6.6 (Niue Government 1982:31), a figure very similar to that for New Zealand.

The practice the Niuean Government has adopted, of sending all severe emergency patients and cases of high risk off the island for treatment, undoubtedly affects mortality figures. These cases appear on Niue's records simply as "transferred to New Zealand." and if death occurs subsequent to transfer, reasonably enough, it is not recorded as a death on Niue even though the person had resided and become ill on Niue.

Hence, published mortality rates are lower than actual rates, and these low rates somewhat overestimate life expectancy. Currently, life expectancy at birth on Niue is 71 years, comparing very favourably with the New Zealand figure of 73 years (Taylor & Nemaia 1983:5).

Adult deaths in the period 1978-1982 numbered 135, due largely to injury, infection (particularly respiratory infections) and cardiovascular disorders (see Table 5). The prominence of infection among the leading causes of death for this time period stems partly from intermittent outbreaks of Dengue fever which sweep the island. Males are particularly prone to fatal accident or injury.

The majority (72%) of adult deaths on Niue are of people aged 70 years or more. Old people on Niue suffer less

cardiovascular disorder and fewer neoplasms, the leading causes of death among the aged in New Zealand, but they are far more likely to die because of accident or injury, or through respiratory problems. Elderly men are especially vulnerable to fatal accidents (Barker 1984:16-17).

TABLE 5

MAJOR CAUSES OF ADULT DEATH ON NIUE,  
1978 to 1982, BY AGE AND SEX.

Cause of death	Number of Persons				Total	%
	Male		Female			
	20-69 years	70+ years	20-69 years	70+ years		
Respiratory	3	19	2	21	45	33
Cardiovascular	5	12	2	9	28	21
Injury/poisoning	8	12	2	2	24	18
Gastro-intestinal	2	2	1	4	9	7
Infection	3	0	2	2	7	5
Neoplasm	0	1	4	0	5	4
Renal/Metabolic	1	2	0	3	6	4
Neurological	1	0	1	0	2	1
Symptoms/Ill-defined	0	3	0	6	9	7
	<u>23</u>	<u>51</u>	<u>14</u>	<u>47</u>	<u>135</u>	<u>100</u>

GENERAL MORBIDITY

Once mortality reaches such a low rate, it ceases to mirror all the important disease processes at work in the community. Diseases which hospitalize, which impair functioning but which do not kill, are not reflected in mortality rates. It is these kinds of diseases now constitute the vast bulk of the work of the Health Department on Niue.

The Director of Health, in 1982, estimated, in order of

importance, the major medical problems currently facing Niue to be:

- .respiratory diseases, especially among the young and elderly
- .infectious skin disease
- .gastrointestinal disorders
- .diabetes and gout
- .hepatitis, especially hepatitis B
- .women's health issues
- .Dengue fever and other infectious vector-borne disease

Some medical/health services are currently unavailable or given little emphasis on Niue, despite some need for them. These include: family planning; prevention of alcohol abuse services; community mental health; accident prevention, especially road traffic accidents; occupational health, particularly for farmers using pesticides and heavy equipment operators; and, a greater range of geriatric services (Barker 1984).

Despite this seemingly long list of current clinical and psycho-social problems on Niue, the population is basically very healthy. A most striking thing is the lack of common disorders so prevalent in other under-developed nations in the tropics, even in Niue's neighbours: the absence, for example, of malnutrition, of dysentery and diarrhea, of anemia, of parasitism, of tuberculosis, and of venereal disease. Very little morbidity on Niue is due to these causes.

### Hospital Records

In the six year period 1977 to 1982, a total of 3,330 patients were admitted to Lord Liverpool Hospital, Niue, an

average of 555 per year (standard deviation 80). As Table 6 demonstrates, just over half these patients were female; approximately one-quarter of all admissions were children under the age of 16 years; and, around one-tenth of all hospital in-patients were over the age of 60 years. By far, the major reason for admission involved some sort of respiratory problem but skin infections, complications arising from diabetes, and accidents were also major contributors to hospitalization. Delivery was a major reason for admission for females.

TABLE 6

ADMISSIONS TO HOSPITAL ON NIUE, 1977 to 1982.

Year	Total	Male	Female (%)	Number of Admissions		
				Pediatric (%)	Geriatric (%)	
1977	493	203	290 (59)	122 (25)	28 (6)	
1978	474	204	270 (57)	119 (25)	53 (11)	
1979	479	178	301 (63)	120 (25)	46 (10)	
1980	628	278	350 (56)	197 (31)	48 (8)	
1981	635	283	352 (55)	192 (30)	32 (5)	
1982	648	253	368 (57)	178 (27)	48 (7)	
	3330	1399	1931 (58)	929 (28)	255 (8)	

### Ambulatory Patients

Out-patient attendance figures are scant in detail, little indication being given of the characteristics of people presenting with thus-and-such a disorder. Nevertheless, a total of 17,000 ambulatory patients made use of services in 1982, an average of 5.8 visits per person per year.

Two-thirds of all ambulatory consultations were made at the hospital. Most adult out-patient visits (64%) are made by females, with ante- and post- natal visits accounting for a significant proportion of these visits.

A monthly register details the various types of disease encountered in ambulatory settings. Throughout 1982, only four "peaks" of disease incidence were noted. Christmas visitors from Western Samoa brought with them a form of conjunctivitis which afflicted 68 residents of Niue between January and April. A second disease "peak" in March comprised some 260 cases of gastro- enteritis, mostly among young children. The most severe cases of a 'flu-like disease, experienced by many people, especially children, in March and April, were investigated for Dengue or Ross River Fever. No recent evidence of those diseases was found. The last "peak" occurred later in the year when an outbreak of chickenpox spread among preschool children between July and October; no severe complications arose (Niue Government 1982:3,9).

The first case of pulmonary tuberculosis to be discovered on Niue for some years was a young woman recently arrived from Western Samoa. She was hospitalised and given chemotherapy for several months and after improving she returned to Western Samoa. Investigation of her Niuean contacts revealed no secondary cases (Niue Government 1982:3).

Diabetes continues to rank as a major health problem on Niue, partly but not entirely because of the high level of

obesity in the population. A 1980 survey by the South Pacific Commission found, for example, 84 cases of diabetes (approximately 3% of the total population), five of which are controlled by diet alone, 74 by oral medications, and five by insulin injection (Niue Government 1982:3). Diabetic complications during pregnancy are common and women with histories of perinatal infant death due to diabetes are usually transferred for specialist care to National Women's Hospital in Auckland, New Zealand, at about six months of pregnancy.

Hepatitis B, a disease hyperendemic in the adult population, is causing grave concern on Niue at the moment. While less than 15% of the population gets infected before two years of age, these children have the greatest risk of becoming chronic carriers of the disease, and are most prone to develop later chronic hepatitis B, cirrhosis and hepatocellular carcinoma (Williamson et al 1985; Zhuang et al 1983). It is hoped that, in the future, vaccination against Hepatitis B of all children born on the island will prevent the development of these unpleasant sequelae in adult life.

#### **PEDIATRIC MORTALITY**

In general then Niue has a healthy adult population. Figures for childhood deaths and disease also reflect the same, generally good state of health.

There are very few child deaths on Niue. Only eight

deaths of children under the age of 16 years occurred between 1978 and 1982. Half of these deaths were of children born with severe birth defects or prematurely, half were the result of accident or misadventure.

### Infant Mortality

In just forty years Niue has dramatically reduced her infant mortality rate, from a high 248 (deaths per 1000 live births) in 1940, to just 12.9 in 1982 (Taylor & Nemaia 1983). Niue's infant mortality rate is now so low that most infant deaths are unavoidable neonatal deaths. These are unavoidable because they stem from prematurity or congenital anomaly rather than from poor ante- or post- natal care or poor environmental sanitation.

The steady decrease in infant mortality over time (see Table 7) has resulted in an infant mortality rate which currently is slightly lower than that in New Zealand.

TABLE 7

INFANT MORTALITY RATES ON NIUE,  
BY DECADES 1940 to 1980.

<u>Decade</u>	<u>Number of Years with Data</u>	<u>Total Live Births</u>	<u>Total Deaths under 1 year</u>	<u>Infant Mortality Rate</u>
1940s	3	483	107	221.5
1950s	4	856	53	61.9
1960s	5	994	27	27.2
1970s	10	1194	24	20.1
1980s	3	311	4	12.9

Of course, the habit of sending the 1%-to-2% of women who are expected to have difficult births for any reason, to

New Zealand for delivery helps keep the infant and maternal mortality rates low.

#### **PEDIATRIC MORBIDITY--HOSPITAL ADMISSIONS**

Data for this section were collected from the hospital's Ward Admissions Book. This Book records the patient's own individual hospital number, their age and sex, the date of admission and discharge, the length of stay, and the primary reason for admission.

Though primarily used by the ward staff for their own record keeping about admissions and as an aid to computing monthly and yearly statistics for official purposes, this register contains a wealth of meticulously recorded information in summary form. On a small random sample of cases, information from the Admissions Book was checked against the individual's medical records. Information proved to be complete and accurate for all cases and, therefore, the Admissions Book was an ideal base for the collection of data relating to pediatric admissions.

#### **Some Caveats**

The information in the Admissions Book is generally complete and accurate. Nonetheless, some explanation is needed of how that information was recorded and how it has been treated here.

A child admitted, for example, with a pyrexia of unknown origin might well later be diagnosed as suffering

from a urinary tract infection. This clarification is not reflected in the Admissions Book data nor in the following analyses which talk about cause of admission and not about diagnoses.

Say one patient is recorded as being admitted for appendicitis while another is simply noted as having diarrhea and vomiting. Both will unequivocally be classified as having a gastro-intestinal reason for admission. It is clear, however, that breakdown of the reason for admission into finer categories (here, into appendicitis versus gastritis) is less easy.

At admission, some children were suffering from more than one condition. In such cases, the primary reason for admission has been used in the analysis. This was taken to be the most urgent or most serious of the presenting conditions. A child admitted, for example, with broncho-pneumonia and infected scabies would be treated as an instance of respiratory disease, and will appear only once in the data under that heading.

Further, the data refer to instances of admission to hospital and not to individual children or cases of illness. Thus, a child admitted twice, for the same or different disorders, will be treated as two instances of admission to hospital.

Some Niuean children were sicker than others and so experienced more than one episode of hospitalization during the period under study. The number of children involved in such multiple admissions, however, was very low, less than

1% of the total admissions. These children, mainly preschool males suffering from respiratory problems or adolescent females with recurrent gut pain, generally underwent only two or three hospitalizations over the six years. Here, the distinction between instance of admission and case of illness is slight.

### Chronic Illness and Hospital Admission

The distinction between instances of admission and cases of illness is especially important when considering the impact of admission to hospital on a child's life. One or two brief admissions for acute illness in early childhood are quite different from multiple admissions throughout life for a chronic illness.

Consider one five year old boy with chronic asthma. During the period of study, he not only experienced one episode of hospitalization that lasted over a year but also had more than twenty other admissions for respiratory problems. Regarding each admission as a separate event reflects poorly his experience of illness and hospitalization. He was the exception, however. Most children on Niue experienced only one episode of hospitalization, for an acute illness.

There are only a few children on Niue with chronic illnesses and most are rarely hospitalized. No central register records all children with handicaps or chronic illnesses on Niue, so it is impossible to estimate the

proportion of the child population that suffers from chronic conditions. Their conditions are such (deaf mutism, epilepsy or spastic deformity, for example) that repeated admissions are rarely necessary.

### Time Frame

Because the population of Niue is so small, only around 100 children are admitted to hospital in any one year. This small a number makes for large chance fluctuations year by year in relative numbers of boys and girls admitted, or the age distribution of the pediatric population, or even in reasons for admission. Thus, it is difficult to select a truly representative year or to analyse the data extensively.

To minimise chance variation, then, it was desirable to investigate hospital admissions over a longer period. The six years, 1977 to 1982, were chosen for two reasons. First, it includes the period of ethnographic research and the years immediately prior to that. Hence, observations on child management and child health related to the same approximate time span. And second, total child admissions during this period numbered nearly one thousand, a figure quite large enough for statistical manipulation.

Some analyses could not be performed because there are no base population figures. Though the last Census on Niue was done in 1981 detailed age and sex by village breakdowns of the population are not yet available. And so, differences in hospital use by area can be noted but, without base

population figures, it is impossible to know if this merely reflects differences in numbers of children in the areas or is an indication that children from certain areas are genuinely more likely to be hospitalized.

#### **TOTAL CHILD ADMISSIONS, 1977-1982**

A total of 929 children aged 0 to 15 years were admitted to Lord Liverpool hospital during the six year period, 1977 to 1982. Of these, 532 (57%) were males and 397 (43%) were females.

This overall excess of males is not surprising. Virtually all published child health statistics for any country exhibit a similarly disproportionate sex ratio. In 1979, for example, under-15-year-olds admitted to New Zealand hospitals comprised 58% males and 42% females (from Table 3:3, Hyslop, Dowland & Hickling 1983:68).

The annual total of pediatric admissions varied between a low of 119 to a high of 198, as shown in Table 8. The sharp increase in pediatric admissions in 1980 reflects the sudden rise in all admissions that year due to an outbreak of dengue fever between March and May.

In any one month, pediatric admissions constitute about one quarter of all admissions (average 27%, standard deviation 9%, range 4% to 45%). Admissions are evenly spread across the year with only a slight peak around July. Neither was there any seasonal fluctuation in numbers of children hospitalized for any particular cause.

**TABLE 8**

**NUMBER OF CHILDREN, AGED 0 to 15 YEARS,  
ADMITTED TO HOSPITAL ON NIUE BETWEEN 1977 to 1982,  
BY SEX AND YEAR OF ADMISSION.**

<u>Year</u>	<u>Number of</u>		<u>Total</u>	<u>Proportion</u>
	<u>Males</u>	<u>Females</u>	<u>Number</u>	<u>of Total</u>
				<u>Admissions</u>
1977	63	59	122	25%
1978	67	52	119	25%
1979	64	56	120	25%
1980	118	80	198	31%
1981	112	80	192	30%
1982	108	70	178	29%
	-----	-----	-----	
	532	397	929	
	(57%)	(43%)	(100%)	

**Rates of Hospitalization by Age**

The majority of admissions (62%, n=573) are of preschoolers, those less than six years of age. As shown in Table 9, one-quarter of all child in-patients are less than one year of age.

**TABLE 9**

**RATES OF PEDIATRIC HOSPITALIZATION, BY AGE AND SEX,  
FOR NIUE, 1977 to 1982.  
(Rate per 1,000 population in group).**

<u>Age</u> (in years)	<u>Males</u>		<u>Females</u>		<u>Both Sexes</u>	
	<u>Number</u>	<u>(%) Rate</u>	<u>Number</u>	<u>(%) Rate</u>	<u>Number</u>	<u>(%) Rate</u>
under 1	128 (24)	426.7	103 (26)	365.2	231 (25)	396.9
1 - 5	211 (40)	140.6	131 (33)	92.5	342 (37)	117.3
6 - 10	98 (18)	68.3	71 (18)	52.6	169 (18)	60.7
11 - 15	95 (18)	57.8	92 (23)	65.8	187 (20)	61.5
	-----		-----		-----	
All Ages	532 (100)	109.1	397 (100)	89.3	929 (100)	99.6

Further, the rate of hospitalization for this infant group (396.9) far exceeds the rate for older age groups

(117.3 for preschoolers, 61.1 for 6-15 year olds). At all ages under 11 years, boys have higher rates of hospitalization than do girls. On Niue, among children aged 11-to-15 years, the rate of hospitalization for girls exceeds that for boys. (Calculation of the basic child population figures needed to construct these rates of admission is shown in the Appendix 1).

This pattern, of high rates of hospitalization for infants, higher rates of hospitalization for boys than for girls in the under-11-years-of-age groups, and the rapid decrement in rates of hospitalization as age increases, is not unexpected. Compare these figures for Niueans to the figures for New Zealand children, as in Table 10.

TABLE 10

COMPARISON OF RATES OF PEDIATRIC HOSPITALIZATION,  
BY AGE AND SEX,  
FOR NIUE, 1977 to 1982, AND NEW ZEALAND (NZ), 1979.  
(Rate per 1,000 population in group).

Age* (in years)	Males		Females	
	Niue	NZ	Niue	NZ
under 1	426.7	367.7	365.3	281.5
1 - 5	140.6	133.2	92.5	97.0
6 - 10	68.3	} 79.0	52.6	} 61.4
11 - 15	57.8		65.8	

(\* Age groups in New Zealand were slightly different: 1-4 years, and 5-14 years. From Table 3:3, Hyslop, Dowland & Hickling 1983:68).

Comparison with New Zealand figures, reveals that Niueans of both sexes have higher rates of admission during infancy. Older children, however, have very similar rates of

admission to hospital. By late childhood/early adolescence in both countries, the male rate of admission has decreased to the point where it matches the rate for females.

#### **CAUSES OF PEDIATRIC ADMISSION**

The New Zealand figures include children institutionalized for gross physical and mental handicaps. Such children occupy a considerable number of beds on a long term basis, and form an increasing proportion of pediatric patients from infancy through to adolescence. There are no such children in the hospital on Niue. The few Niuean children with physical or mental handicaps either live at home with their families or, if severely afflicted, have been institutionalized in New Zealand.

#### **Major Reasons for Admission**

Major causes of hospital admission for children on Niue are for various kinds of acute illnesses (see Table 11). Respiratory problems account for nearly one-half of all pediatric hospitalizations, and for 50% of all male and 39% of all female admissions. Though gastro-intestinal complaints form only a small proportion (5%) of the reason for out-patient clinic attendances, they constitute the second most common reason for admission.

#### **Variation in Cause of Admission by Sex and Age**

Males and females experience a significantly different

pattern of admission for all reasons for hospitalization ( $\chi^2 = 32.34, 6df, p < .0000$ ). Respiratory disease is the commonest cause of admission for both males and females while gastro-intestinal troubles rank second for both sexes. Nevertheless, the proportion of total admissions due to these two leading reasons varies considerably by sex, as illustrated in Table 11.

**TABLE 11**  
**MAJOR CAUSES OF PEDIATRIC ADMISSIONS, BY SEX,**  
**FOR NIUE, 1977 to 1982.**

<u>Cause</u> (by organ system)	<u>Number of</u> <u>Males</u>	<u>Number of</u> <u>Females</u>	<u>Total</u> <u>Number</u>	<u>Percent</u> <u>Of All</u> <u>Causes</u>
All causes	532 (100%)	397 (100%)	929	100.0%
Respiratory	265 (50%)	153 (39%)	418	45.1%
Gastro-intestinal	59 (11%)	83 (21%)	142	15.3%
Symptoms/Ill-defined	40 ( 8%)	35 ( 9%)	75	8.1%
Accident/Poisoning	47 ( 9%)	21 ( 5%)	68	7.3%
Skin/Subcutaneous	32 ( 6%)	27 ( 7%)	59	6.4%
Infectious/Parasitic	26 ( 5%)	32 ( 8%)	58	6.3%
Musculo-skeletal	26 ( 5%)	11 ( 3%)	37	4.0%
Nervous/Sense Organs	22 ( 4%)	13 ( 3%)	35	3.8%
Genito-urinary	5 ( 1%)	7 ( 2%)	12	1.3%
Pregnancy	-	10 ( 3%)	10	1.0%
All other causes	7 ( 1%)	6 ( 2%)	13	1.4%

Moreover, for males, accidents are the third most common reason for admission. Symptoms/ill-defined conditions rank fourth and skin/subcutaneous tissue problems are fifth. In contrast, accidents are not among the five leading causes of admission for girls. Symptoms/ill-defined conditions are the third most frequent reason for female admissions while

infectious and parasitic diseases rank fourth, with skin/subcutaneous tissue problems fifth.

Major reasons for admission vary by age, too, as shown in Table 12. As children age, from infancy to adolescence, respiratory disease plays a less prominent role in the admission process while accidents, problems with the musculo-skeletal system, diseases of the skin and subcutaneous tissues, and infectious disease, all begin to acquire more significance. Accidents, often motor vehicle related ones, seem to occur more frequently to teenage boys than they do to younger boys or to girls of any age.

TABLE 12

MAJOR REASONS FOR PEDIATRIC ADMISSION, BY AGE  
FOR NIUE, 1977 to 1982.  
(Figures given as % of total admissions for that age group)

Reason for Admission	Age (in years)			
	under 1 (n=230)	1 = 5 (n=338)	6 = 10 (n=167)	11 = 15 (n=182)
Respiratory	58	56	42	12
Gastro-intestinal	13	11	13	26
Symptoms/Ill-defined	12	8	-	-
Accidents/Poisoning	3	7	9	11
Skin/Subcutaneous Tissue	-	6	7	9
Musculo-skeletal	-	-	8	9
Infectious/Parasitic	3	-	7	14

( - not a major reason for admission)

Reasons for Admission: Niue and New Zealand Compared

The rates of hospitalization for Niuean and New Zealand children might be similar but the reasons why they are admitted to hospital are not. Respiratory problems are the

foremost cause of admission in both countries but the proportion of total admissions for that reason varies widely, as demonstrated in Table 13.

Niuean children suffer twice as much respiratory distress but only half as many accidents as New Zealand children. Gastro-intestinal problems do not rank as a major cause of admission for New Zealand children whereas it is the second most frequent cause of admission on Niue.

TABLE 13

COMPARISON OF MAJOR CAUSES OF ACUTE PEDIATRIC  
ADMISSIONS TO HOSPITAL  
FOR NIUE, 1977 to 1982, AND NEW ZEALAND, 1979.

<u>Reason for admission</u>	<u>Proportion of total admissions</u>	
	Niue	NZ
Respiratory problems	45.1%	23.9%
Gastro-intestinal disorders	15.3%	-
Accidents/Poisoning	7.3%	15.3%
Nervous system/Sense Organs	3.8%	13.3%
Symptoms/Ill-defined Conditions	8.1%	7.3%
Infectious/Parasitic Disease	6.3%	6.0%
All other causes	14.1%	34.2%
	(n=929)	(n=82 311)

( - Not a leading cause of hospitalization)

Nervous system/sense organ problems are quite minor on Niue yet these rank as the third most common cause of admission in New Zealand. Indeed, in New Zealand, 68% of admissions in this category are ear problems, primarily infections of the middle ear (otitis media). But on Niue only 42% (n=15) admissions in this class are ear related, and only two-thirds of those were for otitis media or its

sequelae. Many Niuean admissions for this cause (27%, n=10) come from traumatic abrasion of the cornea.

Interestingly, the amount of parasitic and infectious disease is similar in both places, though undoubtedly due to different agents. Niue, for example, has periodic epidemics of mosquito-borne Dengue fever, and ascaris is such a common parasite that children are routinely de-wormed throughout their early years. New Zealand not only lacks insect vectors which spread infections but intestinal parasitism is not sufficiently common to be a matter of routine concern.

It is clear that the "catch-all" category called symptoms and ill-defined conditions plays a similar role in hospital admissions in both Niue and New Zealand. Niuean physicians are following well-established principles in admitting children with certain non-specific disorders. On Niue, children admitted for observation of symptoms and ill-defined conditions comprise those with: (febrile) convulsions (21%, n=16) or with pyrexias of unknown origin (29%, n=22), mainly young children under 6 years of age; and, older children (49%, n=37) with symptoms such as gut pain, epistaxis, vomiting or non-specific respiratory distress.

#### PRINCIPAL TYPES OF DISORDER

Thus far, reasons for admission have been categorised solely on the basis of the major organ system involved.

There are, of course, a number of different types of illness which can stem from any particular organ system.

### Respiratory System Problems

Within the class of respiratory illness, Niuean children suffer several different kinds of disorder (see Table 14). Nearly half (45%, n=186) of all admissions for respiratory problems is because of wheezing bronchitis.

TABLE 14

ADMISSIONS FOR VARIOUS TYPES OF RESPIRATORY DISORDER,  
BY SEX, NIUE, 1977 to 1982.

Type of Disorder	Males	Females	Both Sexes
Wheezing Bronchitis	50%	38%	46%
Pneumonia	30%	51%	38%
Asthma	13%	5%	10%
All Other	6%	6%	6%
	-----	-----	-----
	100%	100%	100%
	(n=257)	(n=149)	(n=406)

Not only is wheezing bronchitis the leading cause of admission within the respiratory class but significantly more boys than girls suffer from it ( $\chi^2=4.95$ , 1df,  $p < .03$ ). Two-thirds of all admissions for wheezing bronchitis are of children under five years of age.

Equal numbers of girls and boys are admitted for pneumonia, but for girls, unlike boys, it is the leading cause of admission within the respiratory class. Unlike wheezing bronchitis, pneumonia is not limited mainly to preschool children but tends to affect children of all ages.

Taken together, asthma and other respiratory admissions (e.g., upper respiratory tract infections) are more frequent for boys than for girls. In addition, there seem to be more males than females who suffer from chronic respiratory conditions, such as asthma.

### Disorders of the Gastro-intestinal System

For both males and females, gastro-enteritis is the most frequent disturbance of the digestive system which results in admission (see Table 15). All cases of gastritis, enteritis, or as vomiting with diarrhea were classed as gastro-enteritis.

There are significantly more males than females under 6 years of age, and more females than males over 6 years of age, admitted for gastro-intestinal disturbances ( $\chi^2=5.49$ , 1df,  $p<.02$ ). This is because the two principal disorders within this class--gastro-enteritis and appendicitis--predominantly affect children of different ages and sexes.

TABLE 15

ADMISSIONS FOR VARIOUS TYPES OF GASTRO-INTESTINAL DISORDER,  
BY SEX, FOR NIUE, 1977 to 1982.

<u>Type of Disorder</u>	<u>Males</u>	<u>Females</u>	<u>Both Sexes</u>
Gastro-enteritis	71%	53%	61%
Appendicitis	22%	42%	34%
All other	7%	5%	6%
	-----	-----	-----
	100%	100%	100%
	(n=59)	(n=83)	(n=142)

Gastro-enteritis affects a higher proportion of males than females. Moreover, three-quarters of all patients admitted with gastro-enteritis were under age 6 years. Appendicitis, however, appears to be predominantly a female problem: 73% of all admissions for appendicitis are girls, all over the age of 10 years.

#### Conditions of the Skin and Sub-cutaneous Tissues

The majority of admissions (59%, n=34) within this class are for abscesses, ulcers, or infected sores or wounds. Dermatitis, cellulitis, and adenitis collectively comprise the second commonest reason (30%, n=18) for admission with skin problems.

All these conditions affect boys and girls equally. Males dominate the remainder of admissions in this class. Six boys (10% of this class) were admitted with inguinal hernias. One female was admitted with an umbilical hernia.

#### Musculo-skeletal System

Most admissions in this class (55%, n=20) are due to broken bones, mainly in arms and legs. Males, however, usually those 8 years of age or older, sustain 85% (n=17) of the fractures while females account for only 15% (n=3) of them.

Arthrits, infections of the bone, and other musculo-skeletal problems, often the result of previous trauma, affect males and females equally. A total of 16 (45%) admissions were for these reasons.

## Accidents

The commonest form of accident (24%, n=16) was a laceration or puncture wound, often from a bush or fishing knife. Head injuries and concussions, many from motor vehicle accidents, comprise another 22% (n=15) of admissions within this class. The ingestion of kerosene, paraquat, brake fluid and other poisonous substances was responsible for 14 (21%) admissions and for one fatality. Burns accounted for 13 (19%) admissions and another fatality. Nine other accidents (13%), such as electric shock or the intrusion of foreign bodies, were also recorded. No accidents due to drowning or near-drowning were recorded in the period 1977-1982.

Children involved in these accidents were usually over 5 years of age. Two-thirds (n=46) of all accidents which resulted in hospital admissions were sustained by males. Males tended to ingest more poisons, suffer more burns, and have more head injuries or concussions than did girls, although the differences were not statistically significant.

## Trauma

Making a distinction between musculo-skeletal and accidental reasons for admission overlooks a very significant fact. Namely, that children usually break bones as the result of a fall or some other accident. Moreover, much childhood arthritis is of traumatic origin. Combining the Musculo-skeletal and Accidents categories gives a better

idea of the total amount of trauma or accidental injury suffered by children on Niue.

The age at which Niuean children suffer least trauma is 6-to-10 years (28% all trauma, n=29). Infants and preschool children (37% of all trauma, n=39) sustain as much trauma as children aged 11-to-15 years (35% of all trauma, n=37).

Girls experience most trauma when under five years of age (47%, n=15) and least trauma when over ten years of age (19%, n=6). This difference in age of trauma for girls is significant ( $\chi^2=4.49$ , 1 df,  $p<0.03$ ). Boys experience similar amounts of trauma at every age: 33% (n=24) under 5 years of age, 25% (n=18) between 6-and-10 years of age, and 42% (n=31) over 11 years of age.

As a group, all boys sustain proportionately more trauma than do all girls ( $\chi^2=6.87$ , 1df,  $p<0.009$ ). Only in the 11-to-15 year age group, however, is the sex difference significant; then, males suffer significantly more trauma than females ( $\chi^2=18.80$ , 1 df,  $p<0.0000$ ).

This pattern of hospital admissions due to trauma is not consistent with the pattern found in New Zealand (Hyslop, Dowland & Hickling 1983:60-75). In New Zealand, as on Niue, trauma admissions are dominated by males, and especially so at older ages. But New Zealand girls do not experience their greatest number of admissions for trauma in the under five years of age group, for like males but in lower numbers, they too experience an increase in admissions for trauma as they get older.

## Surgery

The regular hospital staff on Niue perform "routine" surgeries, such as appendectomies. Specialists, who visit every two years or so, carry out less urgent procedures of a specialized nature; for example, myringotomy. Extensive surgery of a very specialized nature, for club foot or cleft lip/palate, for example, common congenital abnormalities on Niue and among Polynesians in general (Cartlidge 1983; Chapman 1983), is performed in New Zealand. In the period 1977 to 1982, only 26 children were admitted to Lord Liverpool Hospital, Niue, with the intention of undergoing surgery.

Of course, sometimes children admitted for other reasons also ended up having some type of surgery, open reduction or fixation of a fracture, for example, or an appendectomy after an initial hospitalization for appendicitis. This latter type of surgical case was difficult to locate from the available records. So this section on surgical procedures refers only to those children admitted for that specific purpose, and, as such, is a rather poor record of pediatric surgery on Niue.

The most common surgical procedure for which children were admitted was appendectomy (46%, n=12). Three times as many girls (n=9) as boys (n=3) had this type of surgery. Hernia repair, on six males, was the next most frequent type of surgery. Seven other surgical procedures were noted: three adeno-tonsilectomies, two removals of foreign bodies from the ears, one myringotomy, and one skin graft.

**LENGTH OF STAY**

In the period 1977 to 1982, only 10 (1%) of Niuean pediatric admissions were not discharged back into the community. Seven children died in hospital: three because of prematurity and/or congenital abnormalities, two as a result of accidents, and two because of disease. In addition, three children were transferred to New Zealand for further treatment, two children with infectious diseases causing severe neurological and respiratory problems, and one child with a neoplasm.

For children admitted to Lord Liverpool Hospital, the mean length of stay is 7.7 days (standard deviation 20.8; n = 917). However, the median stay is five days and three-quarters of all children admitted to hospital on Niue are discharged within one week. Only five percent stay longer than one month (see Table 16). The longest stay by any child was 434 days.

**TABLE 16**  
**LENGTH OF STAY FOR PEDIATRIC ADMISSIONS,**  
**NIUE, 1977 to 1982.**

<u>Length of Stay</u> (days)	<u>Number of</u>		<u>Total</u>
	<u>Males</u>	<u>Females</u>	
1 - 7	409 (78%)	309 (79%)	718 (78%)
8 - 14	74 (14%)	58 (15%)	132 (14%)
15 - 31	29 (6%)	18 (5%)	47 (5%)
32 - 90	8 (2%)	6 (2%)	14 (2%)
90+	5 (1%)	1 (-)	6 (1%)
	-----	-----	-----
	525 (100%)	392 (100%)	917 (100%)

Niuean pediatric in-patients are remarkably uniform in their length of stay, showing little variation by age or sex. Table 17 presents the mean length of stay for males and females of various ages.

Niuean children spend, on average, two more days in hospital than do children admitted to New Zealand hospitals (see Hyslop, Dowland & Hickling 1983:65-72). Unlike their counterparts in New Zealand, however, Niuean infants and preschool children stay no longer than older children. Nor do Niuean infant or preschool males have longer stays than girls in these age groups (cf. Hyslop, Dowland & Hickling 1983:60-75).

Though differences in stay by age and sex are not marked on Niue, nonetheless some differences do exist. Older boys, for example, tend to stay longer than younger ones (Kruskal-Wallis  $H = 14.29$ ,  $p < 0.003$ ). There is no such trend for girls. Moreover, only among the oldest children on Niue, those aged 11-to-15 years, is the difference by sex in length of stay statistically significant (Kruskal-Wallis  $H = 6.19$ ,  $p < 0.01$ ). In this oldest group, significantly more boys than girls stay longer than one week ( $\chi^2 = 4.66$ , 1df,  $p < 0.03$ ).

#### Length Of Stay By Reason For Admission

Age and sex are not the only variables likely to affect how long a child remains in hospital. Another important aspect is affecting length of stay is reason for admission.

TABLE 17

MEAN LENGTH OF STAY FOR PEDIATRIC IN-PATIENTS,  
BY AGE AND SEX, NIUE, 1977 to 1982.

Age (in years)	Males		Females		Both Sexes	
	Mean Stay (days)	S.D. N	Mean Stay (days)	S.D. N	Mean Stay (days)	S.D. N
under 1	8.9	29.3 127	6.1	11.0 103	7.6	23.0 230
1 - 5	8.5	32.1 209	5.4	4.7 129	7.3	25.4 338
6 - 10	7.5	12.0 98	8.1	10.6 69	7.8	11.4 167
11 - 15	10.5	18.4 91	6.9	7.9 91	8.7	14.3 182
All ages	8.7	26.5 525	6.4	8.6 392	7.7	20.8 917

Consider, for example, patients admitted with symptoms/ill-defined conditions. All (n=75) are discharged within 14 days whereas only 54% (n=20) of those suffering from musculo-skeletal problems are sent home in under 14 days.

As Table 18 shows, the mean length of stay for children admitted for the six most common reasons varies considerably by reason. (Table 18 excludes from consideration 15 extremely long-stay patients, those patients who remained in hospital for more than 60 days. See Appendix 2 for more information on long-stay pediatric patients).

From Table 18, it is obvious that children with trauma not only stay longer than children admitted for other reasons but there is also great variation in their length of stay. Considerable variation in length of stay in hospital is evident, too, for children of both sexes admitted with infectious/ parasitic disease. It is, however, only males with skin/sub- cutaneous tissue disorders who exhibit much variation in length of stay.

The only significant differences by sex in the mean length of stay are for admissions due to respiratory and to skin/sub-cutaneous tissue problems. For patients with respiratory disease there are no significant differences in length of stay by age. Unlike New Zealand boys, Niuean males with respiratory conditions have a slightly shorter overall length of stay than do females. Even during infancy and the preschool period, Niuean boys stay no longer than girls for respiratory reasons (Hyslop, Dowland & Hickling 1983:61-62).



Females, aged 11-to-15 years, with gastro-intestinal disease, however, tend to stay longer than males of the same age admitted for that reason but the difference is not significant.

Less common reasons for admission create more long-stay patients than do the common causes of admission (which collectively account for 88.5% of all admissions). One-third (n=22) of all patients who remain in hospital for more than 14 days were admitted for reasons other than the six commonest reasons, i.e., for other than respiratory, gastro-intestinal, symptoms/ill-defined conditions, accidents, skin/subcutaneous tissue, and infectious/parasitic reasons.

#### HOSPITAL ADMISSIONS BY VILLAGE

The largest proportion of pediatric in-patients (22%, n=205) came from one village, Alofi, the capital which contains about one-quarter of the entire population of Niue. The proportion of child in-patients from each village, shown in Table 19, approximates the proportion of the total population in each village. Without detailed census data on the age and sex structure of the birth to 15 year old population of each village, however, it is impossible to say more.

Extreme variation exists from village to village in the ratio of male to female pediatric patients admitted. This is not significant. The number of pediatric admissions from many individual villages is so small that chance variation

could have caused great differences in the proportion of males to females. Moreover, these disproportions might reflect the actual age and sex structure of the child population of the villages but it is impossible to confirm this.

TABLE 19

NUMBER OF PEDIATRIC ADMISSIONS BY SEX AND VILLAGE OF RESIDENCE, NIUE, 1977 to 1982.

Village	Number of		Total Number	Total (%)
	Males	Females		
Alofi	102	103	205	(22%)
Tamakautoga	73	33	106	(11%)
Avatele	43	48	91	(10%)
Vaiea	5	7	12	(1%)
Hakupu	56	49	105	(11%)
Liku	32	20	52	(6%)
Lakepa	30	13	43	(5%)
Mutalau	27	26	53	(6%)
Toi	10	7	17	(2%)
Hikutavake	73	20	93	(10%)
Namukulu	8	4	12	(1%)
Tuapa	38	49	87	(9%)
Makefu	34	17	51	(6%)
	-----	-----	-----	-----
	531	396	927	(100%)

### Division Into Areas

An important question is whether or not there are differences in hospital admissions by village. Most villages have populations which are too small to use in meaningful analysis. Therefore, in order to perform an investigation into geographic or regional differences, the island was been divided into four areas: Alofi, South, Back, and Front.

The capital, Alofi, not only has the largest population of any single village on the island--23% of the total

population in 1981--but is the seat of government, with the hospital in its midst. Despite recent heavy migration from Niue, it is a region of moderately stable population. As a region, Alofi suffers the least unemployment (16%, calculated as a % of persons in full-time employment). Besides offering easiest access to Government and private sector work it also supports fishing and planting activities as income supplements (Connell 1983; Niue Government 1985).

Comprising the villages of Tamakautoga, Avatele, Vaiea and Hakupu, the South supports a high proportion of the total population, 31% in 1981. It has experienced moderate loss of population through recent migration. Except for one village, it is an area of fairly steady employment (47% unemployment) and moderate income, supplemented by planting and easy-access fishing.

Liku, Lakepa, Mutalau and Toi, the Back villages, have experienced recent devastating (about 50%) losses of population through migration. The remaining population, 24% of the 1981 total population, suffers from high unemployment (mean 77%, with two villages experiencing 120% and 167% unemployment). Many have adopted the less valued and less lucrative planter role for economic survival.

In the past the Front villages, Hikutavake, Namukulu, Tuapa and Makefu, had considerable population losses but these have now levelled off. In 1981 this area housed 22% of the total population on Niue. Although many people continue to supplement incomes through fishing and planting, these

villages are relatively well provided, sustaining only 25% unemployment.

### Hospital Admissions By Area

Of all pediatric hospital admissions between 1977 and 1982 (see Table 20), 22% came from Alofi, 34% from the Southern villages, 18% from the Back, and 26% from the Front. These figures parallel the distribution of total population on the island in 1981.

The number of male and female admissions to hospital varied significantly by area ( $\chi^2 = 8.56$ , 3 df,  $p < .04$ ). Alofi admits more females and fewer males than all the other areas ( $\chi^2 = 7.7$ , 3 df,  $p < .05$ ).

TABLE 20

NUMBER OF PEDIATRIC IN-PATIENTS FROM EACH AREA,  
BY SEX, NIUE, 1977 to 1982.

<u>Area</u>	<u>Males</u> Number (%)	<u>Females</u> Number (%)	<u>Both Sexes</u> Number (%)
Alofi	102 (50%)	103 (50%)	205 (100%)
South	177 (56%)	137 (44%)	314 (100%)
Back	99 (60%)	66 (40%)	165 (100%)
Front	153 (63%)	90 (37%)	243 (100%)
	-----	-----	-----
	531 (57%)	396 (43%)	927 (100%)

There are significant differences by area in the age of patients admitted, too, as Table 21 shows ( $\chi^2 = 22.60$ , 9df,  $p < 0.007$ ). Back villages contribute fewer 1-to-5 year old and more 11-to-15 year old hospital patients than do the other areas. Front villages have fewer 1-to-5 years olds and

more 6-to-10 year olds hospitalized while Alofi sends slightly more infants and preschoolers to hospital.

TABLE 21

NUMBER OF PEDIATRIC IN-PATIENTS FROM EACH AREA,  
BY AGE, NIUE, 1977 to 1982.

Area	Age (in years)				
	under 1	1-5	6-10	11-15	All ages
Alofi	55 (27%)	80 (40%)	32 (16%)	33 (17%)	200 (100%)
South	77 (25%)	119 (38%)	52 (17%)	66 (21%)	314 (100%)
Back	46 (28%)	48 (29%)	24 (15%)	47 (28%)	165 (100%)
Front	52 (21%)	94 (38%)	61 (25%)	41 (17%)	248 (100%)
	-----	-----	-----	-----	-----
	230 (25%)	341 (37%)	169 (18%)	187 (20%)	927 (100%)

There is no significant difference in the area distribution of female patients by age, but there is for males ( $\chi^2 = 26.42$ , 9df,  $p < .002$ ). Alofi had more infant males hospitalised while the Back villages had more 11-to-15 year old boys. The Front had fewer under-1-year-old boys and more 6-to-10 year old male in-patients.

Moreover, there are combined age/sex differences in patients coming from the various areas. Despite having significantly fewer males than other areas, Alofi contributes more young male patients than do the other areas ( $\chi^2 = 10.28$ , 3 df,  $p < .02$ ). Indeed, Alofi sends to hospital significantly more young boys and more older girls than do the other areas ( $\chi^2 = 8.39$ , 3df,  $p < .04$ ).

### Area Differences In Reasons for Admission

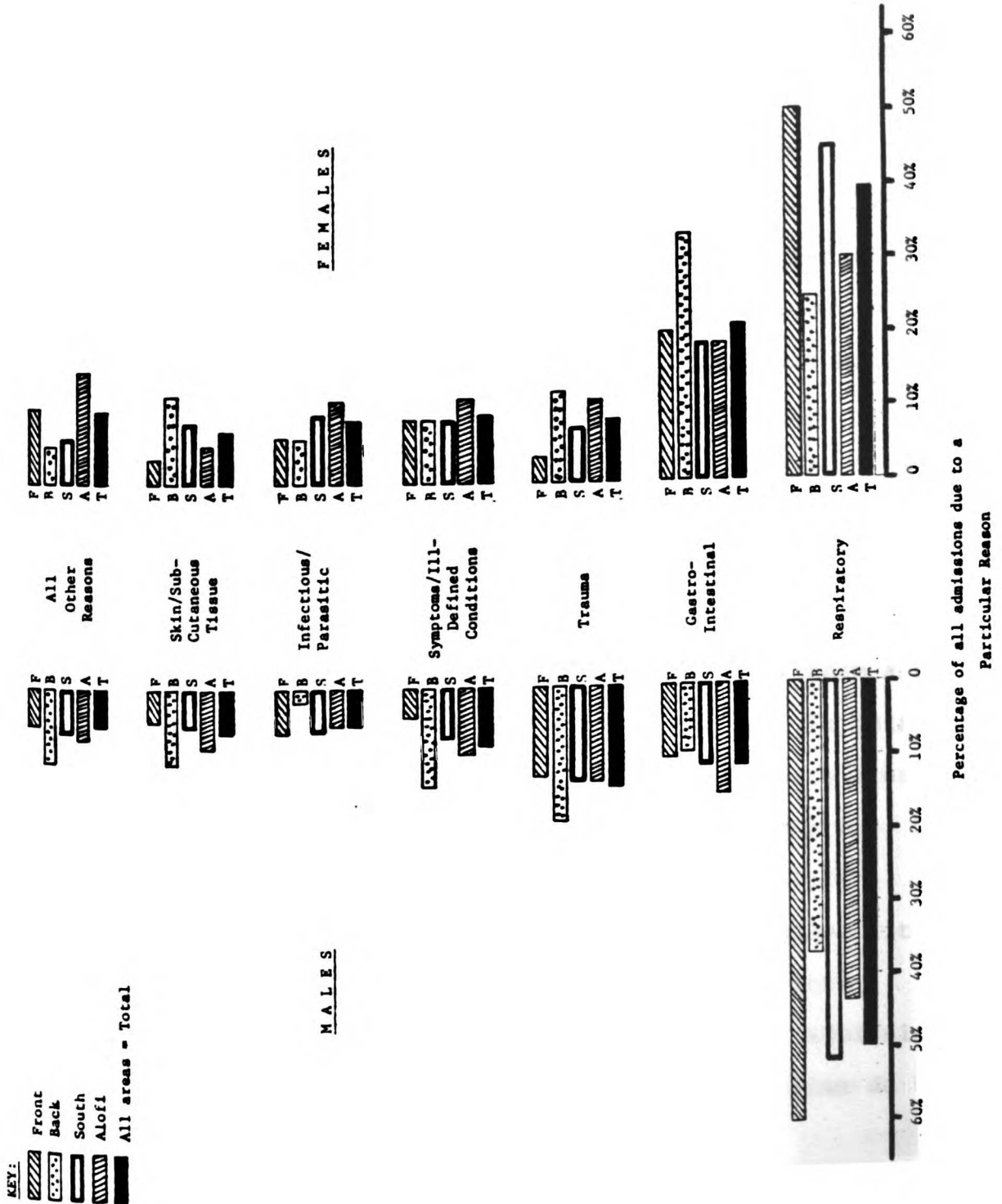
The overall pattern of reasons why children are admitted to hospital varies significantly by area ( $\chi^2 = 44.57, 18df, p < .0005$ ). Furthermore, it also varies significantly by area for both males ( $\chi^2 = 28.69, 18df, p < 0.05$ ) and females ( $\chi^2 = 35.11, 18df, p < .009$ ).

Figure 5 depicts the overall pattern of reasons for admission by sex and area. That Figure presents the percentage of all admissions due to each reason for admission, for males and females, for each area. With one exception, respiratory problems dominate the scene, for all areas, and both sexes. That exception is for females from the Back villages--for these girls, gastro-intestinal reasons for admission become primary and respiratory reasons fade to second place. This is the only group for which respiratory disease is not the most frequent cause of admission.

Differences between males and females admitted for the three most frequent reasons are significant ( $\chi^2 = 25.37, 2df, p < .0000$ ). As Figure 5 shows, respiratory problems and trauma are more common for males than for females in every area, and gastro-intestinal upsets are more common for females than for males in every area.

There are no significant differences by area for males admitted for the three most frequent reasons--respiratory, gastro-intestinal, and trauma. Hence, the significant differences among areas for all male admissions, noted above, is due to the less common reasons for admission.

**FIGURE 5: REASONS FOR PEDIATRIC ADMISSION TO HOSPITAL, NIUE, 1977 TO 1982, BY SEX AND AREA**



Inspection of Figure 5 suggests that boys from the Back villages experience fewer admissions for infectious/parasitic problems and more for symptoms/ill-defined conditions, skin/sub-cutaneous tissue problems and all other problems than do males from other areas. Differences among the other areas for these reasons are minimal.

For females admitted for the three most frequent reasons, however, area differences are significant ( $\chi^2 = 18.43$ , 6df,  $p < 0.005$ ). From Figure 5 it can be inferred that this is due mainly to females from the Back villages, who not only have proportionately fewer respiratory and more gastro-intestinal problems but also more trauma than do girls elsewhere. For less common reasons for female admission, the Back dominates in the skin/sub-cutaneous tissue category while Alofi and the Front seem to be most prominent in the All Other class.

Respiratory conditions are the most variable from area to area, the South and Front areas being dominant in this category. There are no significant differences among areas by age for females admitted with respiratory conditions, but there is for males ( $\chi^2 = 29.10$ , 6df,  $p < .0001$ ). Alofi provides a great number of admissions of infant males with respiratory distress. The South and Back provide more preschool, 1-to-5 year old, boys in this class of admission while the Front sends more over 5 year old males than do the other areas.

For girls, the majority of All Other reasons for admission relate to pregnancy, followed closely by nervous

system/sense organ problems. The All Other class for males relates mostly to nervous system/sense organs issues.

Thus, it would seem that the Back area has a different pattern to the other areas with respect to reasons for admission, for both males and females. The other three areas are more alike in their pattern of reasons for admission. It is not immediately obvious why this regional should exist.

#### Length of Stay by Area

Over 70% of all children from all areas remain in hospital for 7 days or less (see Table 22). Even so, there are significant differences by area in length of stay ( $\chi^2 = 18.80, 6df, p < .005$ ).

TABLE 22

NUMBER OF PEDIATRIC IN-PATIENTS FROM EACH AREA  
BY LENGTH OF STAY, NIUE, 1977 to 1982.

Area	<u>Length Of Stay</u> (in days)			N
	<u>up to 7</u>	<u>8 to 14</u>	<u>15 and over</u>	
Alofi	169 (85%)	19 (10%)	11 ( 6%)	199 (100%)
South	231 (76%)	51 (17%)	21 ( 7%)	303 (100%)
Back	110 (71%)	23 (15%)	21 (14%)	154 (100%)
Front	188 (80%)	37 (16%)	11 ( 5%)	236 (100%)
	-----	-----	-----	-----
	698 (78%)	130 (15%)	64 ( 7%)	892 (100%)

The differences are significant between Alofi and all other areas ( $\chi^2 = 6.87, 2df, p < .03$ ), and between the Back and the Front/ South areas ( $\chi^2 = 10.05, 2df, p < .007$ ). Thus, more of Alofi's children return home within a week than do

children from all other areas. More children admitted from the South or Front stay 8-to-14 days than do children from other areas. And, more pediatric in-patients from the Back remain over 15 days than do children from either the Front or the South or Alofi.

Even when extremely long-stay patients are excluded from consideration, the area differences in length of stay remain significant (anova; df 3, 899;  $F = 4.447$ ,  $p < .004$ ), as Table 23 demonstrates. No significant sex differences exist with respect to length of stay by area.

For both males and females, patients from Alofi have the shortest stay, followed by those from the Front and then those from the South. Children from the Back stay longest and have the greatest variation in length of stay.

Not only is there a significant difference by area in age of patient admitted but there are also significant differences in mean length of stay by age (anova; df 3,899;  $F = 6.17$ ,  $p < .0004$ ), by area (anova; df 3,899;  $F = 4.13$ ,  $p < 0.006$ ), and by age and area in interaction (anova; df 9,899;  $F = 1.994$ ,  $p < .04$ ). Children under five years of age have a significantly shorter stay than older children. Complete data on mean length of stay by age and area are presented in Table 24, which excludes extremely long-stay patients from consideration.

From Table 24, it is clear that no consistent pattern emerges across age groups for shortest or longest stays. The Back has the longest mean stays and greatest variation in stay for all age groups except 11-to-15 year olds. Shortest



**TABLE 24**  
**MEAN LENGTH OF STAY (DAYS) FOR PEDIATRIC IN-PATIENTS**  
**FROM EACH AREA BY AGE, NIUE, 1977 to 1982.**

Area	Age (in years)												
	under 1		1-5		6-10		11-15						
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	N	Mean	SD	N	
Alofi	4.76	3.80	3.94	3.10	82	6.28	6.94	32	6.03	4.78	34		
South	4.61	2.69	5.80	4.77	118	6.84	7.23	51	7.87	8.02	63		
Back	5.71	5.48	6.44	5.80	45	10.57	13.20	21	6.44	4.71	43		
Front	5.63	4.57	5.07	3.17	88	5.23	4.88	60	6.32	4.60	38		
NIUE	5.10	4.08	5.23	4.26	333	6.62	7.61	164	6.84	6.09	178		

stays are divided among the other areas and age groups. Alofi's children have shortest stays at 1-to-5 years and 11-to-15 years of age. Infants under 1 year of age from the South have the shortest stay while children from the Front stay the shortest time of all 6-to-10 year olds.

#### SUMMARY OF PEDIATRIC IN-PATIENT DATA

In any one year, approximately 25% of all in-patients admitted to Lord Liverpool Hospital, Niue, are children under the age of 16 years. The majority (62%) of these children are under 5 years of age. Infants make up one-quarter of all child admissions. Boys admitted to hospital out-number girls in the ratio 3:2.

Rates of hospitalization for Niuean youngsters are similar to those for New Zealand children. Differences between males and females are not nearly so marked on Niue. Niuean infants have higher rates of hospitalization whereas Niuean teenagers have slightly lower rates. The reasons why children are admitted differ considerably between the two countries.

Though respiratory problems are the leading cause of admission in both countries, they play a more prominent role in Niue. The most common respiratory problem on Niue is wheezing bronchitis, which afflicts young males particularly. The second most common reason reason for admission on Niue, gastro-intestinal disorder, is an uncommon reason in New Zealand. On Niue, this type of

problem is associated most strongly with older females. As the age of the Niuean child increases so does the likelihood of admission for musculo- skeletal reasons, skin and subcutaneous tissue problems, and infections. Accidents play a prominent role in creating child admissions in both nations, particularly for older males.

Discharge of the Niuean child is almost always back into the community. The mean length of stay for all children, between 1977 and 1982, was 7.7 days. There are no significant differences in general for length of stay by sex nor by age. Unlike New Zealand, infants stay no longer than older children. Length of stay varies by reason for admission: respiratory illnesses generate shorter stays than do admissions for trauma or infectious/parasitic problems or skin and subcutaneous tissue disorders. Less common reasons for admission generate more longer stay patients than do common causes of admission.

There are significant age and sex differences for children admitted from various areas on Niue. Alofi sends more young males to hospital than any other area. The Back villages send most 11-to-15 year old patients while the Front sends most 6-to-10 year olds. Reasons for admission vary by area, too. Respiratory distress is a more common cause of admission for Front and South than for other areas. Gastro-intestinal problems are extremely common among older females from the Back. These differences in age of child admitted and cause also create differences in mean length of

stay by area. Alofi children have the shortest stay while Back children have the longest.

The Back area is least like any other in that its child admissions are older, stay longer, and have more uncommon illnesses. There is no clear reason for this. The Back is an area of high unemployment, substantial out-migration, has access to less productive land for growing subsistent and cash crops, and has difficult access to the sea and its resources. It is also a region in which people maintain a fierce pride about Niuean traditions. This is also an area with two village clinics, staffed by respected and experienced nurses. There is no difference in access to medical or welfare services for infants or children. Whether, or exactly how, differences in child hospital admissions are related to such factors is not known.

The most complete morbidity data for children on Niue are those presented above, those relating to hospitalization. But not every disorder which merits the attendance of a physician results in hospitalization. Therefore, in order to understand more completely the type of illnesses which affect Niuean children, it is important to supplement the picture drawn by hospital statistics with a look at out-patient use of services.

#### **PEDIATRIC USE OF OUT-PATIENT SERVICES**

As is common elsewhere, the quantity and quality of data about illness decreases as one moves away from the

hospital ward and into the community. Even in a small country, such as Niue, where the physicians double as hospital registrars and general practitioners, information about out-patient morbidity is harder to find and poorer in quality than in-patient data.

### Types of Ambulatory Service

On Niue, there are several ways by which out-patients can consult with the medical staff. In addition to the hospital which runs a regular ambulatory clinic every week day, a mobile clinic caters to the needs of patients in villages outside Alofi. Also, there are three villages which have their own clinic building and associated nurse.

The bulk of patients attending the hospital clinic are people who live or work in Alofi, the village in which the hospital is situated. Except for scheduled follow-up visits or regular appointments, the hospital clinic operate on a drop-in system. Patients attending for simple procedures, for example, a change of dressings or minor wound care, are seen only by the nurses on duty. Other problems are seen by the doctor on duty.

Known as Island Round, the mobile clinic takes a physician and nurse to every village four days a week. People who wish to consult with the doctor put a red flag at the roadside, whereupon the van drives to the patient's door. Outside normal working hours, a van will transport patients to the hospital so they can be attended by the physician on duty.

In those villages with a clinic--Hakupu, Liku and Mutalau--people usually gather there to await the arrival of the Island Round van. As at the hospital, patients with minor wounds or problems are attended by the clinic nurse only and do not consult the physician.

### Sources of Data

Each patient who consults a physician is noted in a register kept in the doctor's office or in the Island Round van. At village clinics, however, consultations with physicians are noted in the clinic registers. The quality of data in these different registers varies dramatically.

Patients who see the nurses only, those attending for routine wound care, dressings or the like, whether at hospital or village clinic, are rarely noted in any detail. They are counted as an attendance at the village clinics but at the hospital even a tally of people attending for these reasons was rarely kept.

Village clinic books ranged from a very complete to a minimal coverage of all attendances at the clinic, even of physician consultations which occurred there. All kept a monthly tally of total attendances but often complete information about the patient or his/her reason for attending the clinic was not provided. Thus, apart from their count of total attendances, the village clinic books proved to be unreliable sources of information about patients.

The most complete registers were the Doctor's

Cons.

the I

patie

and s

addi

Roun

Thes

info

late

16,9

hosp

of p

an I

atte

nurs

clin

cons

the

is

and

the

att

exp

Consultation Books, either in the hospital clinic rooms or the Island Round van. These not only accounted for every patient visit but routinely recorded the patient's name, age and sex, and their reason for consulting a physician. In addition, except for those villages with clinics, Island Round noted the village at which the patient was attended. These were the most useful and reliable sources of information about out-patient attendances.

### Attendance Figures

Total out-patient consultations in 1982 numbered 16,907. This figure is composed of patients attending the hospital, Island Round and the village clinics. The number of people consulting a physician either at the hospital or on Island Round totalled some 8,600, nearly half of all attendances. The remainder were attended to, primarily by nurses, in the village clinics.

Because minor reasons for attendance at the hospital clinics were not accounted for and as physician consultations at villages with clinics were not recorded in the Island Round register, the figure for total attendance is suspect. For example, because it under-estimates ambulatory attendances at the hospital for minor problems, this total figure thereby over-emphasizes the numbers attending village clinics.

Not only is the role of the village clinics over-emphasized but little reliable data exists for attendances

there. This section on ambulatory visits by pediatric patients, then, deals only with data from the hospital and Island Round; it does not discuss village clinic data.

Moreover, unlike hospital admissions which affect only a hundred or so children a year, ambulatory visits involve several thousand child-visits per year. Therefore, it was possible to simply take one year and examine the data with respect to children for that year. The year chosen was 1982.

For reasons outlined above, it difficult to give an accurate number for total out-patient visits made by children under 16 years of age. Of the 8,600 total out-patient visits in 1982 made to the hospital or Island Round and for which adequate data exist, 3,000 (35%) were made by children aged 0-to-15 years. Just over half of these pediatric ambulatory visits (54%) were made to the physicians on Island Round.

A four month sample was made from these 3,000 attendances, a sampling that covered potential seasonal variations in clinic use. Details were noted of all children aged birth to 15 years who consulted a physician in the months of March, June, September and December of 1982, and the following analyses made.

#### Total Sample

Of the 995 children aged 0-to-15 years who consulted a physician on an out-patient basis, 55% (n=551) were male and 45% (n=459) were female. There were significant differences in the ages of male and female patients who consulted

physicians on an out-patient basis, as shown in Table 25 below ( $\chi^2 = 17.62$ , 3 df,  $p < 0.0005$ ), especially at the younger age groups. These differences probably stem from variation in annual male-to-female birth ratios rather than from any other source. Among infants, more females and fewer males consulted while the reverse occurred in the preschool group.

**TABLE 25**  
**NUMBER OF PEDIATRIC OUT-PATIENTS IN SAMPLE,**  
**BY AGE AND SEX, NIUE, 1982.**

<u>Age</u> (in years)	<u>Number</u> <u>Males</u>	<u>of</u> <u>Females</u>	<u>Total</u> <u>Number</u>
under 1	108 (20%)	130 (28%)	238 ( 24%)
1 - 5	246 (40%)	149 (32%)	395 ( 40%)
6 - 10	106 (19%)	83 (18%)	189 ( 19%)
11 - 15	92 (17%)	81 (18%)	173 ( 17%)
	----- 551	----- 459	----- 995 (100%)

Children who consulted Island Round and the hospital clinics were similar in age and sex distribution except at the youngest and oldest ages. Fewer infants but more 11-to-15 year olds were taken to the hospital clinics. This makes sense when it is realised that the majority of under 1 year old children live outside Alofi and that children going to the High School in Alofi use the nearest health service, the hospital.

## Reasons for Attendance

Most children visited the doctor for respiratory reasons. Skin conditions were the next most frequent reason for out-patient clinic attendance while "Follow-up" checks constituted the third most common reason for attendance, as Table 26 reveals. There are no significant differences by sex in reason for attendance.

TABLE 26

REASONS FOR PEDIATRIC OUT-PATIENT ATTENDANCE,  
BY SEX, NIUE, 1982.

<u>Reason for Attendance</u>	<u>Proportion of all attendances by</u>		<u>Total (Number)</u>	<u>%</u>
	<u>Males</u>	<u>Females</u>		
Respiratory	30%	31%	(302)	31%
Skin conditions	19%	22%	(202)	20%
Follow-ups	19%	18%	(183)	18%
Infections	8%	9%	( 84)	8%
Symptoms	6%	7%	( 64)	6%
Gastro-intestinal	5%	5%	( 50)	5%
Nervous/sense organ	5%	5%	( 49)	5%
Accidents	6%	2%	( 43)	4%
Musculo-skeletal	1%	2%	( 13)	1%
	-----	-----		-----
	100%	100%	(990)	100%
	(n=550)	(n=440)		

There are, however, significant differences by age in reason for attendance ( $\chi^2=113.70$ , 24 df,  $p<0.0000$ ). Infants have few problems except for respiratory and gastro-intestinal disorders. Preschoolers, too, predominantly have respiratory problems, and to a lesser extent, infections, but otherwise few types of illness. Children in the 6-to-10 year age group have problems in all categories, especially nervous system/sense organ and musculo-skeletal disorders,

though respiratory problems are fewer than in younger age groups. The oldest children have much less respiratory distress but more skin problems, more follow-ups, and many more accidents than do younger children.

#### Age and Sex Differences In Attendance

For two classes of reason for attendance at ambulatory clinics, for respiratory problems and for follow-ups, there are significant age and sex differences ( $\chi^2 = 10.58$ , 3df,  $p < 0.01$  and  $\chi^2 = 10.39$ , 3 df,  $p, 0.02$ , respectively). On one hand, more female infants and 11-to-15 year olds have respiratory distress than do boys of the same age while, on the other hand, more preschool and 6-to-10 year old boys have lung and respiration problems than do girls of the same age. Further, more infant girls than boys have follow-ups whereas at all other ages males dominate in the number of follow-ups received.

Combining accidents and musculo-skeletal problems together, as a measure of trauma, shows that males suffer proportionately more trauma than do females ( $\chi^2 = 4.19$ , 1 df,  $p < 0.04$ ). Most trauma occurs in the oldest pediatric group, among children aged 11-to-15 years.

Island Round is the only ambulatory service that routinely identifies the village of residence of its patients. Thus, extensive analysis of the data by village or area is not meaningful. Use of out-patient services appears not to vary by sex or age for children from different

villages. Nor are there significant differences between villages in common reasons for pediatric attendances.

#### COMPARISON WITH OTHER COUNTRIES

Ambulatory attendances by pediatric patients in New Zealand are not well documented. Relatively little is known about the age or sex of children consulting physicians on an out-patient basis or about their reasons for going to a doctor.

It is clear, however, that rates of and reasons for pediatric hospitalization are almost identical for New Zealand and the United States (Hyslop, Dowland & Hickling 1983 cf. Halfon 1985). It is not unreasonable then to assume that out-patient attendances in both these countries might be similar. So, as more is known about out-patient pediatric attendances in the United States, it is this population which will serve as a comparison group.

Unlike Niue, where such services are handled routinely by the Public Health Nurses and not the physicians, pediatricians in the United States spend about half their time doing well-baby checks or giving vaccinations. Only about 35% of visits is for acute illness (Halfon 1985:81). Of these visits for sickness, however, the major reasons for visiting are similar to those for Niue.

In 1980-81, for example, 28% of acute illness visits by children in the United States were for respiratory conditions, 6% were for infectious/ parasitic disorders, 4%

for skin and subcutaneous tissue problems, 3% for symptoms or ill-defined conditions, and 5% for accidents (Halfon 1985:84).

A major and dramatic difference between Niue and other countries concerns visits in category of nervous system/sense organ problems. In Niue this category occurs only 5% of the time while for children elsewhere it occurs around three times as often. Indeed, for children in the United States:

"in 1980, otitis media was the leading cause of illness in children less than ten years old diagnosed by physicians and it accounted for approximately 12.4 percent of all office visits to pediatricians ... otitis media plus myringotomy accounted for six percent of all hospitalizations in 1979, for children less than 15 years old. It was the third most common diagnostic category [reason for hospitalization]"

(Halfon 1985:80)

This picture of middle ear disease is similar to that for New Zealand, where hospitalizations due to otitis media are common and where middle ear infections are recognised as a common problem among children (Hyslop, Dowland & Hickling 1983: 60-75). In contrast, Niuean children do not suffer the same high rates of disorder due to acute or chronic infections of the middle ear. Nor do they get hospitalized for surgery to drain the middle ear or to repair tissues destroyed by chronic middle ear infection.

#### Rates of Hospitalization

From the total figures for out-patient attendance, it would appear that some 35%-to-40% of all ambulatory

physician-visits are made by children. Thus, some 6,760 visits to doctors on Niue in 1982 were made by children. With an assumed base population of 1,554 children aged between birth and 15 years of age (see Appendix 1), it is clear that every Niuean child makes an average of 4.4 out-patient visits to a physician in one year. Moreover, these visits are virtually all sickness-related visits because well-baby clinics and preschool health checks are conducted separately.

Further, it is known that as a result of these visits, 178 children were hospitalized. As a conservative estimate, then, on Niue one in every 38 visits to a doctor by a child results in admission.

By comparison, in 1979, 843,560 New Zealand children aged birth to 14 years made a total of 2,530,680 visits to general practitioners, the major providers of out-patient medical care (Hyslop, Dowland & Hickling 1983), an average of only three visits per year. As for their Niuean counterparts, these visits by New Zealand children are sickness-related, most well-baby or preschool checks being conducted by public health nurses or Plunket Society nurses. These visits to ambulatory care physicians resulted in a total of 82,311 admissions, which gives an admission rate of one in 31 visits resulting in hospitalization.

Hence, Niuean children make, on average, one more out-patient visit per year to a doctor because of sickness than do New Zealand children. But, visits to a physician end in hospitalization slightly less often for Niuean children,

approximately once in every 40 visits instead of once in every 30, as for New Zealand children.

#### **SUMMARY OF PEDIATRIC OUT-PATIENT DATA**

Approximately 35% of all out-patient visits to physicians on Niue are made by children between the ages of birth and 15 years. A little more than half (54%) of these visits are made to the doctor on Island Round which, thus, constitutes an important part of the medical services available to children. The most common reason for ambulatory consultations is respiratory in origin. Next, in frequency of visits, are skin/sub-cutaneous tissue problems and then "follow-ups." There are few sex differences in reason for consultation but there are age differences.

Infants and preschoolers suffer the most respiratory distress while children aged 6-to-10 years have fewer of that type of disorder but more musculo-skeletal and nervous system/sense organ disorders. Skin problems and accidents play a prominent role in sending 11-to-15 year olds, especially males, to the doctor. At every age except infancy, boys make more "follow-up" visits than do girls.

The average child on Niue makes 4 visits per year to a doctor because of sickness but only 1 in every 40 visits results in hospitalization. This is not excessive compared to New Zealand. Reasons for hospitalization are similar to those for out-patient visits except that gastro-intestinal disorders play a more prominent role.

The greatest difference between children on Niue and elsewhere is in the nervous system/sense organ category. Instead of high numbers of visits for otitis media, Niuean children suffer very little in the way of middle ear disease. This was not always the case. Many older Niueans, and physicians who have worked on the island for many years, mentioned discharging ears as a common childhood ailment of 20 or so years ago. Since then, however, standards of public health and hygiene, and medical practice, have improved dramatically and have contributed to the current enviable situation with respect to middle ear infections among children on Niue.

## CHAPTER VIII

### FORMAL AND INFORMAL ASPECTS OF CHILDREN'S HEALTH SERVICES, NIUE

As we have seen in the previous Chapter, Niuean children are fairly healthy, making an average of four visits to a physician each year for sickness-related reasons. When children on Niue do get sick, the prime responsibility for their care is assigned to their mothers. She is not alone in the task of caring for children, however, be they sick or well.

#### MOTHERS AND SICK CHILDREN

When children are sick enough to need medical attention it is almost always the child's mother who takes him to the physician. The mother might assign an older sibling or other relative the task of taking a child for "follow-up" visits or regular checks, but it is her primary decision to seek care for each new episode of illness. She decides a child is sick not just on her own knowledge but after consultation with others, usually her husband or her mother.

When a woman takes her child to the doctor, frequently she is accompanied by her own mother or her sisters or some other relative, for family support is vital at such times. The more people who accompany the sick child to see a physician the better; the presence of others is an

expression of love and concern, and a great comfort to mother and child. The more people who hear and discuss the case with physicians and nurses the better understood the diagnosis and treatment plans, and the better the compliance with physician's orders. Further, a sick child causes immense anxiety in a mother so the more support she has from others the better she copes with her fears, the better she helps her child. Besides, the child is not just the mother's responsibility but is an a charge on all members of the household and kin group.

A mother who does not acknowledge that her child is sick and, say, goes to work leaving him with his usual caretakers, does not severely damage the child. Someone else, most likely the child's grandmother, will see that the child receives medical attention. But a mother who "abandons" her child like that will be called to task for it--her own mother, her neighbours, members of her household, all will tell her in no uncertain terms and with a degree of unmistakable anger that they do not approve. A mother ought stay home and care for a sick child, and a mother who does not quickly learn that lesson is likely to lose her child, to have him "adopted."

Niuean employers accept without question the right of a mother to stay away from work, perhaps even for weeks, in order to care for a sick youngster. If a mother's work is urgently needed, no one would find it at all strnage to find the sick child ensconed in the workplace, so that his mother

can attend to his needs during the day. Or, for the mother to take several long breaks each working day to return home, where practicable, to care for an ill child. A child over the worst, a convalescent child, can be left to the care of others but not an ill child.

### Children In Hospital

Children who are hospitalised are always accompanied by their mothers who remain with them throughout their hospital stay. Mothers attend to all the child's personal needs--bathing, feeding, entertaining--and leave only skilled cares to the nursing staff.

Daytime sees the mother of hospitalised child sitting cross-legged on the floor with him in her lap, cuddling him, cradling him even as he sleeps. Only very sick children are left to lie on their hospital cots. With the child on her lap, the mother passes the time quietly talking with the mothers of other sick children, giggling, gossiping with the hospital staff, weaving, or doing embroidery. Fathers, too, will often come and sit with their child for hours at a time, day and night, offering the mother a break from her duties and much needed support. Other family members constantly visit, bringing with them choice items of food to tempt the sick child in eating again.

Thus, large groups of kin and friends gather around the bedside of a child in hospital, chatting and talking amongst themselves, apparently making little direct effort to involve the youngster. Yet in reality they are speaking

volumes, for the gift of physical presence, of nearness, of concern enough to come and be with him, is itself a message to the child, a message of love and concern that needs no bolstering by words.

At nights, mothers sleep on woven mats on the floor next to the child's bed, often removing the child from the cot and placing him on the floor next to them. This is not just because the child would otherwise be frightened at being abandoned amidst strangers and made to sleep on his own, but this is also to ward off the aitu that hang about the hospital, waiting to attack sick people and especially children.

Couples with just one or two children will usually spend all night with the one in hospital, secure in the knowledge that their other child is being cared for by other household members. Those with more children, however, tend to take turn-about at staying with the children at home and with the sick one at nights.

When the child has recovered and is discharged to his home, then the household returns to normal. If the child is of preschool age, then, once fully recovered, his next encounter with the health services on Niue will most likely be at one of the monthly Child Welfare Clinics (CWCs). These well-baby and healthy-preschool-child services are operated by the Public Health Nursing service.

## DEVELOPMENT OF CHILD WELFARE SERVICES ON NIUE

Alarming high infant and child mortality rates in the first decades of the twentieth century led to a cry for a public health nurse from New Zealand to be seconded to Niue. Made at a time when the New Zealand Government was acutely aware of the failing health of all native populations under its control and when a vigorous move for the improvement of maternal and child welfare services was being made within New Zealand itself (Schoeffel 1984), this cry from Niue was heeded. So, in 1920, the first Child Welfare Nurse arrived to take on the task of restoring the health of Niue's children.

With the availability of more sophisticated public health techniques, newer knowledge, and modern equipment the basic child welfare services introduced by Margaret Copland have changed over the years yet such change really has been superficial. The model of service developed in the 1920s exists as the basis for today's child welfare effort on Niue.

Copland, who had trained under the Plunket scheme of child care in New Zealand (see Geddis and Silva 1979 for a description of this scheme), based child welfare services around preparation of the mother for child-bearing and child-rearing. Women were to be adequately prepared for motherhood in the pre-natal period and then closely supervised and supported throughout the first five years of the child's life, especially during infancy.

Pre-natal preparation of the mother included both physical well-being and instruction about infant care, especially feeding, hygiene, and disease prevention. Once the child was born, however, normal development in children, nutrition, hygiene, and care of the sick child were topics discussed by the nurse during her regular monthly checks of the child's progress. Satisfactory progress involved regular weight gain and a generally healthy appearance, free from obvious problems, such as skin conditions, suppurating ears, and the like. The child's condition at each visit was charted, with extra attention given to children who did not progress properly.

At first, the child welfare nurse assisted at deliveries, almost all of which took place at home. She ran her clinics either from horse-back or, later, from the Health Department's truck. By the mid-1950s, the duty of attending home births was handed over to village clinic and hospital nurses who would accompany the Assistant Medical Officers and the Child Welfare Nurse was left to devote her attention solely to the welfare of children. This was more easily accomplished in the 1950's when the Child Welfare Nurse acquired a van of her own, so becoming not only more mobile and independent of other transport but also better able to organise her rounds from village to village. At this time, too, supplementation of the diet of weanlings commenced with the distribution of free skim milk powder to toddlers (Brown 1962; Geissler 1962; McMillan 1960).

The early Child Welfare nurses, who later worked in

tandem with the Assistant Medical Officers, did a fine job of raising public awareness of the importance of child welfare. In 1947 the women of Mutalau village banded together to form a Women's Club which was to meet regularly to hear lectures on various aspects of child welfare. This interest in child welfare and in the role of women's organizations in public health eventually spread throughout all villages. The modern Women's Club, with members from every village, sustains its active role in child welfare (Paka 1981).

Within the Public Health sector, child welfare remained the exclusive purview of ex-patriate nurses until the late 1960s, when some of the Samoan-trained nurses were permitted to understudy the role <sup>77</sup>. Throughout the 1960s and 1970s it became harder and harder for the New Zealand Administration to fill posts in their island dependencies, such as that of the Child Welfare Nurse so that, despite the availability of Niuean understudies, for some brief periods no service was offered. Not until Independence loomed large on the horizon did the Administration seriously consider handing over full and permanent responsibility for this aspect of health care to trained Niuean nurses. Since the mid-1970's, however, child welfare services have been staffed entirely by Niuean nurses with special training in public health aspects of pediatric care.

## ORGANIZATION OF CHILD WELFARE SERVICES

This scheme for monitoring child health remains the basis of modern child welfare services on Niue. Pre-natal physical examinations are no longer a part of the child welfare nurse's duties, that has been taken over by the clinic staff at the hospital, by the obstetrician and the nurse-midwives. Other aspects of child welfare work, however, the dissemination of information about care and health of children and the regular checks of children for height, weight and general health, remain foci of the child welfare nurse's work. Vaccination of children against a number of infectious diseases has been added to her duties.

### Schedule of Visits

On Monday mornings the Public Health Nurse, the child welfare nurse, in a van accompanied by a driver and occasionally by a nurse aide, makes a round of the island, calling on all babies that are newborn or under one month old. Depending on what other work is pending for the week and the number of babies to be visited, sometimes a complete trip around the island is made but usually just the Northern or Southern half the island is visited. The other half the island is visited the following Monday or on Friday when visits are made to handicapped and geriatric patients. During these rounds, mothers of older children who are anxious to consult the Public Health Nurse about some aspect

of child care, can summon her by placing a white flag (usually a white cloth baby's diaper!) at the roadside.

Hence, the first contact a mother has with the child welfare service, a "first visit" as it is officially designated, is usually within a couple of days of her return home with the newborn child. Nowadays, 95% of all births on Niue occur in hospital, a vast change since the 1950s when home birth was still the norm. After an uncomplicated pregnancy with normal delivery, mother-and-child are usually discharged from hospital within three to four days of the birth.

Neonates are checked by the Public Health nurse once every week till one month of age, then they seen once every two weeks till three months of age. Thereafter they are seen monthly at the regular village child welfare clinics, until they are ready for school at five years of age.

Three other days a week, usually Tuesdays, Wednesdays and Thursdays, are devoted to Child Welfare Clinics (CWC) in the villages. With 13 separate villages to visit (because Alofi is relatively so large, it is split into Alofi Tokelau [Alofi North] and Alofi Tonga [Alofi South]) and time for three CWCs a week, the nurse is able to visit each village once a month. These visits are sandwiched between village inspections, examination of new school entrants, and the regular supervision of handicapped and geriatric patients.

### Services Provided

At "first visits" the nurse advises the mother on

general infant care and attends to any breast-feeding problem noted by the mother. Virtually every child is breast fed from birth for at least several months and some 80% of children are still breast fed at one year of age but are usually weaned about then. The nurse notes the general condition of the child, checking especially for excessive weight loss and proper hygiene, in a special booklet issued by the hospital. There, at every visit she writes down the child's weight and any specific items of advice, such as care of the child's umbilical cord stump or hernia. General queries that the mother might have, either about the newborn or any older children, are dealt with now.

Before making a first visit, the nurse consults the hospital records to ensure that before leaving the hospital the child received a the first BCG vaccination against tuberculosis and had a blood sample taken for PKU screening. If either of these procedures were not performed in the hospital, the child welfare nurse will attend to it during her first visit.

When the child is around six weeks of age, the nurse usually issues mothers with a cod liver oil/vitamin mixture for the child. At this time, too, the child is introduced to coconut milk which is rich in B vitamins or the juice of certain tropical fruits, such as mangoes and pawpaws. Some mothers make an extract of the bark of several native trees and give this to the child, as a vitamin supplement.

Once the child is old enough to attend the regular CWCs, he is subject to monthly scrutiny. His weight is

checked and his general appearance noted in several areas-- cleanliness, skin condition, nutrition, dental health, sociability, and for younger children, achievement of motor developmental milestones. Children who are obviously ill, are consistently in poor health, are unkempt, grossly retarded in acquiring milestones, or in need of de-worming are referred to the physicians on Island Round.

That is but one half of the work of the CWC. Once all the children are weighed and checked, the Public Health Nurse delivers to the assembled mothers a talk on various topics or demonstrates some aspect of child care. Certain themes are prominent in these talks--hygiene, nutrition, and the prevention of illness being the three most common themes.

Particular lectures throughout 1982, for example, included the following topics: detection and management of head lice; why the toilet is the proper place for allowing a child to urinate or defecate; the need for regular de-worming; how to bath an infant correctly; nutritional requirements of the recently weaned child; the advantages of breast-feeding; local foods and their place in infant and child diets; what vaccinations are given to children, when and why; how to deal with specific illnesses or problems in children, such as chicken-pox, 'flu, prickly heat, infected tinea or scabies.

Once the talk, which usually lasts for 30 minutes or so, is finished the nurse vaccinates children who required

it and then distributes dietary supplements and fluoride tablets. Skim milk powder is given out at this time, too, to all toddlers and old folk in the village. Those mothers who have difficulty breast-feeding, those with twins, or those on a low income but forced to part-bottle feed their infants (usually single mothers who were working to support themselves) are given tins of full-cream milk powder/baby formula. On those occasions when the stores ran out of tinned baby formula (and they seemed to do that about every five or six months, depending on how the weather [e.g., hurricane alerts] affected the shipping schedule) cans of infant food are distributed to all mothers who require it, irrespective of income.

### Preventive Campaigns

There is a strong preventive slant to the child welfare services which aim at avoiding disease where possible and, where unavoidable, at catching it early and treating it aggressively. For this reason, the vaccination program is a central feature of the child welfare services.

Vaccines, in large part donated, are provided mainly by the World Health Organization's programs to developing countries. They cost the Niue government very little and are delivered free of charge to all children on the island. Similarly, for PKU screening, the laboratory work is donated by the New Zealand health services.

At three months of age, when the child first begins to attend the monthly child welfare clinic in the village, he

receives his second vaccinations: the first DPT trivac shot--against diphtheria, pertussis and tetanus--and oral poliomyelitis vaccine. Two months later, a second trivac injection and a polio booster is administered. At one year of age comes a vaccination against measles while six months later a booster injection against diphtheria and tetanus is given as is the second oral polio booster. A diphtheria and tetanus vaccination is given at age two years and again just before entering school. The fourth oral polio vaccine is given then, too. Sometime between the ages of eight and ten years the male child completes his vaccination schedule when he receives his second BCG injection. The schedule is completed for females at age thirteen when, in the first year of High School, each girl is vaccinated against rubella.

Careful records are kept of completed vaccination. Mothers generally are extremely co-operative and ensure their children receive all vaccinations. Few mothers forget or overlook the time for a child's vaccination and if they do the nurse will seek out the child specially, to ensure all children are completely covered by the vaccination program.

The other major preventive campaign on Niue which is run through the child welfare services, is the prevention of dental decay through the ingestion of fluoride tablets, by pregnant women and children. The distribution of tablets and rationale for this campaign is less well organised and

understood by the general populace. Pregnant women and preschoolers receive fluoride tablets--when they are available and that has been a big problem recently--from the child welfare nurse. But, unlike the clearly "medical" services provided by the Public Health Nurse, mothers must ask for the fluoride tablets instead of having them routinely offered.

If during the CWC inspection the nurse notices that a child has dental problems, she will refer the child to the mobile dental clinic. One of the dental caravans visits each village regularly, attending to the teeth of preschoolers. Once the child reaches school, he will be visited there by the dentists twice a year. Similarly, if she notices a medical problem that has not been attended to, she will refer the child to the physician--and follow this up with a note to the physicians telling them to check the child in question.

#### **CHILDREN WITH SPECIAL PROBLEMS**

Children on Niue generally are very healthy, from birth on. Nonetheless, some under five year old children were born with medical problems and some acquired them in the first few years of life. Of the 393 children on the Child Welfare Records in June 1982, 11 were noted as being involved in some special circumstance or as having a chronic problem. All but one of these cases arose from medical conditions.

### Social Problems

The only case of social origin involved a child with very poor nutrition, almost clinical malnutrition, arising from the parents's straitened circumstances and an element of abuse and neglect by the father. This child was born to a couple who were not only actively engaged in a feud with both their families but also generally regarded others in a hostile fashion. They had cut all social ties and were barely scraping out a living isolated in a shanty in their bush gardens. The family had virtually no money income with which to buy supplemental food and, because of his attitude, the father had no access to a canoe to go fishing.

Few Niueans understood the attitude of this couple. Most grudgingly accepted that the adults could do what they liked, no matter how incomprehensible that might be, but all felt sorry for the child, feeling that the child was being unjustly "punished" by her parents's actions. That anyone could treat a child so defied most people's imagination.

In consequence, the Health Department staff kept a constant eye on this family, allowing them their freedom as far as possible but also keeping a concerned watch over the child because of the poor diet, the lack of social contacts, and the father's propensity for physical abuse. Besides frequently urging the parents to give more protein foods to the child, the Public Health Nurse regularly gave them tins of canned meats or whole milk powder with strict orders that it be solely for the child.

### Medical Problems

Medical problems were accepted and better understood by the Niueans. Little stigma is attached to either having or being a child with a special problem. These children are not excluded from regular life but instead are generally indulged even more than usual and are encouraged to participate fully to the degree that their handicap allows.

One under-five-year-old child was a spastic with mental retardation while another had a congenital anomaly similar but not identical to Down's syndrome. Both were well cared for in the homes of their maternal grandparents.

Physical congenital abnormalities were present, too. One child had a cleft palate; one had bilateral talipes; and, two had hydrocele. These children either had already had surgery to correct their conditions or were scheduled to get it in the future. One chronic asthmatic child had already developed pigeon chest, despite the constant attention of the medical services. In contrast to the children primarily with mental problems, these children were living with their parents. So, too, were the three albino boys.

Albinoes have been common on Niue for many years (see Smith 1983, who relates a traditional legend about albinos; Loeb 1926; Ryan 1984). Albinoes, mahele, are accepted unequivocally as Niuean. Although they are sometimes teased by other children who call them palagi (Niuean for people of European origin), the most common, affectionate nickname given these children is miti, the name given white coconut

milk, an important element in Niuean diet and cuisine. Apart from good quality sunglasses, these boys, otherwise receive exactly the same care and attention as other children of their age.

### School Examinations

Regular checks of children's health cease when the child turns five and enters primary school. But the child welfare services still play a role on children's lives on at least two more occasions.

Within an month or so of the new school year starting, the Public Health Nurse and a physician make a visit to schools to examine all new school entrants. The children are weighed, their height is measured, and their general appearance noted, for cleanliness and freedom from skin problems such as head lice, scabies or tinea. The physician sees every child, doing chest, ear, eye, and abdominal examinations. Any special developmental or medical problems are noted and discussed with the teachers and treatment instituted if necessary. Thereafter, the teacher will call Island Round to attend to any child found to have a medical problem.

A further examination is done when the child enters High School. Again, height, weight, eyesight, hearing, and general condition are noted and necessary corrective procedures for any specific defects planned. Girls receive their final, rubella, vaccination at this time.

## CHILD WELFARE CLINICS FOR INFANTS AND PRESCHOOLERS

The major thrust of the child welfare services is the monthly child welfare clinic. This is the forum at which most of the services to children are actually dispensed and the instruction of mothers takes place. A closer look at the structure and organization of child welfare clinics is therefore appropriate.

### Setting Up A CWC

While the regular pattern of child welfare visits changes slightly according to circumstance, each village is nevertheless visited once a month. The Public Health Nurse informs mothers of her impending arrival by, early in the morning, sending a message to the radio station which then broadcasts her intention to hold a CWC and, if applicable, to distribute skim milk powder in a particular village later that morning.

The message is broadcast around 8am. About 10am the van carrying the Public Health Nurse will arrive in the selected village to begin the CWC. Occasionally, the day selected for CWC will coincide with the day the Education Department has chosen to take a mobile preschool class to the same village. Then the Public Health Nurse waits until nursery class is finished and the mothers and children are free to assemble for a CWC.

Only four villages, Alofi, Hakupu, Mutalau and Tuapa, have a permanent arrangement for a preschool class for one

morning every week. These villages not only tend to have larger numbers of preschoolers than the other villages but also the women tend to support the notion of preschool more vigorously and so provide materials and labour on a regular basis. Attendance at preschool is optional.

Technically, so is attendance at a CWC but in practice all children between the ages of three months and five years are expected to attend these clinics regularly. Any child who has not been seen at a clinic for a while and about whom the nurse has not had a report from others, will be "chased up" at home or in the bush, wherever the child happens to be.

The Public Health Nurse is kept informed, largely through the "coconut wireless", of the departure for or arrival of under five year old children from New Zealand. And of the occasions on which a child is taken to live, usually temporarily, in the bush or with grandparents in another village. Or of children who are sick. In this way, she maintains up-to-date knowledge of the whereabouts and health status of every one of the children in her charge.

Each village has a sub-committee of the Women's Interest Club and some of these have formed a Child Welfare Committee to ensure that all under five year olds in the village attend the CWC and carry out the nurse's instructions (Paka 1981:3). Some village Committee's are quite active while others are not so forceful. To encourage friendly inter-village rivalry the Public Health Nurse annually presents a special Shield to the village with the

best CWC record, in terms both of attendance and of general child well-being. Despite these imperatives, attendance at CWCs is essentially voluntary.

### The Location of CWCs

Child welfare clinics meet in a variety of places except in inclement weather when the Public Health Nurse commutes from house to house to see children. Usually, though, mothers or grandmothers or other child caretakers gather with their children in a central spot in the village, under a mango tree, at a village clinic, on the verandah of the policeman's house or the church, in a village hall, next to the village water tank.

Here, the large group of women sit on the ground shaded from the sun, chatting together, joking, relaxing, laughing, gossiping, teasing. It is as much a social occasion as a health clinic. Some mothers bring weaving or embroidery to do while waiting for the nurse to arrive or to finish her talk. Most, however, enjoy a break from domestic duties and simply exchange news and views with each other, in muted tones even during the nurse's talk.

Babies, if awake, are passed from woman to woman for cuddling and admiration; if asleep, they lay contentedly and securely in the cradle formed by their mother's crossed legs. Toddlers, tired of playing or seeking reassurance, occasionally come and briefly sit on their mother's laps or play with younger children before venturing forth once more into the boisterous play of their peer group. Older children

run nearby, climb trees, or kick a soccer ball with exuberant shrieks and giggles. All the children are dressed in good clothes and are sparkling clean from being recently bathed.

Most child-caretakers bring with them a container, a plastic bag or lidded bowl or a well-scrubbed tin and lid, in which they will put skim milk powder if it is available. It is usually the responsibility of the toddler to look after the container into which his milk powder is put.

The Public Health Nurse arrives in her van, along with the records of every child, scales, cold-storage bag for the vaccines, and a box replete with vitamin supplements and basic medical supplies. She sits down in the midst of the group of women and joins in their chatter and laughter. Her manner is quiet and jocular, not at all superior, much like an old friend visiting. All these women know her well as she has been the Public Health Nurse for several years now and is respected, for being helpful and knowledgeable, for being kind and genuinely concerned for the welfare of children, for being a good mother herself.

After a few minutes, she begins the clinic proper, with the older children, those able to walk and stand on the scales which are placed on the ground in front of her. She calls out each child's name in turn and while talking quietly with them weighs each child, inspects each for dirt behind ears and under finger nails, checks the state of their teeth and skin. Babies, the nurse deals with last as they are weighed on a beam balance set up in the back of the

van. Each infant is undressed, laid on the balance, weighed, checked over, commented on, cuddled, and handed back. The mother of each child comes forward during this inspection and answers whatever questions the nurse might put, often about diet, about developmental milestones, or about sickness.

In keeping with much of Niuean life, CWC forums are public events. Each child is examined in public, every comment the nurse makes about a particular child is heard by all. This public forum, open to all, is a very effective means of sanctioning, both positively and negatively, the activities of particular mothers. This not only imparts a degree of mild competition between mothers to keep their children healthy and fit but ensures conformity to a common standard of child care. Poor mothers are publically identified and social pressure brought to bear, primarily through gossip, to get her to improve her standard of child care.

Mothers who consistently do not meet the expected standard of child care or do not bring their children to CWC are scorned. They are given the perjorative designation of "lazy" by the other mothers from the village and Public Health Nurse.

A woman and her four under-five-year-old children, for example, had not been seen at the CWC for three months. During one particular CWC the nurse learned that the mother in question had been at a dance in the village the

night before and the consensus of opinion of other village mothers was that she would be tired still asleep, "too lazy" to get up and bring her kids to the clinic. One of the children was due for a vaccination, so when the clinic ended soon after midday, the nurse took the van to that mother's house to find the child and vaccinate it. On arrival, all four children appeared: all were covered from head to foot in dust and dirt; the youngest, barely walking yet, was unclothed; another, a toddler, was dragging behind him a machete that he and his twin brother were obviously using as a play-thing; all had not been fed since the previous evening. The nurse, with plenty of noise, vaccinated the child and as she was doing so the mother sheepishly appeared at a window, obviously recently roused from sleep. The Public Health Nurse eventually left that home, but not before delivering a stinging tirade about selfish mothers too lazy to feed, bath and clothe their children and promising to return soon to check that the children were better cared for.

### CWCs And Village Life

When skim milk powder is to be distributed, about once every two months, the social atmosphere of the CWC is enlarged by elderly women who, coming to receive their quota of milk powder, arrive early and stay to tease, hector, and cajole everyone at the clinic. They pass comments, about the appearance or demeanour of the children, about the domestic

abilities of the mothers, and about the activities of various households in the village.

On rare occasions, a man will bring his child to the CWC. Friendly, frequently ribald, teasing then usually breaks out between the assembled mothers and the small contingent of men, usually made up of the driver of the CWC van, the child's father, and an old man or two from nearby houses, come for a chat. There is no stigma or proscription which prevents men from engaging in childcare activities. Indeed it is very common for a man to undertake all domestic tasks, cooking, laundry, cleaning and care of older children, for the first week or two after his wife gives birth. So, it is more that a man's presence at the CWC offers advanced opportunities for fun than that the man is being actively rebuked by the teasing banter that accompanies his presence.

The work of the CWC is performed amidst usual village life. Serious work though it be it is not without its lighter moments. Passersby call out and greet the women at a CWC. An off-duty physician who lives in the village, driving past in his van, stops, calls out to his sisters at the clinic with their children, and displays his fishing catch, to the amusement and teasing of all. The men in the Public Works trucks rumbling by on their way to a makatea quarry all wave and call out. A pig that has escaped from its pen at the back of a nearby house is followed by a shouting horde of four and five year olds from the clinic assisting the owner re-capture it.

Every so often, a village mother will arrive at the CWC with some fresh drinking coconuts or ripe bananas, or once even some ice cream, that she will give to the nurse and driver. In those villages with village medical clinics, the Public Health Nurse remains after the CWC and has lunch with the village nurse. Then, women will sometimes bring gifts of roast chicken, baked fish or cooked taro. These gifts are not expected by the staff. They are fakaalofa, a gift given and accepted as an expression of the village women's satisfaction, a gift of friendship.

The women of the village which receives the Shield for having the best child welfare attendance in the previous year usually puts on a small fiafia or lunch, after the CWC when the Shield is presented. Then every women in the village arrives with some fresh-cooked food which is shared with all. The Public Health Nurse, as guest of honour, presents the Shield and makes a speech about the importance of child welfare. This is replied to by the most respected senior women present who thanks the nurse for her service and for awarding the Shield. Throughout the year of its tenure, the Shield is usually displayed in some prominent position in the village, in the church or on the wall of the village hall. It is a matter of pride for the whole village that the women and children secured the Shield.

## ATTENDANCE AT CHILD WELFARE CLINICS

In June of 1982, there was a total of 393 children on the child welfare records. Throughout the preceding 12 month period, a monthly average of 370 children (standard deviation 28) attended clinics. Thus, well over 90% of eligible children attend the CWCs on a regular basis.

Although there is some variation by village in the degree of assiduity with which attendance is maintained, no village dropped below 80% attendance during the time of fieldwork.

Some 20% (n=77) of children seen by the child welfare service were under one year of age. Nearly the same number of boys as girls attended the child welfare clinics.

Considerable variation by sex of child existed between areas, however, as Table 27 shows.

TABLE 27

NUMBER OF CHILDREN ON NIUEAN CHILD WELFARE RECORDS,  
BY SEX AND AREA, AND RATIO OF CHILDREN TO MOTHERS,  
AS AT JUNE 1982.

Area	Sex of Child			Number of Mothers	Children/ Mother
	Males	Females	Both Sexes		
Alofi	56	44	101	69	1.41
South	43	72	115	76	1.51
Back	52	47	99	75	1.32
Front	47	32	79	58	1.36
	-----	-----	-----	-----	
	198	195	393	278	1.41

This total of 393 children was born to 278 mothers between June 1977 and June 1982. Each mother had borne an average of 1.41 children in that time period. There is little variation in this ratio by area. Though spacing

between children was partly dependent upon the number of children a woman had already borne, there being more time between first- and second- borns than between third- and fourth-'s, for example, the average gap between children born to the same mother was 18 months (standard deviation 8 months).

Only just over half (53%) of the children attending CWCs were the children of new mothers, that is, first- or second-born children. As Table 28 shows, more than one-quarter of the young children on Niue are fifth- or later-born children.

TABLE 28

BIRTH ORDER OF CHILDREN ON CHILD WELFARE RECORDS,  
AS AT JUNE 1982.

<u>Birth Order</u>	<u>Number of Children</u>	
1st	91	29%
2nd	75	24%
3rd	37	12%
4th	42	13%
5th	30	10%
6th	13	4%
7th	5 )	
8th	6 )	
9th	10 )	9%
10th	2 )	
11th	4 )	
	-----	
	315	100%

### Twins

Twin births are common on Niue. In the six year period 1977 to 1982, some 627 births took place on the island, 11

of which were twin births. This gives a twin-birth rate of 1:50, about double the rate expected elsewhere.

There is little special significance attached to the birth of twins, which are called mahanga fua if they are of the same sex and mahanga lei if of opposite sexes. A special name, tungi, is given twin girls, the oldest of which is known as la-tungi.

## CHAPTER IX

### THE LIFE COURSE IN POLYNESIAN SOCIETY

Niue has been losing to out-migration more than 20% of its total population in each of the last two intercensal periods, so that the number of inhabitants on the island has dropped to around 2,500. Niueans, both those remaining on the island and those overseas, have expressed considerable anxiety about this tremendous loss of population, they worry about Niuean culture dying out, about its being unable to be sustained by so few people. Many wonder if there will be anyone at all on the island by the year 2,000.

The only hope they see for the future is children. To sustain Niue as a viable place in the modern world, to maintain Niuean culture and traditions, people on Niue must produce many children and must protect the ones they already have.

Current willingness on the part of Niueans to mate with people from many different societies and to claim all offspring from such unions as Niuean is a typical response to massive de-population, a response quite reminiscent of another period in the life of other Polynesian populations. Maude (1981), for example, discusses an identical phenomenon on Tongareva after that island's population was reduced by around 80% in one fell swoop by "blackbirders" in the mid-nineteenth century.

This Niuean emphasis on children, however, is not new. It is merely a heightened awareness of a very old cultural value central to all Polynesian societies.

#### THE IMPORTANCE OF CHILDREN IN POLYNESIAN LIFE

In all Polynesian societies, children are a valued and loved resource. Children are a gift without which one is poor indeed.

Although children were dearly prized, infanticide or abortion was undertaken occasionally in former times, more to ensure the survival of the young in times of famine, war or disease than to restrict family size (Loeb 1926). Nowadays, family planning is frowned upon as being an unnecessary means of restricting the number of children people have--a particularly serious problem as the number of permanent migrants leaving Niue continues to show little decline. Big families--six and seven or more children per married couple--were common around the turn of the century (Thomson 1902) and are not uncommon nowadays.

Large numbers of children are not merely desired on Niue but indeed essential to maintaining their entire way of life. Having too few children severely decreases the social support system, leaves to few people to undertake childcare or elder-minding and places an enormous, unaccustomed burden onto adults. Mothers unused to full-time unrelieved child care, especially after the birth of a second or third child, tend to neglect or abuse their older children more

(Dubanoski 1981; Dubanoski & Synder 1980) and, already overburdened, begin to resent and forget to meet the demands of elderly parents.

Adults attend to infant needs just as they attend to the needs of others--out of love and concern, a desire to be hospitable, generous, and to live in a well-ordered domestic environment. Social life in a well-ordered household, however, is constructed around adults, not children. Children do not supercede the needs of others. Children are provided for, given enough attention to satisfy basic necessities in the way of food, clothing, comfort and protection, but, except in the initial months of infancy, they are not a constant focus of adult life.

Children are independent creatures whose task it is to learn how to function in the adult world. Children grow and develop, eventually progressing through the various moral stages in the lifespan.

#### **STAGES OF MATURITY IN POLYNESIAN LIFE**

In Polynesian thought, there are five distinct stages of life between birth and death. These are moral stages rather than age categories (Martini & Kirkpatrick 1981:191).

Varying considerably in duration, these stages reflect ideals in the acquisition and performance of certain social competencies necessary for maturity. These competencies are: mobility; knowledge of the world; competence at everyday tasks; willingness to perform domestic and communal tasks;

and, achievement of a particular, valued style of interpersonal relationship, i.e., a caring, nurturant attitude towards others, displayed in kind, "loving" actions and speech. The object is to produce mature adult Polynesians, those "committed to an orderly and nurturant domestic life", those who see what needs doing and do it without fuss or supervision (Martini & Kirkpatrick 1981).

Of course, the actual acquisition or display by individuals of the criteria upon which these levels of maturity are built, might be incomplete or even intermittent. Frequently physical maturation far out-strips the social maturity implicit in these moral stages. Some individuals may remain in a particular stage far longer than their age mates, or may pass through quickly. Nonetheless, by chronological old age most Polynesians have progressed to the last stage.

The stages and the Niuean words used to describe them are:

- |                  |                    |
|------------------|--------------------|
| (1) infant       | = <u>tama muke</u> |
| (2) child        | = <u>tama</u>      |
| (3) youth        | = <u>fuata</u>     |
| (4) mature adult | = <u>patu</u>      |
| (5) elder        | = <u>fuakau</u>    |

These terms refer to a males in the various stages; they apply less clearly to females. The terms fuata and patu in particular seem to be reserved specifically for males, without any really equivalent terms for females.

Briefly examining each stage in turn will allow us to see what marks one stage from the next and what social competencies develop when.

## Infancy and Childhood

Infancy, the first stage, usually lasts from birth to about 18 months of age. During this period a child has certain inherent capabilities which will unfold but he or she is essentially untrainable (Ritchie & Ritchie 1981; Martini & Kirkpatrick 1981). At this stage the child is pro-social, he has potential for speech and social interaction but he has not yet the capability of performing these acts satisfactorily. Acquisition of these capabilities will come naturally, will unfold without the need for parental encouragement. As soon as the child can walk and speak well enough to engage in social interaction though he moves to the next, most diverse moral stage, that of child.

The concept of child, tama, encompasses children in a wide age range, from the toddler through the preschooler and the latency age school child to early adolescence. This is a stage of intense instruction--in social mores, in social interaction, in social responsibility. The peer group, large and multi-faceted, instructs children in fundamental aspects of the world, teaching that one's primary responsibility is to respect those of greater ability and to nurture those with lesser skills.

These lessons are unabashedly age related. Upon those older than him, a child is dependent and he learns respect for their status. While they can legitimately demand service from him, they nevertheless are bound to look after him. Those younger than him are dependent upon him. From them, he attains respect and acquiescence to his own desires but

towards them he must show compassion and nurturance. Thus, as children age chronologically they progress through the peer group from the bottom ranks, where everyone else cares for them, to the senior ranks, where they are responsible for the care of all younger children.

The same lesson is repeated over and over throughout childhood. Every child learns to respect a particular status before acquiring it (Ritchie & Ritchie 1979, 1981) and knows that a central obligation accompanying any elevation in status is to care in ever more mature ways for those who are younger.

The relationship between male and female siblings is always one of protection/nurturance. So, too, is the relationship between same-sex siblings but here it based on relative age. A person calls an older same-sex sibling taokete and a younger one tehina. Along with this linguistic marker of relative age goes an assumption of the proper behaviour towards those older or younger: to elders, respect is given; to youngsters, nurturance.

This linguistic device signalling relative age is very powerful, and is often generalised symbolically to almost any relationship. Thus, it establishes clear bounds of obligation and duty for those in the relationship. Hence, throughout life, a Polynesian is surrounded by people to whom he ought defer and people whom he ought nurture.

From around puberty, girls and boys begin to engage in very different activities. Girls are confined more and more

to domestic duties, taking over the running of the household on a daily basis, whereas boys are expected to out with their fathers, fishing or planting. The peer group begins to break up into two separate groups comprised of adolescent girls and boys, respectively. These two groups meet and interact regularly, at dances, at Church, at village events. Individual teenagers begin to form romantic attachments but these are always pursued in a clandestine fashion.

### Youth

After passing through sexual maturity, sometime in late teenage years children move to the next stage: youth. It is only now that sexual differences in expected behaviour become florid. Girls are to maintain their virginity till marriage, be obedient to the wishes of fathers and especially brothers, and to assist in the running of the household, caring for younger siblings, taking over the burdens of cooking and cleaning. Boys, however, are supposed to display their virility and independence. They undertake hard physical labour in hunting, fishing, and planting. They vie with each other, performing daring, even reckless, feats of strength, courage and endurance. And they engage in series of sexual exploits, more or less casual liaisons.

Although technically the term fuata, youth, could also describe a female who has reached that particular stage, in fact it is rarely used in conversation about girls. Moreover, many women scornfully reject it as applying to themselves but have no equivalent term to offer. Fuata has a

strong male "flavour", implying sexual promiscuity, hedonistic irresponsibility, and daring to the point of danger. These are all attributes women deny having, at least openly. Not until old age can a woman jest about such things and claim that in her adolescence she was like a boy.

Teenage girls, though not expected to be as "wild" or uncontrollable as adolescent boys, are nonetheless capable of such actions and so are watched over carefully to ensure they maintain the proprieties. Their primary guardians are their brothers of around the same age, who know only too well what they are guarding the girls against as they are actively engaged with other boys's sisters in the very activities from which they seek to shield their own siblings! No matter how closely watched, girls always manage to escape from their brothers's sights for a while and so conduct their romances in relative privacy.

There is rarely any lasting disgrace to either boy or girl if a pregnancy results from these sexual dalliances. Both parties will publically acknowledge the event, even if the boy does not intend to assist in the child's upkeep. Thus the facts of biological parenthood are well-known in the community and are not concealed. Adopted children, tama hiki, know and relate to both natural and adopted families.

A boy who has fathered a child out of wedlock might be reprimanded by his family or community but is also accorded some respect for having so visibly affirmed his virility. Though the girl and her family might feel some shame because

of the obvious failure to remain virgin, this is rarely lasting or excessive. Shame or anger usually results in only a temporary estrangement between pregnant girl and her family, rarely will a family eject a pregnant daughter from its ranks.

Occasionally the girl will feel ashamed and will leave soon after the birth, often leaving her child behind to be cared for by her parents. Most unwed mothers, however, remain a member of their father's household where the impending birth and the thought of a new baby in the household usually over-rides any parental (most frequently paternal) anger. No matter how upset an older couple might be with their teenage daughter for having an "own" child, those feelings are not passed on to the child, who is welcomed with joy as the latest addition to the family.

Sometimes, pregnancy will signal the move from a clandestine romance to a consensual relationship or marriage. This type of union might or might not result in legal marriage in a few years time. Consensual unions always result in the girl moving from her father's residence to her boyfriend's parents' household where she will raise her child. It is, in a way, a testing of the relationship, a testing of the strength of commitment between the young couple. To secure her position in the eyes of her child's father and his family, a woman who is consensually wed will often have one or two more children in quick succession.

Youth lasts from late adolescence until marriage. For those rare few who do not marry, this social stage extends

to around 35 years of age, by which time one has usually either produced an "own" child or adopted a child from a sibling or other family member. Though youth display competence in domestic tasks, contribute produce and labour to the households in which they reside, and even produce children, they do not yet have a moral duty to do so. During youth one learnt the skills, acquired the capacity for social and economic production, but it is only upon marriage that one acquires the obligations to so produce. And so it is upon marriage, upon settling down, that people acquire maturity and a new social standing in the community.

### Married Men and Women

When a man marries, when he "settles down", when he accepts the responsibilities of being a husband, a father and a provider, then he becomes a more important, more influential figure in the community. Only married men or patu can vote on community matters brought before the Village Council. Married men are the backbone of society, for it is they who undertake all political decisions, who do back-breaking work in providing food and necessities for their families, who father a new generation of children to keep society going. Only married men have a secure old age, for only married men father children, either biologically or socially, and children are the people who support the elderly. An old, unmarried man might be permitted to adopt a child that would eventually care for him, but this is a precarious arrangement.

Once a woman is married she is treated with considerable respect and is no longer subject to the pervasive scrutiny of her brothers (though this does not cease entirely). After agreeing to her marriage, they turn over to her husband the right to control her. Nevertheless, they still have an obligation to protect her from any unfortunate exigencies which might arise, such as wife-beating or neglect.

Moreover, she now is expected to engage in mature domestic activities. She is no longer an unwed girl, a veritable "servant" at the beck and call of any older adult in the family, but is now a wife, a "manager" of domestic affairs with authority to command those at lesser stages of maturity to perform tasks for her. She is the moral equivalent of a patu, or married man, a head of household.

### Old Age

As in all Polynesian societies, the aged are accorded considerable respect. Most families cherish their elderly who are seen as having had a lifetime of experience, as having passed through the stages of rash youth and burdened adulthood and now they have the time and knowledge to think and comment upon and guide the lives of younger persons. Wisdom resides with the ulu motua, the gray-haired ones.

Generally, the elderly are treated well. Individual elders or fuakau, however, may be neglected or rejected in old age, usually, people say, because they were mean and ungenerous in their youth, forming no lasting ties of

affection and duty with younger members of kin or household. Once the elderly become very infirm though there is a tendency to overlook them (Barker 1985), to leave them alone, to let them sink into oblivion and death with little ceremony.

Elders uphold central Niuean values, values they learnt from their parents and their peer group. Elders are important sources of information, decision-making and knowledge in Polynesian societies and they play a substantial role in rearing the new generations.

#### CHILD-REARING IN POLYNESIAN CULTURE

"Throughout Polynesia, despite the impact of six major metropolitan cultures--France, Britain, United States, Germany, Australia and New Zealand-- a common family and child-rearing form persists"  
(Ritchie & Ritchie 1981: 188).

Various aspects of this common pattern of child-rearing have been studied over the past several decades in a number of different Polynesian societies--Samoan, Tongan, New Zealand Maori, Tahitian, Marquesan, Cook Island Maori, and Hawaiian (e.g., Ausubel 1977; Beaglehole & Beaglehole 1941; Brady 1976; Dubanoski 1981; Carroll 1970; Gallimore, Boggs & Jordan 1974; Graves & Graves 1978; Holmes 1974; Hanson 1970; Levy 1968, 1969, 1973; Martini & Kirkpatrick 1981; Mead 1928; Ritchie & Ritchie 1979, 1981). From these sources, a clear picture of Polynesian child and family life has been drawn. Niuean child-rearing fits well this general

Polynesian pattern of child-rearing and family organization, though different in minor detail. A brief outline of the common pattern of Polynesian child-rearing and family life therefore serves to introduce the Niuean style of child-rearing, which is later exemplified by a discussion of adoption.

### Multiple Parenting

A central aspect of Polynesian child-rearing is the notion of multiple parenting. Children do not "belong" to their biological parents, rather they are the responsibility of the entire household and kin groups: parents' siblings, parents' parents and other close kin all play a role in raising a child. Any older member of two forms of social organizations--the household or the kin group--is expected to care for children, to protect them, chastise them, socialise them and instruct them in their proper tasks and duties.

The collective parenting function of kin and household are acknowledged on all ritual occasions, such as weddings and hair-cuttings. It, too, is responsible for the ever-changing, fluid membership of households.

The prime point of this extended parenting role, as Levy (1968) so eloquently points out, is to provide no key point for a child to manipulate, whether by cuteness, precocity, stubbornness or charm. Children learn to submit to the will of elders and to the social group simply because no one person can protect him from the wrath, the will, the

rights of others. Children learn that they do not and cannot control the people in their world for there are simply too many with too many varied personalities and qualities to be successfully manipulated. Alternatively, no one can be "blamed" if the child turns out to be "rotten", that is merely the way he is and no one person made him like that. The large group responsible for child-rearing also teaches the child, by example, societal rules about hierarchy and collateral authority, about competition and co-operation, and about democratic and autocratic decision-making (Ritchie & Ritchie 1981).

Mothers have authority over children, which they wield by over-seeing the actions of other caretakers. By the time she reaches her teenage years, most girls are heavily involved in "substitute-mother" activities especially with respect to young children (Levy 1968). But age and sex have never been criteria in Polynesian societies for the assignment of tasks (Macpherson 1978; Ritchie & Ritchie 1981), so child-tending is a task that can equally well be and often is undertaken by boys too.

Interestingly though, the same as many other Polynesian groups, Niueans do not count this a sufficient introduction to child-rearing. Once a girl has her own child she is then taught by her own mother how to parent. Only then does she have real authority over and ultimate responsibility for a child, things she lacked in her former role as mere child-caretaker.

## Chastisement And Authority

Punishment for wrong-doing is sporadically meted out on a rather arbitrary basis by whomever is around (Levy 1968). It is as much a matter of adult mood as content of wrong-doing that triggers punishment. Because a child can never be certain when certain actions will provoke adult wrath and physical punishment, they quickly learn to conform, to extinguish negatively-sanctioned behaviours, to become self-monitoring and responsible.

Parents will frequently slap their child or even beat him, sometimes severely, but rarely if ever will they threaten to withdraw love (Shore 1982:143). Multiple parenting crops up again here, in that other adults with rights in the child monitor the punishment the child receives. A parent who beats a child for no good reason or who excessively chastises their child will be taken to task by other adults. If necessary, the child will be removed from the household to another one.

Physical punishment is accepted as a sign of love, accepted by both adults and children. It is also a part of the uncontrollable capriciousness of the world in which children and adults live. Parents are stern with their children but they make it clear that what is being punished is the behaviour, not the person.

Emotions of joy, anger, rage, grief, and love are not hidden in Polynesian cultures. A child who is hurt or angry is encouraged to let others know this but as soon as others respond to alleviate the hurt or comfort the child, he must

cease his display of emotion. The most severely punished, least well-tolerated behaviours, are those in which a child tries to escalate anger or make it reverberate throughout the group (Levy 1968, 1969).

Children are taught the consequences of their actions by learning to fear potential outcomes. A child who falls out of a tree and breaks an arm is greeted not with sympathy but with ridicule: "Good job, too! Now you'll know that climbing trees is dangerous! Maybe you won't do it again."

Unsupervised play within the peer group means that children quickly learn to monitor themselves. They tease but do not hurt each other; they quarrel yet resolve difficulties without resort to adult help (Levy 1968:597).

To see how multiple parenting works in Niuean society let us take an extended look at the process of adoption. Adoption brings together discussions on child-rearing, family and kinship, household organization, and central Polynesian values around children, land, respect, and duty.

#### **ADOPTION ON NIUE**

Adoption, both formal and informal, is common on Niue. As in most Polynesian societies, adoption is not so much a means of handling children of unusual circumstance, those borne out-of-wedlock or orphaned for example, as a means of cementing social relations between people.

Kin ties through adoption are deliberately woven to hold family groups together. Biological ties are not

overlooked but natal connections that are never "socialized" are weak and loose. Social ties, however, acts of nurturance and love over time, hold firm and can supercede any biological connection.

But biological ties can be socialized at any later time, so that long after an adoption has been formalised, a child can re-enter his natal group, and play a major role therein. An unwed mother, say, who leaves her year-old child on Niue after she migrates often maintain a relationship with that child throughout life by writing letters. It is common for such children in their late teens to make a visit to their mother in New Zealand, sometimes even becoming an accepted member of her and her husband's household.

A person who was herself adopted can strengthen the ties between herself and her adopted family by adopting one of her adopted-sibling's children. Or she can cement the relationship between herself and her natal family by sending one of her own offspring to be adopted by a biological parent or sibling, or by accepting a child from them. An exchange of offspring between children who were both adopted into the same household furthers the ties that bind them together. Thus, within two or three generations, biological and social bonds become inextricably intertwined.

No child "belongs" to one person or a couple alone for the child is part of the entire kinship group. Parents have primary responsibility for the child but every other relative has a fiduciary responsibility towards the child. Given the nature of parenting in Polynesian society with its

emphasis on multiple caretakers, given Polynesian kinship terminology, and given the nature of village life, it is rare for an adopted child to have no relationship with his/her biological parents. Hence, adoption does not sever entirely relationships between biological parent and child but rather re-assigns primary responsibility for the child to others. Moreover, this transfer of responsibility is not an action undertaken just by the individual parties concerned but has to be agreed to by the extended families or kin groups for adoption has many far-ranging implications, including inheritance and access to land.

### Residential Mobility

Adoption sometimes creates the first residential move in a child's life, frequently taking place during the first year of life, but these will certainly not be the last shifts in residence a child will experience. Moves from household to household are ubiquitous in the life of Niuean children.

The most common form of residential shift by children involves transitory changes in household structure without any implication of permanency. For many reasons, children are often sojourners in households other than their own.

Say a woman decides that she is going to spend a couple of months living with her married sister in another village. She will pack up her children and move her residence for a

while yet otherwise continue her life, going to work as usual and sending the children to school.

Unlike in the West, there is no obligation on a child to return home every night. If, for example, when he and his cousin returned from fishing in the evening, they went to the cousin's house, had a meal and slept there, no one would consider it remarkable. Nor would it be strange if the child left for school the next day and returned again to his cousin's home. If the child did not appear in his own home for several days no one would worry. Any child will always be fed and sheltered in any house they happen to be, and the parents will quickly hear through the village "grapevine" that their child is at so-and-so's house. Alarm will only spread, and then rapidly, if no one in the village can account for the child.

Episodes of this type are common throughout a Niuean child's life. By the time they reach adulthood, then, every child on Niue will have spent some time living in at least one and often several different households to the one he was borne into. Indeed, this is an expected and valued part of the multiple parenting function of the family.

In this way, a child is exposed to the central values of his society and the norms surrounding them. He learns to adapt to many adult caretakers, their moods and whims, sorting out what is individual and what is common to life in many households. Moreover, he learns first-hand that many people have an interest in his welfare, that he is not solely dependent upon his parents but rather has a wide

variety of folk on whom he can rely for care and protection.

So, the mere fact that a child is not living in his biological parents's household means little in Niuean society. He might simply be a sojourner in another household, a foster child or an adoptee. Only someone who knows the household well can tell the difference. Residential mobility alone most definitely is not a criterion signalling adoption or even fostering.

### Adoption and Fostering

There is considerable fluidity in Niuean speech and thought about the concept of adoption. A truly adopted child is called a tama hiki where hiki means "to reverse, to turn around." But the phrase tama hiki might also be used to refer to any child, from a legally adopted one to one who is "just visiting" for a month or two. To Niueans, distinctions between fostering and adopting are not only blurred but to a large degree irrelevant.

In keeping with Niuean thought then, much of the following discussion makes little distinction between fostering and adoption. Explicit reference to fostering is rare but it is considered, as a variety of adoption.

In both fostering and adoption, the child moves from one domestic group to another after discussion and agreement between both sets of parents. There is some presumption that adoptive relationships will be permanent while fostering ones are merely temporary child care arrangements made to meet some special need or circumstance.

Rarely is there a clear cut notion of how long "temporary" is. Fostering relationships can extend from days to years.

There is a further presumption, that with fostering the parents of the child have never fully relinquished their primary responsibility for the child and can claim their child at any time, taking him back into their household. In adoption, of course, the (biological) parents cannot reclaim their children and are obliged to return a child to his adoptive home if he should attempt to stay with them.

Any form of domestic organization involving children originally from outside that household which either extends over time (say, a month or more) or recurs regularly is liable to be described as adoption. A child, for example, who spends week about between his parents's and his grandparents's households is often referred to as adopted by his grandparents by outsiders talking about that household. A woman with whom a niece has lived for some months might call her an adopted child when introducing her to strangers even though the living arrangements are known to be temporary, lasting only till the child's mother returns from New Zealand. A child given at birth to his grandparents "for their old age" might not be legally adopted till he is nearly out of the teenage years but no one will ever refer to him as anything other than adopted.

No Niuean word or phrase clearly distinguishes a fostered child from an adopted one. Description of how the a child came to live in any particular household usually does

not differentiate whether adoption or fostering was the original intent.

Relationships that began as fostering often eventually become adoptive ones. The exact point at which this transition occurs, however, is murky. Such transitions in primary kin affiliation, by either fostering or adopting, often is marked by the child changing its name to reflect more directly its relationship with the head of the domestic group with whom it resides. A child's given or first name is usually retained but the surname alters, whence, Sione Togatama (literally, John son of Togatama) becomes Sione Tagaloa (John son of Tagaloa). Later in life, he might change his name back to the original one, or to a new one, or he might use both names depending on who he is talking to and which kinship bonds he wishes to stress.

Adoption, then, involves a change in residence for the child, a re-assignment of primary responsibility for the child, and usually a change in name. Fostering, initially, lacks the latter two criteria. Yet the first criterion alone is insufficient even to signal the beginning of any re-arrangement in kin or domestic relationships.

#### **REASONS FOR ADOPTING**

Desire to demonstrably strengthen bonds of affection between particular persons, childlessness, insurance in old age, and love are the main reasons for adopting children. Rarely does a single reason prevail, however, as people

usually cite several reasons why they adopted a particular child.

Mature adults who are childless, whether married or not, frequently ask siblings or nephews and nieces for a child to adopt. Adopting a child alleviates the loneliness Polynesians feel in households with few people as well as strengthens kin bonds. Not only is caring for a child a pleasurable activity and a sign of maturity and acceptance of community responsibility but it is also insurance for one's old age. Children, especially adopted ones, have a duty to care for elderly parents. Hence, it is wise for the childless to adopt.

It is not just childless or mature unmarried adults who adopt children, however. Married siblings of an unwed mother often ask her to give them her child as a welcome addition to their own family. Parents, too, ask for grandchildren to be given them, even by their married offspring, as a gift of love, a fakaalofa, a "child for their old age" (Juniper 1922). This is not only repayment for the years devoted to bringing up their own offspring but also a means of ensuring a young able-bodied person is available to do the household chores. For these reasons, grandparents willing bring up children left behind by sons or daughters who migrate.

#### Adoption by Non-Relatives

Though relatively uncommon, adoption between unrelated folk does happen. Most often this is because people who are good friends wish to further their relationship by

establishing a kinship link. Occasionally, it occurs because a family lacks the resources to cope with the child, either because the child is handicapped or because the family is poverty-stricken. Equally rarely, adoption between non-kin takes place because a powerful, special bond exists between child and adoptive parent.

There is a feeling that young mothers who have a handicapped child, one who is mentally sub-normal or physically impaired, have not the skill, patience or experience to care for such children properly. So an older, more experienced relative, a mother's sister or a mother's mother, often will adopt these children. Sometimes when no grandparent or other relative is present or able to provide care the child will be taken into the household of a non-relative.

More rarely, children borne into an already large family with few financial or monetary resources are sometimes adopted out. People who are so poor have usually arrived in such a state because of feuds or disputes with others in the kin group. Rather than approach their kin to take the child they will ask non-relatives to care for it.

Thus, on occasion, village elders, church leaders or respected widows in the community, become the adoptive parents of such children. Either because they have been asked by the parents or because they take pity on the child and remove him from an unpleasant situation in an already burdened household.

This kind of adoption generates a lot of discussion in

the villages, praise for the adopting parties and disapproval for the families who gave up their children. Allowing non-kin to adopt a child under such circumstances is to treat the child as if it were a piece of property to be disposed of at whim, not as a human with personal and spiritual connections to kin.

Women, particularly those who are unable to have children, on occasion form strong attachments to the particular child of a friend or neighbour, lavishing intense affection and unceasing care on it. If this behaviour is sustained unfalteringly for several months then the child's parents come to recognise the woman's yearning and the special nature of relationship between her and the child. The intense need of the woman and the joyful response of the child is seen as an extraordinary bond, literally a "heaven sent" spiritual bond, certainly not one that ought be disrupted by selfish desire to keep one's own offspring. So, the child is adopted out.

#### **ARRANGING AN ADOPTION**

Though there is a Court-appointed Adoption Officer who is charged with investigating the circumstances of any adoption and making a formal recommendation, most adoptions take place outside the jurisdiction of the legal system. The Adoption Officer enters the process only when people decide to make the adoption legal by formally asking the Land Court to register the adoption.

Informal adoptions are far more common and, in Niuean minds, no less binding. Adoption properly involves the care and protection of a child, not simply a deed or legal document. Informal arrangements, after discussion within the family group or by happenstance, are just as correct and binding as a deed.

### By Request

One common way of arranging an adoption, often at or before the birth of a child, is for the adopting party to ask the parents for the child. Less frequently, parents will ask someone to care for a child for them. Out of politeness, joy, and desire to demonstrate lasting affection between those involved, many requests for adoption are made. These are often refused, with no adverse effect, both parties realising the nature of the request. If someone desires a child greatly, however, they will ask again despite previous refusals.

It is difficult to refuse such requests for a child, especially if the request comes from close kin, from someone who is childless, or someone to whom one has a social obligation. Continued refusal in the face of repeated sincere requests for a child is a serious matter.

An unmarried mother can refuse her siblings by implying she has already given the child to her own parents, a very common procedure. Saying she will keep the child and continue to live in her parent's household is an action tantamount to giving the child into her mother's care. A

married couple who consistently refuses to give up a requested child to parents, however, threaten the extant social relationship. Often it is the first born child of a married couple that is most eagerly sought for adoption by the grandparents.

A definite cooling of relationship, estrangement between the parties, even lasting enmity, results from brusque or adamant refusal of legitimate requests to adopt. To refuse a request for adoption is to cast a slur on the competence of the individual and the family as a whole, to imply that others cannot or will not care for the child properly. Further, it signals an unhealthy selfish attachment to the idea of private property, a thought distasteful to Polynesians with respect to objects and abhorrent in reference to people.

Outright refusal to allow adoption is often softened by a sort of "time share" arrangement where the child "commutes" between two (frequently, adjacent) households. Grandparents, for example, who have requested a child and been refused adoption nevertheless often end up caring for the child for several weeks or even months at a stretch. Sharing primary child care enables the parents to retain control over the child while allowing the grandparents to get the pleasure of having a child in the house and the services the child performs. As more children arrive in the family, so it is likely that the "shared one" will end up spending more and more time with the "adoptive" parents till

eventually all accept that indeed adoption has taken place.

"Time share" fostering of a child can also heal previous breaches in social relations, especially between parent and offspring. Those who formerly were estranged now come together, initially for the common purposes of child-rearing but later to resume collective social activities.

Adoption takes place not just at or near birth but is common at any time in a child's life. Instead of being explicitly planned it may simply happen as circumstances alter.

#### By Circumstance

A child borne to an unwed mother who lives at her parent's house, for example, often remains with the grandparents when the mother marries some years later--thus is she adopted. Consider also the case of two sisters who live together. The unwed one goes for a temporary visit to relatives in New Zealand, leaving her offspring in the care of her sister. She decides not to return to Niue and knows that her children are safe, being looked after by her married sister and her husband--thus are her children adopted.

Sometimes the children themselves decide they would rather live with another person or in a different household from their parents, and will move residence accordingly. Children decide to move household on any number of grounds: to escape punishment for some misdemeanour; to avoid "bush work"; to live with a favourite aunt or cousin; to escape

stern parents; to be nearer school; or, just to have a little variety in life. This arrangement may last just few short months or may become permanent. Sometimes, such arrangements last for the duration of a particular event, for example, during the High School years, and then the child may return to his natal household or go somewhere else.

Fostering, for no other reason than to give everyone "a change of scenery" or out of love for siblings, is common. Short fostering episodes create few long-term obligations between child and adult. As fostering proceeds over longer periods it slowly turns into adoption but the line between fostering and adoption is never clear, being dependent largely upon the length of the arrangement, the strength of the affectional bonds between the parties, the kin relationship between them, the reasons why fostering has been for so long, and a host of other intangibles.

#### **ADOPTION AND STIGMA**

Every child, every person in the village, knows the details of adoptions. When it comes to the choice of marriage partners it is necessary to know to whom exactly one is related biologically. Widening the circle of kin who will aid and care for one or look out for one when one is seeking a job is a prudent thing to do, especially if thereby one establishes ties to a politically or socially prominent family. There is no disgrace in keeping alive

kinship ties with biological relatives as well as adopted ones.

With adoption so common, so flexible, so easy, so open and so important there ought be no stigma attached to it on Niue. To be an adopted child ought not to be in a dishonourable or questionable status. Is this in fact the case ?

Surprisingly, no, not in all respects: there are very real social and emotional consequences to adoption on Niue. It is not clear quite why this is. Certainly, the lack of a rigid social hierarchy, the ranks of which one could climb by virtue of "well-placed" adoptions, might play some role. Perhaps, too, the Niuean egalitarian ethic and the drive for individual achievement create some ambivalence and hostility towards adopted family members.

The stigma of adoption on Niue is more fear or anxiety than actual tangible neglect or abuse. It is more a state of mind than a result of gross, systematic differences in treatment or affection. That it exists more in the realm of the mind than in the order of social relationships in no way, of course, diminishes its reality.

### Treatment of Adopted Children

The cultural norm is for there to be no difference in treatment or affection between natural and adopted children. And in fact most adopted children are cared for and cherished in a fashion identical to the natural children of the household. Nevertheless, on occasion adopted children

are treated less well than natural children.

For example, a woman's "own" children who live with her after her marriage are often said to suffer more than their siblings from the wrath of their father, being punished more or made to work harder. For this reason, when an unwed mother marries, she usually leaves her "own" sons in her parents's household in order to alleviate any jealousy her husband might feel, a jealousy that is feared will manifest itself in harsh punishment of the boy. Her daughters, however, she will take with her as they contribute substantially to the smooth running of the household from a very early age. Moreover, girls eventually marry and cease to claim anything from the adoptive parent yet are still duty bound to support him in his old age. Adoptive sons, however, can be a liability, always able to claim some land and not as bound to provide for their father's old age.

The ideal is for the husband to take the sons too and let them work for him, so he can reap the benefit of their service without ever having had to provide for their upkeep till his marriage. But it is acknowledged that human nature varies from individual to individual, that some men are "too jealous" and that they display this by treating their adopted children, especially sons, harshly.

### Emotional Consequences

Adopted children often feel rejected by their biological parents. They feel bereft of an indisputable basis on which to make or to legitimise claims on their

adoptive parents. This is not so bad for a child adopted by his mother's parents, as is most often the case.

But what if his mother was an "own" child of his grandmother? Then there is no biological link to the grandmother's husband, his adoptive father. In such cases, the adopted child feels as he does to a lesser relative or non-kin: that he has little basis on which to claim an undisputed relationship to this man. A child's personal charm or a grandfather/adoptive father's whim are elusive and slippery bases for building any sort of permanent or meaningful relationship in Polynesian society. No wonder children adopted by non-kin feel threatened by a lack of biological tie.

Despite repeated assertions of love and cherishment by the parents, adopted children feel uncertain of the emotional quality of the relationship between themselves and their adoptive kin. Even with legal adoption this feeling rarely disappears. It may become ameliorated, muted perhaps but it is not entirely dispelled.

Children who are adopted feel they have to prove themselves constantly, by working harder and longer than their siblings in the bush gardens, out fishing, or round the house. Not only do they feel this work is expected of them but they feel it is the only way that they can prove to their adoptive parents that they are appreciative of the care and protection afforded them. Adopted children cannot let it be taken for granted, they must visibly demonstrate their gratitude.

Girls need access to their father's land only if they do not marry or are widowed and have children to support. Boys, of course, support their families on the land made available to them by their kin. Theoretically, the entire extended family and kin group agreed to the adoption of any particular child and no difference is supposed to exist between an adopted and a natural son's access to their father's land. In practice, of course, considerable argument can--and does--arise on this point, especially if the land in question is small yet has to be spread over many claimants. While attempted rejection of a boy's claim to land on the basis of adoption has no validity either by custom or law, it nonetheless carries a powerful social and emotional message, of "second class citizenship" in the family group.

This emotional message is reinforced in subtle ways. Whenever I asked someone to talk about their family members, as I frequently did, I would be given extensive, detailed lists of siblings and their achievements. No one, not one person, mentioned siblings adopted into the family until I specifically asked if they had any such kin. And then most people replied with an off-hand, minimal account of adoptions into the family group. From this it would appear that adoption on Niue is not strain free for the adoptee, and that he or she is subject to a lifetime of subtle and not-so-subtle discrimination within their adoptive family.

## Sex Differences

Boys in particular seem to resent being adopted. This seems to be especially so if they were of legitimate birth. They rail at their biological parents for "abandoning them" at the same time as they despise and resent their adoptive parents for accepting "someone else's cast-offs". These feelings are not surprising given the frequency with which harsh treatment is meted out to adopted boys, and the resentments that can build and rankle between natural and adopted sons over access to land.

By late adolescence, this resentment frequently reaches a head. Many adopted youths "get even" either by becoming juvenile delinquents or by running away from their adoptive home, to live on their own, to sea, or to New Zealand. A boy's resentments often last till long after he has married (sometimes to a non-Niuean) and produced his own children. Some feel so vehement they do not return to Niue and cut their relationships to things Niuean.

## **LEGAL ADOPTION**

A child is usually, but not always, informally adopted in the first year or two of life. After some time this arrangement may be formalised by application for legal adoption.

Occasionally, adoptions are legalised to prevent a discredited parent having further access to a child but the vast majority of adoptions which get registered formally are

to assure the child's access to land and inheritance. One is always intimately connected with land; it defines who one is, where one lives, and who are one's friends and neighbours. Land is not merely the substance of subsistence on Niue but it is the very identity and life-blood of the people. For this reason, adoptions fall under the jurisdiction of the Land Court.

Legal adoption is not necessarily permanent. In special circumstances it can be repudiated by the adopting parent if some serious breach occurs in the relationship with the child. This option, of course, simply exacerbates further the psychological ambivalence of adopted children, especially of sons who are very dependent on access to land.

In 1981 and 1982, there were only 33 cases of legal adoption on Niue, 16 involving girls and 17, boys. This reflects poorly the number of cases of actual adoption, albeit informal ones, that actually were arranged during that time. But, being informal, the result of agreement between two kin groups, there are no records of such transactions and so no figures documenting who arranged what when and with whom. Court records must suffice.

#### Who Adopts Whom?

Of those 33 cases of legal adoption, the majority of children (60%) were adopted by either their (biological) mother's parents or mother's siblings; a further 15% were adopted by more distant maternal relatives. Of the remainder, 15% were adopted by paternal kin and 9% by

others. The dominance of maternal kin is documented in Table 29 which details the exact relationships involved in all the applications for legal adoption in 1981/2.

TABLE 29

KIN RELATIONSHIPS BETWEEN THE APPLICANTS FOR ADOPTION AND THE ADOPTIVE CHILD, NIUE 1981 to 1982.

Mo Mo & Mo Fa	10	30%	} Mother's Side
Mo Mo	4	12%	
Mo Fa	1	3%	
Mo Br	3	9%	
Mo Si	2	6%	
Mo Mo Br So	1	3%	
Mo Fa Si	1	3%	
Mo 2nd Husband	3	9%	
Fa Mo & Fa Fa	1	3%	} Father's Side
Fa Si	1	3%	
Fa Si Da	1	3%	
Fa Mo Si So	1	3%	
Fa Fa Si Da	1	3%	
No Relation	2	6%	
Unknown Relation	1	3%	
	---	-----	
	33	100%	

Not only are there many fewer adoptions through the child's father's kin compared to adoptions via maternal kin but significantly more paternal kin adoptions are with distant kin than are maternal kin adoptions (Fisher's Exact test,  $p < .03$ ). Thus, recent legal adoptions on Niue not only overwhelmingly involve maternal kin connections but close ones to boot.

Of the 17 legal or de jure adoptions for which the time of actual or de facto adoption was known, only three took place some considerable time after the birth of the child.

These three instances comprised two children being adopted by their mother's husband after the widow had remarried, and one child who was adopted by a mother's sister after the death of her own mother. Thus, most adoptive children move into residence with their adoptive parents soon after birth.

Application for legal adoption, however, is rarely made soon after de facto adoption. Although nearly one-quarter (24%) of applications for legal adoption were made within one year of the child's first moving residence, the same proportion of applications was made 16-to-20 years later! It would seem that legal adoption is not a matter of course but rather that the relationship between parent and child is subject to considerable scrutiny before any decision is made to legalise the situation.

Thus, adoption proceedings in the Court involve minors of all ages, from birth to 20 years. There were no differences by sex of child in the age at which they were adopted, either de facto or de jure, nor in the time lag between customary and legal adoption. There was, however, a significant difference in who adopted male and female children (Fisher's Exact test,  $p < .02$ ). More girls ( $n=10$ ) than boys ( $n=3$ ) were adopted by the mother's parents. The corollary of this, of course, is that boys were more likely to be adopted by distant kin, a fact that undoubtedly serves to heighten their already marked ambivalence about being adopted.

Recall, however, that these figures refer solely to applications for legal adoption and the extent to which

they reflect the social processes of customary adoption is unknown. It might be that, for some unknown reason, fewer applications for legal adoption were made in this period for boys adopted by close maternal kin or it might be that these figures reflect a wider social reality. At this point there is no evidence to choose one or the other option.

### The Customary Face Of Legal Adoption

Many Niueans still do not understand the full ramifications of legal process based on Western ideas, including the process of adoption. As in many other spheres of life, legal adoption has overlaying it a patina of traditional custom and it is this, not formal legalities, that rules people's decisions and guides their understanding of legal adoption (Commonwealth Magistrates Association 1977).

Couples do jointly adopt children on Niue, in both a legal and traditional fashion. But, to be married is not a requirement for customary adoption. A mother's sister, say, can adopt a child. The fact that she is married carries little weight, it is she not her husband who is adopting her sister's son. Arrangements will be made between the siblings and will not concern the sister's husband. Except for agreeing to support the child in his household, he is making no commitment to the child or its mother. In time, of course, he might become very fond of the child and take a greater role in the child's life but initially he has only a

minor supportive role to play in the customary adoption proceedings. These views are clearly a signal of the extent to which sibling bonds take precedence over the spousal tie.

The law, however, has a different view of things. Entrenched within its ideas is the Western notion of a married couple in which spousal ties supercede all others. Thus, a joint application by husband and wife is necessary for a legal adoption and, of course, the law considers any agreement to bind them both. Each becomes a legal parent of the child. Many Niueans do not either understand or agree with this stance. So, despite the law, a marriage that breaks up after a legal adoption usually results in the adopted child staying with whichever parent actually initiated adoption proceedings and loses contact with the other parent.

## CHAPTER X

### ORGANIZATION OF NIUEAN HOUSEHOLDS IN WHICH PRESCHOOL CHILDREN RESIDE

Thus far, discussion has considered the role of kinship in the creation of family ties, in structuring social organization. Now, however, we move on to look at households, to see how the constellation of members of particular domestic units affect the life of children on Niue.

#### THE DEVELOPMENTAL CYCLE IN HOUSEHOLD FORM

Though kinship and household organizations are closely linked they are not co-terminous. To further confuse the issue, these two social organizations are frequently called by the same title--family.

#### Distinction Between Family And Household

The distinction between family-as-kinship and family-as-household is well recognised, albeit ill-defined, in social science (Bender 1967; Radcliffe-Brown 1955; Yanagisako 1979). Households are units of social organization that engage in domestic activity, such as cooking, cleaning, sleeping, storing articles, and recreation, within one or a cluster of adjacent buildings.

The people who occupy the dwellings and perform these domestic activities constitute the household. Usually, the majority of these folk are also related to each other through kinship but not all the members of a household or domestic unit are always so related. Servants, for example, are clearly members of a domestic organization or household yet are not necessarily kin to other members of the same group. Further, not all the kin who are related to each other occupy the same household. Adult siblings, for example, might live with their spouses and offspring in separate, perhaps, adjacent domestic units or households. Hence, family (defined by kin ties) and household (defined by activities) are over-lapping but non-identical units of social organization.

Throughout this dissertation, the term "family" is used solely in reference to a group of kin, a social group that is activated only under certain circumstances on the basis of kin ties. The everyday reality of a child's living situation, however, is referred to as a "household", a domestic unit that structures and orders his daily life. It is this latter which is of interest in this Chapter.

Family-as-kin changes membership through time, as new members are born or adopted in and as old members die. Family-as-household also changes composition over time, but on a different basis. Change in household constellation is not random but occurs in response to major changes in the life cycle of the primary occupants of the domestic unit. As children are born, grow, marry and move away, a particular

domestic unit or household undergoes change, change that corresponds to the "natural" cycle of development.

This notion of developmental cycle has been explored previously in anthropology to understand intra-societal differences in household structure (Barnes 1972; Fortes 1958, 1978; Hammel 1975; White 1969; Yanagisako 1979). But always previous work has looked at major life cycle differences, how the newly formed domestic unit differs from the one that is 20 years old, for example. What this section does is to take one period of the life cycle--households producing children (under five years of age)--and to look for differences in household composition, differences within a single stage of the life cycle.

This Chapter asks the question "do all preschool children grow up in similar households?" and, if they do not, what differences in household form exist, what accounts for these differences, and what effect do such differences have on children and their up-bringing? How can variations in household form be related to wider cultural values in Niuean society?

Choosing this life cycle stage, the stage of production of children, was quite deliberate as it represents the stage that I am most interested in--preschoolers and their parents. Later, I concentrate my attention on mothers with first-born children under five years of age, on "new" mothers and how they learn to cope with children and children's illnesses. So, I need to know whether or not

first children grow up in "different" households than do later children.

### Households And Dwellings

Niuean households are large. Indeed, they might comprise so many people that a single dwelling structure is not large enough to accomodate all household members. In such cases, a cluster of adjacent dwellings are used to house members of the same domestic group. A group of people who share common domestic utilities such as cooking or bathing facilities yet who sleep or have assigned quarters in one of several dwellings, nevertheless, comprise just one household. Hence, what is referred to here as a household is actually a domestic group, a group that either lives in one building or spreads across several dwellings.

Internal re-arrangement within the domestic group of occupancy of any particular dwelling or room within a building is not only ubiquitous but done on the slightest of whims. So common is re-organization within a household that any attempt to analyse the data by exactly which dwelling a child shares with whom, when, and for how long is simply meaningless. Suffice it to say that even if a child constantly changes the building he lives in, as long as those buildings are under the control of the same domestic group, then he remains in the same household.

### The "Parent-Child Core" As Reference Point

Relationships between members of a household have to

discussed from some point of reference. Throughout this section, the under-five-year-old child is used as the reference point for all discussion of kin relationships extant within the household.

Further, it is assumed that the child and his parents formed the basic household. This is an heuristic device only. It is not historically correct as in fact many parents remain in a previously formed household, headed usually by their own parents, and introduce their children to it. It is easier, however, to discuss the composition of a household by using this device, by speaking of the under-five-year-old child and his parents as a "parent-child core" to which others are appended.

Within this core, there are sometimes several under-five-year-old children, siblings, offspring of the same set of parents. The youngest of the children belonging to any particular parent is taken as the reference point.

#### **THE SURVEY OF HOUSEHOLDS**

In order to answer the question "with whom do children under-five-years-of-age live and interact on a daily basis?" a survey was made in October 1982. That survey examined the living arrangements of 140 children between birth and five years of age, living in 96 different households in four villages on Niue.

### Villages Surveyed

The capital, Alofi, was excluded from the survey for two reasons. One, because there was no easy way to collect reliable data for that large a population within a widespread area. And, second, because many households there are composed of civil servants originally from other villages but now domiciled in the capital because of job requirements. These people, forming a significant proportion of the population in Alofi, reside largely in nuclear households because their kin are still in their native villages. Hence, to reproduce as far as possible, the household form common to the island as a whole and to not skew it unduly by including the higher social echelons in atypical situations, Alofi was excluded from the survey.

One village from the Front, two Back villages and one village from the Southern area of Niue were sampled, comprising 45% of the total population of Niue. Each area contributed between 25% and 40% of the children surveyed. Further, the 140 under-five-year-old children who live in these villages make up 36% of the total population of infant and preschool children on Niue late in 1982. The survey, therefore, was reasonably representative.

### Information Collected

Data on household composition were collected by locating a key informant within each village who knew the inhabitants well--village pastor, village policeman, clinic nurse--and asking them to describe in detail the household

in which each under-five-year -old resided. A complete list of names of all infant and preschool children in that village was used to ensure that all eligible children were included in the survey. That list was taken from the Child Welfare Records, which are very accurate.

The responses of these key informants were checked by asking others who also knew the village well (such as the hospital's van drivers, who know not only the location of every inhabited house on the island but generally have a good idea of their occupants, too, or several nurses who live in the village) to confirm the original information. Key informants were found to be very accurate in their reports.

This strategy was adopted rather than the traditional village census for several reasons. First, households without young children while of interest were not of prime concern as they did not help explain the living situation of preschool children. Second, to ensure that the households in which under-fives lived were completely covered, it was vital to have an independent source of information about how many such children lived in the village and who they were. Records kept by the Child Welfare Nurse served this purpose well.

Also, young children tend to move household a lot, both within the village confines and, often, from village to village. It was important to include these children in the survey, children who tend easily to "fall through the cracks" in a more traditional house by house census of an

entire village. Asking questions like "who lives in this house now" tends to leave out children who "commute" between villages or who have recently arrived or departed as visitors, foster-children or adoptees. If the child's existence was not already known about and if the occupants of the house excluded him or her from their reckoning, there would be no way to ever find out about them, except by chance remark. That unsatisfactory state of affairs was avoided by being able to name a specific child and to ask where he or she lives now and then following up replies until all possible information was extracted.

By using information from the Child Welfare records, it was also possible to know exactly the sex and age of the focal child as well as his birth order. Later, it was possible to relate this information to data on household composition.

Information on household composition consisted of a detailed description of the child's parents, whether legally or consensually wed or not in any form of stable relationship; of the number of persons with whom the child resided; of the relationship of each person in the household to the child; and, of who was responsible for taking the child to the Child Welfare Clinic. Whenever informants felt there was something unusual about a particular household's structure, a history was given of how the household came to be composed in that fashion.

## COMPOSITION OF HOUSEHOLDS WITH YOUNG CHILDREN

By traditional standards, contemporary household size on Niue is probably small (Thomson 1902; Loeb 1926), but by modern Western standards, Niuean domestic units are large. Household composition seem not to have been altered much by recent massive out-migration and de-population. The current findings accord well with information obtained a decade ago by Frankovich (1974), who used a random sample of 50 preschool children, and Pollock (1975) who did a census of two villages.

### Household Size

Households in the survey varied a lot in size, from the smallest households of just two people, to the largest of 18. The median number of persons per household with under-five-year-old children was 6.5; the mode was 8 persons per household. Table 30 gives the distribution of young children across households of varying sizes.

TABLE 30  
NUMBER OF PERSONS PER HOUSEHOLD

<u>Total Number Of Persons In The Household</u>	<u>Number of Cases</u>	
2	4	3%
3 - 4	25	18%
5 - 6	37	26%
7 - 8	43	31%
9 - 10	25	18%
>10	6	4%
	-----	
	140	100%

Both Pollock (1975) and Frankovich (1974) also found a substantial proportion of households composed of more than eight people. Forty percent of Frankovich's (1974:23) sample of preschoolers (n=50), for example, came from households which included six or more people.

The very smallest households, those of just two or three people including the under five year old child, were created out of unusual circumstances. One such household, for example, consisted of an unwed mother and her first child awaiting the return of the child's father from Tonga. This match was unpopular with the woman's family which is one reason why she and the child were on their own. Another small household comprised a child adopted by an elderly couple whose own children had long since left the household. Circumstances such as these are not common on Niue.

Similarly, households with more than ten members are no longer very common. One such household was made up of a single mother and her two children who lived with her parents, her three brothers and two sisters and a child of one of these sisters. A woman who had never married yet who had 11 children formed a second large household. A third such household comprised a consensually wed couple and their four children living with the father's parents, two sisters of the father and their six children, and two father's brothers. Yet another large household consisted of a married couple, their four adult children and all their spouses and offspring.

A surprisingly high proportion of children (18%) live

in households with three or four members. Many of these are single mothers with several children but an increasing proportion of households of this size are composed of upwardly mobile young married couples with one or two children. Relatively good salaries and prestigious jobs are making it easier for some young adults to move into nuclear households earlier than is currently standard. Nevertheless, within a year or so of moving into a new house on their own all of these households had acquired "extra" members, such as Tokelau High School students being boarded in the house or distant kin come for an extended stay. Thus far success has not lead to a breakdown of traditional Niuean values or family forms.

**Extended Households: Generations and Relationships**

As Table 31 demonstrates, just over half the households with under-five-year-old children consist of only two generations, mainly parents and children.

**TABLE 31**  
**NUMBER OF GENERATIONS IN A HOUSEHOLD**

<u>Number Of</u> <u>Generations</u>	<u>Number Of</u> <u>Cases</u>	
2	51	53%
3	41	43%
4	3	3%
5	1	1%
	-----	
	96	100%

Most households with more than two generations are extended upwards, to the grandparental and great-grandparental levels but a few descend, to a mother's sister's daughter's daughter, for example.

The ways in which households are extended beyond children and their parents is given in Table 32. Virtually the same number of under-five-year-old children, about 40%, live in nuclear households with just their parents as live in extended households consisting of parents, grand-parents and the siblings of one parent.

**TABLE 32**  
**COMPOSITION OF NIUEAN HOUSEHOLDS WHICH CONTAIN**  
**PRESCHOOL CHILDREN**

<u>Persons In Household</u>	<u>Number Of Cases</u>
A = Child(ren) and parent(s) only	38    40%
A + Mother's parent(s) only	5    9%
A + Father's parent(s) only	4
A + Mo's parent(s) + Mo's siblings	23    39%
A + Fa's parent(s) + Fa's siblings	14
A + other Mo's relatives	8    8%
A + other Fa's relatives	3    3%
A + unrelated others	1    1%
	-----
	96    100%

Pollock (1975) discovered that 50% of her households were nuclear ones, composed of parent(s) and children only, while only 23% of domestic units included grandparent(s) as

well as parents. Given that her sample included every village household, those with and without children and not just those with preschool children, These figures are not too dissimilar to the above findings.

The number of grandparents a child lives with varies. Sometimes, one grandparent will have died or will have gone for a lengthy visit (sometimes, years) to children in New Zealand. Relatively few households have only the child's grandparents present in addition to the child's parent(s). Where there is a grandparent present there also tends to be father's or mother's siblings present, often with children of their own.

Eleven percent of households with young children have only more distant kin present. One household, for example, consisted of the parent-child core plus the mother's mother's mother, a mother's sister's daughter and her three children. Another was composed of the parent-child nucleus along with the mother's half-sister's daughter. Yet another comprised, in addition to the core of parents-and-children, the mother's adoptive mother and the mother's biological mother's mother's sister's daughter. One other household included a father's mother's brother's son. Thus, young children who do not live in the same household as their grandparents are, nevertheless, often living in households with older, albeit distant, kin.

Overall, then, Niuean youngsters live in large households of about eight people. Usually these are made up

of a parent-child core along with grandparents and parent's siblings or more distant kin present.

#### The Number Of Parents A Child Lives With

While the majority (65%, n=62 households) of children live in the same household as both their parents, 16% of children between the ages of birth and five years have neither biological parent in their household. These usually are children adopted by a parent's parents or being fostered by some other family member. A further 20% of young children live with only one parent; in all cases, their mother.

Of those children in households with two parents, 81% (n=50) of the parental couples are legally married. In only 12 households (19% of those with both parents present) were the child's parents living in consensual union.

#### **AREA DIFFERENCES IN HOUSEHOLD CONSTELLATION**

For some unknown reason, the proportion of single mothers or consensually wed parents to legally wed parents, varies considerably from village to village. In one village, for example, 32% of all preschool children were living with single mothers whereas in another village only 6% of under-five-year-old children were born to unwed mothers.

It may be that villages of different socio-economic status have different patterns of legal marriage and single motherhood. Low socio-economic status also tends to mean people cannot pay for migratory trips, and so tend to remain

on Niue whereas someone in similar circumstances from a different village might have left. Or it maybe that deviations from the norm are less well tolerated in particular villages, so there are fewer consensually-wed couples or solo mothers living there.

More likely, however, disparities result from regional differences in out-migration and the impact of this on household composition. The Back continues to lose very high proportions of its population (50% between 1976 and 1981) whereas migration losses have steadied out in other areas of Niue (Connell 1983). At different periods of time different kinds of persons or groups have migrated (Walsh & Trlin 1973; Walsh 1980; Connell 1983), leaving behind households depleted in particular ways, ways that altered over time.

Interestingly, Pollock's (1975) survey, done before the massive upswings in out-migration, also found substantial differences in household composition between two villages, one in the South, one in the Front, so these differences might not be recent. Table 33 presents her data (Pollock 1975), which refer to all households in the village, not just to households with young children.

Socio-economic differences between villages might cause regional variations in household constellation but one must not overlook the possibility that these could also represent long-standing but different traditions with respect to domestic organization. It is just these kinds of differences that most likely give rise to, and sustain, the feelings

Niueans have about each village being different from the others.

**TABLE 33**  
**VARIATION IN HOUSEHOLD CONSTELLATION BY AREA, NIUE 1975**  
 (from Pollock 1975)

	<u>Southern Village</u>	<u>Front Village</u>
Number of Households	57	38
Number of Persons	342	202
Mean Number Persons per Household	6	5
Child plus parent(s)	46%	47%
Child plus mother only	4%	3%
Child plus mother and grandparent(s)	19%	5%
Child plus parents and grandparents	26%	18%
Child plus grandparent(s)	0%	13%
Husband and wife only	5%	13%

#### CHILD'S BIRTH ORDER AND HOUSEHOLD COMPOSITION

Overall, then, we are left with a rather fuzzy picture of the kind of households under-five-year-old Niuean children inhabit. Almost half of these preschoolers live just with parents and siblings while the same number live with grandparents and a horde of other relatives. Some domestic units with under-five-year-old members are large, some are small. Why is this?

The pattern is too coherent for this to be mere random variation. Something that both distinguishes some children from others and accounts for these differences in composition of the domestic unit is the child's birth order.

Children in the survey ranged widely in birth order, from first-born to eleventh. The majority of children, however, fell into the first- and second-born category: 48 children (34%) were firsts, 24 (17%) were seconds. Eleven per cent (n=16) of the children were in each of the third-, fourth-, and fifth-born categories. There were 12 (9%) sixth children and nine (6%) children of higher birth order.

While it is true that most children (65%) live with both parents, it is not true that the majority of children of all birth orders live with both parents. Some 18% of first children, for example, live with folk who are not a parent whereas only about 5% of fourth children are in this situation. Table 34 presents data on (youngest) child's birth order by number of parents in the household; clearly, birth order makes a difference.

TABLE 34

NUMBER OF PARENTS A CHILD LIVES WITH, BY BIRTH ORDER OF YOUNGEST CHILD TO THOSE PARENTS

<u>Parents</u>	<u>Birth Order</u>			
	1st	2nd	3rd	4th+
Legally wed parents	41%	44%	50%	68%
Consensually wed parents	18%	6%	13%	11%
Mother only	24%	33%	13%	16%
Not with parents	18%	17%	25%	5%
	-----	-----	-----	-----
	100%	100%	100%	100%
	(n=34)	(n=18)	(n=8)	(n=37)

Significantly more third- or higher born children live with both parents, be they in legal or consensual union, than do first- or second-borns, who tend to live with

mothers only or with others (Fisher's Exact test,  $p < .03$ ). Further, significantly more third- or higher birth order children live with their legally married parents than do first- or second- borns (Fisher's Exact test,  $p < .02$ ).

### Children Of Legally Wed Parents

Of children living with legally married parents, 71% of third- and higher born lived with the parents only, in nuclear households, while just 29% of first- or second- born children were living in nuclear households. This difference is statistically significant (Fisher's Exact test,  $p < .02$ ).

First and second children from legal unions are equally likely to be living with the father's parents or with the mother's parents. For third- or higher birth order children of legally wed parents from households which are non-nuclear, extension of the household is far more likely to be due to distant kin than to the children's grandparents or parents's siblings.

### Children Of Single Mothers

Single women with one or two children continue to live in their parents's household but once a woman has three or so children out-of-wedlock she forms her own household. First- or second- children born to single mothers live with others in addition to their mother but third- or higher birth order children of unwed women tend to live with her alone (Fisher's Exact test,  $p < .0001$ ).

### Total Number Of Adults In The Household

Adults in a household are likely to be: the child's parents, the child's grandparents, the child's parents's siblings, and the child's parents's more distant senior kin. Number of adults in a household then is a measure of how much social support a young mother has in guiding and advising her on childcare, particularly in medical emergencies. The total number of adults, rather than just female adults, is important as there are no strictures in Polynesian society against a man being involved in childcare, even though it is acknowledged as being a woman's primary responsibility. Throughout life, men as well as women will look after children and be involved in decisions about their care. So they too constitute a source of advice and aid for a new mother.

The number of adults in the household ranged from just one to seven. A moderately strong relationship exists between the number of adults in the household and the birth order of the youngest child in the parent-child core (Pearson's  $r = -.41$ , 95df,  $p < .0000$ ). Thus, the smaller the birth order of the child, the greater the number of adults in the household (see Table 35).

The differences in Table 35 are significant ( $\chi^2 = 16.23$ , 2df,  $p < .0003$ ). Hence, birth order of the child is a moderately good predictor of household composition in terms of number of adults (tau c =  $-.41$ ,  $p < .0001$ ; Kruskal-Wallis H (number of adults dependent) =  $16.1$ ,  $p < .0001$ ).

**TABLE 35**

**NUMBER OF ADULTS IN THE HOUSEHOLD, BY BIRTH ORDER OF YOUNGEST CHILD**

<u>Number of Adults</u>	<u>Birth Order</u>	
	1st/2nd	3rd +
1 or 2	41%	80%
3	22%	11%
4+	37%	9%
	-----	-----
	100%	100%
	(n=51)	(n=46)

**HOUSEHOLD CONSTELLATION AND SOCIAL SUPPORT**

It is reasonable to expect those adults that are in the household other than the child's parents, such as the child's grandparents or aunts and uncles, to play a significant care-taking role in the child's life. Is this, in fact, the case?

The sheer number of other adults in the house is one obvious measure of social support available to a "new" mother, a mother whose first-born is under five years of age. From the above data, it is clear that first-born children live with more adults than do other children. Thus the "new" mother has many sources of advice and help available when she needs them, when she has her first child.

Birth order influences not just the number of parents a child is likely to live with but the entire composition of the household, too. First and second children are more likely than are third or later-born children to be born to parents in irregular unions--single mothers or consensually

wed couples. Further, first or second children of all parents are more likely to be living in non-nuclear households. How do these factors influence the amount of social support a mother has?

To see how birth order and household constellation combine to influence the kind of social support persons available to a mother, let us turn to some additional information about the Child Welfare Clinics. Let us see to what factors account for who accompanies a child to the Child Welfare Clinics.

#### Who Accompanies Children To Child Welfare Clinics?

The majority of children (60%) are taken to the child welfare clinics by their mothers. A further 21% of children are taken by their mother's mother, 11% by their father's mother and 6% by other relatives, usually a mother's or father's sister.

The younger a child is, especially if under a year of age, the more likely he is to be taken to the clinic by his mother: 63% of infants were taken by their mothers while only 25% of children aged 4-to-5 years were accompanied by their mothers. Maternal grandmothers or other people most frequently take older children.

Age is but one factor in the picture of who takes the child to the CWCs. The number of children of clinic age in the household is also important. Just 50% of children from households with only one clinic-age child were taken by mothers. This figure increased to 88% for children from

households with three under-five-year-olds.

It is not just the number of clinic-age children in the household that is important, however, as actual birth order of the youngest child also plays a role. First-born children are divided between three care-takers: 48% are accompanied to CWCs by their mothers; 27% by their mother's mother; and, 24% by their father's mother.

Not only are grandmothers as frequent takers as mothers for first-born children but they also play the same considerable role for second- and third- born children. By the time fifth-born children arrive, however, the grandmother's role has diminished considerably. Mothers accompany 80% of fifth- or higher birth order children to CWCs while grandmothers are responsible for taking only 5% of such children.

#### Household Constellation And CWC Attendance

Three out of every four children taken to CWCs by a grandmother live in the same household as the grandmother, in a three- or more generation household. Households are extended in different ways depending upon the relationship between the parents of the child.

Children Of Legally Wed Parents. Parents who are legally wed have a choice of living with either set of their parents and frequently, after long periods of time with one set, will move to the others. This is gives access to both grandmothers as child-caretakers, especially if the union

has resulted so far in only one or two children. Moreover, there is less pressure on a wife to hasten back to work if she has a husband to support her. This situation is reflected in the CWC data. Most children (69%) of legally wed parents are taken to CWCs by their mothers. Where others are involved the task is split evenly between the father's and the mother's mother.

Children Of Consensually Wed Parents. Consensual marriages result in the woman leaving her natal home and in the couple living with the man's parents. This restricts the number of others on whom a mother can call to take her child to the CWC, as is clear from the data. Slightly fewer mothers in consensual marriages take their children to CWCs (62%). The rest are taken by grandmothers: 31% of the children are accompanied to the clinics by their father's mother but no mother's mothers take children from such unions.

Children Of Single Mothers. In contrast to those who have elected to maintain a relationship with their child's father, solo mothers either live on their own with their children or remain in her parent's household. In its own way this too restricts a woman's choice of people to assist her if necessary in taking her child to the CWCs. Only 24% of the children of single mothers are taken to the clinics by their mothers, often because the mothers are working to support themselves and their children. Over half (52%) such children are accompanied to CWCs by their maternal grandmother while none are taken by their paternal

grandmother. However, nearly one-quarter (24%) of such children are taken by other people: mother's sisters, mother's brother's wives, or, in one case where the maternal grandmother was dead, by a neighbour.

When the single mother lives on her own with her children, then it is she who takes the child to the clinic. When she shares a house with some relative other than her parents, such as a sister, then it is this other relative who takes the child to the clinic. If, however, a single mother lives with her parents, then the child's grandmother usually takes the child to the CWC. In six instances (one-third of the cases in which solo mothers lived in their parents's households), the child's mother was actually in New Zealand and the maternal grandparents were fostering the child. It is exactly this sort of relationship that often eventually turns into an adoptive relationship unless the child's mother is absent for only a few months.

#### **THE MAJOR CHILD-RAISING TRIO**

These findings highlight not just the influence of child's birth order on the composition of the household in which he lives, but they also point up the importance of the grandmother, especially the maternal one, in the life and welfare of Niuean children. These findings also fit well with the central idea in Niuean society that the trio, composed of the child's mother, father, and (maternal) grandmother, are the most important people in his life,

especially when he is young. The role of the mother in the life of the child is more obvious than the roles of the others.

### Grandmothers

A grandmother is the primary substitute care-taker when mothers are unavailable, whether because of work, subsistence needs, illness or absence from the island. In families of unusual composition, such as single motherhood, the maternal grandmother is a prime source of help and assistance in childcaring. The mother's mother is said to be the more important because she teaches her daughter to parent, but in the maternal grandmother's absence the father's mother steps easily into the same role.

From the data above on CWC attendance, we have seen how a mother's mother takes charge of first-and second children, especially after infancy, freeing the mother to return to work and sparing her the burden of full-time house-keeping duties till she has more children to care for. During the infancy of her daughter's first couple of children, however, she is a vital resource, giving advice and reassurance, teaching her daughter to parent. Household composition clearly demonstrates how the role of the maternal grandmother changes once her daughter has established herself as a capable mother.

### Fathers

Fathers are important for children because they give

them a name, a genealogy, a link with the land, with the ancestors. Children "without fathers", children who are "own" children of their mothers, lack an automatic link to a group of kin and a block of land; they lack a form of social standing that they will only acquire when they themselves wed and produce children. The importance of fathers then is largely symbolic in Niuean society.

Fathers, too, tend to be rather remote authority figures throughout a child's life. Given sometimes to rage and severe chastisement of their children, generally, though, Niuean fathers are kindly and supportive towards their children, and are very important role models for sons.

The child's father has a more distant role than the mother during early childhood. Niuean men love babies and toddlers and will happily fondle, cuddle, indulge and comfort small children. Fathers, when home, will attend to the physical needs of their children but this is regarded primarily as a woman's job, the wife's responsibility. Once the child begins to walk and talk, however, then the father takes a more active role, especially if the child is a boy. Then, a man is likely to take the child to the bush with him when he goes in the evenings to weed the bush gardens, or to take it to Alofi when he goes visiting.

By the time a child is five years old, however, sex roles are strongly differentiated for children. Adult men have increasingly remote relationships with their daughters, increasingly close contact with their sons. Boys accompany their fathers more and more, to learn bush work and fishing.

Girls become adjuncts in the household, cooking, cleaning and caring for younger siblings. As children age even more, the authority that a father has over his daughters diminishes even further, being delegated almost entirely to his sons.

### The Mother

A marriage between a man and a woman is not sealed or settled by a wedding, rather the wedding signifies the beginning of a spousal relationship that will grow over time and strengthen with each additional child (Martini & Kirkpatrick 1981). A woman with just one child has less commitment to being a full-time housewife and mother, especially if she has a good job, than does a woman who has "given her husband" several children.

Only when there are several children of the union, when the marriage is stable, will a woman contemplate staying home and caring for children full-time. This is also when the child's grandmother will have decided that her daughter is now a capable mother. So, as the family grows to include three or four children, it will move away to form a separate household. The mother will stay home with her children and the grandmother will become a less dominant but nonetheless important figure.

Thus are inextricably intertwined in Niuean society, the factors that we have examined in this Chapter: household composition, child's birth order, the social support from the culturally appropriate "trio" for raising a child.

## CHAPTER XI

### MOTHERS'S EXPECTATIONS OF CHILD DEVELOPMENT

In a previous Chapter, we saw how growing up on Niue depends heavily on peer socialization at all life stages, and how household composition is organised to provide new parents with most social support when they most need it, when they have their first children.

Exactly what effect does this manner of child-rearing have on a child's development? Do his parents's expectations of his physical, intellectual, emotional and social competence at various ages match his performance in these spheres? In order to answer these questions, let us look a little closer at childhood in Niuean society.

### THE LIFE OF POLYNESIAN CHILDREN

The "Golden Age" of Polynesian childhood is the early period, from birth to toddlerhood, during which time the child is indulged and given constant attention. By around two years of age, however, the child is expected to be independent and is firmly but kindly pushed away from his primary attachment to his mother towards the peer group which will dominate his existence for the next two decades of life.

### Birth To Three Months Of Age

For the first month or so, infants are the primary responsibility of their mothers who are released from all other duties at this time. Mothers keep a constant watch, even cuddling the child while it sleeps, and quickly attend to every need. Children rarely need to cry and are quickly comforted when they do (Martini & Kirkpatrick 1981).

By the time a child is a few months old, however, the mother is no longer the dominant caregiver although she retains prime responsibility for the child. All adults and children enjoy cuddling young babies such that in any group of people, the child begins to be handed from person to person for all to hold or cuddle. A distant kinsman or a friend who arrives at the home is expected, without asking permission, to pick up the child and cuddle him. Now, too, a host of other people are used to care for the child for increasing lengths of time as the mother goes about her business and begins to pick up the threads of her normal domestic life. Older siblings, often as young as 3 or 4 years of age, grandmothers, aunts, even neighbours free the mother to leave the child for several hours or even to return to work, secure in the knowledge that her child is being looked after (Levy 1968; Martini & Kirkpatrick 1981:192-193; Ritchie & Ritchie 1979).

Even in early infancy, a Polynesian baby is constantly reminded that he is a part of a social world, of a large group of people with whom he must interact. Polynesian mothers do not, as in the West, mirror or mimic infant/child

behaviour and then refine it. Rather, they "serve as prototypical social others" and brief interactive routines developed in the mother-infant dyad are quickly generalised to interaction with others (Martini & Kirkpatrick 1981: 211). The mother does not talk to the child, guessing at what he is thinking or wanting, but rather constantly directs his attention to others in his immediate environment.

### Six Months to One Year

Social training continues throughout the first year of life. When a child reaches 6 to 8 months of age, he is regularly engaged in very complex social interactions among the mother, other adults and "medial" caretakers, usually children, often as young as three or four years (Martini & Kirkpatrick 1981).

Sitting or standing on his mother's lap facing the audience, the child plays games such as "peek-a-boo" or "pat-a-cake" or is commanded to "wave" or "dance." The baby's responses are a source of delight to the entire group surrounding the infant. Adults rehearse the child in these ventures until imperfect movements turn into practised responses. Mothers's verbal utterances to the child decrease as the child ages and change from getting his attention to directing his performance (Martini & Kirkpatrick 1981:204).

The intent of such games is not to amuse so much as to direct the child's attention to the social world in which he exists and to encourage interaction with other people.

During this time the child's attention is directed away from himself or his mother, towards the others present in the social situation, and towards developing competence in the performance of simple tasks. "Adults make a world in which infants can experience pleasure through effective motor coordination and simple interaction with others" (Martini & Kirkpatrick 1981:211). Success in the performance of such tasks is prerequisite to independence.

The child is never forcibly prevented from interacting with other things but is distracted from paying attention to lesser valued learning objects, such as toys, or from situations of danger. Constantly, his attention is directed towards people rather than material goods.

Once the child can crawl or pull to stand or begin to totter around, he is carried all over the place by siblings barely older than himself. The sight of a four year old struggling along with a 12-month-old infant in his arms is common. By now the mother's role has been reduced to that of overseer and organizer of activities surrounding the child, ensuring that the child's caretaker does not go too far and that the baby's needs are adequately met by the child-caretakers or others.

### Weaning

Weaning, not usually abrupt and often as late as 18 months, is another sign that moves are under way to separate the baby from the primary care of the mother or

other adults. The child, for example, no longer sleeps with her but with siblings or other children in the household.

Traditionally, children under about two years of age were considered untrainable beyond a minimal level but as soon as a child displayed competence in walking and talking, "real" training could, and did, begin (Ritchie & Ritchie 1981:189). Polynesians avoid many of the trials and tribulations of the "Terrible Two's", as this age is frequently called in the West, because of this assertion of independence.

After weaning, for example, a child is considered to be sufficiently independent to be quite able of organising his own eating and sleeping pattern (MacKenzie 1973:298-299; Ritchie & Ritchie 1979). It is simply assumed that a child will eat when hungry and will go to sleep when tired, even if it is in the middle of the floor right next to the speakers of a stereo-system playing music loud enough to be heard 100 yards away! Someone will gather up a sleeping child and move him to a mat out of the way but no one dreams of keeping the house quiet.

At this age, children learn useful skills that will stand them in good stead throughout life--they learn to sleep through intense noise, bright lights, and the arrival or departure of other siblings on the bed. They learn, too, to accept interruption in sleep by siblings who want to talk or to go some place with them, for sociability is more important than biological function. Interactions with kin

are limited but one can sleep anytime, so the former take precedence over the latter.

### **The Toddling Age**

During infancy, the major concern of mothers is to encourage the child's active participation in a social world. After weaning, however, continued training in sociability devolves more and more to the sibling and village peer groups.

Maternal indulgence begins to diminish and eventually to cease, either with the arrival of the next child or at about two years when the child is a toddler. Once a child is mobile and can purposely explore the world, he ceases to be dependent and becomes a distinct being with his own abilities and personality.

Considerable value is placed on the child's independence and on an adult's freedom from children's demands and dependency (Metge & Kinloch 1978:39; Ritchie & Ritchie 1979, 1981). Adults who get "stuck" with childcare duties for unusually long times resent this greatly and, if unrelieved for long periods, sometimes take out their frustrations by excessively punishing or ignoring their children (Dubanoski 1981; Dubanoski & Synder 1980).

Independence is encouraged in the toddler by moving him out of the indoor world of the adult into the outdoor world of children. Promotion of the child into the peer group is not rejection in either intent or effect but rather further encouragement in the development of independence. This is not

a harsh, cold or hostile rejection by the parent but a gentle non-response to the toddler's demands (Martini & Kirkpatrick 1981: 191; Ritchie & Ritchie 1981: 189). This early training in independence is "a clearly identified, positively sanctioned, cultural practice regarded by Polynesians as evidence of good parenting" (Ritchie & Ritchie 1981: 191).

Two aspects of Polynesian culture reduce the negative effects of this early parental "ejection from the nest": peer/sibling socialization and multiple parenting. The toddler is expected to become a part not just of his/her sibling peer group but also of the age-graded village peer group (Ritchie & Ritchie 1979; Gallimore, Boggs & Jordan 1974). Instead of one mother and a few siblings, children now have many age peers to relate to. Moreover, at this age the wider kin take an even more active role in child-rearing and child-minding. Now children spend days at a time with aunts, uncles, and grandmothers so that the child's family of origin becomes relatively less important.

### Childhood

The rest of childhood is very much an extension of the toddling period. As children become physically more competent so more and more tasks are given them until they contribute fully to their households. The peer group and the wider kin group become even more important.

This is attested to by the flexibility of household

membership. Frankovich (1974:25), for example, found that 10% of her sample of under-five-year-old Niuean children had lived for up to six weeks with family members other than the family of origin. By the time a child is ten years old, however, he has probably lived in several different households for months at a stretch.

No child of any age is ever excluded from an adult gathering. Children are always included at parties, weddings, 21st Birthday celebrations, dances or whatever, even at nights. If children get bored or restless, they will be sent outside or encouraged to play with peers, leaving adults to take part in the ceremony. Children who fall asleep during the event are merely bundled into the nearest bed or put in a car for the trip home. An eight-year old who stays up to attend a dance will be gently teased by his older siblings and peers but no one would dream of refusing to allow him to go. As long as an older sibling or adult is present to keep an eye on him, he will remain at the dance. He, too, is free to ask any woman, young or old, to dance with him and not once will he be refused.

A prime lesson of Polynesian childhood is that age and sex alone do not determine task allocation: competence, skill, and demeanour have far more bearing. So, a boy or a man can be involved in caring for children or cooking without in any way feeling as if they are doing unmanly things. A child learns to respect those who have the ability to perform tasks whatever those tasks be, and the young serve their elders while caring for their juniors.

## NIUEAN IDEAS OF DEVELOPMENT IN YOUNG CHILDREN

Like most Polynesians, however, Niueans regard child development as basically a matter of course, an unfolding of innate abilities that requires little monitoring, teaching, or enhancement. Mothers agree over the timing and sequence of infant development and have a willingness to simply allow development to unfold when the child is ready rather than a desire to spur on physical or other attainments. Playful or instructional interactions with a child, while enjoyed and valued by adults, are intermittent leisure-time activities, not a focus of adult child-rearing responsibilities. Play has no role in Polynesian theories of child development, nor does focussed, concentrated enhancement of skill (Martini & Kirkpatrick 1981:192).

Mothers also have their own notions of what constitutes good development in throughout infancy and childhood. A well-developed child is not necessarily precocious with respect to motor or verbal skills but rather is mature in temperament and well built. Children who are plump or stocky rather than lithe or lean are preferred, are said to be better developed, are the children who are said to be "strong." "Strong" children early display valued cultural attributes: they eat better, are healthier, are happy and placid, are socially responsive, and are stoic in temperament.

Once a child is fully mobile (able to walk) and displays minimal competence in social interaction (can

converse sensibly if not yet extensively) then he graduates from being an infant to being a child. He graduates from his mother's lap to the peer group. He graduates from simply revealing his innate abilities to having to learn how to be a proper social being.

This transition from infant to child is quite marked. Expectations of growth and development of infants and toddlers involve mainly the acquisition of verbal and physical skills. But once over the threshold into true childhood, more and more demands are placed on the child, demands to become a social person conforming to Niuean norms and values.

Just exactly how do these child-rearing practices and ideas about children shape mothers's expectations of child development? What is "normal development" for a Niuean child? When exactly are demands for social skills made upon Niuean children, and what form do these skills take? To give greater substance to Niuean notions of child development a survey was made of a group of randomly selected mothers. This survey consisted of an intensive interview about child-rearing and expectations of child development. After mothers finished giving me their personal views, all respond to a structured list of questions which covered particularly salient items in child development.

## THE SAMPLE OF MOTHERS

Using the Child Welfare records kept by the Public Health Nurse, a list was made of all Niuean women resident on the island with children under schoolage. To eliminate variation due to the mothers' experience of child-rearing it was decided to interview only those mothers who were at the same stage of child rearing; that is, to limit the study to those essentially new to the task of parenting, to those with first-born children who were five years of age or less.

Further, mothers selected were in a stable relationship with the father of their child(ren) and resided with him. This ensured that all respondents had access to at least one similar prime source of social support, the child(ren)'s father, to whom she could turn for advice and assistance. Hence, the criteria for inclusion in the sample were: that the woman was Niuean, was resident on the island, had a first-born child of five years of age or less, and was living with the child's father.

Women who did not meet the sampling criteria were ineligible and were eliminated from the list of mothers. Of the 100 women meeting the criteria, twenty were randomly selected to be in the sample. This number was chosen as being the maximum able to be interviewed in the time available.

Further, the interviews and instrument were administered in English, because my grasp of Niuean was rudimentary and because women whose first child was under

five years of age were likely to be able to converse well in English. English has been the prime language of the schools on Niue for the past twenty years. Informants who did not feel comfortable talking in English were omitted from the sample.

### Interview Process

All interviews were conducted during the day in the informant's own home. No other adults were present.

The women were pleased to be asked for their views on child-rearing and on life in general and were interested in the topics brought up. Questions about child development seemed to delight the mothers and all gave assured and ready answers. Mothers recognised the phenomena presented to them, were certain of their knowledge of child development, and were fascinated by the formal structure which the questions revealed as underlying their children's behaviour.

The majority of women said they enjoyed the experience. However, despite their willingness to co-operate, a few women were unable to respond to the test questions or to talk about their lives and thoughts in a coherent manner. Niueans, on the whole, are not a very introspective people and are not used to answering questions about themselves, their lives and their thoughts. For this reason it was difficult to establish rapport with some of the women selected, who, despite knowing and interacting with me in many different social situations over a long period of time, froze at the "formal" task implied by the interviews.

Especially affected were those who were less well-educated and/or who felt shy. Some women were shy about speaking in English; others worried in case they "made a mistake" in answering.

Obviously, a bias towards the better educated (and therefore more Westernised) mother was present, a bias that potentially impaired the usefulness of the results. There is reason, however, to believe that this bias was minimal and barely affected the results.

Differences in educational attainment, for example, are slight, the matter of one or two years in High School, rather than no schooling or no secondary education at all versus considerable Western-style High School. Also, Nemaia's (1984) study of family planning among Niuean women revealed a considerable degree of homogeneity among mothers on the island. She could find no differences in family planning knowledge, attitude or practices by parity, level of education, or marital status. Thus, although I tended to interview more Westernised mothers, it is likely that their replies were no different from their less Westernised counterparts.

### Characteristics Of The Sample

From the 20 mothers with whom interviews were attempted, a total of only 13 responses were useable. Time constraints precluded adding further eligible women to make up the shortfall.

The average age of mothers who gave useable responses was 25 years (standard deviation 3 years), ranging from 21 to 30 years. Altogether, the 13 women had 26 children. Four women had only one child, five had two children, and four had three children, all preschoolers with an average age of 2 years (standard deviation 1.5 years). The youngest child was 3 months old, the oldest 5 years. Half the children were male and half, female.

Eight of the mothers had only 4th or 5th form education, leaving school without a diploma. These women either had very short working careers or continued to work but as casual labourers. The other five mothers had not only all graduated from high school but had some kind of additional training: one was a nurse, another had training as a nurses' aide; one was a primary and one a secondary school teacher; the fifth was a typist-clerk for a government department. Moreover, the husbands of this latter group of women also had higher educational qualifications and more skilled jobs than did the spouses of the former group of women.

All but two of the women were living with the fathers of their children at the time of the interview. One woman's husband was temporarily absent, taking a 3 month training course overseas. Unresolved marital conflict was the reason the second woman was no longer living with her husband. He had left the family home only days before, in the period between initial screening contact and the actual interview.

His wife felt this was only a temporary separation and not a permanent split.

Including these two cases, eight women altogether lived in a household made up of the spousal pair and their children alone. Three women, with their husband and children, lived in their father's household. Two women, with their spouses and children, resided in the households of their husband's parents. All but one woman was legally married to her husband. The one woman who was consensually wed had been living with her child's father, in his parents's house, for five years.

#### **THE STRUCTURED QUESTIONS ON CHILD DEVELOPMENT**

A structured list or questionnaire about certain aspects of child development was presented to the mothers after they had already spent considerable time talking to me about topics they thought important in child-rearing and child development. This structured list of questions was not used in order to make value judgements about the degree of fit between Niuean beliefs and Western norms, derived from the literature. Rather, it was used as a means of ensuring all mothers covered the same topics and considered the same skills in their discussion of child development.

In order to understand Niuean ideas of normal growth and development in children, information from several sources was used: information given by mothers during their interviews; comments made in informal, casual conversation

with a host of different people; extended observation of social actions around children; and, responses to specific questions.

### Constructing the Questionnaire

Western tests of child development were used as a resource from which to derive a list of questions covering all aspects of child development. Surprisingly, there are few tests available which investigate parental knowledge or expectations of child development (Constable 1980). Only one instrument really fit the tasks of delineating parental knowledge and expectations of child development, that of Constable and her associates (Constable 1980; Constable, Jacobs & Ward 1981).

Constable's questionnaire was constructed using data from several sources on child development, such as the Denver Developmental Screening Test, Bayley's and McCarthy's Scales of children's abilities, Cattell's measurement of intelligence in infants and young children, and Uzgiris and Hunt's work on infant psychological development (Constable 1980; Constable, Jacobs & Ward 1981).

To Constable's (1980) basic 36-item questionnaire, I added another set of questions covering aspects of child growth and development pertinent to the late-preschool and early school years. These items extended not only the age range but also the breadth of developmental skills. Considering skills important to the early school years allowed the inclusion of questions about some less common

but nonetheless important aspects of emotional maturity and independence. Thus, items included represented major developmental skills and were readily observable by untrained parents.

The list of questions actually used to help elicit Niuean mothers's knowledge and expectations of child development is given in Appendix 3. This 48-item questionnaire covers five areas of development: motor skills (11 items); language (7 items); personal/social (10 items); intellectual (13 items); and, emotional maturity/independence (7 items). Items relating to these five areas of development were randomly distributed. When responding to the questions from the list, all mothers referred specifically to their own children or some other nearby child who was now at the age under discussion. Mothers talked about the age at which the particular milestone under consideration could be said to really be established and not the age at first acquisition of the milestone.

Throughout the tables of results, Western norms for the acquisition of these developmental milestones are noted. This is not intended to represent a standard from which Niuean replies deviate but rather is given so that differences that do occur between Niuean and Western beliefs about child development and actions around child-rearing can be highlighted.

### Niuean Ideas Of Time And Responses To The Questionnaire

Notions of time on Niue are relatively poorly developed. Whereas the Western world makes clear distinctions between, say, a child of 10 months of age and another child of 12 months, Niueans would be most likely to refer to both as one year of age. Similarly, a child of 30 months and one of 36 months become the same age, three years, in Niuean speech.

Likewise, the responses mothers gave were broad, often sweepingly encompassing, and considerable probing was needed before a more refined notion of age at milestone acquisition became meaningful. Consider, for example, a question about when a child will be able to utter three words in addition to "mama" and "dada". Niuean mothers were wont initially to say "about two years", a notion that further questioning would eventually refine to 12 to 18 months.

Niuean inattention to fine time distinctions becomes a problem when the answer to all the development questions depend upon an estimate of time. To accommodate Niuean inexactitude in thought and speech about time, then, responses to test items were rated as matching Western norms if they either (a) matched the criteria set down in the literature for that particular item, or (b) were within three months of either limit. Thus, to the question above about when a child can say three words, a reply of 12 months and answers of 9 months and 18 months are all regarded as matching Western norms.

This strategy of allowing an extra three months at each

end of the range over-estimates the extent to which Niuean mothers views match Western views on child development. Hence, any response which is deemed to be different is very much so by Western standards and is more likely to be a truly different expectation than simply an artifact of sampling, inexact speech or the like.

Niuean responses which fall within Western norms are labelled Matching, those which fall below the expanded Western limits are designated Early, and those above the limits are called Late. Appendix 4 outlines the developmental area tapped by the questions put to mothers and documents the number of Early, Matching and Late responses Niuean mothers made to each question.

#### THE UNIFORMITY OF MOTHERS'S RESPONSES

No mother gave uniformly Early, Late or Matching answers to the items in the questionnaire. Eight mothers had more than half their answers fall in the Matching category, though no woman's total responses were more than 58% so. Three women had more than half their answers fall in the Late category, with the highest proportion being 75% Late. No mother had more than half her answers in the Early category.

No relationship could be discovered between mother's age, her level of education, the number of children she had, and the number of Early or Late responses she made. Nor was there a relationship between the number of Matching answers

a woman gave and the number of Early or Late answers. Similarly, there was no relation between number of Matching responses given and the mother's age or educational level.

Women with a first child aged four years or more, however, tended to have more than half their answers fall in the Matching category whereas mothers whose first child was younger tended to have less than 50% Matching answers. A similar effect was found for women with more than two children. The sex of the oldest child had no effect on the type of responses mothers made.

Thus, the more children a woman had and the greater the age of her oldest child, the more Matching answers she gave, the more Western-like her responses to the structured questionnaire. As this is such a small sample, however, further interpretation of this data is unwarranted.

A woman's own childhood experience, in the peer group, of child-minding does not seem to equip her with the knowledge of children that a mature adult has, a fact frequently noted by Niuean women themselves. Women insisted that it was not until they had had at least two children and had been under their own mother's guidance in child-rearing matters for several years that they really understood all the demands and constraints of bringing up children. They often talked about how mothers of one child have less opportunity to observe the full-range of developmental tasks a child must acquire in the first five years of life. Either because her child tends to be very young or because once the child is taken into the peer group for much of the day, she

loses the opportunity to observe closely. Such a mother, too, is more likely to be working or engaged outside the home if she has just one child. With more children, however, she stays home more, notices more similarities and differences between children of different ages, and so is better able to generalise and to articulate her expectations of children.

### ACQUISITION OF MOTOR SKILLS

Eleven questions related to motor skills. Nine items involved gross motor activities while two concerned the development of fine motor skills. Table 36 outlines the motor activities considered and Niuean mothers's responses.

TABLE 36

#### MEDIAN RESPONSES TO MOTOR SKILL ITEMS

<u>Question Number</u>	<u>Description of Skill</u>	<u>Western Norm (Months)</u>	<u>Median Niuean Response (Months)</u>	
<u>Gross Skills</u>				
12	Sits alone steadily	4.5 - 7	8	Matching
27	Pulls to stand	6 - 10	10	Matching
41	Crawls on hands and feet	7 - 9	8 - 10	Matching
24	Moves to music	8 - 12	12	Matching
25	Walks without support	11 - 14	12	Matching
21	Climbs onto a chair	11 - 15	18	Matching
30	Throws objects forward	9 - 18	24	Late
18	Kicks objects forward	15 - 22	24	Matching
33	Climbs a tree	46 - 52	48	Matching
<u>Fine Skills</u>				
9	Reaches for offering	3 - 5	6 - 10	Matching
2	Piles up objects 4 high	15 - 21	30	Late

Obviously, Niuean mothers's knowledge and expectations of the acquisition of motor skills in children matches the Western norms. Only two items, one a gross and one a fine motor skill, received unmatching responses, both being given late estimates. Both these items involved children's manipulation of objects.

Niuean children do have objects that they manipulate but rarely are these manufactured toys and seldom are they specifically given to children to play with. It is far more likely that the children came across these items accidentally and that they are ordinary, household implements or tools, such as clothes pegs, pot lids, string, and cooking spoons, or backyard items, such as stones, twigs, and prepared leaves for weaving. Children, then, have relatively few chances to acquire reaching and stacking skills. And mothers have limited opportunities in which they would offer a child a toy or in which they would see young children with objects, either throwing or stacking them. Given this general lack of toys for children to play with and a typical Polynesian preference for sociality over material possessions, it comes as no surprise that mothers have late expectations for the development of object-related skills.

#### Sequence And Timing Of Motor Development

Mothers had a good grasp of the sequence and timing of motor development throughout the first year of life. Interestingly, not one single respondent under-estimated when infants would acquire motor skills pertinent to the

first year of life. There were very few over-estimates. Mothers's estimates of the age at which an infant reaches certain developmental markers are matched by the Child Welfare records of actual achievement of motor development milestones by Niuean babies.

Only some 10% of Child Welfare records have any notation of developmental progress and on occasion these notes have been made some time after the event. Not all milestones are noted for every child and later markers of development, such as bladder control and speech, are never recorded. Despite this, the Child Welfare records provide a useful insight into motor development.

The median age at which Niuean children sit alone steadily is 7 months, range 4 to 10 months; by this age, 61% (n=84) of children for whom this milestone was noted had achieved it. Five percent of Niuean children do not commence crawling until after their tenth month but by 7 to 8 months 60% (n=75) of children have become mobile. Forty percent (n=23) of children walk without support before their first birthdays.

To Question 41, when a child first starts to crawl on hands and feet, every respondent gave an answer consonant with Western norms. This, of course, represents the first time an infant achieves independent mobility, an important marker of change from the social stage of infant to that of child in Polynesian thought, so it is not surprising that mothers notice the achievement of this milestone.

Items dealing with motor development in the second year, however, drew a wide range of responses. Some Early estimates as well as some Late estimates were received. The two Late median responses were in answer to questions about motor skills appropriate to this time period.

### LANGUAGE DEVELOPMENT

Three aspects of language development were tapped in the 7 items relating to language development: vocalization, comprehension and true speech. Mothers's replies to the questions are detailed in Table 37.

TABLE 37

#### MEDIAN RESPONSES TO ITEMS CONCERNING LANGUAGE

<u>Question Number</u>	<u>Description of Skill</u>	<u>Western Norms (months)</u>	<u>Median Niuean Response (months)</u>	
<u>Vocalization</u>				
31	Copies sounds	5 - 10	12	Matching
<u>Comprehension</u>				
16	Follows simple commands	9 - 12	10	Matching
38	Knows own name	10 - 14	10	Matching
20	Follows simple directives	15 - 22	18	Matching
<u>True Speech</u>				
10	Says three words	12 - 15	12 - 18	Matching
39	Puts two words together	14 - 22	18	Matching
34	Asks questions	24 - 36	36	Matching

All median responses to items about language development matched Western norms. Speech is an important social marker--it clearly indicates that a child is a separate individual capable of initiating, responding and

engaging in social intercourse. With their typical Polynesian emphasis on sociability, this is one aspect of child life that is observed, encouraged and given attention, from the very earliest days, for it is the basis for true social interaction.

#### DEVELOPMENT OF PERSONAL AND SOCIAL ATTRIBUTES

A total of ten items tapped mothers's knowledge and expectations of personal and social development in children. As shown in Table 38, three major sub-sets of this category, namely personal, social and interactive development, were explored.

TABLE 38  
MEDIAN RESPONSES TO ITEMS ABOUT PERSONAL AND SOCIAL DEVELOPMENT

<u>Question Number</u>	<u>Description of Skill</u>	<u>Western Norm (months)</u>	<u>Median Niuean Response (months)</u>	
<u>Personal</u>				
8	Drinks from cup by self	10 - 14	12 - 18	Matching
6	Feeds self, no spills	13 - 18	24	Late
3	Dresses self, no help	33 - 48	36	Matching
<u>Social</u>				
13	Smiles spontaneously	1.5 - 3	3	Matching
28	Becomes shy of strangers	5 - 10	18 - 24*	Late
22	Signals wants, no crying	10 - 14	18 - 24	Late
42	Comes soon after called	33 - 39	30	Matching
<u>Interactive</u>				
1	Plays with others own age	42 - 48	24	Early
40	Shares toys with others	54 - 60	24	Early
45	Stops fights, no adults	55 - 65	48	Early

(\* Excludes 1 reply of "never")

Unlike the previous developmental topics in which mothers's responses frequently matched Western norms, median responses here are mixed. Both Matching and Late replies are found in the personal and social sections whereas interactive skills uniformly receive Early responses. In fact, no individual informant gave Late replies to any item dealing with interactive skills.

### Personal Skills

Personal skills match Western norms except for a child's being able to feed himself without spilling. Niueans eat with their fingers. Given the many coconut cream and other broths used in cooking, this eating style is nearly impossible to execute without spillage. Mature people adopt a particular, forward-bent- at-the-waist, stance that enables them to eat without spilling on themselves, sauces falling back onto the platter rather than onto clothing. The developmental task is thus different in a Niuean context, a difference that is reflected in the mothers's responses. Mothers speak about the age at which children learn to eat like a Niuean.

### Social Development

Social development begins early in life. By two months of age an infant will spontaneously smile at people who come into his field of vision. Niuean mothers's expectations of their children's achievement of this milestone not only match Western norms but Child Welfare records bear out their

expectations for this skill. Spontaneous smiling took place before one month of age in 41% (n=17) of children whose CWC records noted this achievement. By two months, 98% of children were capable of initiating social contact through unprompted smiles.

Mothers's expectations of when their children would answer, either by calling out or coming, soon after being called, matched Western norms, too. To two other social skills, however, to "stranger shyness" and to signalling wants without crying, mothers gave Late responses.

### "Stranger shyness"

One mother said a child will never become shy of strangers. Most of the other mothers said children become shy around two years of age. At first sight, these are odd answers, quite different from the Western norm of 5-to-10 months.

Recall, however, how family members respond to infants, passing them from person to person, cuddling and indulging them. Visitors to the household, too, are expected to pick up babies and dandle them. Thus, throughout the first year of life a child is in constant contact with a host of different people, some transient, some permanent. An infant is used to seeing and being picked up by many people. Under such circumstances, the concept of "stranger" is difficult to develop.

Young children, those between about 6 months to a year

in age, do occasionally exhibit "stranger shyness." But this is rare and always in relation to extreme differences between people. For example, when entering a house or attempting to cuddle a child, European adults, with their pale faces, frequently cause a Niuean infant to cry, out of "stranger anxiety" or fright, but no Niuean ever elicited these response from a well infant. Thus, mothers "Late" responses to Question 28, once again, reflect Niuean social reality.

By the time a child is two, though, he will have language and other skills to help him sort out who belongs in the household or near neighbourhood and who does not, who he knows and who he does not. He can categorise people as kin or non-kin and become shy of those he does not know well. Also, this is the time at which he is being firmly steered away from primary dependencies on adults and pushed towards the peer group. Initially he does not know well all the members of the peer, it being a large age-graded organization. New faces in his immediate surroundings make him seek the security of those he knows. Thus, it is sensible for mothers to classify his clingingness and frantic rushes back to her at this age as "stranger shyness." This behaviour is only tolerated by the adults for a short time, however, as it is not good for people to be shy. Thus, it makes sense, too, for a mother to claim children are never shy of strangers--she is merely stating a cultural ideal.

Moreover, on such a small island, "true" strangers are

rare. Everyone knows every other inhabitant by sight and reputation even if they have no actual social relationship. The only "true" strangers are occasional tourists and the ex-patriates who generally live in a small enclave and encounter the locals in restricted (work) settings.

These people are sometimes, unbeknownst to them, used by mothers to frighten recalcitrant toddlers and pre-schoolers into submission. Whenever an ex-patriate or other genuine stranger appears, toddlers, especially those who are whining, crying, clinging or annoying adults in some way, are told to be quiet and behave lest they be taken away by the stranger. The malevolence in this threat of abduction of the child from the family is always alleged to stem from the stranger--the child's crying will catch the stranger's attention and so foster their desire for the child--rather than being a product of an exasperated parent.

This technique reinforces the message that kin and community members can be trusted while the outside world cannot, as it is unpredictable and scary. It also enables parents to insist on and reinforce behaviour that conforms to their wishes at a time during which they are otherwise encouraging the child to develop his independence. Being abducted by strangers is the parent's fantasy, is a wish initiated by the parent to prevent the child's burgeoning independence from going too far. This strategem by the parent, this trickery, cannot be detected by the child until he is much older. So, for the toddler or pre-school child this is a very effective threat that rapidly reduces a

rambunctious child to a quiet, pliable one--at least temporarily.

No wonder then that mothers claim two year olds are shy of strangers. Before this age children are unlikely to be able to form the concept of stranger and at this age, fears about unknown people are deliberately heightened by parents as a means of controlling their children.

### Signalling wants without crying

Mothers answers to Question 22 indicated that children were expected to be able to let an adult know what they wanted without crying by about two years of age. The literature, however, states that children ought be able to do this some eight months to a year earlier. What accounts for this difference?

Niueans, like Polynesians in general, value the suppression of individual desires to the will of the social group. Adults have a duty to limit their pleasures to ensure that those younger receive the basic necessities of life and, likewise, it is a youngster's duty to forgo individual wants and to work towards fulfilling the desires of those older.

The expression of individual wants and desires is not encouraged and from an early age Niuean children are taught to forgo their own individual wants. Indulgence of infants does not extend to the fulfillment of their wishes. Indulgence takes the form of providing for basic physical needs and unbounded social companionship and love. It does

not include the granting of other wants, whatever they might be, and children who express some want or other are usually ignored no matter how old they are.

By the time they are two years old, however, children can verbalise their desires and so bring them to the notice of adults but it is still unlikely that any adult would submit to the child's demands. So, Niuean mothers do not encourage children to have wants and have no recognition of the idea until a child is able to bring those wants to her attention through speech.

### Interactive Skills

The three items dealing with the development of skills necessary for social interaction each received an Early response from Niuean mothers. In comparison to Western norms, mothers under-estimated the ages at which children acquire interactive skills by as much as three years.

These results clearly demonstrate the great emphasis placed on social interaction and the little emphasis on personal ownership in Polynesian societies. Children are expected to play with and share toys with others from a very early age.

It is not at all uncommon to see a child as young as ten months sitting on a woven mat in the middle of a ring of older children surrounded by a few toys or other play items. These older children usually range in age from, say, 18 months to 10 or 12 years, and it is their job to play with

the baby and keep him happy. One older child will offer a particular object to the focal infant. If he accepts that offering, all the other toys will be distributed among the others in the circle. If the infant later reaches over to take an item one of the others, the child will release it and take, in turn, the first item the infant was playing with. And so the time passes, with objects constantly being passed from child to child, none getting upset at the appearance or disappearance of any particular piece.

The oldest children in the group also constantly encourage the central child to jointly play with the objects being circulated. Toys are thrown back and forth to the infant. Several toys might be stacked in front of the baby and then re-distributed around the ring. Any toddler or preschool child who objects to losing a particular piece or who tries to hoard certain items is severely chastised by the older children. Usually this "punishment" is verbal but if the younger child is persistent or cheeky a slap or two is also in order.

Mothers and other adults do not interfere when punishment is meted out by peers. Only in the unusual situation when all the children are toddlers will mothers step in to sort out children's quarrels. By the time a child reaches preschool age, however, he is expected to be able to sort out his problems with his peers by himself, without recourse to adult interference. He is also expected to accept his peers judgement over the rights-and-wrongs of any squabble.

Thus, from an early age children are put in interactive play situations with others and are taught by their peers to share toys and objects with other children. Moreover, the peer group is expected to be self-regulating with children able to resolve quarrels and arguments without interference from outside.

So, mothers's answers to these questions reflect Niuean cultural values and the behaviour of children in this society. Mothers's expectations of child development are in accord with child-rearing practices and beliefs about the capabilities of children at certain ages.

#### **INTELLECTUAL DEVELOPMENT**

Eight items in the questionnaire dealt with intellectual development during the sensorimotor phase while another five items referred to cognitive "school-readiness" skills. Mothers's replies to these questions are detailed in Table 39.

#### **Sensorimotor Skills**

Only two of the eight items involving sensorimotor skills received answers that did not match Western norms. Both these questions, one involving the distinction between anger and hunger cries in an infant and one about children's imitation of adult work, got Late responses.

TABLE 39

MEDIAN RESPONSES TO ITEMS ABOUT  
INTELLECTUAL DEVELOPMENT

<u>Question Number</u>	<u>Description of Skill</u>	<u>Western Norms</u> (months)	<u>Median Niuean Response</u> (months)
<u>Sensorimotor</u>			
15	Hunger/anger cry different	0 - 1	5 - 8 Late
19	Interested in objects	3 - 6	6 - 7 Matching
35	Copy an adult's clapping	7 - 10	10 - 12 Matching
44	Refuses, pushes away hand	8 - 12	12 Matching
32	Drops object, looks to see	8 - 12	8 - 10 Matching
5	Acquires object permanency	8 - 11	12 Matching
7	Purposely throws things	11 - 15	12 - 18 Matching
43	Imitates adult actions	12 - 17	36 Late
<u>Cognitive</u>			
37	Knows/names colours	33 - 45	54 Late
47	Knows some songs	24 - 27	24 - 36 Matching
23	Not easily distracted	33 - 39	36 - 42 Matching
4	Count 1 - 10	33 - 39	48 Late
26	Ideas size, weight, time	45 - 54	48 - 60 Matching

The ability of mothers to distinguish between anger and hunger cries in an infant is partly dependent upon how often the infant cries. Niuean infants rarely cry. They are very contented babies whose every wish is anticipated and immediately met from birth on. Limited opportunities exist for mothers to separate the different types of cries for their infants, which makes the Late response to this question understandable.

The Late response to the question dealing with children's imitation of adult actions, such as household duties like sweeping or washing, stems from the typical Polynesian way of teaching/learning skills. Unlike the Western world which relies heavily on explanation of "how to do X" and "why X works" before the task is attempted,

Polynesians do little formal teaching of skills. Instead, they rely heavily on acute observation of skilled others in performance of some task and then movement-by- movement imitation of those actions. Reasons might be given later, once the task is mastered. Any person who can successfully observe all the proper actions around any task and then actually perform all those actions in the approved fashion, is not merely imitating but actually doing the task.

While children who successfully complete a task for the first time are rarely praised, they nonetheless are permitted, indeed even expected, to undertake that task in the future. Children who attempt some task but fail are chastised, told to leave it alone until they are capable of doing it correctly. Thus, in a single family, a five year old who shows he uses a bush knife correctly will be allowed to use this tool even though an older brother, aged seven, is not yet permitted to do so.

A young child who watches an adult sweep the house and then later "plays at keeping house" in an ineffectual fashion will not be encouraged to continue such imitations of adult work. Only when the child competently imitates adult work will the child's effort to learn the task be rewarded, by allowing him to continue to carry out that task, thus relieving adults of that burden and allowing them to concentrate on more important matters. So, mothers who say a child does not imitate adult actions till 36 months of age instead of the 12-to-17 months claimed in the literature, are referring to the age at which a child can

competently perform simple household tasks, such as sweeping, rather than to the age at which a child might first try to imitate the adults around him.

### Cognitive or "School" Skills

Three of the five items for cognitive skills indicative of school readiness received responses which matched Western norms. Two items, however, were given Late answers, those involving counting from one to ten, and recognising and naming colours.

Though pre-schools are an active commitment on the part of Niue's Education Department, and a preschool is available in every village at least once a week, many parents do not take their children to these sessions. Further, many parents still feel that it is the job of the school not parents to teach things such as counting. What is appropriate to school belongs there, not necessarily in the home so there is little concerted effort to teach children outside the school. Although Niueans value education and achievement, the family and its subsistence needs takes precedence over school needs (see also Frankovich 1974). So a child is encouraged to learn first the skills that will enable him help the family in its food production or household efforts and only later to learn other "school-type" things.

### **EMOTIONAL MATURITY AND INDEPENDENCE**

Seven items, dealing mainly with the three-to-six year old child, were covered under this heading. Two questions

concerned emotional maturity while the other five dealt with issues of autonomy, as shown in Table 40.

Only two of the seven questions in this section received replies which matched Western norms. These two items, considering the interplay between a child's physical abilities and his sense of independence/maturity, dealt with going to the toilet unaided and his ability to handle pointed scissors safely.

All other items in this section dealt with emotional and social maturity. All were given Early answers.

TABLE 40

MEDIAN RESPONSES TO ITEMS ABOUT EMOTIONAL MATURITY AND INDEPENDENCE

<u>Question Number</u>	<u>Description of Skill</u>	<u>Western Norms</u> (months)	<u>Median Niuean Response</u> (months)
14	Goes to toilet on own	33 - 39	36 Matching
46	Leaves mother easily	30 - 36	18 - 24 Early
29	Uses pointed scissors safely	45 - 54	48 Matching
17	Does not cry when frustrated	54 - 60	36 Early
36	Stays home alone for an hour	60 - 72	48 Early
11	Disagrees without fighting	66 - 78	48* Early
48	Helps regularly with chores	66 - 78	60 Early

(\* Excludes 4 replies of "never")

Children's Learning Of Stoicism

Question 17 (not crying upon frustration) is a corollary of question 22 (signalling a want without crying) discussed above. A child must learn early to tailor his wants and to withstand disappointment. Crying in the years beyond infancy is not tolerated, by adults or the peer

group, especially if those cries arise because wishes have not been met or have been frustrated in some way. A child must learn to accept socially frustration and disappointment and to extinguish quickly any signs of anger or resentment.

Life is tough. Part of this "toughness" is that "into every life a little rain must fall", rain in the form of disappointment of personal desires, frustration in reaching goals or effecting change, and physical pain. Children are expected to learn to submit without fuss to painful procedures, be they huki (injections) from the doctor or cuffs from an irate parent, and to tolerate quietly pain from broken limbs, infections, burns, and bruises (Juniper 1922; see also Ablon 1973).

At Child Welfare Clinics, the reaction of every child to vaccination is carefully noted. A year old child who does not cry on being jabbed in the bottom with a needle during his measles vaccination is much admired by all. Smiles break out on watching adult faces and many approving murmurs of "strong baby" reverberate around the group of observers. Being slow to cry is a prized value for Niuean children, even from an early age. It is a characteristic that, in Niuean opinion, sets them above other, less stoical peoples. The medical staff on Niue, for example, frequently made disparaging remarks about children from elsewhere being "pain sensitive."

### Early Emphasis On Social Skills

Emphasis on early social skills, on an ability to get along with peers, and on the importance of the peer group as the prime socializing agent throughout childhood, is again exemplified in Niuean mothers's answers in this section of the questionnaire. A child's being able to leave or separate from his mother without distress is a skill vital to his incorporation into and success of peer group socialization in childhood. As the peer group takes over the child-caretaking role during the toddling period, about two years of age, it makes sense that Niuean mothers claim children leave them without distress by 24 months of age, instead of the 30-to-36 months reported in the Western literature.

This emphasis on early acquisition of social/interactive skills is entirely consonant with Polynesian values and social organization. It is found in other Polynesian societies, for example, among Cook Island Maoris (Graves 1978; Graves & Graves 1978), Hawaiians (Gallimore, Boggs & Jordan 1974), the New Zealand Maori (Ausubel 1977; Ritchie & Ritchie 1979), and Samoans (Metge & Kinloch 1978).

### Physical Aggression

The peer group cares for all children past infancy and is the primary agency of chastisement for wrongdoing. Older children punish younger ones who display inappropriate emotions, engage in anti-social actions or are verbally abusive. Quarrels, fights and disagreements among peer group

members are normal events, happening frequently, yet are usually quickly resolved by older siblings or peers without outside help. This situation has been discussed above in relation to Question 45.

The milestone of squabbling with peers without resorting to physical aggression, a sign of emotional maturity, is not easily achieved. The literature on child development gives a Western norm for expecting its acquisition as five-and-a-half to six-and-a-half years.

Interestingly, four mothers (31%) replied "never" to this item, reflecting another value in Niuean society. Here they were not considering the child so much as the place of physical aggression in Niuean life. Physical aggression, severely punished in the peer group, is recognised as one way to resolve (or keep alive!) those inevitable quarrels and feuds that exist between individuals or families in any society. Adult men (but not only men) who feel that their honour, their reputation, their virility, their manhood, is questioned or threatened by others, will frequently resort to physical aggression to resolve the issue. Fights between young men, fuata, at dances or social gatherings are very common. Further, spousal discontent often results in wife-beating. Children, too, on occasion are on the receiving end of physical punishment from an angry parent. Physical violence against persons is a fact of life on Niue.

To expect a child to acquire a milestone that is openly flouted by adults is not sensible. Hence, some mothers reasonably claimed that this milestone is never achieved by

their children. Why, then, did 69% of the mothers think their children achieved this marker of emotional maturity, and by the Early age of five years, too ?

### The Influence Of The Peer Group In Later Childhood

Mothers's answers reflected the peer group's low tolerance for and harsh punishment of outbursts of physical aggression which threaten the social cohesion of the group. The group is threatened not by an initiation of violence, for that is an acceptable display of emotion, of anger, but rather it is threatened by a child who refuses to stop or escalates the level of aggression after others have responded to his overt sign of anger. So, the peer group quickly punishes continued aggression.

Being able to disagree with a peer without kicking, biting, scratching or fighting is not necessary. What is vital is submission to the other members of the peer group and a hasty resolution to physical aggression. Older peers not only quickly break up fights but also, if need be, physically punish the offenders. Greatest wrath is reserved, however, for those who continue aggressive activities and who resent punishment enough to display anger (Levy 1969).

Hence, the social norm is for a child to cease fighting almost as soon as hostility breaks into actual aggressive activity. Mothers, then, referred to the age at which most children learnt to cease quickly their physical aggressions rather than to an age at which such outbursts would no longer occur.

### Outside The Peer Group

A marker of maturity for which it was difficult to find an expectation in the Western literature was the age at which people think a child can stay home alone for an hour. From discussion with Western parents and reading of several articles and books on child development, a time of over five years of age was finally decided upon.

Not often are children on Niue alone, they are usually with peers or some extended family group. It does sometimes happen though that a child is left alone. Then, unlike Western children, the child left on its own in the house or in a car, does not wander away, "get into mischief", pull things about, or get distressed but simply stays passively where he was left, often simply falling asleep. Children, exuberant and daring with peers and siblings, are afraid to leave the household when alone (Martini & Kirkpatrick 1981:194). Children who are cowed by being alone can safely be left on their own much earlier than can a child who is used to being on his own.

Thus, Niuean mothers claim four years is a reasonable time to expect a child to stay on his own for some time and they are not in error. Observation of young children in situations in which they were alone amply attest to the accuracy of the Niuean mothers's expectations. Men visiting their hospitalized wives in the early evening, for example, would sometimes bring their toddlers and pre-school children with them, leaving them alone in the car for an hour or so. Not once did those children come to harm. Not a one strayed

nor put so much as a foot outside the car despite the common habit of leaving the doors open!

Niuean children are rarely as alone as in the above example, not even during sleep. A Niuean child spends the first year or so sleeping with his parents or other adults in the household. When the child graduates to the peer group he is usually removed from the parental bed, not into his own separate bed but in with his siblings or others in the household. In contrast, Western children from an early age, sleep on their own, separated from others in the household.

#### Children And The Work Ethic

On Niue, children are economic assets from an early age. Not only is the work ethic well-established among adults (Lee 1974; Pollock 1979) but it is imbued early in children. Ages ranged from as young as three years to as high as seven-to-eight years in mothers's answers to item 48, when can children be expected to help regularly with household chores. By five years of age, the median response, a child is expected to perform regularly important household tasks.

Most mothers's made a distinction between the kinds of tasks suitable for boys and girls at this age. Already, even at this age, boys are expected to function in the public domain while girls remain closer to the house and domestic chores. Boys are expected to pick up rubbish around the house, to fetch and carry generally, and to help their fathers with such chores as feeding the pigs, filling the

water barrels, and carrying bush knives. Girls, however, are supposed to assist their mothers with domestic chores, sweeping the floors, tidying rooms, washing dishes and clothes.

#### YEAR-BY-YEAR DEVELOPMENT

Niuean mothers's expectations of child development were most similar to Western standards during the first year of life, when markers of physical growth outweigh other considerations. By the time a child reaches five years of age, however, Niuean cultural values and social process intrude so much that mothers's expectations of their children's development and abilities deviate completely from Western norms.

Of the 23 items dealing with milestones which begin sometime within the first twelve months of life, for example, Niuean mothers gave responses that did not match Western norms on five items (22%). All non-matching responses were Late. They concerned one fine and one gross motor skill, an intellectual milestone, and a personal/social skill.

Eight questions concerned development throughout the second year of life. Answers to 3 (38%) of these items were categorised as non-matching (all Late, in fact). These items involved a fine motor skill, an intellectual milestone, and a personal/social measure of development.

Seven (62%) of eleven questions concerning

developmental markers in the third and fourth years of life were given answers which did not match Western norms. Of the responses which differed from the literature-derived norms, two intellectual development questions were given Late replies while one item about emotional maturity/independence was rated Early as was one item on personal/social development.

None of the milestones of the fifth year of life received answers which matched Western norms. All items (100%)--four emotional maturity/independence questions and two personal/social development markers--were given Early responses.

This progression, from substantial agreement with Western standards in the first year of life to complete Early estimates of developmental achievement at later ages, particularly with respect to social and interactive skills, reflects more than Niuean cultural values: it also mirrors social organization and social process around child-rearing.

For multiple parenting to be possible, not only must children live in households with easy access to other adults, a condition that Chapter X showed in fact exists, but children must learn skills that will enable them to relate to other care-takers during infancy and early childhood. Moreover, for peer socialization to be successful, children must be expected and encouraged to acquire early those social and interactive skills that will allow them to become an integral part of a group, able

quickly to pick up and conform to that group's norms and values.

This is exactly what happens. As is made evident by the mothers's discussion of their child-rearing practices and values and by their responses to structured questions about salient milestones in the growth and development of children.

## CHAPTER XII

### MOTHERS AND THEIR RESPONSES TO SICK CHILDREN

Chapter XI revealed the extent to which Niuean mothers's views of child development both conform to cultural norms about the place of children in society and to societal child-rearing practices. This Chapter investigates how these same wider aspects of Niuean society influence mothers's responses to sickness in children.

This Chapter seeks to answer the questions: do Niuean mothers recognise typical signs and symptoms of illness in children? How do they respond to certain serious circumstances or symptoms? Do they respond appropriately in situations requiring urgent medical attention or do they delay seeking medical help? How do social organization, in the form of family and household constellations, and general cultural beliefs and values affect mothers's understandings of sickness in children?

To answer these questions, a structured questionnaire, about some important medical situations involving children, was presented to a small number of randomly selected mothers, the same mothers who responded to the section on child development. Details about the respondents have been presented in Chapter XI.

The results from this questionnaire are related to other data, gathered through intensive interviews, casual

conversations, and prolonged observation of mothers and their reactions to sickness in children. Most importantly, the data from the questionnaire are related to information from the "call system", data from telephone calls made on an emergency or out-of-hours basis to the hospital requesting advice or assistance with sick children. Thus, mothers's responses to the hypothetical vignettes in the questionnaire are related to their actual responses to sickness in children.

#### **VIGNETTES OF MEDICAL SYMPTOMS AND SITUATIONS**

Surprisingly, the literature describes few instruments that examine parents's ideas about children's health or their reactions to symptoms or signs of illness. From the few available tests, the instrument chosen to assess parental response to signs and symptoms of illness in children, was Stine & Chuaqui (1969).

#### **Development Of The Instrument**

To Stine and Chuaqui's (1969) list of vignettes of symptoms and situations, however, I added two questions, both of a serious nature, both involving ear disease. Despite ear infections being an extremely common pediatric problem with potential for serious long-term complications (Halfon 1985), this topic had been omitted from their test instrument.

The actual questionnaire used on Niue, then, consisted

of 40 questions or vignettes of medical situations or symptoms, each in the form "what would you do if ... ? " where ... was filled with a phrase like "your child cries every time she passes urine? " or "your baby has cried steadily for four hours? " (See Appendix 5 for the complete questionnaire). The situations and symptoms presented in the vignettes ranged from life-threatening conditions to harmless physiologic reactions, arranged in random order (Stine & Chuaqui 1969:2036).

The source for appropriate responses, against which to display the Niuean mothers's answers, was also Stine & Chuaqui (1969). Their instrument was designed originally for a large urban population with access to services not available on Niue. Thus, Stine and Chuaqui (1969) included replies inappropriate for the Niuean situation, replies like "telephone the physician for advice" or "consult a pharmacist."

So, in order to make the responses of Niueans comparable to those deemed appropriate by Stine and Chuaqui (1969), responses inappropriate to the organization of medical services on Niue (e.g., "consult a pharmacist") were eliminated. Hence, the response possibilities were simplified, to five choices.

Informants were handed a card on which these five choices were written:

1. ignore it as it is nothing to worry about
2. wait and see what develops
3. give the child a home remedy or medication
4. take the child to the doctor next day
5. take the child to the doctor or hospital immediately

Using this card as a guide to the type of answer expected, the mother was asked to describe in detail her probable response to each vignette or situation. The response she selected as appropriate for each question was then noted by its number from the card. The responses mothers made to the questions were then compared to the literature, to see how well mothers recognised serious conditions. Appendix 6 details the appropriate responses for each vignette in the questionnaire, by number on the Response Card.

Other details mothers gave as they discussed the situations presented in the vignettes were also carefully noted. Probing questions were used to establish the degree of urgency the woman gave to the situation and to discover to whom she turned for advice or reassurance. Where mothers said they had actual experience of making a decision about a situation, (e.g., a child's having a convulsion), they were asked to recall as far as possible the details of the event and the actions surrounding its resolution.

### Mothers's Reactions To The Questionnaire

The women who responded to this questionnaire recognised and understood without difficulty the situations being presented. Responses to the first question or two were often somewhat tentative until the mother was sure she was doing the task correctly, then her replies became more assured.

With ease, several women related occasions upon which they had been presented with just such a situation as

outlined in the vignette with respect to one or other of their children and they recalled how they handled that event. Such recall served to assure the mother she was understanding the task correctly and to flesh out the replies to the hypothetical questions.

On the whole, however, these were not pleasant topics for informants. They did not like contemplating such events. Mothers tended to relate the situations very concretely to their own children and to become slightly alarmed at the thought of the more serious situations affecting their child. Nonetheless, most completed the task adequately.

#### Mothers's General Responses To The Vignettes

Both the modal and median replies by the 13 Niuean mothers interviewed, to each vignette presented in the questionnaire, are detailed in Appendix 6.

Those women who responded to a particular vignette with a lower number from the Response Card than any thought appropriate are called "under-users", meaning they choose a response that under utilises available medical services. Those who answered with a reply of a number higher than that thought proper are called "over-users." A "Don't Know" response is here classed as an under-use response. The number of mothers who gave under- or over- use replies to each vignette are also shown in Appendix 6.

No vignette achieved a unanimous response. Eight vignettes, half being serious situations and half being harmless physiological reactions, were answered

appropriately by at least 75% (10 or more) of the sample of mothers. In only 19 of the 40 vignettes did a total of seven or more (more than 50%) Niuean mothers give appropriate responses. In the other 21 vignettes, mothers's answers were more widespread.

Underuse replies were more common than overuse ones. Overuse usually took the form of mothers saying they would give some form of medication or use a home remedy rather than simply waiting to see what developed.

#### **MOTHERS'S RANKING OF VIGNETTES BY SERIOUSNESS**

The 23 conditions ranked in the literature as serious are listed in Table 41, in order of degree of urgency. (These conditions consist of 21 from Stine & Chuaqui's (1969) original list plus the two additional questions on ear disease). These 23 conditions form the focus of comparison between the Niuean mothers and the literature.

The other 17 conditions tapped by the questionnaire are non-serious or non-urgent ones and, as all Niuean mothers regarded these as such, they do not require extensive discussion.

The median score Niuean women gave each vignette determined its rank on a scale ranging from "Serious, Needing Urgent Medical Attention" to "Wait And See What Develops." In practice, a Number 1 response, "It Is Nothing-Ignore It", was so difficult to distinguish from a Number 2 answer, "Wait and See What Develops", that replies

in these categories were collapsed together to produce a four point scale.

TABLE 41

SERIOUS CONDITIONS PRESENTED IN THE QUESTIONNAIRE,  
IN ORDER FROM MOST TO LEAST URGENT.

<u>Vignette Number</u>	<u>Symptom/Situation</u>	<u>Appropriate Response</u>
2	Swallowed rat poison	5
3	Head injury with vomiting	5
5	Ingestion of paint	5
9	Convulsion lasting 5 minutes	5
12	[Baby] lies flat, too weak to lift head	5
13	Convulsion lasting less than 5 minutes	5
22	Ingestion of large quantity of aspirin	5
37	Urinary obstruction	5
1	Cold with rapid difficult breathing	4,5
14	Hoarseness with cough	4,5
15	[Baby] Early fatigue	4,5
17	Cough with chest pain	4,5
23	[Baby] Urinary frequency with crying	4,5
27	Fever with discharge from ear	4,5
28	Red urine	4,5
29	Swollen, red eyelid	4,5
31	Blood/phlegm/pain on bowel movement	4,5
33	[Baby] Loss of appetite	4,5
35	Red, swollen painful knee	4,5
36	Unrecognised rash on face and chest	4,5
8	Dysuria	4
20	Ear pain, lethargy, irritability	4
25	[Baby] 8 bowel movements in 12 hours	4

Niuean mothers's ranking of vignettes by seriousness of situation/symptoms approximates that of Stine and Chuaqui (1969). Vignettes appear in much the same sequence in both the literature and the Niuean lists but there are notable alterations in the degree of seriousness or rank assigned the vignettes by the Niuean mothers, as Table 42 shows.

TABLE 42

NIUEAN MOTHERS'S RANK OF SYMPTOMS BY SERIOUSNESS,  
RANKED BY MEDIAN SCORES.

Rank V: Serious, Needs Urgent Medical Attention

Median Score 5:

Ingestion of rat poison

Median Score 4, Mode 5:

Head injury with vomiting

Convulsion lasting less than five minutes

Ingestion of aspirin

Rank IV: Serious, Needs Medical Attention Within 24 hours

Median Score 4:

Ingestion of paint

Dysuria

Convulsion lasting over five minutes

Crying steadily for 4 hours

Baby lies flat, too weak to lift head

Cough with chest pain

Ear pain, lethargy, irritability

Ear discharge with fever

Red urine

Blood, phlegm, pain on bowel motion

Unrecognised rash on face and chest

Urinary obstruction

Rank III: Not Very Serious, Use Home Remedy Or Self-Medication

Median Score 3:

Child cold, with rapid, difficult breathing

Cough

Ingestion of cigarette butts

Hoarseness with cough

Urinary frequency with crying

Red, swollen eyelid

Low grade fever

Red, swollen, painful knee

Rank II: Wait and See What Happens/Ignore It

Median Score: 2 or 1

All other vignettes

**Rank V--Serious And Urgent**

Niuean mothers agreed that the ingestion of rat poison (Vignette 2) was an emergency situation meriting immediate medical attention. This vignette was the only one to receive both a median and modal score of 5. Also included within this rank were three vignettes with modal scores of 5 but median scores of 4. These were Vignettes 3, 13, and 22, dealing with head injury with vomiting, convulsion less than five minutes, and ingestion of aspirin, respectively. These rankings parallel those of Stine and Chuaqui (1969).

**Rank IV--Serious But Not So Urgent**

Next in the women's ranking were those with median scores of 4, indicating a need to take the child to a physician within 24 hours. Twelve vignettes fell into this category. Stine and Chuaqui (1969) rate some of the vignettes in this rank higher than do Niuean women, as 5's rather than as 4's. This is true of Vignette 5 (ingestion of paint), 9 (convulsion lasting more than five minutes), 12 (flaccid, weak baby), and 37 (urinary obstruction). For some unclear reason, perhaps because fine time distinctions are unimportant in Niuean culture, mothers rate convulsions lasting less than five minutes as more serious than convulsions lasting longer.

**Rank III--Slightly Serious But Not Urgent**

A total of eight vignettes fall into the third rank, those with median scores of 3, indicating situations Niuean

women thought amenable to home remedy or self-medication. This rank is the one most different from the reference literature. To all of the vignettes Niueans put in this rank, Stine and Chuaqui (1969) ascribe a different score.

The two authors, for example, ascribe at least a 4, if not a 5, to Vignettes 1 (rapid difficult breathing), 14 (hoarseness with cough), 23 (urinary frequency with crying), 29 (red, swollen eyelid), and 35 (red, swollen, painful knee). Niuean mothers, however, rate these as less urgent conditions, preferring to deal with them on their own, and so score them as 3's. While Stine and Chuaqui agree that Vignettes 4 (cough), 6 (ingestion of cigarette butts) and 30 (low grade fever) could belong in this category, could be treated by a home remedy, they also give these lower scores, indicating they should be watched for developments as much as treated.

Judging by their response to Vignette 1 (a child with signs of a cold who later breathes rapidly and with difficulty), Niuean mothers seemed not to recognise some signs of serious respiratory distress. This is surprising given both the frequency with which this population of children suffers respiratory distress and the extent to which children are taken to physicians at the first signs of breathing disorder. Mothers responses to Vignette 17 (cough with chest pain), however, would suggest they do adequately recognise serious respiratory problems.

So their response to Vignette 1 must be due to something else. Perhaps, because the most common respiratory

disorder among Niuean children, wheezing bronchitis, has a different symptomatology mothers do not "recognise" this vignette. Or, more likely, it may be that being the first vignette, mothers were not sure of the task and responded hesitantly with a "middle-of-the-road" answer.

#### Rank II--Not At All Serious

All other vignettes Niuean women assign to the least serious rank with the least need for medical supervision. Given this low rank, and therefore missing from the Niuean list of serious situations/symptoms, are Vignettes 10 (hayfever symptoms), 19 (swallowed coin), 25 (8 bowel motions in 12 hours) and 39 (stomach pains while eating). All of these, Stine and Chuaqui see as worthy of a score of 4, if they persist for a long time or do not respond to home treatment.

Further, Niuean women grossly underrate, by placing them in this class, two conditions which Stine and Chuaqui view as extremely serious, as worthy of score of 4 or 5. These are vignettes 15 and 35, both of which refer to a baby, with early fatigue and with loss of appetite, respectively.

So, the first 20-some vignettes in Stine and Chuaqui's ordering by seriousness are also, by and large, the first 20-odd vignettes on the Niuean list. The main differences lie in whether or not the mothers agreed that a response of 4 or 5 was proper; that is, in whether or not all conditions merited attention by a physician within 24 hours.

This sample of young Niuean mothers, those with first children under the age of five years, recognised as serious only 15 (65%) of the 23 vignettes to which the literature assigns a degree of urgency, a score of 4 or 5. The remaining eight "serious" vignettes Niuean mothers ranked with scores of 3. Moreover, mothers elevated to the serious ranks (to Rank IV), one condition which Stine and Chuaqui thought less urgent, Vignette 11 in which a baby cries steadily for four hours.

The women felt the remaining 16 conditions were worthy of responses 1 or 2. In contrast, Stine and Chuaqui assigned fewer, only ten, conditions to 1 or 2 alone. For nine other vignettes that portrayed symptoms which could persist for 24 hours or more or for which mothers could need reassurance, these authors offer as appropriate a response of 4 in addition to the lower rank.

#### **DELAYS IN SEEKING HELP**

For each informant, responses to the 40 vignettes were divided into categories labelled appropriate, over-use, and under-use responses, as described above. The ratio of over-use and under-use responses to appropriate ones was then calculated. This is one way to test for any tendency to delay seeking medical help for sick children as a high proportion of under-use responses indicates a willingness to wait for developments in illness (i.e., delaying) rather than seeking immediate help.

For the entire sample, there was a median of six over-use responses, 11 under-use responses and 23 appropriate replies to vignettes. Only three women answered at least 2 out of every 3 (67%) of vignettes with appropriate replies. Four women gave appropriate responses to between 50% and 67% of the vignettes. The remaining six women, nearly half the sample, gave appropriate responses to less than 20 (50%) of the total of 40 vignettes, the majority of their responses falling into the under-use category.

For 18 of the total of 40 vignettes, under-use replies were most common, the number of under-use responses exceeding the sum of the appropriate and over-use responses. Fourteen of these 18 vignettes (78%) represented serious conditions.

Hence, mothers tend to respond to serious vignettes with answers suggesting they would under-use (i.e., delay seeking help) available medical services. This is particularly true for the more serious situations presented. In situations in which mothers are doubtful, of the importance of the symptoms or the potential consequences of delay in seeking help, they are more likely to wait and see what develops than to take the child to a physician.

Mothers's ideas about how to deal with less serious conditions were appropriate and similar to the published ones. But their responses to potentially life-threatening or urgent situations frequently indicated women did not understand the potential consequences of delay or did not realise the symptoms were serious.

### Effects Of Maternal Age And Education

Considering the 23 vignettes denoted by the literature as serious, there is considerable variation by informant in the ratio of under- to appropriate responses to these vignettes. Under-use to appropriate response proportions for this block of serious vignettes ranged from 5% for one informant to 76% for another. The median was 33%

There are significant differences by mother's age and education in the number of under-use responses made to these vignettes. The younger a mother, the more likely she is to give under-use responses to serious vignettes ( $\gamma = -.15$ ,  $z = -2.16$ ,  $p < .03$ ). Women under 25 years of age, for example, had a median of 11 under-use responses whereas older women had a median of 5 under-use replies. Education was even more strongly associated with the number of under-use responses mothers made to the serious situations ( $\gamma = -.89$ ,  $z = -0.4975$ ,  $p < .005$ ). Women who had received any form of additional training beyond High School level, whether as a teacher, a nurse or a typist-clerk, had a median number of under-use responses of 2. In contrast, mothers who had only some High School education had a median number of under-use responses of 11.

It is reasonable to expect number of children to affect a woman's ability to respond to these vignettes. The more children a woman has, the more experience she should have of child-raising and of making decisions about a variety of medical situations involving children. Interestingly, for this sample of women, number of children was not related to

maternal age, education or tendency to give under-use responses.

So, certain kinds of Niuean mothers--those who are young or less educated--are more likely to make under-use responses to the serious vignettes, to delay seeking help. Delay in seeking professional help, whether through non-recognition of symptoms or inaccurate assessment of the need for urgent attention, can lead to undesirable consequences, such as difficult or unusually extensive treatment, prolonged recovery or even, in extreme circumstances, death. This section focuses upon mothers's responses to those 23 conditions given a 5, 4-5, or 4 as appropriate responses and thus ranked as serious by the literature. Instead of considering here each vignette individually, reference is made to types or categories of disorder which logically belong together; for example, to all the vignettes involving urinary conditions.

#### Ingestion of Poisonous Substances/Foreign Objects

Mothers generally recognised that the ingestion of poisonous substances--rat poison, paint and aspirin (Vignettes 2, 5 & 22)--as an emergency situation requiring rapid response. No mother felt these were situations to be ignored.

Despite this, only 41% of replies indicated that the women would seek immediate medical help. Medical help should be sought the next day according to 31% of the replies. Eight percent of the replies to these vignettes about

poisons were "Don't Know". All such answers were qualified by the women saying they would ask their mothers, or in her absence, their husband's mother or other older female relative, for advice in such situations.

Another form of delay in reaching medical services was mentioned in relation to this type of disorder. Twenty percent of mothers talked about first inducing vomiting by a variety of means--putting fingers down the child's throat, giving salty water to drink, giving raw egg or milk--and thereafter immediately taking the child to the hospital. While these first aid measures are understandable and sensible responses, nonetheless, there are some associated risks of which mothers seemed unaware. That the child might aspirate his/her vomitus or that there might be an undesirable reaction between poison and emetic did not occur to these women.

Niuean women distinguished one relatively harmless instance of ingestion of foreign substances from more serious situations. Cigarette butts being swallowed by an infant, vignette 6, was correctly assessed by all mothers as harmless. The majority of mothers, though, said they would try to induce the child to spit up or vomit the butts but they intended no further action if effort proved unsuccessful.

Similarly, most mothers felt that a child who swallowed a small coin was in no immediate danger. Most women (77%) commented that they would "let nature take its course", with or without a dose or two of some laxative to help. All these

mothers said they would check to see that the child eliminated the coin within a day or two, and only if that did not happen would they seek medical attention. Two women were not sure if this constituted a problem or not, answering with a "Don't Know".

### Neurological Disturbance

Head injury with vomiting and convulsions of any duration (Vignettes 3, 9 & 13) were the neurological disturbances presented in the vignettes. In all cases, the appropriate response was to give the child immediate medical attention. Mothers's replies to these vignettes, however, were widespread. A substantial proportion of responses under-rated the seriousness of these situations.

The greatest proportion of replies, 38%, said that medical help should be sought next day; 31% of answers asserted immediate help would be best. Five percent of replies dismissed these vignettes as "nothing to worry about" while another 10% said they would "wait and see what developed" before seeking medical help for the child. Some replies (5%) suggested home remedy as an adequate response, cooling the child with cold compresses. Ten percent of answers were "Don't Know".

### Urinary Problems

Vignettes 8, 23, 28 and 37 presented the mothers with four different urinary problems: dysuria, frequency with

crying, red urine and urinary blockage, respectively. There was considerable variation in mothers's responses to these vignettes.

Just under half (46%) of the responses were to take the child to see a physician within 24 hours, while 23% opted for immediate attention. A further 25% of replies ranged from "no immediate problem--wait and see" to unspecified home remedies. Six percent of responses were "Don't Know".

### Respiratory Distress

Three vignettes involved respiratory distress to some degree. As discussed above, Vignette 1 was not recognised by these mothers as serious yet Vignette 17 was so acknowledged. Of the replies to vignette 17, cough with chest pain, 69% were for a score of 4 or 5 from the response card. Fifteen percent of replies mentioned the use of cough syrups or home remedies for this problem, while another 15% waited to see what eventuated.

Respiratory distress accompanied by hoarseness, vignette 14, was not recognised as a serious condition. It was treated very like Vignette 4, a simple cough. For both these situations, the majority of mothers intended initially to administer self-treatment and then to seek medical advice only if symptoms persisted unabated for a day or two.

### Ear Infections

Most mothers (80%) had no difficulty in recognising ear infections (vignettes 20 and 27) as serious enough to be

treated with 24 hours or even immediately. Some 20% of replies, however, indicated self-management of these conditions would suffice.

### Bowel Disorders

Abnormality in bowel function was uniformly perceived by these informants. One vignette was rated as serious whereas the second was not.

The vignette (number 31) which presented the case of a child who complained of pain and visible blood and phlegm on bowel movement was treated seriously by 11 of the 13 mothers; they all said they would take the child to see a physician within 24 hours. One mother planned an unspecified home treatment and one said she did not know what to do.

Similarly, there was considerable agreement about vignette 25 in which an infant produced 8 bowel motions in 12 hours. Ten of the mothers felt this was not an abnormal event; three expected to take the child to a physician within 24 hours if the condition persisted.

### Rashes and Swellings

Less agreement between informants was evident for three conditions that involved abnormalities in appearance--a new rash on chest and face (vignette 36), a red, swollen eyelid (vignette 29) and a painful, red, swollen knee (vignette 35).

Altogether, 54% of replies felt these conditions merited medical attention within 24 hours. The remaining 46%

of replies were mostly "wait and see what happens". Fifteen percent of answers mentioned some form of home treatment, usually cold compresses to reduce swelling. Ten percent of replies were "Don't Know."

#### CERTAIN CONDITIONS IN INFANCY

Signs of sickness in infants are often diffuse and muted. With their tiny bodies and immature organ and immune systems, babies can be quickly overcome by disease. Whatever the cause, say, dehydration because of diarrhea or a respiratory infection, very young children are rapidly exhausted by sickness, eventually becoming totally limp and too weak to even lift their heads. At this juncture medical treatment is urgently needed if the child is to recover fully.

It is important, then, that mothers recognise signs of sickness in their babies, preferably before they reach the point of total collapse, and that they quickly get medical assistance. To test the mothers's knowledge of danger signs in infants, eleven vignettes referred specifically to a baby or infant under 12 months of age, and a range of situations from serious to mundane were presented.

Niuean mothers were adept at recognising and appropriately dealing with less serious conditions, such as temper tantrums or lack of a bowel motion on any particular day. With more serious signs of illness in infants, however, mothers were not so skilled, either at recognising the

potential seriousness of the situation nor at seeking medical help fast enough. Table 43 gives details of Niuean mothers's responses to the vignettes about infants.

Flat, Weak Baby

The only condition ranked as serious by Stine and Chuaqui (1969) for which mothers would seek medical help was when the baby was limp and too weak to lift its head. But even then help would not be sought immediately. Five mothers said they would take the child to the doctor the day after the baby was first noticed to be limp and weak. Only four women recognised this as a danger sign, saying they would seek urgent attention for the infant. A further two mothers said this was not a sign to worry about. One said she would wait and see what developed before seeking assistance. One mother intended to treat her infant with an unspecified home remedy.

TABLE 43

NIUEAN MOTHERS'S RANKING OF VIGNETTES REFERRING TO INFANTS, IN ORDER FROM SERIOUS TO RELATIVELY INNOCUOUS.

<u>Vignette</u>	<u>Appropriate Response</u>	<u>Median Niuean Response</u>
12 Lies flat, too weak to lift head	5	4
11 Cries steadily for 4 hours	2, 3, 4	4
6 Ingests cigarette butts	1, 2	3
23 Urinary frequency with crying	4, 5	3
15 Early fatigue	4, 5	2
33 Loss of appetite	4, 5	2
25 8 bowel motions in 12 hours	4	2
34 Forceful vomiting of supper	2	2
32 No bowel motion all day	1	2
26 Uninterested in playing	2	1
40 Angry, crying, holds breath	1	1

Early fatigue, loss of appetite, and urinary frequency with crying were not seen as potentially serious situations requiring medical assistance. Nor were eight bowel movements in 12 hours necessarily regarded as a sign of sickness.

### Diarrhea

This vignette, number 25, drew extensive comment, showing that mothers were aware of the significance of eight soiled diapers in 12 hours as an indication of diarrhea in infants. Every mother, in response to this vignette, however, said the colour, odour, and consistency of the feces, and the child's age and diet, needed to be considered before thinking this a sign of illness.

Providing the feces were firm, were yellowish-brown in colour and did not smell offensive, then this number of bowel motions in a short time period was not abnormal. Moreover, if the child were very young, newborn to about one month of age, or, if older, were known to have eaten large quantities of fruits or fruit-juices, then this was nothing to worry about.

If any of these conditions were violated, however, mothers said they would seek medical aid within a day of first noticing the condition. Thus, contrary to what might be expected from examination of the median response alone or even the distribution of total responses, mothers had a good sense of what constituted abnormal bowel motions in infants and had realistic plans for dealing with such a situation.

## Crying

Whereas Stine and Chuaqui (1969) regarded a "wait and see what develops" response as appropriate, mothers reacted much more vigorously to a baby's crying steadily for four hours, taking it to be a sign of distress requiring medical attention within 24 hours. This aggressive response to what is elsewhere regarded as a minor problem probably reflects two things: the general demeanour of Niuean babies and the mothers's beliefs about the cause of an extended period of crying.

Niuean babies rarely cry much and then usually only for brief periods (cf. Gallimore, Boggs & Jordan 1974). Infants are not left unattended, even when asleep, and their needs are met immediately. Moreover, Niuean infants, like Polynesian babies in general, are easily and quickly pacified, especially by cuddling. Hence, a child who cries steadily for a long period is acting quite "out-of-character" in an alarming way.

Some mothers claimed that an infant would only cry so if it were being "touched by an aitu". In such a case, the appropriate treatment is to ward off the aitu, through traditional (healing) methods, and to ensure the child is unharmed by its experience. A loving and cautious parent would use as many means as possible, traditional and modern, for ensuring that the child was safe and well after such a dangerous encounter. So, consultation with a (Western) physician in this event becomes understandable as a prudent precaution.

## CHARACTERISTICS OF SITUATIONS DEEMED SERIOUS BY THE MOTHERS

For eight vignettes--numbers 2, 3, 5, 9, 12, 13, 22 and 37--the literature gives as an appropriate response number 5, "immediate attention by a physician" (Stine & Chuaqui 1969). Only 70% of the sample of young Niuean mothers, however, gave these vignettes replies that reflected that degree of urgency.

For these most serious emergency conditions and for all others ranked as requiring urgent attention, around one-third of Niuean women consistently under-rated the need for immediate treatment, substituting instead the use of home remedies or self-medication. Poisonings were the situations which generated most "prompt attention" replies but even so only 41% of responses indicated this was the best strategy in such circumstances. For all types of serious disorder, the majority of mothers chose to wait overnight and take the child to a physician if the symptoms persisted.

Thus, delay in seeking treatment is common, for serious as well as more mundane matters. Niueans might be given to horror and panic in the face of medical emergencies, but they are not necessarily spurred by that into seeking prompt attention. Their fatalistic outlook is likely to assure them it is too late or will not work anyhow. If the patient does not succumb within a short time then medical attention can be sought.

From Table 42, there seem to be three categories of disorder to which Niuean mothers recognise as serious and

for which they will seek medical attention, if not with alacrity at least with some degree of promptness. These three categories of disorder are: Ingestion of known poisonous substances; some obviously abnormal bodily output; and, grossly "wrong" or unusual body appearance which is visible or public.

The first category, ingestion of poisons or restricted items, is fairly obvious. What is not so clear from this questionnaire and analysis is how mothers would respond to a substance not well-known as dangerous. Observation leads one to suspect that prompt attention would not be given, not until obvious signs of distress are manifest.

Problems that result when fluids or other natural products are produced inappropriately or are not voided normally are subsumed under the second category. It includes both improper outputs from the body--discharges from ear, bowel, bladder or mouth, especially if that discharge is suggestive of blood (red in colour) or accompanied by pain--and problems arising because the body is abnormally retaining its usual output--urinary blockage.

Hence, discharges from orifices which do not normally have them, or normal fluids which suddenly seem to contain blood or pus, seem to prompt close if not always speedy attention. Complaints of pain alone are rarely listened to, partly because of a value of stoicism in Niuean (and all Polynesian) cultures (Juniper 1922; see also Ablon 1973). But pain which accompanies unusual discharges serves to legitimise further the idea that the disorder is serious.

Extreme weakness in infants; lethargy and irritability; convulsions; excessive crying; and, unrecognised rashes on chest and face, comprise the third category. These problems are highly visible or public problems which alter a child's demeanour or appearance in a very undesirable way and so lead to intense scrutiny by the mother and treatment.

Several mothers commented on how important it was that the rash in vignette 36, for example, manifest itself on the face as well as chest. Indeed, closer examination of the vignettes Niuean mothers rated as serious will show that many involve the head in some sense or other, for example, head injury with vomiting or ingestion of poisons.

This accords well with Niuean belief that the head is a very special, tapu, sacred, region of the body and the seat of complex emotions and skills. The head is involved in many images of power and proper social relations; activities involving the head are rife with symbolic values above any biological worth. So, illnesses or disorders which affect the head are likely to be noticed promptly and assessed as serious. Treatment deemed proper to such injuries, however, might still be delayed somewhat or be felt to lie more in the province of the traditional healer than the Western-trained medical professional.

#### **"DON'T KNOW" RESPONSES**

Interestingly, it was only in response to the category of vignettes that the literature ranked as "serious" that

mothers gave any "Don't Know" responses. Less harmful conditions elicited unhesitating replies from all women. Description of more serious conditions, however, sometimes drew no response at all for a long time or else elicited a hesitant and tentative reply.

Twelve out of the total of 13 "Don't Know" responses occurred in answer to this group of 23 vignettes which the literature rated as serious. Thus, replies of "Don't Know" constituted 4% of the answers to serious vignettes and do not feature at all in replies to less serious vignettes.

This high number of "Don't Knows" within this serious/urgent-attention-needed category does not necessarily signify ignorance on the part of the mothers. Rather, it indicates their recognition of the seriousness of these vignettes and is an expression of horror, panic and fear in the face of such an event. To a large extent, "Don't Know" was a measure of a woman's discomfort with these vignettes, a sign that she was overwhelmed by the contemplation of possible or real danger to her child(ren).

All the "Don't Know" responses were made by women with low educational qualifications. Women with advanced training in any field seem to gain confidence in their abilities, to handle a questionnaire such as this one, to handle unusual situations affecting their children, to make decisions on their own and to stand by the consequences of those decisions. This difference in "Don't Know" responses between low- and high- educated women is very significant and independent of the woman's parity or age.

On many occasions, women qualified their "Don't Know" answers by saying that they would consult their own mothers and ask her advice and help in these situations. Only two of the women (25%) actually lived in the same household as their mothers while the rest of the women lived in nuclear households, close to either their own or their husband's mothers or other kin.

This use of their own mother as an authority allays the fear, spreads the responsibility for the decision, and calls into play the mother's support group. Further, it highlights the importance of the child's (maternal) grandmother in his up-bringing and welfare. This is especially important for the children of women with few educational resources or skills.

Moreover, this fits well with the Niuean belief that a woman learns to parent on her first and second children, a learning that takes place under the watchful eye of her own mother. To aid in this process, it is thought that a woman should live with her mother while she has just one or two children and until she has learnt to parent and has proven herself capable. The grandmother is the authority figure. She is the one with experience and in times of distress or unusual situations, it is she who steps to the fore and makes decisions, teaching her daughter how to respond correctly to her children and their problems.

Hence, a woman who seeks advice from her mother or other older female relatives when confronted with situations such as those described in the serious vignettes is not

unduly delaying seeking competent help. In fact, she is actively seeking competent help, albeit not in a medical field.

Thus, "Don't Know" responses become clearer. They are not so much admissions of ignorance as acknowledgments that these young, lesser educated mothers lack the experience and understanding necessary for a decision in serious situations. In matters of less importance, these mothers have enough experience and wisdom to make the correct decision, but in a potentially life-threatening situation they do not. Then they should--and do--turn to those who have the wisdom and experience to understand the situation, to their own mothers and other close, older female relatives, or even to a husband's mother and aunts.

#### **MOTHERS'S ACTUAL USE OF ELDERS FOR ADVICE ABOUT CHILDREN**

Many times women were observed and reported using their own mothers, their husband's mothers and other older female relatives for advice about children thought to be sick. Even when mothers were sure of the correct course of action to take with respect to a sick child they are likely to seek reassurance and comfort from others. Mothers reported checking with their mothers or husbands' mothers only for incidents they suspected were serious, such as convulsions, head injury, ingestion of poisonous substances and similar occurrences.

Consider the occasion when an 11 month old child, a

fifth child in the household, had tried to pull himself up to stand by grasping hold of a large, heavy piece of sculptured wood standing in the corner of a room. The ironwood statue was not fixed to the floor or walls and, with the infant's tugging at it, it fell on top of the child, striking him a heavy blow on the forehead. The child's screams not only brought his mother running in from the clothesline where she had been hanging the laundry but they also attracted his maternal grandmother who was in her shed next door weaving mats.

By the time the women arrived, within seconds of the screaming, the child had a large reddish-blue lump forming on his forehead, his eyes were glazed and he stared dazedly but fixedly at his mother. Sweeping the infant into her arms, the mother immediately asked the older woman, in a rather hysterical fashion, if the child was dead, if it was serious, should she take the child to the village clinic. The grandmother tried to calm her daughter down, assuring her the child was not dead--yet, she kept pessimistically adding--but was badly hurt. Neither could decide if it was better to take the child to the clinic or call the hospital from the Pastor's phone.

By now, young wives, the next door neighbours, hearing the commotion, had arrived and crowded into the room to offer their advice, their sympathy, their alarm. After a few chaotic minutes when all seemed to offer contradictory advice, the grandmother remembered that the Island Round van had not yet been through the village but was due imminently

so she urged her daughter to hurry with the child to the clinic to await the doctor's arrival. She seemed to be the only one who was calm and capable, the younger women merely flapping their hands and worrying aloud.

Just as the daughter left carrying her now semi-conscious son cradled in her arms, the child began to vomit. At this further sign of damage, the young mothers collectively broke into wails of distress while the mother ran to the clinic with her burden. Again, the older woman calmed the younger ones, assuring them that the doctor would be there soon and the child better once it got to hospital.

Within minutes the Island Round van arrived. The doctor hastily arranged for a van to come to pick up the mother and child and deliver them to the hospital for X-rays and admission. While waiting, first for the doctor and then for the van to arrive, the younger women stood around and discussed the event and the mother sat comforting her child. The boy's grandmother put some clothes for mother and child into a suitcase ready for the trip. While busy at these tasks, the older woman kept up a steady string of information, advice, and reassurance, aimed at herself as much as at her daughter and the neighbour women and anyone else within earshot.

Meanwhile, an older son arrived home. Within about fifteen minutes the Health Department's van arrived, when mother-and-son left without further ado, the mother content that her older child would be looked after without any need for specific mention or arrangement to be made.

This was but one occasion when the presence of an older woman was reassuring to more than just her immediate household in the event of a major emergency. By and large, older female relatives, both close and more distant, are of considerable importance in teaching a mother how to correctly respond to children's illnesses.

#### **MOTHERS' RESPONSES TO ACTUAL ILLNESS IN CHILDREN**

Niuean mothers's responses to a series of hypothetical medical vignettes about a variety of symptoms or situations common to children, discussed above, suggested that mothers under-rate the seriousness of symptoms and delay seeking-help. But how do mothers respond in real life to actual situations in which their children experience some sort of medical problem?

One way of answering this question is to analyse the data collected by Niue hospital's "Call Books." This procedure compares the small, random sample of "new" mothers who answered the questionnaire, those whose eldest child is under five years of age, with the wide range of individuals who telephone the hospital for help with a child's medical problem.

The latter people are "new" mothers, grandmothers, fathers, nurses in the community, mothers with older children, relatives and neighbours. This comparison will help discover whether or not the group of mothers selected to answer the vignettes gave "culturally expected" replies.

Also, it will broaden the base for understanding Niuean parents's responses to illness in children by considering school children and teenagers as well as babies and preschoolers.

#### THE "CALL BOOK"

Kept by the telephone operator or the nurses on afternoon or night duty, this "Book" registers every telephone call made to the hospital which requests medical assistance or advice. Calls usually are made on weekends or on weekdays outside of normal working hours. The person at the hospital who accepts the call fills in a special form for each call, and at the end of every month these forms are bound together into a "Book", giving a complete month-by-month register of telephone calls.

Designed to assist the doctor on call to assess the seriousness of the case and to arrange prompt, correct treatment, the form requires the hospital employee who answers the phone to elicit certain kinds of information. Obviously enough, it begins with date and time of call and then patient's name, sex, age and village. It also asks for information about who lodged the call. As well as asking the caller to describe the problem in their own words, it asks for an estimate of the duration of the problem. A series of standard questions, such as "is there bleeding?", "is there pain?--where is it located?", "is the patient conscious?", and so forth, completes the form.

When the call is complete, the form is handed to a driver who delivers it to the on-duty doctor. The physician then decides whether to send the driver to collect the patient and bring him to the hospital for immediate examination, or if it would be better to send the driver and a staff nurse to the patient with medication, or if the problem can safely wait until the next morning's clinic. Occasionally, the on-duty physician wrote on the form what treatment he recommended and whether or not the patient was admitted. This was not a routine procedure, however, so such messages were not a reliable measure of all admissions from calls. Nonetheless, they do give some indication of the degree of seriousness of the complaints.

#### Information Available From "Call Books"

The basic information on the telephone call forms, however, is useful, giving insight into "emergency" calls made on behalf of children. The age, sex, and village of the sick child; the reasons for the call; who made it; and, an estimate of the duration of the problem before being brought to the attention of the medical staff, can all be garnered from the "Call Book."

Unfortunately, not all staff who took calls filled in all the details so there was considerable variability in exactly what details could be gained from any one form. Over the course of several months, through several "Call Books", however, enough reliable data was gathered to enable analyses to be done.

Data for this section were gleaned from "Call Books" kept in 1982. The records of calls for three months-- January, July and September--could not be located so the following analyses refer to a nine month period commencing February, ending December 1982.

The date and time of call was usually but not always present on the forms. Questions about the name, age and village of the patient were virtually always completely filled in but for some 10% of child-complaints the sex of the child was not indicated. This is partly because these records, made for the staff's own use and not intended for any other purpose, already gave enough information for staff to know if the child were male or female. Often name alone was sufficient or, failing that, a combination of name, age and village would identify a particular child.

Always completely specified on the forms was the patient's complaint, albeit sometimes rather briefly. Complaints varied a lot in specificity but a general, broad idea of the problem could be discerned. Some staff, for example, would write "difficult breathing, wheeze, cough--?asthma" while others felt "breathing problem" would suffice. Terse though the latter description is, it nonetheless enables it to be easily distinguished from other types of distress and coded as "respiratory problem", adequate enough for analysis.

Less rigour was shown in giving information about who made the call. Sometimes the person who lodged the call was identified by name or nickname only, which made tracing the

relationship between caller and child-patient difficult if not impossible. Usually though the caller was noted by role as well as name; for example, "mother", "S/N Manogi at clinic" or "uncle."

There was a problem, too, with the replies to questions about the duration of the complaint. Little variation was found in answers to duration. From this it was not clear if staff set down the caller's actual words or if, when filling in the form, the on-duty staff had a set of stock answers which they used to "translate" the caller's answer into a more standard form.

Disorders which had persisted for more than one day were noted by number of days, but most calls were made about complaints with shorter histories. For the majority of problems, then, duration consisted of notes such as "a few hours", "since this morning", or "all day", with an occasional "just now" or specific length of time being noted. Those specific times were almost invariably "2 hours", "6-8 hours", or "almost 24 hours."

Even if the duration notes are a "translation" by the staff from the caller's words, they are still useful. The various categories used are systematic and form several discrete time intervals. Moreover, these are intervals constructed and used by people of the same background and cultural response to time. There is no reason to assume that such "translation" distorted the meaning or intent of the caller's words to any serious degree.

In coding the data for analysis, notations of duration

were rationalised into the following system, which attempts to maintain without gross distortion the spirit of the original time distinctions. Four categories were used: a) "just now" or any specific time up to 2 hours; b) "a few hours" or any specified duration between 2 to 6 hours; c) "since this morning", "all day", any interval from 6 to 24 hours; and, d) "more than a day" or any specified time over 24 hours.

#### **CHILD-RELATED TELEPHONE CALLS**

For the nine month period under consideration, a total of 543 telephone calls were made to Lord Liverpool Hospital, Niue, requesting advice or assistance for sick patients. Of these calls, 250 (46%) related to children between the ages of birth and 15 years, an average of 28 (standard deviation 7) child-related calls per month.

Notations were incomplete but showed that a minimum of 11% (n=27) of these calls resulted in admission to hospital. This seems a high proportion but, especially at night, children with symptoms suggestive of serious disease were often admitted at least until next morning when they could be thoroughly examined.

#### **Sex And Age Of Children In Calls**

The sex of the child was noted on 90% of the call forms. The sexes were fairly evenly represented in calls, just over half (56%) being for male children.

The majority of telephone calls, 75%, concerned children under schoolage. One-quarter of all calls were about infants, and one-quarter were for children aged six years or more (see Table 44).

TABLE 44

AGE AND SEX OF CHILDREN ABOUT WHOM CALLS WERE MADE

<u>Age</u>	<u>Males</u>	<u>Females</u>	<u>Both Sexes</u>
Under 1 year	25 (21%)	27 (29%)	52 (25%)
1 - 5 years	62 (53%)	42 (46%)	104 (50%)
6 - 10 years	15 (13%)	12 (13%)	27 (13%)
11 - 15 years	16 (14%)	11 (12%)	27 (13%)
	-----	-----	-----
	118 (100%)	92 (100%)	210 (100%)

There were no significant differences by sex in the age of children about whom calls were made. Indeed, there are few significant differences by sex at all: not for area in which the child resided, person who lodged the call, length of time the child had the problem before a call was made, nor type of complaint. It would seem that the child's sex is irrelevant to the Niuean parent who assesses the medical problem and decides to seek help on the basis of factors other than the child's sex.

Calls From Various Areas

The largest proportion of calls--nearly half (46%)--came from the Alofi area. People from Southern villages (Tamakautoga, Avatele, Vaiea, and Hakupu) were the second-most frequent callers, making 31% of all calls. The Back

villages of Liku, Lakepa, Mutalau and Toi, hardly made any calls about children, only 6% of all child-related calls. Some 17% of all child-related calls came from the Front area, which comprises the villages of Hikutavake, Namukulu, Tuapa and Makefu.

This distribution of calls is very different to the distribution of the population as a whole. Alofi is over-represented while the Back and the Front are very much under-represented. It is not clear why this vast difference in distribution of child-related calls exists. (Because such a small number of calls came from the Back villages, the Front and Back have been combined into an area called the North for the rest of this section).

One possible explanation is that the two village clinics with strong "gate-keepers" are in the North. Community respect for and use of these medical resources means that calls from those villages involve only serious cases and are lodged by the clinic nurses. In contrast, people from other areas call the hospital directly, for serious and non-serious conditions. Why Alofi folk call more than their counterparts in the South is unknown. There are more ex-patriates, more Tongan migrants, and more highly educated Niueans living in Alofi, and it might be that these people call more often for medical aid in circumstances most Niueans ignore.

Another explanation for Alofi's dominance in calling is suggested by Table 45, which shows the area distribution of calls by age of child.

TABLE 45

AGE DISTRIBUTION OF CHILDREN IN CALLS, BY AREA

Area	Age (in years)			
	Under 1	1 to 5	6 to 15	All ages
Alofi	26 (50%)	48 (46%)	14 (26%)	88 (42%)
South	15 (29%)	33 (32%)	13 (24%)	61 (29%)
North	11 (21%)	23 (22%)	27 (50%)	61 (29%)
	-----	-----	-----	-----
	52 (100%)	104 (100%)	54 (100%)	210 (100%)

Alofi provides more calls about infants than do other areas whereas the North generates most calls about older children, those over six years of age. Also, there are many more infant-related calls than calls about older children. Moreover, the better educated seem to recognise illness in infants more than do others. So, a combination of factors might explain the over-representation of Alofi in child-related calls to the hospital.

These differences in age by area are significant ( $\chi^2 = 16.27$ , 4 df,  $p < .003$ ). Moreover, these differences are paralleled by differences in age distribution for boys ( $\chi^2 = 13.79$ , 4 df,  $p < .008$ ). Most male infants come from Alofi whereas boys over six years of age come mainly from the Northern region. There are no significant differences in age by area for girls nor in the overall sex distribution by area.

Person Lodging The Call

The mother of the child was the person who most often lodged the call, 49% of calls being made by mothers. The

child's father was the second-most-frequent caller (21%), while nurses on the hospital staff were the third most common source of calls about children (see Table 46).

**TABLE 46**  
**RELATIONSHIP OF CALLER TO CHILD ABOUT WHOM**  
**CALLS WERE LODGED**

<u>Relationship</u>	<u>Number of calls</u>	
Parents	136	(75%)
Mother	89	
Father	38	
Both	9	
Other Relatives	8	( 4%)
Grandmother	6	
Uncle	2	
Nurse who resides in same village	27	(15%)
Other/unrelated	10	( 6%)
	181	(100%)

**The Importance Of The Village Nurses.**

Two-thirds of the calls from nurses came from those employed in village clinics. In fact, the clinic nurses in the North made all the calls about children in those two villages. Not only are they the only nurses living in these villages but they also are important and trusted community members. Both are older women from leading village families. One, a widow, has over 20 years service in the village clinic and is a leading church member. The other, though originally from a different village, is the respected wife

of the local pastor. These two clinic nurses then are powerful "gate-keepers" to medical care.

The third clinic nurse, in the South, has a more marginal status in her community. Not only is she younger but she is separated from her husband and is from a family with less renown. That she is not consulted as often and so functions less like a "gate-keeper" is clear from the fact that only 36% (n=9) of all calls from that village were made by her.

This difference in call rate is not simply due to the slightly greater number of private phones in the village. It also indicates the extent to which people by-passed the most immediate source of help in favour of the hospital for the Matron and several other senior nursing staff also reside in this village and are all, on occasion, used as "persons of first resort" for medical decision-making.

Thus, off-duty nursing staff are often important contacts in the process of deciding whether or not a child needs treatment, especially in villages that do not have village clinics. One-third (n=9) of calls from nurses were made by off-duty staff who resided in the same village as the sick child. This does not, however, adequately reflect the number of times they have been consulted by uncertain parents. From talks with nursing staff and observation of village life, it is obvious that many calls from parents and others are made on the recommendation of an off-duty nurse and her assessment of the child's condition.

### Duration of Complaint

Although more than half the calls were made within 6 hours of the onset of the complaint (see Table 47), some 13% of telephone calls were not lodged until the child had exhibited symptoms for more than a full day.

TABLE 47  
DURATION OF COMPLAINT BEFORE CALL

<u>Duration</u>	<u>Number</u>
Less than 2 hours	27 (13%)
2 - 6 hours	92 (44%)
6 - 24 hours	61 (29%)
More than 24 hours	27 (13%)
	-----
	207 (100%)

There is no difference in duration by sex of child but there are significant differences by age ( $\chi^2 = 12.18, 4 \text{ df}, p < 0.02$ ). Table 48 documents the impact of age on the length of time between onset of problem and call to hospital.

TABLE 48  
LENGTH OF TIME BETWEEN ONSET OF PROBLEM AND CALL,  
BY AGE OF CHILD.

<u>Age</u>	<u>Duration</u> (in hours)			<u>Total</u>
	<u>Up to 6</u>	<u>6 to 24</u>	<u>Over 24</u>	
Under 1 year	13 (34%)	19 (50%)	6 (16%)	38 (100%)
1 to 5 years	54 (60%)	25 (28%)	11 (12%)	90 (100%)
6 to 15 years	25 (63%)	7 (18%)	8 (20%)	40 (100%)
	-----	-----	-----	-----
All ages	92 (55%)	51 (30%)	25 (15%)	168 (100%)

There is little difference in duration of problem for children aged 1-to-5 years and for 6-to-15 year olds. Most calls are made within six hours but slightly more teenage children than school children have to wait over 24 hours before a call is made.

Interestingly, infants have the smallest proportion of calls in the shortest time period. Only 34% of the calls about infants were made within 6 hours of onset; in contrast, over 60% of calls relating to children over one year of age, were made within 6 hours. Moreover, approximately the same proportion of calls about infants as for older children, some 16% of calls, were for problems that had existed for more than a day.

#### **REASON FOR CALLING**

The type of symptoms which prompted child-caretakers to call the hospital for advice are listed in Table 49.

Single symptoms were mentioned as a reason for calling in 41% (n=104) of all calls. Of the 59% of calls comprising multiple symptoms, two symptoms were noted for 117 (46%) cases while only 32 (13%) calls detailed three or more symptoms. Only 18 general types of complaint were made.

Respiratory symptoms, either singly or in pairs, dominate this list of reasons for calling. Altogether, respiratory symptoms appear in 56% (n=142) of the calls. Fever is the next most common symptom, being described in 27% (n=69) of total calls. While diarrhea/ vomiting appears

in 16% (n=40) of calls, pain is mentioned in 13% (n=33) of all telephone calls. Trauma or accidents account for only 4% of these telephone calls about children. Though Other Symptoms collectively comprise 8% of all calls, the individual items of which this category is composed (crying, convulsion, and so forth) appear infrequently.

TABLE 49

SYMPTOMS MENTIONED IN CHILD-RELATED CALLS

<u>Symptom</u>	<u>Number of calls</u>	
Cough	17	( 7%)
Wheeze	16	( 6%)
Difficult breathing	5	( 2%)
Abdominal pain	8	( 3%)
Generalized aches	13	( 5%)
Diarrhea	5	( 2%)
Vomiting	8	( 3%)
Fever	2	( 1%)
Trauma/Accident	10	( 4%)
Other *	20	( 8%)
Cough &/ Wheeze &/ Difficult Breathing	64	(25%)
Cough & fever	22	( 9%)
Other respiratory symptom & fever	11	( 4%)
Cough & vomiting	7	( 3%)
Generalized Pain & Fever	12	( 5%)
Diarrhea & Vomiting	11	( 4%)
Vomiting & Fever	9	( 4%)
Fever & Other Symptoms	13	( 5%)
	-----	-----
	253	(100%)

\* Other symptoms are those such as: crying; irritability; rash; sores; convulsion; constipation; and loss of appetite.

Age Of Child And Type Of Complaint

As the age of the child increased, so the reason for calling changed from mainly respiratory, diarrhea/vomiting

and fever in infancy to more pain and Other problems in the over six year old children. Table 50 documents these trends, which are statistically significant ( $\chi^2 = 22.89$ , 8 df,  $p < 0.004$ ). There were no significant sex differences in types of complaint at various ages.

**TABLE 50**  
**AGE OF CHILD AND TYPE OF COMPLAINT**

Age (in years)	Type Of Complaint (as a proportion of all complaints)					Number
	Respiratory	Diarrhea/ Vomiting	Fever	Pain	Other	
Under 1	62%	17%	11%	6%	4%	53 (100%)
1 to 5	55%	13%	8%	12%	11%	105 (100%)
6 to 15	42%	9%	2%	25%	23%	57 (100%)

**Area In Which Child Lived By Type Of Problem**

There are significant differences in the type of problems reported by calls from various areas ( $\chi^2 = 17.84$ , 8df,  $p < 0.02$ ). Table 51 details differences by area in type of complaint.

**TABLE 51**  
**TYPE OF COMPLAINT BY AREA**

Area	Type Of Complaint (as a proportion of all complaints)					Number
	Respiratory	Diarrhea/ Vomiting	Fever	Pain	Other	
Alofi	44%	17%	9%	14%	17%	102 (100%)
South	63%	12%	3%	20%	2%	60 (100%)
North	62%	6%	9%	9%	15%	47 (100%)

Alofi has fewest calls for respiratory complaints but most for diarrhea/vomiting and Other reasons. The South makes the most calls for respiratory reasons and pain but the fewest for fever and Other reasons. Pain and diarrhea/vomiting are least frequent from the North.

### Duration By Type Of Problem

Duration of the problem before calling varied somewhat by type of problem. For all types of problem, the majority of calls were made between 2 and 6 hours after onset (see Table 52).

**TABLE 52**

**TYPE OF PROBLEM BY DURATION.**

<u>Time Between Onset of Problem &amp; Call</u>	<u>Type of Problem</u>				
	Respiratory	Diarrhea/ Vomiting	Abdominal Pain	Fever/ Pain	Other
Less than 2 hours	10%	11%	15%	9%	35%
2 to 6 hours	45%	42%	60%	36%	35%
6 to 24 hours	32%	36%	20%	32%	15%
Over 24 hours	12%	11%	5%	23%	15%
	-----	-----	-----	-----	-----
	100%	100%	100%	100%	100%
	(n=106)	(n=36)	(n=20)	(n=22)	(n=20)

Abdominal pain tends to be responded to with slightly more alacrity than other types of complaint; a smaller proportion of these complaints are held over 24 hours before a call is made. This difference, however, is not significant.

The only type of problem for which duration differs

significantly from the general pattern is the Other category ( $\chi^2 = 9.2, 2 \text{ df}, p < .01$ ). For this type of problem, more calls are made in under two hours since onset than for any other type of problem. Undoubtedly this is due largely to the inclusion into this category of the ten calls made because of Accidents or Trauma. These involved: six lacerations, mainly by bush-knife; three motor vehicle accidents; one fall from a breadfruit tree; and, one suspected poisoning. To such events, Niueans respond promptly.

#### **CALLS AND VIGNETTES**

Mothers make almost half the telephone calls to the hospital requesting medical advice or help for children, three-quarters of whom were under 5 years of age. Although 57% of calls were made within 6 hours of onset of symptoms, a large proportion of complaints, 13%, had a duration of over 24 hours.

The sex of the child had no influence on type of complaint reported, duration of complaint before call, age of child attended, or area from which the call was made. Age and type of complaint, however, both had an influence on duration of problem and on each other. As the age of child increased so the type of complaint changed from primarily respiratory, fever, or diarrhea/ vomiting to more problems involving pain or Other conditions. The older a child, too,

the more promptly his/her complaints were notified to the hospital.

From these data it is clear that Niuean parents are relatively poor at recognising and/or at responding promptly to signs and symptoms of illness in infants. The older a child is, however, the more likely it is that he will interject complaints, of pain, of nausea, of soreness, and so forth. Verbal comments from the child-patient apparently speed up decision processes, perhaps by more quickly raising the suggestion that the child might be ill and by rapidly confirming such an idea after which medical attention can be sought. Infants who cannot verbalize complaints beyond crying, who are unable to specify some dimensions of their distress, cannot participate fully in this process and so have no mechanism for speeding up the decision process of their caretakers.

These data, too, show that mothers's responses to the vignettes were not idiosyncratic but, rather, were expressions of culturally appropriate behaviour around sick children. Their use of older female relatives for advice and reassurance is culturally approved behaviour. Their tendency to wait to seek treatment, especially for infants and preschool children, is also a pattern found in the wider society.

## CHAPTER XIII

### CONTEMPORARY USE OF TRADITIONAL MEDICAL BELIEFS AND PRACTICES FOR CHILDREN

Mothers seek help for sick children, whether those children be sick with gagao fakapalagi (Western diseases) or with gagao fakaniue (Niuean disorders). While instances of the former are recorded in hospital and clinic registers, the latter types of illness are not documented in any way. Nonetheless, they are important kinds of illness.

#### TRADITIONAL MEDICAL BELIEFS AND PRACTICES

Mothers accept, indeed in many instances aggressively pursue, the preventative focus of modern child welfare services, a focus exemplified through such things as vaccinations and well-baby visits. But this emphasis on prevention is not new. Much of Niuean traditional medicine, too, was based on preventative principles.

Rather than discarding one set of medical ideas in favour of another, most mothers combine the two sets of views. Contemporary Western-style "hospital" medicine on Niue is firmly embedded within a large corpus of traditional medical beliefs and practices. Any discussion of child-health on Niue must take that body of knowledge and action into account.

## The Covert Nature Of Traditional Healing

Discussion of traditional Niuean medicine is limited here. First, because the practice of traditional medicine on Niue is not an overt activity. While not entirely secret, it is nevertheless handled very discretely. Second, because official Government policy is to denounce traditional medicine and to stop its use. Further, the healing power of much of traditional medicine depends heavily upon secrecy, of the ingredients in the various potions, of their manner of use, and of the healer, who ought not flaunt his or her powers. Much that is done and known cannot be revealed for fear of destroying efficacy.

Only taulaatua understand the philosophy and the logic behind much of the traditional healing practices or beliefs. That knowledge, passed from generation to generation is both sacred and secret. Reported here are scraps, fragments, tatters of ideas, beliefs and actions from the traditional system of medicine that remain despite attempts by the missionaries, by the New Zealand Administration and by the current government to discredit and destroy such knowledge.

So, this discussion deals with less powerful but nonetheless important aspects of traditional medical knowledge and actions, those aspects which are unequivocally in the public domain. Those fragments of folk wisdom that all Niueans know about, whether or not they believe in or adhere to them. These ideas while well-known still are spoken about with a deal of circumspection. Because of the partially covert nature of many of these beliefs and

practices, it is difficult to obtain a complete or systematic account of all such ideas and actions prevalent in the public domain.

This account, then, is not comprehensive so much as illustrative of certain widespread ideas and practices. There are undoubtedly many aspects of lay medicine which derive from traditional ideas that are not discussed.

Knowledge about traditional healing and attitudes toward it varies dramatically from person to person, depending upon age and personal character. How much traditional healing lore a person knows depends in part on their interest in the topic and the number of recipes or cures their family owns. All people, however, know the following pieces of medical lore that pertain to the maintenance of maternal and child health, especially infant health.

#### **PREGNANCY AND CHILD-BIRTH**

It is said that when a woman becomes pregnant her face changes, some become paler, some darker with freckles, and that these changes depend upon the sex of the fetus. Many women use this change alone to signal to their kin that they are pregnant. Women usually inform their husbands/boy-friends of the impending event.

#### **Circumstances Surrounding Conception**

Unmarried mothers usually remain quiet until the pregnancy cannot be concealed any longer. Then they prefer

to disclose their pregnancy to their mother, grandmother or female siblings, leaving their father or brothers to guess, to notice body changes, or to hear from someone else. A brother frequently beats his sister if he thinks she is engaging in sexual intercourse, especially if it is with a man he does not care for, but once she reveals a pregnancy he will usually stop for fear of harming the unborn child. After a brief initial period of anger at the mother, the impending birth is usually eagerly awaited.

A child who is born to a married woman is always attributed to her husband, said to be his child even though circumstances might make it clear that the child could not possibly have been conceived by him. Thus, the child of a woman who conceived during a vacation trip to relatives in Rarotonga, Cook Islands and who returned to Niue to get married, is said to have "been born to her father" [i.e. mother's husband]. Similarly, children born as a result of extra-marital flings and dalliances, which are common and usually discrete (despite which everyone seems to know about them!) are said to be attributed to the husband. Characteristics of the child, in appearance, temperament or abilities that mirror the biological father are used as evidence for the liaison which is usually accepted matter-of-factly.

Informants estimated that in any 10 children born to one woman as many as three would in fact be due to extra-marital liaisons. Exactly how they came by this figure is

not clear, but several woman with large families told me that two or three of their offspring could be the result of extra-marital unions.

Niueans exhibit a high degree of tolerance and flexibility over illicit sexual arrangements. Not many irregular unions exist but those that do are well-known to all members of the public. One man, for example, maintains a form of polygamy, said to be an ancient custom (Loeb 1926): he is legally wed to one woman but also has several children by her sister who lives next-door. Less well-tolerated liaisons are those which are incestuous: close-cousin unions, especially between the children of two sisters, and father-daughter or brother-sister liaisons.

Incestuous unions are said to be the male's fault. To result from his extreme jealousy as he will not allow another man access to his daughter or sister, or, in cases where a young girl is involved, to a father who took advantage of his authority over his daughter to sexually abuse her. Only instances of the latter bring swift legal punishment and community disapproval. Children from incestuous unions are generally regarded as being mentally deficient.

#### Behaviours During Pregnancy

Older women, skilled in detecting pregnancy and in dealing with issues of child-birth, can tell whether the fetus is male or female by noting particular changes in a woman's appearance. Some elderly women can also predict,

through palpating the abdomen of a woman pregnant for the first time, how many children she will ever bear in her life.

During pregnancy a woman is expected to keep fit, to continue working in the bush gardens, pulling weeds, or to fish or collect crustaceans from the reef. There are, however, some restrictions on her activities, restrictions which will prevent undesirable results.

She ought not, for example, eat in thresholds, peep out of windows or sit in doorways, lest the child "gets stuck" during birth. She ought not wear a necklace lest the cord gets wrapped round the baby's throat. Nor should she eat certain foods: eating flounders will cause the baby's eyes to be misformed, and both on one side of the head; octopus will give her child sores all over its skin; over-indulging in chocolate will leave birthmarks that cannot be removed; consuming too much pork will give the baby feet like a pig. Moreover, one should be kind to handicapped children or albinos lest one's child becomes similarly handicapped. A mother ought not steal else her child will be born with a withered arm.

These and similar ideas are still strongly held by women on Niue. In Jacobsen's (1983) study of mothers on Niue, all of whom had had a child within 24 months of the survey, 64% (n=16) of those she interviewed strongly agreed with the statement "I should not wear a necklace during pregnancy."

Some Niuean women, particularly older women, also

believe that many babies are born prematurely, especially boys. Girls, it is sometimes alleged, arrive late.

### Birth

About one month before the birth, herbal medications are often given to the pregnant woman "to ease the passage of the child" at birth. Nearly one-quarter (24%) of mothers in Jacobsen's (1983) sample, for example, agreed with the idea that herbal medications promote delivery. Regular, gentle massage is also common.

These traditional medications and massage are often cited by the Western-trained physicians as reasons for the occasional stillbirth (Beecroft & Gunn 1985). Yet no clear evidence exists for this. Most pharmacological investigations of the medications reveal only slight laxative effects (Nemaia 1982). Rarely is massage so violent that it would dislodge the placenta or produce intra-cranial hemorrhage in full-term fetus (Maiai 1985).

The most common explanation for still-births is that an aitu has taken the child. Some ancestral or malevolent spirit has stolen the child for its own purposes and, of course, this has been done to punish some transgression by the family of the child. Often the lives, recent and remote, of the dead child's grandparents are given closest scrutiny to determine exactly who brought such revenge upon the family. Grandchildren are proof of the success of a person's family and social life. Moreover, a grandchild is often

named after their grandparent. So what better way would an aitu choose to punish a person than to take a grandchild, especially a first or second one?

Child-birth for Niuean women is neither faster nor less painful than for others. Child-birth is expected, however, to be endured, with little pain medication, with a minimum of fuss, and, apart from a supportive audience, with little aid. One-quarter of Jacobsen's (1983) mothers, for example, strongly agreed with the idea that "a woman should be able to cope on her own during labour and delivery."

But birth is a dramatic time, a time of uncertainty and danger, a time when new and established souls and lives are in peril. It comes as no surprise then to learn that this is also a time when aitu are especially active. Women in labour sometimes become delirious or hysterical, calling out to dead ancestors, arguing, fighting. In such cases a close relative, mother, sister, sister-in-law even, will enter the delivery room with concealed packets of herbs acquired from a taulaatua. Distracting somehow the attention of the aitu that is invading the woman's psyche and body, the relative will quickly place the herbs under the afflicted woman's armpits, in the groin, on the belly, and so drive the spirit away (cf. Goodman 1971).

### Family Support

A woman's family are vital to her during pregnancy and immediately afterwards. From her female kin she learns much--sometimes all--she knows about childbirth and

childcare. Responses to Jacobsen's (1983) questionnaire showed that 36% of her informants felt strongly that their mothers and relatives taught them everything they needed to know about childbirth.

Mothers and sisters commonly accompany a woman through labour but increasingly husbands are being included in the childbirth arena, even beginning to stay in the delivery suite (Jacobsen 1983). Sixty percent of Jacobsen's (1983) sample said they wanted some close relative with them during delivery.

As well as a few folk in the delivery room, a host of other relatives gather outside to await the outcome--the child's grandparents, close in-laws, siblings and friends abound. If the labour is complicated or protracted the more relatives gather, the greater the display of concern and social support.

Visible social support is important to a woman, now and in the first few weeks of a child's life. Three-quarters of Jacobsen's (1983) informants, for example, strongly agreed with the statement "I have a very caring and supportive family."

#### **IMMEDIATE POST-PARTUM PERIOD**

Within two to three days after a normal delivery, the woman and her child are discharged from hospital. Primiparas are kept a little longer, until their episiotomy is well on the way to complete healing and the child feeding well.

On arriving home, the mother continues to rest with her baby, she rarely leaves her baby's side for the first week or two after birth. She and the child lie side-by-side on a bed, sleeping, resting, and, most importantly, keeping warm. The child is fed at frequent intervals, often being cradled in her arms as she rests.

All household responsibilities are delegated to someone else--her mother, her siblings, her older offspring. In-laws and close relatives bring food. Her husband takes over the task of washing clothes and dishes. The new mother must avoid cold things and must not engage in heavy activity: no lifting, no washing, no going to the sea, no garden work, no hair washing. She is not permitted to touch cold things, especially water, till the child is at least a month old. She must not even drink water, only coconut juice. She must have hot steam baths daily "to melt the blood clots inside." This should be a quiet, restful, relaxed time for a woman. If it is not or if these strictures are ignored, the mother will get feva fanau = child-birth fever, puerperal fever.

The new mother should not sit with her arms up, hands resting on the back of her head, lest her breast milk fails. Milk will fail too if she becomes pregnant again. Then, some mothers said, their breast milk turns sour as the fetus is jealous of its older sibling and so the older child is weaned as soon as another pregnancy is confirmed.

Throughout the neo-natal period, the child is often oiled and gently massaged, to insure that its limbs grow straight and strong. To further ensure that the child grows

properly, the child's placenta is wrapped in coconut leaves and other fibres and is taken, usually by a close female relative, to be buried. If the placenta is not buried properly so that harm comes to it, so will harm befall the child.

A child desired to live within the Church's teachings might have her placenta buried in the churchyard. A child desired to be a good fisherman will have his placenta buried on the path to the sea. In this fashion a child is spiritually linked to the land and, to some degree, has his destiny set for him. "Later attributes of the child were often related to the little details that occurred or failed to occur during these rituals" (Jacobsen 1983:18).

Until the child is about a month old he is handled mainly by his mother but thereafter his aunts and other relatives will begin to spend more and more time cuddling the child, passing him from person to person. Both families of the parents usually have a celebratory feast honouring the child's arrival within a few weeks of birth.

### Naming A Child

Traditionally, children are named after their grandparents. The first son being named after his paternal grandfather, the first daughter after her maternal grandmother. This not only establishes genealogical connections but sets up special relationships between the pair who share a name.

Siblings, too, particularly those with a close or special relationship to a parent, sometimes ask that a child be named after them. Refusal of adoption requests are often softened by naming the child after the requestor. Sometimes a special friend or elderly relative is remembered in the name given a newborn.

Another way of naming a child is to commemorate a special event or item of some special significance that happened on or near the day of the child's birth. Hence, names like Jubilee, Graduate and Administration celebrate events in the child's family around the time of their birth.

It is also common for children to be named after a word that is particularly euphonous or after something or someone a parent much admires. So, for example, in the 1950's when a Tarzan movie was shown on the island, many babies were called Tarzini and Jane (Monaghan 1952). In 1980, a first-born son was named in honour of his unwed mother's favourite male movie star. One newborn in 1982 was given the name of a common anti-biotic drug that had been used to combat an infection in her first few days of life. Another child was named after his father's favourite comic strip character whom he resembled markedly.

Names such as Water Lily, Sunday Blossom, Petrol, Truth, and Violence are not uncommon (see also Shore 1982), scattered among the more traditional Niuean names. Few names are reserved just for one sex, though certain popular names are given only to girls (e.g., Mele, Manogi, and Fine) or boys (e.g., Togia and Sione).

Of course, as children grow they acquire nicknames, frequently based on the character or abilities which they display. Sometimes these nicknames become the sole name they are known by and their original name fades out of memory.

#### TRADITIONAL MEDICINE IN INFANCY

Throughout infancy, traditional medicine and healing techniques remain important. Many of these are preventive in aim, attempting to prevent an outbreak of disease and curing those that are present.

Certain diseases or disorders afflict children only in early infancy. If not cured then, they might never be cured or might become so severe that the child's life is in danger. In keeping with traditional medical thought throughout the Southern Pacific region, successful cure defines (diagnoses) the illness (Moyle 1974; Hooper 1985).

#### Ila

One of these life-threatening disorders of early infancy goes by the name ila, a common word throughout Polynesia, often translated simply as a spot or blemish on the skin. Ila has various manifestations in different Polynesian societies, and therefore different forms of treatment, but it seems never to simply refer to the Mongolian sacral spots on Polynesian children, as Moyle (1974:176) claims. Rather, as Hooper (1985: 171-173) and Baddeley (1985) show, as a disease entity ila is complex and

not at all the same thing the word ila is used to refer to, namely, moles or blemishes on the skin.

Every Niuean, hospital nurses included, who described this condition denied that it had a Western equivalent: ila is a disease that affects only Niuean babies. Description of the condition, its cause and cure, were vague but nonetheless well-known in the public sphere.

Ila is apparently a physiological disorder that results in internal (metabolic?) damage to a newborn child, damage which will eventually show itself as a dark (some said green) patch on the lumbar spinal region. No one could show me such a spot on a children being treated for ila despite the fact that these children had clear Mongolian spots present. Babies with ila are irritable, difficult to feed and pacify, slow to grow, easily susceptible to other illnesses.

Babies subject to ila are those who have been exposed to extreme danger, usually in the form of aitu, during pregnancy: those born to mothers who had to handle a corpse while pregnant, or who had suffered a stillbirth or neonatal death in the previous pregnancy, or those who were the fruit of treatment for previous infertility. These were the children who had to be cured of ila.

Taking a child to hegi, in the words of McEwen's (1970) dictionary, "to a witchdoctor for a cure by burning", is the accepted practice. Certain taulaatua, women in a particular village, were reckoned to be the best at curing ila, having

successfully treated many hundreds of babies for the complaint.

Cure involves daily rituals, either at dawn or dusk, in which the naked child is placed on a woven coconut mat, anointed with an oil and herb mixture on head and buttocks which is then burnt off as the child is oriented correctly over a fire. Over the course of the week, this treatment concentrates the disorder, causing the spot to manifest itself and then disappear as the disease is dragged out of the child's body. The child's parents are present at the ceremony and often, too, the parent's parents.

At the end of the treatment, the implements used and any left-over herbal concoctions are sealed into an old tin can. Either the healer or the child's father then disposes of the can by placing it in a sacred cave under spiritual control, one with a reputation for containing the bones of long-dead ancestors. Certainly, somewhere where it will not be found by humans or disturbed by animals lest the child be harmed.

It is said that a child has to be treated for ila within 3 to 6 months of birth else it is impossible to cure and the child might eventually become so fractious, difficult to feed and ill that it could die. The same time limits were also placed on the removal of strawberry birthmarks, another special condition treated by these same taulaatua, in a fashion similar to ila. Treatments were said to cause the birth-mark to shrivel, leaving instead only a small pale barely noticeable scar.

Infants also suffer from other diseases which are treated by the taulaatua. Diseases such as kulakula, a red rash which appears all over the body, and manava pala, a kind of gastritis which is nevertheless said to be different from the type of gastro-intestinal upsets Western physicians can treat.

There is no fee or payment exacted for this curing service, but the child's family "remember" the taulaatua with small gifts or donations from time to time. Though the knowledge of how to heal in this manner is sacred and secret, the knowledge that a cure exists and of who controls that cure is not secret. Everyone knows who is best at curing what illnesses in children, and most women in the village know which families have which recipes or traditional cures for which complaints.

Some complaints are so common in infancy that no special recipe is needed to effect a cure from local materials. Thrush, for example, is prevented by regular ingestion of a mild astringent liquid made from scraping the bark of the yi tree. A more pungent solution is used in treating cases of thrush, and success has been claimed even in very stubborn cases which Western medicine failed to cure (see also Williams 1968:67-68). A few mothers even scorn the Child Welfare Nurse's offering of dietary Vitamin C supplementation as they claim bark infusions are fine vitamin sources, as is coconut juice and coconut milk.

## OLDER CHILDREN AND TRADITIONAL MEDICINE

It is not just during infancy that traditional medicine has a role to play. Although there seem to be no special "culture-bound" conditions that afflict older children, traditional medical knowledge and action remains important.

Massage, for example, is not just to encourage a child's limbs to grow straight and healthy but also is used sometimes to treat particular childhood complaints, specially those with joint or limb involvement or with generalised pain. The usual crop of childhood bumps, scrapes and bruises, too, are often treated with local medicines. Abscesses and boils, too, are treated with hot herbal poultices.

Restrictions on the child's food, drink and activity for up to four to five days is common in traditional healing. Raw food is avoided stringently, and so, too, are foods with qualities "sympathetic" to the illness. Thus, red food ought be avoided as long as one suffers from a red rash. Atonement for social transgression is usually made by the child-offender but parents or larger family are also frequently involved in appeasing the spirits and righting social infractions.

Possession or attack by aitu is not limited to neonates. Preschool children suffering from febrile convulsions are often said to have been "attacked by an aitu." Some staff at the hospital with little sympathy to traditional healing complain that parents wait too long to

bring children with convulsions to the hospital as parents use traditional cures first, to remove the aitu, and then use the hospital to treat the remaining disorder.

Most attacks on children by aitu are unprovoked but a child who offends, who commits some social misdemeanour, can be punished by sickness. A three year old boy who developed balanitis, for example, was said to have been justly punished for he "probably urinated on grave sites."

#### Herbal Medicine And Responses To The Vignettes

That herbal medicine is alive and flourishing in Niue is shown by the fact that in response to certain of the medical vignettes, six (46%) mothers in the sample spontaneously commented that that particular disorder was amenable to herbal treatment. Most mothers made such comments only one to three times but one mother, who is very interested in herbal treatments and is in the process of learning traditional healing skills from her father's mother, mentioned the possibility of using herbs and/or massage in response to 10, 25%, of the vignettes. All mothers admitted to using some traditional techniques for keeping children healthy, if only preparing tree bark infusions for their children.

The vignette which drew most responses about herbal medicine was that involving a child with a bee sting, Question 24. Six mothers said the only remedy they would use would be to cover the stung area with a leaf (three said

arrowroot, pia, leaf; two said tapioca leaf) or with urine, mimi.

Two other vignettes drew more than a single response about the use of herbal medicine. In reply to Question 27 about discharging ears, two mothers said they would consult a village man whose family was known to have a good cure for that. The medicine, made out of the milk of the white coconut plus some other herbs, was used to wash out the external ear canal. A baby who cried steadily for 4 hours, Question 11, was said by two mothers to be having an aitu attack. Both explained that they would offer the child the breast and if consistently refused would eventually consult a physician--after first removing the child from danger by challenging the aitu in an appropriate fashion with help from a taulaatua.

Nine other vignettes drew some comment about traditional healing methods, not as ends in themselves necessarily, but as adjuncts to Western medicine. The other vignettes which drew a traditional medical response are:

Q. 17 --	cough/chest pain	.....	massage
Q. 8 --	dysuria	.....	herbal medicine
Q. 23 --	urinary frequency/ crying	.....	massage
Q. 25 --	infantile diarrhea	.....	local herbs
Q. 35 --	red, swollen knee	.....	massage/herbal poultice
Q. 10 --	hayfever symptoms	.....	massage
Q. 30 --	low grade fever	.....	massage
Q. 4 --	cough	.....	herbs
Q. 32 --	no bowel motion in 24 hours	...	local fruit juices

Here we see how the duality of medical thought in Niuean life extends into childhood and influences mothers's

actions around sick children, or children in danger of becoming sick. With most "Niuean sicknesses" (gagao fakaniue) being due to aitu, to ghost attack, it comes as no surprise to find that most traditional illnesses affecting children occur during the perinatal period, from very late pregnancy through birth to the neonatal period. This is a period of change, uncertainty and vulnerability; a period when established social relationships are altered and new ones formed; a time when children are most prone to succumb to illness and mis-handling, a time when caution can never go amiss.

Therefore, to ensure the health and well-being of their children, Niuean mothers maintain traditions and perform actions which offset the nefarious schemings of various malevolent aitu and which quickly integrate the child into his kinship and social groups. For it is only within the bosom of his family, within the social contexts that family, household and community provide, that a child can grow and mature into Niuean adulthood.

## CHAPTER XIV

### DISCUSSION

Recall that the three central questions that this research sought to answer, were: (1) do Niuean parents in their homeland situation recognise and correctly assess signs and symptoms of illness in children? (2) do parents delay seeking medical help for sick children?, and (3) what roles do family organization and cultural values play in preventing childhood disease and in healing sick children? The extent to which this dissertation presents information that answers these questions is summarized here.

#### NIUE ENCAPSULATED

Niue in many respects is quite unlike her Pacific neighbours. The island's large size, isolation from other island groups, lack of out-lying islands, and harsh terrain and fragile ecosystem make it quite distinct in Western Polynesia. Niue's colonial heritage too, is different. Her present high standard of living and social services are legacies from the New Zealand Administration. These legacies, now supported by massive amounts of foreign aid, serve contemporary Niue well because of central cultural values of egalitarianism and individual achievement, values that are far less pronounced in other Polynesian societies.

Out-migration has been a dominant force shaping Niuean society for many years but in recent years migration has reached a point where it threatens the continued existence of this tiny nation.

These differences have all served to shape Niue's present medical services which are "the best in the Pacific" (Connell 1983; Walsh & Trlin 1973). Health care services on the island are housed in well-designed adequate buildings, with a good standard of equipment, quite capable of serving a much larger population. Staff have been well-trained in a number of overseas institutions and regularly maintain their skills through "re-training" periods off the island. Professional staff in the Health Department include physicians, nurses, dentists, public health officials, and ancillary staff such as laboratory, pharmacy and X-ray technicians.

Therapeutic services are free, accessible at all times and to all sectors of the population. A strong preventative philosophy underlies much of the work of the Health Department as evidenced by numerous public health campaigns. These tackle two disparate tasks: environmental sanitation and child welfare. So successful have been previous public health campaigns and therapeutic services that the burden of disease has been reduced from that typical of an under-developed "tropical" nation to one more like that found in the urban, industrial West.

Paradoxically, Niue is also in many ways a typical Polynesian society. The prominence of the Church in modern

life, a continued emphasis on patrilineality, a multi-generational extended family form, child-rearing through multiple parenting, and peer socialization, an emphasis on early acquisition of social skills, the dominance of sibling bonds over spousal ties--all these are typical of many Polynesian societies.

Typical, too, is duality of thought in the medical sphere. There are "Niuean diseases" (gagao fakaniue) amenable to indigenous healing techniques and there are Western diseases (gagao fakapalagi) treatable by cosmopolitan medicine. These are not so much two separate systems of medical endeavour as different ends of a single continuum. While physicians on Niue are more skeptical about this duality, nurses, other health professionals and the lay public generally believe in the possibilities of aitu, ghosts of the dead, causing sickness or of there being certain kinds of disorder which afflict only Niueans and can be treated only by taulaatua, native healers, with herbal potions, rituals and incantations.

#### THE PLACE OF CHILDREN IN NIUEAN LIFE

There is a strong emphasis on children in Niuean life, because of the de-population of the island as well as traditional Polynesian regard for children. Children are not a constant focus of adult life, however; once weaned, a child is an independent being, a part of the peer group, and adults value being free of constant responsibilities for a

child this age. Peer group socialization is important, for demonstrating the nature of Polynesian life: nurturance towards those younger, reverence for those older than oneself. These messages are reinforced through multiple parenting and fluid household form.

There exists a very clear matrilineal bias in adoption and child-rearing despite the patrilineal basis of formal social organization in Niuean society. This matrilineal focus is also evidenced in the trio deemed important for a child's proper up-bringing. This trio comprises the child's mother--father--and maternal grandmother.

The work of this trio is sustained by household organization. First and second children born to any couple are raised in the maternal grandmother's home while she teaches her daughter to parent. This is seen as a most important task and one a new mother can learn properly only through close contact and reassurance from her own mother. After the birth of a third child, it is likely that the young couple will set up a nuclear household as by the mother will have learnt how to parent correctly.

These household arrangements upheld by who takes children to Child Welfare Clinics (CWCs), too. A CWC is a regular once-a-month meeting in each village conducted by the Public Health Nurse who does well-baby and preschool inspections and instructs mothers on the care of children. If the child is an infant, it is usually his mother who take him to CWCs; if, however, there is only one under-five-

year-old child in the household or if mother is unmarried, it is most likely the maternal grandmother who takes him to CWCs.

The value placed on access to the maternal grandmother was clear, too, in women's responses to questionnaires on medical topics. Women claimed to use their own mothers as knowledgeable resource persons for advice about children and their illnesses, even before consulting medical professionals.

Cultural values and actions around child-rearing are mirrored in mothers's responses to questions about their expectations of child development. Niuean mothers have the same assessments as Western mothers of physical development in the first 12 months of life. Thereafter, Niuean mothers expect children to become socially adept and emotionally mature very early in life, an expectation that not only reflects the values placed on sociability in this culture but that also mirrors children's behaviour. Polynesian child-rearing patterns, indeed, produce children who conform to their mothers's expectations about what constitutes normal development.

Niuean children are seen as economic assets, competent bodies who can be set to work in bush gardens or household by five years of age. In part this response is generated by the harsh nature of the terrain and the hard work involved in subsistence agriculture using slash-and-burn shifting cultivation. In part it is the result of another central

cultural value; namely, a strong work ethic which ought be established early in a child's life.

Despite the paternalistic/male nature of Niuean society, best exemplified by rituals such as hifi-ulu (the ceremony of a boy's first hair-cutting), there is no corresponding neglect or under-valuing of female children. Girls are not only extremely important domestic functionaries without whom a man could not maintain his reputation for hospitality, but they are also the major candidates for training in traditional healing. Established female healers pass their knowledge on to daughters or grand-daughters who display the proper abilities for healing, and thus women are also important in Niuean society as repositories of ancient lore.

All analyses of pediatric mortality and morbidity statistics show no differences by sex in hospital or clinic admission rates, length of stay, or so forth. Apart from infants, Niuean children have admission rates very like New Zealand children though for slightly different disease profiles. Respiratory disease (wheezing bronchitis, in particular) is the major cause of pediatric hospital admissions on Niue.

Mothers have certain responses to medical situations involving children which show that they poorly recognise signs of illness in children and tend to delay seeking help for sick children. This is shown up most clearly during infancy, and might account in part for why the rates of hospitalization for Niuean infants exceeds that for infants

in New Zealand. The older and the better educated the mother, the more her responses matched those found in the literature.

Traditional medicine, particularly in its preventative aspects, is important on Niue today. Certain disorders stemming mainly from aitu activity afflict Niuean infants and these are treated by taulaatua adept at handling those disorders. The child's placenta is still buried on family land, thereby establishing a spiritual link between the child and his land, the child and his ancestors, the child and his present kin. Herbal medicines remain important pharmaceuticals in the repertoire of response to sickness in children by Niueans.

## CONCLUSION

So, delay and non-recognition of seriousness of symptoms are not simply post-migration phenomena but something found in the homeland situation for this particular Polynesian people. Niuean mothers do tend to delay seeking medical help for sick children. Often this is because they are consulting with another source of expert knowledge and advice about children--their own mothers. Hence, the grandparental generation, the maternal grandmother in particular, is of paramount importance to the welfare of Niuean children.

Important, too, are traditional healing techniques which are the only appropriate means of guarding children against the predations of aitu, ghosts, and against other

forms of illness which strike only Niuean children. Healing such illnesses in a child enhances the integration of the family group into which he is born and, thus, assures his future well-being.

These trends, towards non-recognition of serious sickness in children and delay in seeking medical help, are likely to be exacerbated by migration: when access to medical care becomes difficult, when social support and advice from maternal and other (older) kin decreases, when young mothers get pushed prematurely into major decision-making roles usually reserved for elders, when the spousal relationship changes as it does under new economic pressures. It is likely, too, that "Niuean illness" will take on additional meaning in the post-migration situation, as these types of illnesses seem to be mainly psycho-social in origin. Access to traditional healers and herbal medicaments to cure or alleviate distress created by such illnesses would then become as important as on the island. It is to be hoped that the demeanour of health service professionals in New Zealand would facilitate access to means of traditional healing.

## NOTES

Abbreviations: RCN Resident Commissioner, Niue  
(C) MO (Chief) Medical Officer, Niue  
Sec Secretary  
Dept Department  
NZ New Zealand  
IT Dept of Island Territories, NZ

Unless otherwise indicated, archival files in New Zealand were kept by the National Archives, Department of Internal Affairs, Wellington.

Files on Niue are in the Archives Room, Fale Fono, Alofi. Several relevant files, about the very early work of the health services on Niue, unfortunately, have been destroyed by hurricanes.

1. Minutes, Island Council Monthly Meetings, 1931. File 84/8 NZ
2. Annual Report, CMO Niue to Health Dept, NZ. File Annual Report Niue 1947-1967. Health Dept, NZ.
3. Handwritten letter, dated 4 July 1911, from R.H. Head, Tuapa to RCN Cornwall about the measles outbreak in 1898. File 6/4 (#48) Niue.
4. Letter, dated 24 June 1911, from MO Schumacher to RCN Cornwall. File 6/4 (#48) Niue.
5. Handwritten notes, variously dated in June 1911, from MO Schumacher to RCN Cornwall. File 6/4 (#48) Niue.
6. Letter, dated 29 August 1918, from RCN Morris to MO Barraclough. File 6/4 (#48) Niue.
7. Letter, dated 22 February 1922, from Sec. Cook Islands Dept. to RCN. File 6/4 (#48) Niue. Letter, dated 31 March 1922, from Sec. Western Samoa Administration to RCN. File 6/4 (#48) Niue.
8. Memorandum, undated but circa. 1918, written by RCN Morris. File #16 Niue.
9. Letter, dated 27 April 1928, from MO Boyd to Acting Sec. Cook Islands Dept. File #16 Niue.

10. Handwritten letter, dated 16 January 1923, by Emily Rex of Avatele, applying for a position as a student nurse. File 6/4 (#48) Niue. Letter, dated 31 March 1922, from Sec. Western Samoa Administration to RCN. File 6/4 (#48) Niue. Letter, dated 6 June 1922, from Acting RCN Ellison to Hon. Minister Cook Islands Dept NZ. File 6/4 (#48) Niue.
11. Letter, dated 18 July 1922, from Dr Pomare, Minister Cook Islands Dept NZ, to RCN. Memorandum, dated 25 October 1922, from RCN Ellison to Sec. Western Samoa Administration. Letter, dated 22 April 1923, from Acting RCN to Sec Cook Islands Dept. Letter, dated 6 July 1923, from Chief Medical Officer Western Samoa to RCN. Letter, dated 25 August 1923, from RCN to CMO. File 6/4 (#48) Niue.
12. Letter, dated 6 June 1917, from RCN to Hon. Minister, Cook Islands Dept NZ. Memorandum, dated 1923, written by RCN. Memorandum, dated 30 October 1923, from Niue Island Council to RCN. Memorandum, dated 12 April 1927, from RCN to Sec. Cook Islands Dept, NZ. File #16 Niue.
13. Memorandum, dated 12 April 1927, from RCN to Sec. Cook Islands Dept NZ. Memorandum, dated 19 March 1928, from RCN to Sec. Cook Islands Dept NZ. File #16 Niue.
14. Report to RCN on dental health on Niue, by J. Francon Williams, 1941. File 84/8/5 (IT 50/8/5) NZ. Annual Report from CMO to RCN, 1953. File 84/8 NZ. Report on black fly problem on Niue, by B. Given, Dept of Scientific & Industrial Research, NZ, 1957. Assignment Report "Control of human intestinal parasites, Niue", dated 29 August 1960, from Dr Alves to World Health Organization. File 84/8 NZ. Report to RCN on dental health on Niue, by J. Francon Williams, 1941. File 84/8/5 (IT 50/8/5) NZ. Report on black fly problem on Niue, by B. Given, Dept of Scientific & Industrial Research, 1957. Assignment Report "Control of human intestinal parasites, Niue", dated 29 August 1960, from Dr Alves to World Health Organization. File 84/8 NZ. Memorandum "Filariasis survey on Niue 1960-61", dated 18 December 1961, from CMO Crossley to RCN. File 84/8 NZ. Letter, dated 28 March 1961, from CMO Crossley to RCN. File 84/8 NZ.
15. Letter, dated 29 October 1931, from MO Brass to RCN. Quarterly Report, dated 31 March 1932, from RCN to Sec IT. File 84/8 NZ.
16. Letter, dated 29 April 1932, from RCN Bell to Sec IT. File 84/8 NZ.
17. Telegram, dated 4 August 1938, from RCN to Governor-General, Wellington. File 84/8 NZ. Letter, undated

- but circa. 1935, RCN to Sec IT. File 84/1/4 (IT 50/1/4) NZ. Letter, dated 19 November 1946, from CMO to RCN. File 334/7/2 International Health: Niue 1947-1967. NZ Health Dept. Annual Report, 1947. From CMO to RCN. File 84/8 NZ. Letter, dated 23 September 1948, from Acting CMO Hare to RCN. File 84/8 NZ. Annual Report, 1951. From CMO to RCN. File 334/7/2 International Health: Niue 1947-1967. NZ Health Dept. Telegram, dated 15 January 1955, from RCN to Sec IT. File 84/8 NZ.
18. Letter, dated 29 December 1935, from CMO to RCN. File 84/8 NZ.
  19. Minutes, Niue Island Council Meetings, dated 8 March 1938 and 15 March 1938. File 50/1/2 NZ.
  20. Memorandum, dated 10 July 1946, from Chief Medical Officer Apia to Sec. Western Samoa Administration. Letter, dated 11 December 1946, Administration Western Samoa to Sec IT. File 4/1/5 (#326) Nurses: Samoa and Local Trained. Niue.
  21. Memorandum, dated January 1950, from CMO to RCN. File 50/8 NZ.
  22. Memorandum, dated 23 April 1958, from RCN to Sec IT. File 50/8 NZ.
  23. Report, dated 18 June 1947, from J.L.R. Buchanan, Inspector-General South Pacific Health Services, to RCN. File 84/8 NZ.
  24. Report, dated 5 November 1951, from CMO Milne to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
  25. Letter, dated 29 May 1927, from Matron de Ridder to RCN. File 6/4 (#48) Niue.
  26. Letter, dated 26 February 1936, from RCN to Sec External Affairs. Telegram, dated 24 August 1937, from Administration Western Samoa to RCN. Reports, dated 2 November 1937, 7 May 1938, 7 October 1939, from the Matron Apia Hospital to RCN. Letter, dated 5 July 1940, from CMO to RCN. Memorandum, dated 22 October 1940, from RCN to Sec External Affairs. File 4/1/5 (#326) Nurses: Samoa and Local Trained. Niue. Memorandum, dated 22 October 1940, from RCN to Sec IT. Memorandum, dated 2 September 1941, from RCN to CMO. Letter, dated 6 September 1941, from CMO Hunt to RCN. File 4/1/5 (#326) Niue.
  27. Telegram, dated 30 July 1947, from Apia Administration to RCN. Letters in reply, dated 10 September 1947 and

- 14 September 1947, from RCN to Sec. Western Samoa Administration. File 4/1/5 (#326) Niue.
28. Memorandum, dated 8 October 1952, from RCN Larsen to Sec IT. File 4/1/5 (#326) Niue.
29. Letter, dated 4 December 1951, from CMO Milne to Deputy RCN. File 4/1/5 (#326) Niue.
30. Memorandum, dated 4 January 1940, from CMO Hunt to RCN. File 84/8/5 (IT 50/8/5) Niue: Dental Service. NZ. Memorandum, dated 4 January 1940, from CMO Hunt to RCN. Memorandum, dated 8 January 1940, from RCN Bell to Sec IT. Letter in 1941 from J. Francon Williams, Dental Officer, Apia, to Chief Medical Officer Monaghan. Western Samoa, discussing the Niue scheme. Report from J. Francon Williams on dental health in Niue to RCN, 1941. File 84/8/5 (IT 50/8/5) NZ. Memorandum, dated 24 March 1943, from RCN to Sec IT. Report, dated 8 February 1945, J. Francon Williams to RCN. File 84/8/5 (IT 50/8/5) Niue: Dental Service. NZ. Personal communication from Dr H. T. Nemaia, QSO, Director of Health, Niue, who was a Dental Officer on Niue, 1945 to 1954.
31. Memorandum, dated 29 October 1951, from CMO Milne to RCN. Memorandum, dated 23 April 1958, from RCN to Sec IT. File 84/8 NZ.
32. Report of Inspector-General South Pacific Health Service, 1954/55. File 84/8 NZ.
33. Letter, dated 26 April 1949, from Acting CMO Hare to Director of Health Dept NZ. File 50/14/7 NZ. Letter, dated 20 May 1949, from Director of Health Dept NZ to RCN. File 50/14/7 NZ. Report of Inspector-General South Pacific Health Service, 1954/55. File 84/8 NZ.
34. Letter, dated 6 December 1956, from RCN to Sec IT. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings NZ.
35. Report, dated 5 November 1951, from CMO Milne to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
36. Memorandum, dated 30 November 1960, from RCN to Sec IT. File 50/8/4 Niue: Suva Central Medical School. NZ.
37. Memorandum, dated 30 July 1963, from RCN to Sec IT. File 50/8/4 Niue: Suva Central Medical School. NZ.
38. Memorandum, dated 29 October 1951, from CMO Milne to RCN. Letter, dated 20 September 1955, from RCN to Sec

- IT. File 50/8/4 Niue: Suva Central Medical School. NZ.
39. Memorandum, dated 29 October 1951, from CMO Milne to RCN. File 84/8 NZ.
  40. Minutes Niue Island Council Meetings, dated 15 December 1931, 15 June 1932, and 14 September 1932. File 50/1/2. NZ.
  41. Report, dated 3 September 1945, from RCN Larsen to NZ Parliamentary Party. File Niue Island: Care of Old People 84/12/13 NZ.
  42. Annual Report, from RCN to Sec IT, 1953. File 84/4 NZ.
  43. Letter, dated 4 March 1952, from CMO to RCN. Letter, dated 24 February 1953, from RCN Larsen to Sec IT. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
  44. Report, dated 5 November 1951, from CMO Milne to RCN. Letter, dated 23 May 1952, from CMO to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
  45. Letter, dated 15 April 1952, from Acting Sec IT to RCN. Memorandum, dated 22 June 1953, from Sec IT to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
  46. Memorandum, dated 10 February 1955, from Sec It to Minister IT, NZ. Memorandum, dated 23 July 1953, from Sec IT to Minister IT, NZ. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings NZ.
  47. Report, dated 24 March 1959, from CMO Simpson to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ. Memorandum, dated 13 July 1960, from the Minister of IT to NZ Cabinet. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings NZ.
  48. Letter, dated 5 July 1961, from Minister IT to RCN. Memorandum, dated 16 October 1961, from Minister IT to NZ Treasury. Letter, dated 26 February 1962, from Sec Treasury to Minister of Finance, NZ. Memoranda, dated 2 April 1962 and 9 September 1962, from Sec IT to NZ Cabinet. Memorandum, dated 14 November 1964, from Sec Treasury to Minister Finance. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
  49. Personal communication, Dr H. T. Nemaia, QSO, Director of Health, Niue.

50. Personal communication, Dr H. T. Nemaia, QSO, Director of Health, Niue.
51. Memorandum, dated 23 June 1958, from CMO Simpson to RCN. Urgent telegram, dated 10 December 1963, from RCN to Islands. Telegram, dated 27 April 1966, from RCN to Islands. File 50/8 NZ.
52. Memorandum, dated 30 April 1974, from Enetama, Hon. Member for Health Niue Assembly, to Minister IT. File 50/8 NZ.
53. File 84/6 Niue--Leprosy. NZ.
54. Report of Inspector-General South Pacific Health Service 1954/55. File 84/8 NZ.
55. Letter, dated 26 April 1949, from CMO Hare to RCN. Annual Report, 1953, from CMO to RCN. Memorandum, dated 28 March 1961, from CMO Crossley to RCN. File 84/8. NZ.
56. Memorandum, dated 11 September 1950, from RCN to Sec IT. Letter, dated 13 November 1950, from Resident Commissioner Cook Islands to RCN. File 84/8 NZ.
57. Report on August 1952 visit to Niue by W.F. Ponder, Government Architect, Ministry of Works, NZ. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ. Letter and sketch, dated 4 March 1952, from CMO Milne to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ.
58. Memorandum, dated 10 February 1955, from Sec IT to RCN. File 84/6/2 (IT 50/6/2) Niue Hospital: Land and Buildings. NZ. Report, dated 9 January 1957, from CMO Simpson to RCN. Memorandum, dated 4 March 1957, from Sec IT to Resident Commissioner Cook Islands, Rarotonga. File 84/8 NZ. Report, dated 9 January 1957, from CMO Simpson to RCN. File 84/8. NZ.
59. Letter, dated 6 August 1945, from Sec IT to RCN. Letter, dated 9 August 1946, from RCN to Sec IT. File 84/12/13. Niue Island: Care of Old People. NZ. Memorandum, dated 3 September 1945, from RCN Larsen to Sec IT. File 84/12/13 Niue Island: Care of Old People. NZ.
60. Report, in 1947, from Lene Pilitasi, Assistant MO to CMO and RCN. File 84/8. NZ. Monthly report, September 1962, from CMO Whimster to RCN. File 84/8/10. NZ. Notice about a "Baby Show in Alofi", dated 6 January 1950, sent by Child Welfare Sister, Miss S. M. Ladd, to RCN. File 84/8. NZ.

61. Report, undated, from Dr G.P. Blake-Palmer, Director-General of Health, New Zealand, about his visit on 17 July 1968, to RCN. File 84/8. NZ.
62. Report, undated, from Dr G.P. Blake-Palmer, Director-General of Health, New Zealand, about his visit on 17 July 1968, to RCN. Personal letter, dated 13 December 1968, from Dr G.P. Blake-Palmer to RCN Wilson. Letter in reply, 29 January 1969, from RCN Wilson to Dr G. P. Blake-Palmer. Confidential report, dated 23 March 1969, from RCN Wilson to Sec IT on Blake-Palmer's Report. Letter, dated 23 May 1969, from Dr G. P. Blake-Palmer to Sec IT about Wilson's report. File 84/8. NZ.
63. Urgent telegram, dated 10 November 1960, from CMO via RCN to Sec IT and Director-General of Health, New Zealand Health Department, reporting the case. Letter, dated 3 December 1960, from CMO Crossley to Dr Dixon, Department of Preventive and Social Medicine, Medical School, University of Otago, New Zealand. Report in the Christchurch Press on 9 December 1960. File 84/8. NZ.
64. Report, "Observations and Recommendations Arising from Temporary Duty in Niue, 15 August to 4 November 1970", dated 21 December 1970, from Dr Pennington to Sec IT. File 84/8. NZ.
65. Letters, dated 28 January 1960 and 1 November 1960, from CMO Crossley to RCN. File 146 Niue. Report, dated 16 November 1961, from Miss M. E. Attree, Nurse Inspector, Department of Health New Zealand, to Sec IT. File 84/8. NZ. Memorandum, dated 31 July 1962, from Sec IT to RCN. File 146 Niue. Memorandum, dated 23 January 1963, from Matron Perkinson and CMO Whimster to RCN. File 146 Niue. Notes On A Meeting Held In The Office Of Miss A. Orbell, Director, Division of Nursing, New Zealand Department of Health, On Friday 14 June 1963. File 146 Niue. Memorandum, dated 19 August 1963, from Secretary/Treasurer Niue Administration to RCN. File 146 Niue. Memorandum, dated 18 September 1963, from CMO Kay to RCN. File 146 Niue. Final Report, dated 29 January 1975, O. T. Manning, Senior Nurse Educator, Nursing Advisory Services South Pacific, World Health Organization Western Pacific Regional Office, Manila, Philippines. WHO WPRO 4401 (LCP/HMO/05). File 84/8. NZ. Monthly Report, February 1973, from CMO to RCN. File 84/8 NZ. Confidential Memorandum, dated 12 May 1967, Secretary Niue Administration to CMO. File 4/1/5 (#326) Nurses: Samoa and Local Trained. Niue.
66. Documents, dated 8 January 1968, in which the World Health Organization formally proposed to include Niue

- as an area of operation in inter-country public health nursing concerns. File 84/8 NZ.
67. Monthly Reports, 1962 to 1975, from CMO to RCN. File 84/8 NZ and all of File 50/8 Niue: Medical-General. NZ.
  68. Memorandum, dated 24 August 1955, from Matron, Apia Hospital to RCN. File 4/1/5 (#326) Nurses: Samoa and Local Trained, Niue. Note, dated 9 March 1956, from RCN to Sec IT. Note, dated March 1956, from RCN to Sec IT. Note, dated July 1962, from RCN to Sec IT. Note, dated December 1962, from RCN to Sec IT. File 84/8 NZ.
  69. Letter, dated 11 July 1962, from John M. Morrison, Apia to Editor, Niue Newsletter. File 4/1/5 (#326) Niue.
  70. Note, December 1957, from RCN to Sec IT. File 84/8 NZ. Monthly Report, August 1977, from Director of Health to Niue Government. Current file, Niue.
  71. Personal letter, dated 13 December 1968, from Dr G. P. Blake-Palmer to RCN Wilson. Letter in reply, dated 29 January 1969, from RCN Wilson to Dr G.P. Blake-Palmer. File 84/8 NZ. Report by Espie, in Espie (1974). Personal communication, Mr Spencer, visiting ENT Consultant, Niue, 1983.
  72. Monthly Reports, December 1971 and January 1972, from CMO to RCN. File 84/8. NZ.
  73. Monthly Report, March 1972, from CMO to RCN. File 84/8 NZ.
  74. Report, 1972, on outbreak of Dengue Fever which first occurred in March 1972, from CMO to RCN, and thence from RCN to Sec IT. File 84/8. NZ.
  75. This section refers to the ethnographic present.
  76. Monthly report, dated January 1975, from CMO to RCN. Current File, Niue.
  77. Confidential letter, dated 1 March 1967, from CMO Kay to RCN. File 4/1/5 (#326) Nurses: Samoa and Local Trained. Niue.

## BIBLIOGRAPHY

Ablon, Joan

- 1973 Reactions of Samoan burn patients and families to severe burns. *Social Science And Medicine* 7(3): 167-178.

Alpert, Joel J., et al.

- 1967 Medical help and maternal nursing care in the life of low income families. *Pediatrics* 39: 749.

AJHR

- 1903 Cook Islands Report. Section A-6. Appendix to the Journal of the House of Representatives, New Zealand. National Archives, Wellington, New Zealand.

Anonymous

- 1900 The Right Hon. R.J. Seddon's visit to Tonga, Fiji, Savage Island, and the Cook Islands. Wellington: New Zealand Government Printer. [Pp93-217].
- 1929 Niue Island. Kai Tiaki--The New Zealand Nursing Journal. January 2. P35.
- 1940 Health conditions and services in Niue Island. The New Zealand Nursing Journal. November 15. Pp360-361.
- 1953 Niue's unrest: disturbing facts behind the Larsen murder. *Pacific Islands Monthly*. October 24(3): 121-123.
- 1961 New homes for homeless Niueans. *South Pacific Bulletin*. July. Pp 29, 68.
- 1983 Hifi-Ulu: The first haircut. *New Zealand Listener*. August 13. P69.

Ausubel, David

- 1977 *The Fern And The Tiki*. New York: Columbia University Press.

Baddeley, Josephine

- 1985 Traditional healing practices of Rarotonga, Cook Islands. In Claire D.F. Parsons, ed. *Healing Practices In The South Pacific*. Honolulu: Institute for Polynesian Studies. Pp 129-143.

Bakker, M.L.

- 1980a Population growth. 1976 Census of Population and Housing. Volume 2. Department of Justice: Niue. Pp20-26.
- 1980b Population structure. 1976 Census of Population and Housing. Volume 2. Department of Justice: Niue. Pp27-43.
- 1980c Marital status. 1976 Census of Population and Housing. Volume 2. Department of Justice: Niue. Pp 67-74.
- 1980d Fertility. 1967 Census of Population and Housing. Volume 2. Department of Justice: Niue. Pp 75-96.

- Barker, Judith C.  
 1984 Niue's Health Services: A Personal View. Unpublished Technical Report for Dr H.T. Nemaia, QSO, Director of Health, Niue.  
 1985 Obsolescence in Paradise: variation in the treatment of the elderly in a Polynesian society. Unpub. paper presented at the 84th Annual Meetings of the American Anthropological Association, Washington, D.C.
- Barnes, J.A.  
 1972 Three Styles In The Study Of Kinship. Berkeley: University of California Press.
- Barnett, N.T.  
 1977 Migrants in Auckland. In John Stanhope, ed. Migration And Health In New Zealand And The Pacific. Proceedings of A 1975 Conference. Wellington Hospital Epidemiology Unit, Wellington, New Zealand.
- Barry, H.A., M.K. Bacon & I.L. Child  
 1957 A cross-cultural survey of some sex differences in socialization. Journal of Abnormal Psychology 55: 327-332.
- Barry, H.A., I.L. Child & M.K. Bacon  
 1959 Relation of child-training to subsistence economy. American Anthropologist 61: 51-63.
- Beaglehole, E. & P. Beaglehole  
 1941 Pangai: Village In Tonga. Wellington: Polynesian Society.
- Becke, Louis  
 1897 Wild Life In Southern Seas. London: T. Fisher Unwin. [Pp279-301].
- Bedford, R.D., G. Mitchell & M. Mitchell  
 1980 Population History. 1976 Census of Population and Housing. Volume 2: Analysis of Demographic Data. Niue: Department of Justice. Pp 4-19.
- Beecroft, David M.O. & Tania R. Gunn  
 1985 Intracranial haemorrhages in Pacific Islander stillbirths: is traditional massage the cause? New Zealand Medical Journal 98 (771): 18-19.
- Bender, D.R.  
 1967 A refinement of the concept of household: families, co-residence, and domestic functions. American Anthropologist 69: 493-504.
- Bissell, H.P.  
 1965 Niue Island: Land Use And Land Tenure In A Residual Economy. Unpub MA Thesis. University of Hawaii.

- Brady, Ivan, ed.  
1976 Transactions In Kinship. Honolulu: University of Hawaii Press. ASAO Monograph Number 4.
- Brenchley, J.L.  
1873 Jottings During The Cruise Of H.M.S. 'Curacao' Among The South Sea Islands In 1865. London: Longmans. [Pp 17-35].
- Brown, Nanette  
1962 Nursing on Niue Island. The New Zealand Nursing Journal. October. Pp 29-31.
- Campbell, John D.  
1975 Illness is a point of view: the development of children's concepts of illness. Child Development 46 (1): 92-100.
- Carroll, Vern, ed.  
1970 Adoption In Eastern Oceania. Honolulu: University of Hawaii Press. ASAO Monograph Number 1.
- Cartlidge, Ian J.  
1983 Clubfoot in the Polynesian: an epidemiological survey. New Zealand Medical Journal 96 (735):515-517.
- Challis, R.L.  
1953 Problemes Sociaux des Polynesiens Non-Maoris en Nouvelle-Zelande. Document Technique Number 41. Noumea, Nouvelle Caledonie: Commission du Pacifique Sud.
- Chapman, C.J.  
1983 Ethnic differences in the incidence of cleft lip and/or palate in Auckland 1960-1976. New Zealand Medical Journal 96 (731): 327-329.
- Chapman, Terry M.  
1976 The Decolonization Of Niue. Wellington: Victoria University Press.  
1982 Modern times (Ko e magahala fakamui). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/ Institute for Pacific Studies, University of the South Pacific. Pp 59-66, 133-139.
- Chen, E. & S. Cobb  
1960 Family structure in relation to disease. Journal of Chronic Diseases 12: 544-567.
- Clark, M. Margaret, ed.  
1983 The Western Journal Of Medicine 139 (6). Special Issue: Cross-Cultural Medicine.
- Coleman, H.A.  
1969 Radio broadcasting in Niue. South Pacific Bulletin. Second Quarter. Pp 31-35.

- Commonwealth Magistrates Association  
1977 Pacific Courts And Justice. Suva, Fiji: Institute for Pacific Studies, University of the South Pacific.
- Connell, John  
1983 Migration, Employment And Development In The South Pacific. Country Report Number 11-Niue. Noumea, New Caledonia: South Pacific Commission.
- Constable, Elisabeth  
1980 Manual for knowledge and expectations of child development. Revised version. Mimeo. Department of Education, University of Western Australia.
- Constable, Elisabeth, Elspeth Jacobs & Alison Ward  
1981 Test for measuring parents' knowledge and expectations of early childhood development. Perceptual and Motor Skills 52: 82.
- Coppell, William G.  
1975 Bibliographies Of The Kermadec Islands, Niue, Swains Island And The Tokelau Islands. Honolulu: Pacific Studies Program, University of Hawaii.
- Crawford, R.J.  
1977 Missionary accounts of fofo mo'omo'o. Journal of the Polynesian Society 86(4): 531-534.
- Crocombe, Ron.  
1977 Traditional and colonial tenure. In Solomona Kalauni et al. Land Tenure In Niue. Suva, Fiji: Institute for Pacific Studies, University of the South Pacific. Pp 14-24.
- Davidson, G.P. & M.R.C. Carr-Gregg  
1983 Grief, death and bereavement among New Zealand's Polynesian people: A community affair. The New Zealand Nursing Journal. July. Pp 12-15.
- Dempster, G.O.L.  
1949 Leprosy in Niue Island: A note on the history of the disease. International Journal Of Leprosy 17(4): 411.  
1953 Leprosy in Niue Island. Proceedings of the Seventh Pacific Science Congress: 291-294.
- Dodge, Warren F., et al.  
1970 Patterns of maternal desires for child health care. American Journal of Public Health 60: 1421-1429.
- Douglas, Himalea I.  
1974 New Zealand education for a Niuean. In Douglas H. Bray and Clement G.N. Hill, eds. Polynesian And Pakeha In New Zealand Education. Volume II: Ethnic Difference And The School. Auckland: Heinemann Educational Books. Pp 160-163.

- Dubanoski, Richard A.  
1981 Child maltreatment in European- and Hawaiian-Americans. *Child Abuse And Neglect* 5:457-465.
- Dubanoski, Richard A. & Karen Snyder  
1980 Patterns of child abuse and neglect in Japanese- and Samoan- Americans. *Child Abuse And Neglect* 4:217-225.
- Espie, J.G.  
1974 Report On The Public Dental Health Service, Niue. Wellington: Division of Dental Health, Department of Health, New Zealand. Mimeo.
- Etuata, Ikinepule & Pitasoni Tanaki  
1982 The wisdom of Niue (Tau atua tuai he motu ko Niue he vaha pouli). In *Niue: A History Of The Island*. Niue/Suva, Fiji: Niue Government/Institute for Pacific Studies, University of the South Pacific. Pp 17-22, 97-102.
- Feinberg, Richard  
1979 Anutan Concepts Of Disease: A Polynesian Study. Honolulu: Institute for Polynesian Studies. Monograph Series Number 3.
- Fieldes, M.  
1972 Significance of soils of Niue to other soils formed of coral limestone in the Pacific. *New Zealand Soil News*. Pp 75-82.
- Fieldes, M., et al.  
1960 Mineralogy and radioactivity of Niue Island soils. *New Zealand Journal Of Science* 3:658-675.
- Filoiali'i, La'auli & Lyle Knowles  
1981 A note on White Sunday: A day of honour for Samoan children. *Oceania* 51(3): 211-213.
- Finney, Ben R.  
1985 Anomalous Westerlies, El Nino, and the colonization of Polynesia. *American Anthropologist* 87: 9-26.
- Firth, Raymond  
1959 Acculturation in relation to concepts of health and disease. In Iago Galdston, ed. *Medicine And Anthropology*. Lectures To The Laity XXI New York Academy of Medicine. New York: International Universities Press.  
1970 Rank And Religion In Tikopia. Boston: Beacon Press.
- Fisk, E.K.  
1978 The Island Of Niue: Development Or Dependence For A Very Small Nation. Canberra: Australian National University. Development Studies Centre Occasional Paper Number 9.

- Fortes, Meyer**  
 1958 Introduction. In Jack R. Goody, ed. *The Developmental Cycle In Domestic Groups*. Cambridge, U.K.: Cambridge University Press. Pp 1-14.  
 1978 An anthropologist's apprenticeship. *Annual Reviews Of Anthropology* 7: 1-30.
- Frankovich, Marija K.**  
 1974 *Child-rearing On Niue: An Ethnopsychological Analysis Of Aspects Relevant To The Goals And Acquisition Of A Contemporary Western Education*. Unpub. M. Soc. Sci. Thesis, Psychology Department, University of Waikato, New Zealand.
- Frost, I.A. & N.R. Berryman**  
 1966 *The Timber Resources Of Niue Island*. Wellington: New Zealand Forest Service.
- Gallimore, Ronald, Joan Whitehorn Boggs & Cathie Jordan**  
 1974 *Culture, Behavior And Education*. Beverly Hills: Sage Publications.
- Geddis, D.G. & P. A. Silva**  
 1979 The Plunket Society: a consumer survey. *New Zealand Medical Journal* 90: 507-509.
- Geissler, Liliane**  
 1962 Health education develops on Niue. *South Pacific Bulletin*. April. Pp22-25.
- Goffman, Ben C.**  
 1971 Stamps of Niue Island. *South Pacific Bulletin*. Second Quarter. Pp 51-55.
- Goodenough, Commodore**  
 1876 *Journal of Commodore Goodenough, R.N., C.B., C.M.G., During His Last Command As Senior Officer On The Australia Station 1873-75*. 'Edited by his widow.' London: King & Co.
- Goodman, Richard A.**  
 1971 Some Aitu beliefs of modern Samoans. *Journal of the Polynesian Society* 80: 463-479.
- Gordon, Arthur [Lord Stanmore]**  
 1904 *Fiji: Records Of Private And Of Public Life, 1875-1880*. Volume IV. Edinburgh: Clark.
- Graves, Nancy B.**  
 1978 Growing up Polynesian: Implications for Western Education. In Cluny Macpherson, Bradd Shore & Robert Franco, eds. *New Neighbours ... Islanders In Adaptation*. Santa Cruz, CA: Center for South Pacific Studies, University of California-Santa Cruz. Pp 161-177.

- Graves, Nancy B. & Theodore D. Graves  
1978 The impact of modernization on the personality of a Polynesian people. *Human Organization* 37: 115-135.
- Graves, Theodore D. & Nancy B. Graves  
1977 Preferred adaptive strategies: an approach to New Zealand's multi-cultural workforce. *New Zealand Journal of Industrial Relations* 2:81-90.  
1979 Stress and health: modernization in a traditional Polynesian people. *Medical Anthropology* 3(1): 23-59.
- Haggerty, Robert J. & Joel J. Alpert  
1963 The child, his family and illness. *Postgraduate Medicine* 34: 228-233. September.
- Halfon, Neal  
1985 Factors influencing the utilization of health care by children. *Mobius* 5(1):76-91.
- Hanson, F. Allan  
1970 *Rapan Lifeways: Society And History On A Polynesian Island*. Boston: Little, Brown & Co.
- Hammel, Eugene  
1975 Reflections on the zadruga. *Ethnologica Slavica* 7: 141-151.
- Harkness, Sara & Charles M. Super  
1983 The cultural construction of child development. *Ethos* 11(4): 221-231.
- Hilger, Sister M. Inez  
1966 Field guide to the ethnological study of child life. 2, rev.ed. *Behavior Science Field Guides*. Volume 1. New Haven: Human Relation Area Files Press.
- Hinds, Val  
1971 Niue Island, Buttress against the ocean. *South Pacific Bulletin*. Second Quarter. Pp 24-26.
- Holmes, Lowell D.  
1974 *Samoan village*. New York: Holt, Rinehart & Winston.
- Hooper, Antony  
1985 Tahitian healing. In Claire D.F. Parsons, ed. *Healing Practices In The South Pacific*. Honolulu: Institute for Polynesian Studies. Pp 158-198.
- Hooper, Antony & Judith Huntsman  
195 The impact of cultural exchange on health and disease patterns: the Tokelau Island Migrant Study. In Yunshik Chang and Peter J. Donaldson, eds. *Population Change In The Pacific Region: Papers presented in symposia on Pacific Populations During the Thirteenth Pacific*

Science Congress, Vancouver. Pp 175-177.

Howard, Alan

1979 The power to heal in colonial Rotuma. Journal of the Polynesian Society 88:243-275.

Hood, T.H.

1863 Notes Of A Cruise In H.M.S. 'Fawn' In The Western Pacific In The Year 1862. Edinburgh: Edmonston & Douglas.

Hyslop, John, Jan Dowland & Janet Hickling

1983 Health Facts New Zealand. Wellington: Management and Services Research Unit, Department of Health, New Zealand.

Iyengar, M.O.T.

1958 Filariasis in Niue. Technical Information Circular Number 30. Noumea, New Caledonia: South Pacific Commission.

Jacobsen, Veve

1983 Attitudes of Niuean women towards childbirth. Unpub. ms. Research assignment for the Advanced Diploma in Nursing Studies, Auckland Technical Institute, New Zealand.

Juniper Annie B.

1922 Native dietary on Niue Island. Journal Of Home Economics 14(11): 612-614.

Kalauni, Solomona, et al.

1977 Land Tenure In Niue. Suva, Fiji: Institute for Pacific Studies, University of the South Pacific.

Keating, John

1960 Housing for hurricane-swept Niue. South Pacific Bulletin. April. Pp34-36, 38.

Kinloch, Patricia J.

1980 Samoan health practices in Wellington. Management Services and Research Unit, Department of Health, New Zealand. Occasional Paper Number 12.

Krantzler, Nora J.

1984 Dilemmas in cultural change: traditional medicine as "medical neglect". Paper delivered at AAA-AES sponsored symposium on child treatment and child survival: cultural, biological and applied dimensions. 83rd Annual Meeting of the American Anthropological Association, Denver.

Krauss, N.L.H.

1970 Bibliography of Niue, South Pacific. Honolulu: University of Hawaii.

**Kumitau, Vilisoni & Maihetoe Hekau**

- 1982 Origins of the Niue people (Ko e tupuaga he tau tangata to niue). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/Institute of Pacific Studies, University of the South Pacific. Pp 1-10, 83-90.

**Laboratory of Comparative Human Cognition**

- 1979 Cross-cultural psychology's challenges to our ideas of children and development. American Psychologist 34(10): 827-833.

**Langley, Doreen**

- 1953 Nutrition survey Niue Island. South Pacific Health Service iii:58. Mimeo.

**Lee, Margaret**

- 1974 Nga Kaimahi: Polynesians In Industry. New Zealand Vocational Training Council. Wellington: New Zealand Government Printer.

**Levy, Robert**

- 1968 Child management structure in Tahitian families. In N.W. Bell & E.F. Vogel, eds. A Modern Introduction To The Family, revised ed. Glencoe: Free Press. Pp 590-598.
- 1969 On getting angry in the Society Islands. In William Caudill & Tsung-Yi Lin, eds. Mental Health Research In Asia And The Pacific. Honolulu: East-West Center Press. Pp358-380.
- 1973 Tahitians: Mind And Experience In The Society Islands. Chicago: University of Chicago Press.

**Litman, Theodor J.**

- 1974 The family as a basic unit in health and medical care:a social behavioral overview. Social Science And Medicine 8 (9/10): 495-519.

**Loeb, Edwin M.**

- 1924 The shaman of Niue. American Anthropologist 26: 393-402.
- 1926 History And Traditions Of Niue. Honolulu: Bernice P. Bishop Museum. Bulletin Number 32. (New York: Kraus Reprints).

**Loschdorfer, J.J.**

- 1955 General survey of eye diseases on Niue, American Samoa, and Western Samoa. Noumea, New Caledonia: South Pacific Commission Technical Informatino Circular 13.

**Lucas, R.J.**

- 1968 Agricultural progress on Niue. South Pacific Bulletin. First Quarter. Pp 35-39.

Luomala, Katherine

- 1978 Symbolic slaying in Niue: post-European changes in a dramatic ritual complex. In Niel Gunson, ed. The Changing Pacific: Essays In Honour Of H.E. Maude. Melbourne: Oxford University Press. Pp 142-162.

McBean, Angus

- 1961 Niue women run flourishing weaving industry. South Pacific Bulletin. July. Pp 18-21.  
1962 Niue today ... South Pacific Bulletin. October. Pp33-37, 60-63.

McEwen, J.M.

- 1970 Niue Dictionary. Wellington: Department of Maori and Island Affairs, New Zealand.  
1974 Understanding Polynesians. In Douglas H. Bray & Clement G.N. Hill, eds. Polynesian And Pakeha In New Zealand Education. Volume II: Ethnic Differences And The School. Auckland: Heinemann Educational Books. Pp 6-16.

McDowell, D.K.

- 1961 A History Of Niue. Unpub MA Thesis Victoria University of Wellington, New Zealand.

McLachlan, Sue

- 1982 Savage island or savage history? An interpretation of early European contact with Niue. Pacific Studies 6: 26-51.

McMillan, June L.

- 1960 To Niue Island. New Zealand Nursing Journal. December. Pp 7-9.

Mackay, J.B.

- 1974 Tuberculosis in immigrants from the Pacific Islands. In John Stanhope and Jeffrey S. Dodge, eds. Proceedings Of A Seminar On Migration And Related Social And Health Problems In New Zealand And The Pacific 1972. Wellington Hospital Epidemiology Unit, Wellington, New Zealand. Pp53-58.

Mackenzie, Margaret

- 1973 Social and cultural aspects of preschool child health in Rarotonga, Cook Islands. Unpub PhD disseration, Anthropology Department, University of Chicago.  
1976 Damned if you do and damned if you don't: dilemmas in development for Pacific health. Journal de la Societe des Oceanistes 53(32): 314-316.

Macpherson, Cluny

- 1978 The Polynesian migrant family: the Samoan case. In P.G. Koopman-Boyden, ed. Families In New Zealand Society. Wellington: Methuen. Pp 120-137.

- 1985 Samoan medicine. In Claire D.F. Parsons, ed. Healing Practices In The South Pacific. Honolulu: Insitiute for Polynesian Studies. Pp1-15.
- Macpherson, Cluny, Bradd Shore & Robert Franco, eds.  
1978 New Neighbours ... Islanders In Adaptation. Santa Cruz, CA: Center for South Pacific Studies, University of California-Santa Cruz.
- Maiai, Semisi  
1985 In defence of traditional massage. New Zealand Medical Journal 776(98): 251.
- Marsden, E., G.J. Ferguson & M. Fieldes  
1958 Notes on the radioactivity of soils with application to Niue Island. Proceedings Of The Second international Conference For Peaceful Uses Of Atomic Energy; Geneva, United Nations. 18:514-515.
- Martini, Mary & John Kirkpatrick  
1981 Early interactions in the Marquesas Islands. In Tiffany M. Field, et al, eds. Culture And Early Interactions. Hillsdale, N.J.: Lawrence Erlbaum Associates. Pp 189-213.
- Maude, H.E.  
1981 Slavers In Paradise: The Peruvian Labour Trade In Polynesia 1862-1864. Canberra: Australian National University Press.
- Mead, Margaret  
1928 Coming Of Age In Samoa. New York: William Morrow.
- Mechanic, David  
1964 The influence of mothers on their children's health attitudes and behaviour. Pediatrics 33: 444-453.
- Metge, Joan  
1976 The Maoris of New Zealand. Rev. ed. London: Routledge & Kegan Paul.
- Metge, Joan & Patricia J. Kinloch  
1978 Talking Past Each Other: Problems Of Cross-Cultural Communication. Wellington: Victoria University Press.
- Miller, R. B., compiler  
1980 Niue: Soil And Land Use. Seminar: Alofi, Niue. October 9-11, 1979. Wellington: Soil Bureau, Department of Scientific And Industrial Research, New Zealand.
- Ministry Of Foreign Affairs  
1983 Development 6(1). March. External Aid Division's quarterly journal. Ministry of Foreign Affairs, New Zealand.

- Monaghan, C.  
1952 Reminiscences of Niue. The New Zealand Nursing Journal. February 15. Pp 14-17.
- Morris, W., M.H. Hatch & S. Chipman  
1966 Deterrants to well-child supervision. American Journal of Public Health 56: 1232.
- Moss, Frederick J.  
1889 Through Atolls And Islands In The Great South Sea. London: Sampson Low. [Pp 8-14].
- Moyle, Richard M.  
1974 Samoan medicinal incantations. Journal of the Polynesian Society 83: 155-179.
- Murray, A.W.  
1863 Missions In Western Polynesia. London: J. Snow. [Pp 357-398].
- Naval Intelligence Division, Great Britain  
1943 Geographical Handbook Series. Pacific Islands. Volume II: Eastern Pacific. Niue: Pp 562-581. Number BR 519B.
- Nemaia, H.T.  
1982 Personal communication
- Nemaia, Jane  
1984 Family planning amongst Niuean women: a knowledge-attitude-practice study. Unpub. ms. Research assignment for Advanced Diploma in Nursing Studies, Waikato Technical Institute School of Nursing, New Zealand.
- New Zealand Census  
1981 New Zealand Census Of Population And Dwellings 1981. Volume 8B: Pacific Island Polynesians. Department of Statistics, Wellington, New Zealand.
- New Zealand Coalition for Trade and Development  
1982 The Ebbing Tide: The Impact Of Migration On Pacific Island Societies. Wellington: New Zealand Coalition for Trade and Development.
- Niue Government  
1979 Mata Ki Mua: First Five Year Plan 1979-1984. Mimeo. Alofi, Niue.  
1982 Niue Health Department. Annual Report. Mimeo.
- Niue Education Department  
1979 Resource book. Revised edition. Niue: Niue Government.
- Niue Planning Department  
1982 Quarterly Abstracts Of Statistics. Niue.

- Niue Statistics Unit  
1985 1984 Mini-Census of Population Report. Mimeo. Niue:  
Department of Economic Development.
- Owens, J.M.R.  
1972 Missionary medicine and Maori health. Journal of the  
Polynesian Society 81(4): 418-436.
- Pacific Islands Yearbook  
1979 to 1984 Sydney: Pacific Publications.
- Paka, L.  
1981 The role of women in Niue in the areas of health,  
the family and the community, employment, unemployment  
and culture. South Pacific Commission Seminar on  
Pacific Women, Tahiti.
- Parsons, Claire D.F.  
1983 Developments in the role of the Tongan healer.  
Journal of the Polynesian Society 92:31-50.  
1984 Idioms of distress: kinship and sickness among the  
people of the Kingdom of Tonga. Culture, Medicine and  
Psychiatry 8: 71-93.
- Parsons, Claire D.F., ed  
1985 Healing Practices In The South Pacific. Honolulu:  
Institute For Polynesian Studies.
- Parsons, Roger  
1968 Self-determination and political development in  
Niue. Journal of the Polynesian Society 77:242-262.
- Pawley, A.  
1967 The relationships of Polynesian Outlier languages.  
Journal of the Polynesian Society 76: 259-295.
- Picken, Bruce & George Ireland  
1969 Family patterns of medical care utilization. Journal  
of Chronic Diseases 22: 181 .
- Pihigia, Togia  
1977 Supernatural protection of Niuean land. In Solomona  
Kalauni et al. Land Tenure In Niue. Suva, Fiji:  
Institute of Pacific Studies, University of the South  
Pacific. Pp38-39.
- Pollard, Brian  
1978 The problem of aid-dependent economy: the case of  
Niue. In Gay Woods, ed. South Pacific Dossier.  
Canberra: Australian Council for Overseas Aid.
- Pollock, Nancy J.  
1975 Niue--resources and their use. Unpub ms. Mimeo.  
1979 Work, wages and shifting cultivation on Niue.  
Pacific Studies 2: 132-143.

- Powell, Thomas  
 1868 Savage Island, A Brief Account Of The Island Of Niue  
 And The Work Of The Gospel Among Its People. London: J.  
 Snow.
- Pratt, Lois  
 1973 The significance of the family--medical. Journal of  
 Comparative Family Studies 4: 13-25.
- Radcliffe-Brown, A.R.  
 1955 Structure And Function In Primitive Societies. New  
 York: Free Press.
- Rex, Leslie & Young Vivian  
 1982 The New Zealand period (Magahala he pule faka-Niue  
 Silani). In Niue: A History Of The Island. Niue/Suva,  
 Fiji: Niue Government/Institute of Pacific Studies,  
 University of the South Pacific. Pp 51-58, 127-132.
- Ritchie, Jane & James Ritchie  
 1979 Growing Up In Polynesia. Sydney: Allen and Unwin.
- Ritchie, James & Jane Ritchie  
 1981 Child-rearing and child abuse: the Polynesian  
 context. In Jill E. Korbin, ed. Child Abuse And  
 Neglect: Cross-Cultural Perspectives. Berkeley:  
 University of California Press. Pp 186-204.
- Ryan, Thomas F.  
 1977 Prehistoric Niue: An Egalitarian Polynesian Society.  
 Unpub. MA Thesis, Anthropology Department, University  
 of Auckland, New Zealand.  
 1981 Fishing in transition in Niue. Journal de la Societe  
 des Oceanistes 72-73 Septembre-October: 193-203.
- Ryan, Thomas F., compiler.  
 1984 Palagi Views Of Niue: Historical Literature 1774-  
 1899. Auckland: Auckland University Bindery.
- Schoeffel, Penelope  
 1984 Dilemmas of modernization in primary health care in  
 Western Samoa. Social Science And Medicine 19 (3): 209-  
 216.
- Shineberg, Dorothy  
 1978 'He can but die ...': Missionary medicine in pre-  
 Christian Tonga. In Niel Gunson, ed. The Changing  
 Pacific: Essays In Honour Of H.E. Maude. Melbourne:  
 Oxford University Press. Pp 285-296.
- Shore, Bradd  
 1978 Ghosts and government: a structural analysis of  
 alternative institutions for conflict management in  
 Samoa. Man 13(2): 175-199.  
 1982 Sala'ilua: A Samoan Mystery. New York: Columbia

University Press.

Simpson, E.J.

1958 Filariasis on Niue. New Zealand Medical Journal 56:  
136-137.

Smith, S. Percy

1983 Niue: The Island And Its People. Suva, Fiji:  
Institute for Pacific Studies, University of the South  
Pacific. [Reprinted from Journal of the Polynesian  
Society Volumes 11 and 12, 1902 and 1903].

Social Development Council

1978 Families in special circumstances: Migrant families.  
Mimeo report by Department of Social Welfare,  
Wellington, New Zealand.

Spanier, Graham B.

1976 Measuring dyadic adjustment: new scales for  
assessing the quality of marriage and similar dyads.  
Journal of Marriage and the Family 38(1): 15-30.

Speake, J.D.

1980 The prevention of dental decay in Niue. South  
Pacific Bulletin. First Quarter. Pp 33-34.

Spoonley, Paul

1975 Niue And Niueans: A Bibliography. Mimeo. Department  
of Sociology, Auckland University, New Zealand.

Stanhope, John, ed

1977 Migration And Health In New Zealand And The Pacific.  
Proceedings of a 1975 Conference. Wellington Hospital  
Epidemiology Unit, Wellington, New Zealand.

Stanhope, John & Jeffrey S. Dodge, eds

1974 Proceedings of a seminar on Migration And Related  
Social And Health Problems In New Zealand And The  
Pacific 1972. Wellington Hospital Epidemiology Unit,  
Wellington, New Zealand.

Stine, Oscar C. & Constantino Chuaqui

1969 Mothers's intended actions for childhood symptoms.  
American Journal of Public Health 59: 2035-2045.

Super, Charles M. & Sara Harkness, eds

1982 Anthropological Perspectives On Child Development.  
Special Issue Number 8. New Directions for Child  
Development.

Sykes, W.R.

1970 Contributions To The Flora Of Niue. Botany Division,  
Department of Scientific and Industrial Research,  
Christchurch, New Zealand.

- Tafatu, Ofa & Ianeta J. Tukuitoga  
 1982 Developments to annexation (Tau faifeau fakamui mo e pule faka-Niue Silani). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/Institute of Pacific Studies, University of the South Pacific. Pp 43-50, 121-126.
- Talagi, Fifita  
 1982 Early European contacts (Tamaiaga he tau mahani faka-motu kehe). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/Institute of Pacific Studies, University of the South Pacific. Pp 31-42, 111-120.
- Talagi, Tahafa P.  
 1982 Pre-history (Tau tala tuku fakaholo a Niue to hoko mai e tau papalagi). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/Institute of Pacific Studies, University of the South Pacific. Pp 23-30, 103-110.
- Talagi, Siona  
 1971 Dental public health service in Niue. New Zealand School Dental Service Gazette. December. Pp68-70.
- Tamson, Rita, compiler.  
 1973 Bibliography on medicinal plants and related subjects. Working Paper Number 20. Regional Technical Meeting on Medicinal Plants. Papeete, Tahiti, 12-17 November 1973. South Pacific Commission. Noumea, New Caledonia.
- Taylor, Richard & Harry T. Nemaia  
 1983 Mortality in Niue 1978-1982. South Pacific Commission, Noumea, New Caledonia. Paper Numer 1235/83.
- Taylor, Richard, et al.  
 1983 Niue women's health survey. Report of Stage I: review existing morbidity and mortality data and an assessment of needs. South Pacific Commission, Noumea, New Caledonia.
- Thomson, Basil  
 1902 Savage Island. London: John Murray.
- Tonkin, Shirley L.  
 1974a Polynesian child health: effects of education. In Douglas Bray & Clement G.N. Hill, eds. Polynesian And Pakeha In New Zealand Education. Volume II: Ethnic Differences And The Schools. Auckland: Heinemann Educational Books.  
 1974b Preliminary report on Tokelauan children under 5 years of age in New Zealand examined in 1972. In John Stanhope and Jeffrey S. Dodge, eds. Proceedings of a

- seminar on Migration And Related Social And Health Problems In New Zealand And The Pacific 1972. Wellington Hospital Epidemiology Unit, Wellington, New Zealand. Pp 59-71.
- 1974c Health of Tokelauan children. Unpub. ms. Paper presented at the IXVth Medical Women's International Association's Congress in Rio de Janeiro, October 13-19, 1974.
- 1977 The Tokelau children's study: common diseases. In John Stanhope, ed. Migration And Health In New Zealand And The Pacific. Proceedings of a 1975 Conference. Wellington Hospital Epidemiology Unit, Wellington, New Zealand. Pp 119-126.
- Tonkin, S.L. & N. Wynne-Jones**  
 1979 Tokelau Islands children's study: scabies infestation in children. New Zealand Medical Journal 90(639): 8-11.
- Tonkin, S.L. et al**  
 1979 The Tokelau Islands children's study: atoll and New Zealand comparisons: physical growth. New Zealand Medical Journal 89 (637): 429-432.
- Trotter, M.M.**  
 1979 Niue Island Archaeological Survey. Canterbury Museum Bulletin Number 7. Christchurch, New Zealand.
- Turner, George**  
 1861 Nineteen years In Polynesia. London: J. Snow. [Pp 465-671].
- van Westerndorp, J.F.**  
 1961 Agricultural development on Niue. South Pacific Bulletin. April. Pp 67-70.
- Vilitama, Hafe**  
 1982 Traditional politics (Ko e fakatufono motu he vaha i Tuai, i Niue). In Niue: A History Of The Island. Niue/Suva, Fiji: Niue Government/Institute of Pacific Studies, University of the South Pacific. Pp 11-16, 91-96.
- Wagner, Daniel A. & Harold W. Stevenson, eds**  
 1982 Cultural Perspectives On Child Development. San Francisco: W.H. Freeman & Co.
- Walsh, A.C.**  
 1980 Population distribution and migration. In Report On The 1976 Census Of Population and Housing. Volume 2: Analysis of Demographic Data. Niue: Department of Justice. Pp 44-66.

- Walsh, A.C. & A.D. Trlin  
 1973 Niuean migration: Niuean socio-economic background, characteristics of migrants, and settlement in Auckland. *Journal of the Polynesian Society* 82: 47-85.
- Werner, E.E.  
 1979 *Cross-cultural Child Development*. Monterey, CA: Brooks/Cole.
- White, Douglas  
 1969 Mathematical anthropology. In John J. Honigmann, ed. *Handbook Of Social And Cultural Anthropology*. New York: Rand McNally. Pp 369-446.
- Whimster, W.F., D. Tafatu & G.O.L. Dempster  
 1962 Report on Tuberculosis survey, Niue Island, March-May 1962. Mimeo. Department of Island Territories, Wellington, New Zealand.
- Whiting, John W.M.  
 1941 *Becoming A Kwoma*. New York: Morrow.
- Whiting, Beatrice B. & John W.M. Whiting  
 1975 *Children Of Six Cultures: A Psychocultural Analysis*. Cambridge, Mass.:Harvard University Press.
- Whittaker, Graeme  
 1982 *The Niuean Language: An Elementary Grammar And Basic Vocabulary*. Niue: University of the South Pacific Extension Centre.
- Williams, J. Francon  
 1941 Report On Dental Health Survey, Niue Island. Mimeo. Dental Health Division, Department of Health, New Zealand.  
 1968 Survey of Public Dental Health Service In Niue And Plan For Development. Dental health Division, Department of Health, New Zealand. Department of Health Special Report Number 31.
- Williamson, H.G., et al  
 1985 Serological markers of hepatitis B infection in Niue children. *New Zealand Medical Journal* 98 (777): 275-277.
- Wright, A.C.S. & F.J. van Westerndorp  
 1965 *Soil And Agriculture On Niue Island*. Soil Bureau Bulletin Number 17. Department of Scientific and Industrial Research, New Zealand.
- Yanagisako, Slyvia Junko  
 1979 Family and household: the analysis of domestic groups. *Annual Review Of Anthropology* 8: 161-205.

Zhuang Hui, et al.

1983 A cross-sectional study of markers of hepatitis B  
infection in Niue. New Zealand Medical Journal. May 11.  
96(73): 330-332.

## APPENDIX ONE

### POPULATION BASE USED IN CALCULATING RATES OF HOSPITAL ADMISSION

Few figures are available yet from the 1981 Census of Population and Dwellings on Niue. Numbers, such as the age/sex breakdown for the entire pediatric population in each village, are vital to a complete analysis of pediatric use of medical services. As these figures are not known, some analyses cannot be performed and yet others have had to rely on an estimation of the population of children during the six year period, 1977-1982. Outlined below is an account of that estimation procedure.

It was assumed that the pediatric population over the entire period was equivalent to the number of children on the island in 1980. This was taken to be the mean of the available figures, those from the 1976 Census of Population and Dwellings and those from the 1984 Mini-Census. Of course, in 1977 the child population on Niue would have been a little higher than this mean and by 1982 it would have been lower. Nonetheless, it is not unreasonable either to assume a stable sized pediatric population over the entire period or to make it equivalent to the mean population between the two known time points.

Age and sex breakdowns were calculated on the basis of 1976 sex ratio figures for each age group, except for the under one year old group. For this infant group the actual birth records for the six year period was used, to get total numbers and the male/ female ratio.

#### Estimated Population Numbers of Children Aged 0 - 15 years, by sex, Niue 1980.

- 1) From Birth Records. An average of 97 children were born on Niue each year between 1977 and 1982. The sex ratio of these children was 106 males to 100 females.
- 2) From Table 2, page 40, 1976 Census of Population and Dwellings, and from Table 3, page 20, 1984 Mini-Census of Population: "Population by Age in single years And Sex."

Thus:

	<u>1976</u>	<u>1984</u>	<u>Mean</u>	<u>Males</u>	<u>Females</u>
under 1 year			97	50	47
1 - 5yrs	551	420	486	250*	236*
6 - 10yrs	624	303	464	239*	225*
11 - 15yrs	614	407	507	274*	233*
			-----	-----	-----
			1554	813	741

\* (Sex ratios: 0-10years 109m:100f; 11-15years 118m:100f)

Calculation of Rates of Hospital Admission.

As the figures for hospital admissions were collected over a six year period, the base population of children is 6X the Estimated 1980 Pediatric Population. The rate of hospital admission was then calculated, per 1,000 population, for particular age or sex groups. A sample calculation is given below, for infants under 1 year of age.

Infants in 1980 comprised 50 males, 47 females.

The base population of under 1 year olds was thus  $6 \times 50 = 300$  males and  $6 \times 47 = 282$  females.

The number of admissions of infants was 128 males and 103 females.

Rate of hospitalization (per 1,000) is given by the formula:

$$\frac{1,000}{\text{base population}} \times \text{Number of admissions}$$

So, for infant males, the rate is  $(1,000/300) \times 128 = 426.7$  and for females it is  $(1,000/282) \times 103 = 365.2$ . For all infants, the rate of hospitalization is  $(1,000/582) \times 231 = 396.9$ .

## APPENDIX TWO

### CHARACTERISTICS OF EXTREMELY-LONG STAY PEDIATRIC IN-PATIENTS

#### Reason For Excluding From Main Text

Hospital stays over 60 days indicate that the condition for which the child was admitted was probably chronic, not acute, and therefore is of a different nature to the rest of the admissions for the same general reason. Further, extremely long stays not only result in high standard deviations from any mean but they also inflate the mean so that it no longer reflects what happens to the typical patient admitted for an acute illness. Including stays of 60 days or more, for example, raises the mean stay for males with respiratory disease to 7.09 days with a standard deviation of 27.00 days. Excluding the two admissions with extreme stays reduces the mean stay to 5.25 days with a standard deviation of 4.32 days. This is a more realistic picture of acute respiratory distress among boys.

Long-stay patients, nevertheless, are of interest, precisely because they remain hospitalized so long.

#### Long-Stay Patients

Patients with extremely long-stays, those hospitalized for more than 60 days, comprised twelve males and three females. Four were infants under one year of age, four were preschool-age boys, three were aged 6-to-10 years, and four were older children. Infants and preschoolers stayed a mean of 164 days (standard deviation 135) while children 6 years of age and over stayed a mean of 82 days (standard deviation 23).

Four extremely long-stay children were admitted because of fractures, four for musculo-skeletal infections, and four for other infections. Two patients were admitted at birth with prematurity and/or congenital anomaly. One had chronic asthma.

Patients remaining in hospital for more than 60 days were not evenly distributed among the areas: 2 female and 5 male extremely long-stay patients came from the Back; 1 male lived in Alofi; 4 males resided in Southern villages; and, 2 males and 1 female came from the Front.

Nor were extremely long-stay patients evenly distributed by area across the age groups. Two such patients were infants came from the South, one from the Back, and one from the Front. One preschool child came from Alofi, one from the Front and two from the Back. All three 6-to-10 year old extremely long-stay patients came from the Back. Of children aged 11-to-15 years, one came from the Front and one from the Back while two came from the South.

## APPENDIX THREE

### KNOWLEDGE AND EXPECTATIONS OF CHILD DEVELOPMENT

**Instructions:** Discussion is NOT intended to be about specific children but about children in general. Ask the informant

"what is the average age when most children FIRST ... "

where ... is filled by one of the following situations. Discuss and record the informant's response, noting any qualifications or additional comments offered by the respondent. Ask each question in the order set.

#### Situations:

1. like to play with other children of their own age?
2. can make a pile of things four high?
3. can dress themselves without help? (Does NOT include tying shoes or doing up back buttons).
4. can count from 1 to 10 (in any language)?
5. will push away a pillow to find the toy hidden under it?
6. can feed themselves without spilling food?
7. begin to purposely throw toys instead of just dropping them accidentally?
8. drink from a cup without help?
9. reach for something an adult is offering them?
10. can say three words (in addition to Mama and Dada)?
11. can disagree or fight with other children without biting, kicking or throwing things?
12. can sit alone steadily?
13. smile spontaneously (WITHOUT prompting)?
14. can go to the toilet to urinate without assistance?
15. make different cries when they are hungry and when they are distressed for other reasons?
16. understand simple commands (e.g., "wave")?
17. stand disappointment or frustration without crying?

18. can kick a ball forwards?
19. become interested in objects and toys?
20. understand simple directions (e.g., "get the ball")?
21. can climb onto a chair?
22. can let their mother know what they want without crying?
23. can complete a simple task without being sidetracked?
24. move to music?
25. walk without help?
26. understand the ideas of size, weight, time, and space?
27. can pull themselves up to stand while holding onto something?
28. become shy of strangers?
29. can use pointed scissors safely?
30. play at throwing an object to an adult?
31. can copy sounds?
32. drop a spoon and then look to see where it has gone?
33. can climb a tree?
34. begin to ask questions to get information from adults?
35. copy an adult's clapping?
36. can stay home alone for an hour?
37. recognise colours and give them their names?
38. know and turn to their own names?
39. able to say two words together (pilot sentences)?
40. start to share their toys with other children?
41. crawl on hands and feet?
42. come or answer soon after being called?
43. imitate adult actions (e.g., "do housework")?
44. push away an adult's hand if they do not want the food being offered?

45. resolve a quarrel with friends or siblings without adult help?
46. leave or separate from their mothers without distress?
47. know some songs?
48. able to help regularly with household tasks?  
what do you expect boys to do?  
what do you expect girls to do?

APPENDIX FOUR

NIUEAN MOTHERS' S RESPONSES TO CHILD DEVELOPMENT QUESTIONS

<u>Question Number</u>	<u>Developmental Area</u>	<u>Western Norm (months)</u>	<u>NIUEAN MOTHERS' RESPONSES</u>			
			<u>MEDIAN (months)</u>	<u>Number of replies</u>		
				<u>Early</u>	<u>Matching</u>	<u>Late</u>
1	Personal/Social	42-48	24	11	2	-
2	Fine Motor	15-21	30	3	2	8
3	Personal/Social	33-48	36	3	8	2
4	Intellectual	33-39	48	3	2	8
5	Intellectual	8-11	12	-	8	5
6	Personal/Social	13-18	24	2	3	8
7	Intellectual	11-15	12-18	1	6	6
8	Personal/Social	10-14	12-18	-	9	4
9	Fine motor	3- 5	10	-	5	8
10	Language	12-15	18	1	9	3
11	Emotional Maturity	66-78	60	6	3	4
12	Gross motor	4.5- 7	8	-	10	3
13	Personal/Social	1.5- 3	3	-	9	4
14	Independence	33-39	36	2	7	4
15	Intellectual	0- 1	5- 6	-	5	8
16	Language	9-12	10	2	8	3
17	Emotional Maturity	54-60	36	8	2	3
18	Gross motor	15-22	24	3	6	4
19	Intellectual	5- 6	6- 7	-	10	3
20	Language	15-22	18	3	7	3
21	Gross motor	11-14	18	1	7	5
22	Personal/Social	10-14	18-24	-	5	8
23	Intellectual	33-39	36-42	3	6	4
24	Gross motor	8-12	12	-	11	2
25	Gross motor	11-14	12	-	11	2
26	Intellectual	45-54	48-60	4	1	8
27	Gross motor	6-10	10	-	11	2
28	Personal/Social	5-10	18-24	-	4	9
29	Emotional Maturity	45-54	48	4	5	4
30	Gross motor	9-18	24	-	3	10
31	Language	5-10	12	-	8	5
32	Intellectual	8-12	8-10	-	11	2
33	Gross motor	46-52	48	5	4	4
34	Language	24-36	36	-	5	8
35	Intellectual	7-10	10-12	-	10	3
36	Emotional Maturity	60+	48	8	1	4
37	Intellectual	33-45	54	4	2	7
38	Language	10-14	10	1	8	4
39	Language	14-22	18	1	9	3
40	Personal/Social	54-60	24	10	3	-
41	Gross motor	7- 9	8-10	-	13	-
42	Personal/Social	33-39	30	7	5	1
43	Intellectual	12-17	36	-	-	13

44 Intellectual	8-12	12	-	9	4
45 Personal/Social	55-65	48	7	4	2
46 Independence	30-36	18-24	8	2	3
47 Intellectual	24-27	24-36	-	7	6
48 Independence	72+	60	12	1	-

## APPENDIX FIVE

### VIGNETTES OF MEDICAL SYMPTOMS AND SITUATIONS

Instructions: Give informant response card and ask him/her to choose the response he/she feels is most appropriate in the situation outlined by the question

"what would you do if ... ?"

where ... is filled by reading to respondent one of the vignettes below. While recording the answer, discuss it and probe--for a notion of the urgency of the situation or seriousness of the symptoms; for exactly who would be consulted if advice was sought; for the kind of home medications used; for previous experience with this type of symptom or situation. Ask respondent about each vignette in the order set.

The response card has on it a choice of five items:

1. ignore it as it is nothing to worry about
2. wait and see what develops
3. give the child a home remedy or medication
4. take the child to doctor next day
5. take the child to doctor or hospital immediately

#### Vignettes

1. your child has had signs of a cold during the day but now is breathing very rapidly and with difficulty?
2. your child ate some rat poison?
3. your child fell off some steps onto his (her) head and began vomiting an hour later?
4. your child begins to cough?
5. you were painting a table and your child took some paint and swallowed it?
6. your baby ate two cigarette butts?
7. your child played outdoors all afternoon but now he (she) complains of a pain in the foot?
8. your child cries every time he (she) passes urine?
9. your child is having a convulsion (fit) that lasted more than five minutes?
10. both your child's eyes are red and watery and his (her) nose is running with thin mucous?
11. your 2-month old baby has cried steadily for four hours?

12. your baby just lies flat and is too weak to even lift his (her) head?
13. your child had a convulsion (fit) that lasted less than five minutes?
14. your pre-school age child has a cough and a hoarse voice?
15. at suppertime, when your baby is usually wide awake, you notice he (she) is very tired and sleepy?
16. your child has sneezed several times during the afternoon and again at bedtime?
17. your child has a cough and also complains of pains in his (her) chest?
18. your child fell while playing and comes home with a bump about a inch across on his (her) forehead?
19. your child swallows a small coin (1 cent piece)?
20. your child complains of a sore ear and is lethargic and irritable?
21. your child vomits his (her) breakfast before going to school?
22. your child eats half a bottle of aspirin?
23. your baby has been crying more than usual and has begun to wet its napkin (diaper) several times every hour?
24. your child is stung by a bee?
25. your baby has dirtied eight napkins (diapers) with bowel movements between breakfast and bedtime?
26. your baby did not want to play at all during the day?
27. your child has a hot, dry skin and a discharge from his (her) ear?
28. the urine your child passes is red in colour?
29. your child's eye is red and the eyelid is swollen?
30. your child has a hot dry skin and a thermometer shows a temperature of 38°C (101°F)?
31. your school age child tells you it hurt when he moved his bowels and there was blood and phlegm visible?

32. you realize at bedtime that your baby has not had a bowel movement all day?
33. for no apparent reason, your baby is not hungry for solid food or drink?
34. your baby, who usually spits up a little, has just vomited with great force?
35. your child's knee is red and swollen and so painful that she (he) does not want to walk?
36. your child has a rash you have not seen before on her (his) chest and face?
37. your child cries because when he (she) goes to urinate no urine comes out?
38. your child plays outside till suppertime but then complains of feeling tired and hot?
39. after eating only a part of her (his) supper, your child complains of stomach pains?
40. your baby had been angry and crying, and then held his (her) breath until he (she) seems to lose consciousness?

## APPENDIX SIX

### LIST OF MEDICAL SITUATIONS/SYMPTOMS PRESENTED IN EACH VIGNETTE, AND APPROPRIATE RESPONSE NUMBERS

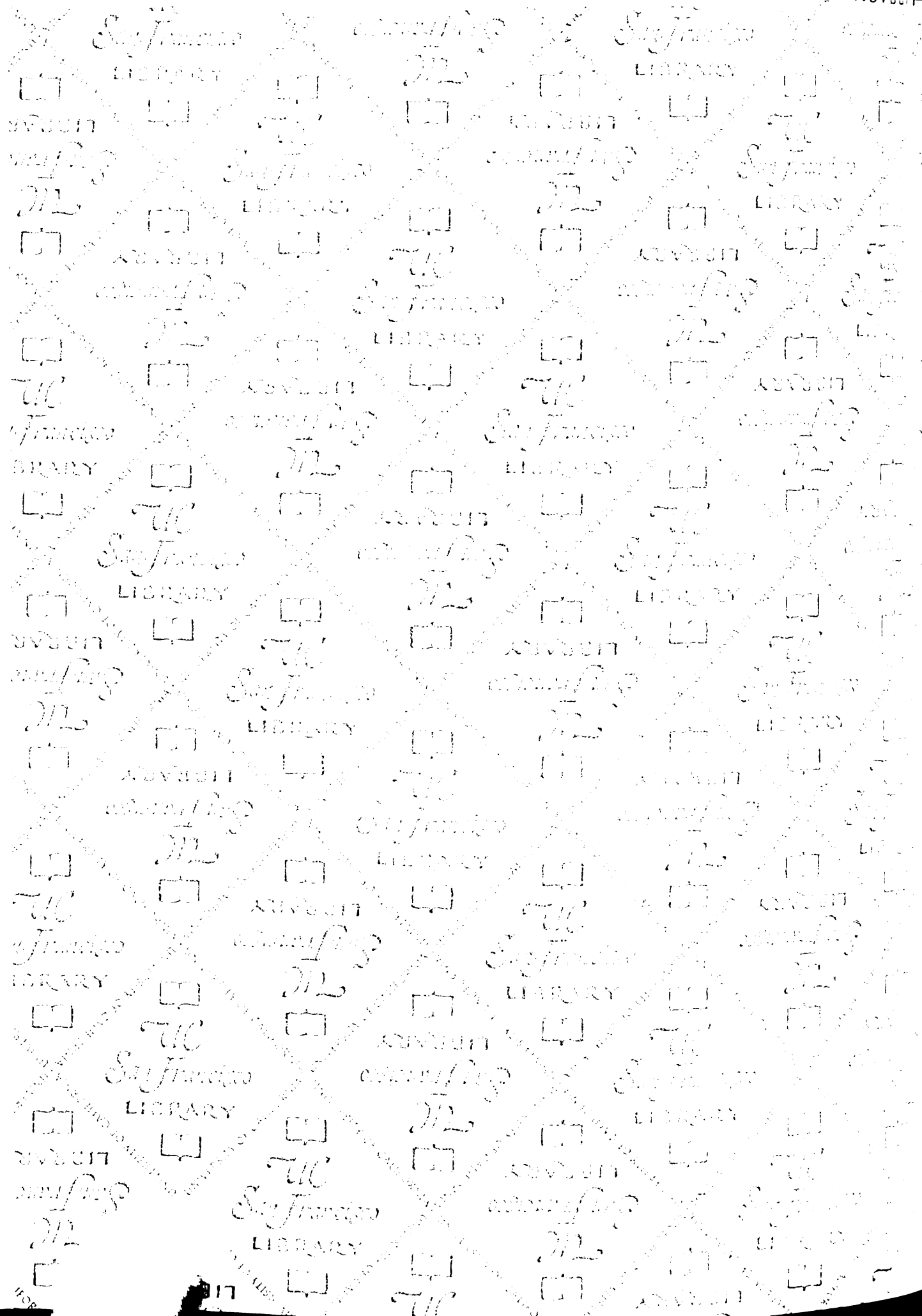
<u>Vignette Number</u>	<u>Symptom/Situation Described</u> (Child is/has...)	<u>Appropriate Response</u> (Number as on card)
1	Cold with rapid, difficult breathing	4, 5
2	Swallowed rat poison	5
3	Head injury with vomiting	5
4	Cough	1, 2, 3
5	Ingested paint	5
6	[Baby] Ingested cigarette butts	1, 2
7	Foot pain	1, 2
8	Dysuria	4
9	Convulsion lasting 5 minutes	5
10	Hay fever symptoms	2, 3, 4
11	[Baby] Cried steadily for 4 hours	2, 3, 4
12	[Baby] Lies flat, too weak to lift head	5
13	Convulsion for less than 5 minutes	5
14	Hoarseness with cough	4, 5
15	[Baby] Early fatigue	4, 5
16	Sneeze	1
17	Cough with chest pain	4, 5
18	Hematoma on forehead	2
19	Swallowed a small coin	3, 4
20	Ear pain, lethargy, irritability	4
21	Vomited before going to school	1, 2
22	Ingested large quantity of aspirin	5
23	[Baby] Urinary frequency with crying	4, 5
24	Bee sting	1, 2, 3
25	[Baby] 8 bowel movements in 12 hours	4
26	[Baby] Uninterested in playing	2
27	Fever with discharge from ear	4, 5
28	Red urine	4, 5
29	Swollen, red eyelid	4, 5
30	Low grade fever	2, 3, 4
31	Pain, blood/phlegm with bowel movement	4, 5
32	[Baby] No bowel movement that day	1
33	[Baby] Loss of appetite	4, 5
34	[Baby] Vomited with force after supper	2
35	Red, swollen knee	4, 5
36	Unrecognised rash on chest and face	4, 5
37	Urinary obstruction	5
38	Fever in the evening	2
39	Stomach pains while eating	2, 4
40	[Baby] Angry, cries, holds breath	1

**NIUEAN MOTHERS'S RESPONSES TO VIGNETTES  
OF SYMPTOMS AND SITUATIONS**

**MODAL, MEDIAN, AND NUMBER OF APPROPRIATE,  
OVER AND UNDER-USE RESPONSES**

<u>Vignette Number</u>	<u>Niuean Mothers's Responses</u>				
	<u>Modal</u>	<u>Median</u>	<u>Number of Responses</u>		
			<u>Appropriate</u>	<u>Under*</u>	<u>Over</u>
1	2	3	6	7	-
2	5	5	7	6*	-
3	4, 5	4	4	9*	-
4	3	3	10	1	2
5	4	4	4	9*	-
6	3	3	4	-	9
7	2	2	8	-	5
8	4	4	8	2*	3
9	4	4	4	8	-
10	2	2	10	-	3
11	4	4	7	3	3
12	4	4	4	9	-
13	5	4	4	9*	-
14	3	3	5	8	-
15	2	2	3	10	-
16	2	2	2	-	11
17	4	4	9	4*	-
18	2	2	8	1	4
19	2, 3	2	4	8*	1
20	4	4	6	2	5
21	2	2	7	-	6
22	5	4	5	8	-
23	2	3	6	7	-
24	1	2	12	-	1
25	1	2	1	10	2
26	1	1	3	9	1
27	4	4	10	3	-
28	4	4	10	3*	-
29	4	3	6	7	-
30	3	3	12	-	1
31	4	4	11	2*	-
32	2	2	4	-	9
33	2	2	3	10	-
34	2	2	7	5	1
35	3	3	6	7	-
36	4	4	9	4	-
37	4	4	9	4	-
38	1	1	6	7	-
39	1	2	5	8	-
40	1	1	11	-	2

\* Includes "Don't Know" responses.



**FOR REFERENCE**

**NOT TO BE TAKEN FROM THE ROOM**



CAT. NO. 23 012

PRINTED  
IN U.S.A.

