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Brigit Obrist
van Eeuwijk

Small but Strong

Cultural Contexts of (Mal-)Nutrition among the Northern Kwanga (East Sepik Province, Papua New Guinea)

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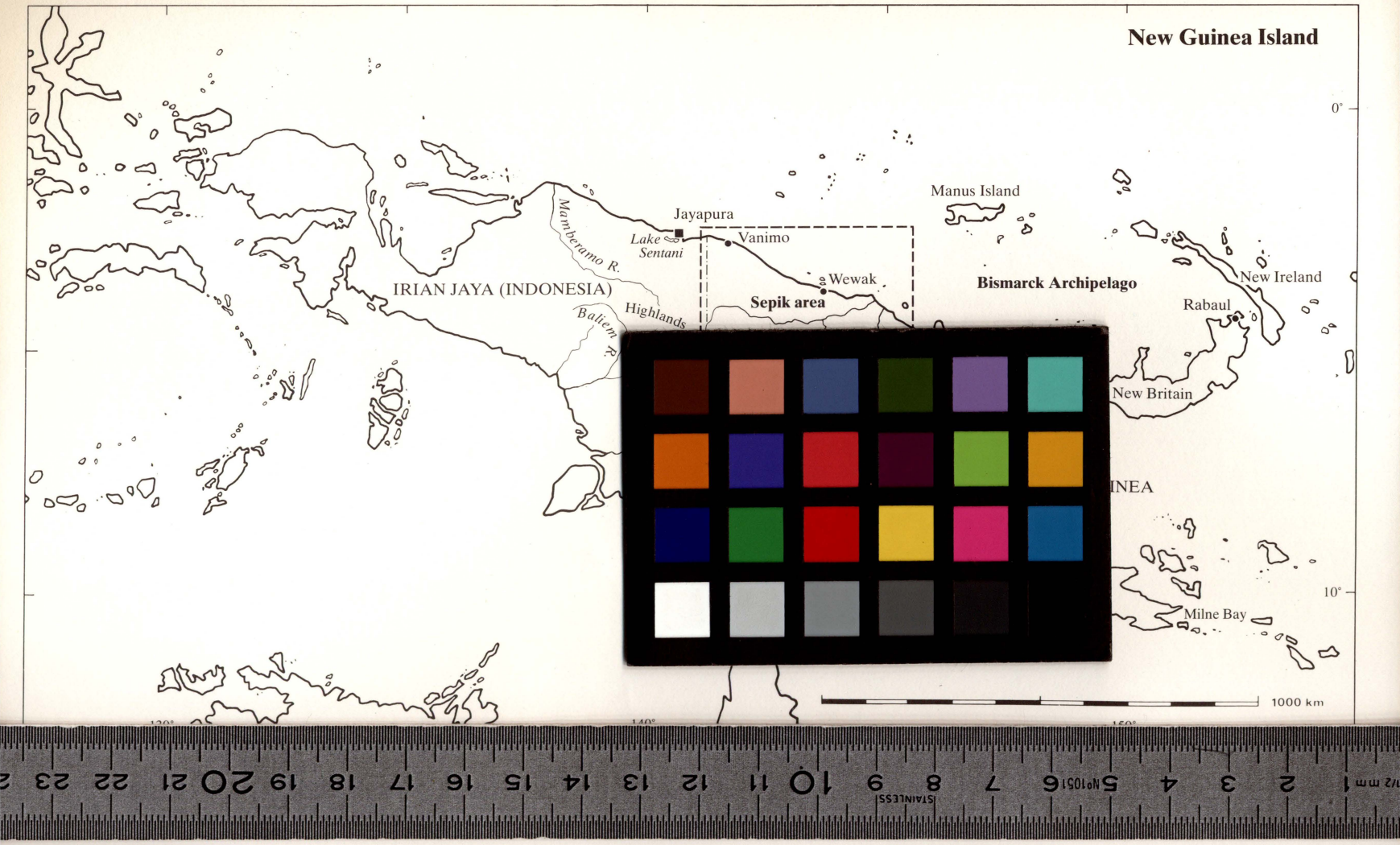
Ethnologisches Seminar der Universität
und Museum für Völkerkunde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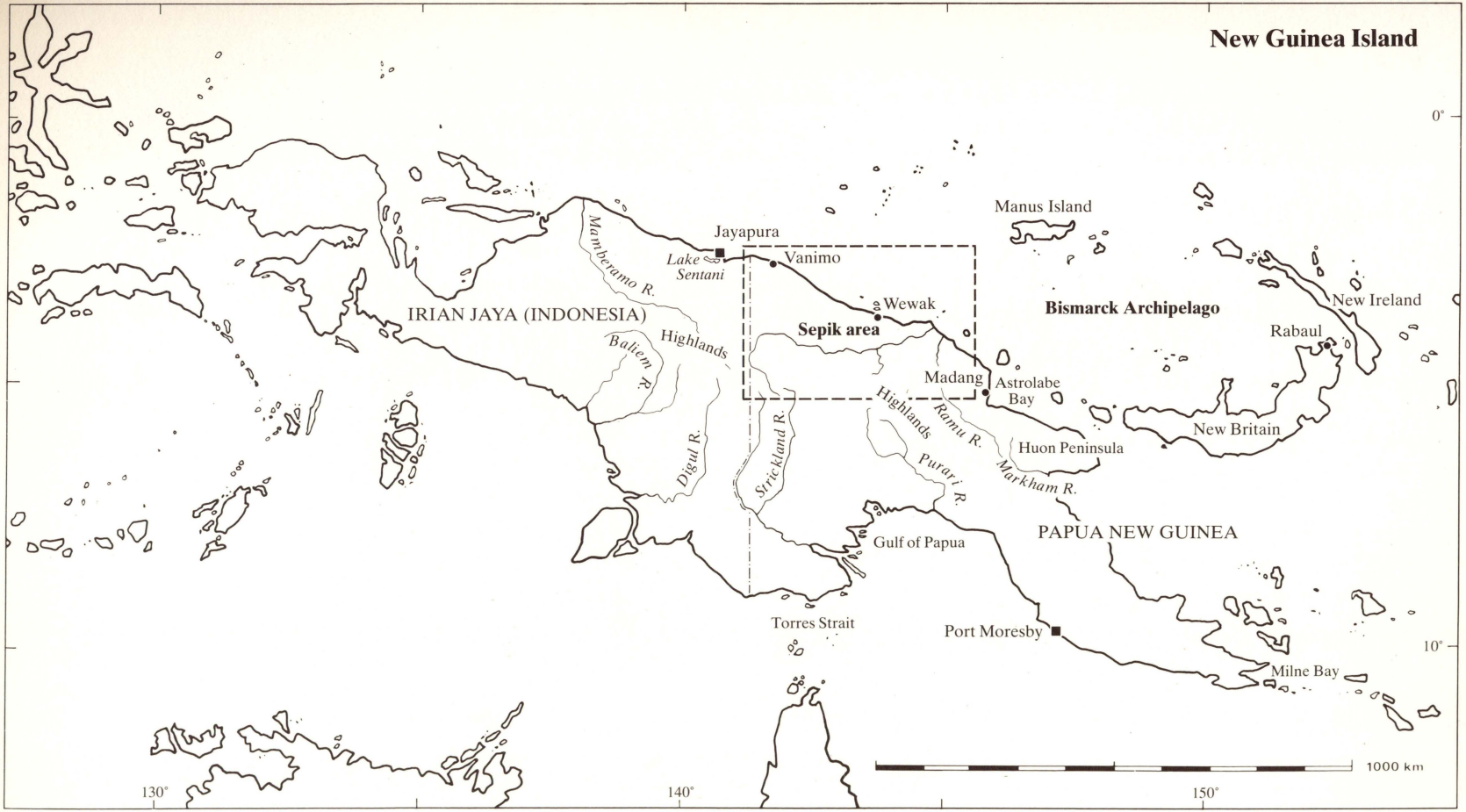
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Strickland R.
Digul R.
Purari R.
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Torres Strait
Port Moresby
Milne Bay
1000 km

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Abbreviations

C.M.	Catholic Mission
SVD	Societas Verbi Divini
SDA	Seventh Day Adventists
SSEM	South Seas Evangelical Mission
PEM	Protein-energy Malnutrition
APO	Aid Post Orderly
PHC	Primary Health Care
HEO	Health Extension Officer
IMR	Institute of Medical Research
MCH	Maternal and Child Health
LGC	Local Government Council
PNG	Papua New Guinea
E.S.P.	East Sepik Province
W.S.P.	West Sepik Province
T	Toea
K	Kina
PMV	Public Motor Vehicles

Author's note:

For ease of identification, Tok Pisin is written upright and underlined (i.e. kokonas), Kwanga words are in italics and underlined (i.e. *siya*) and botanical names are in italics (i.e. *Cocos nucifera*).

Acknowledgements

In any study of this type, many debts of gratitude are incurred. I apologize in advance to the many persons who aided me in various ways but who, because space is limited, cannot be mentioned individually. I do remember their help, as I remember the gracious hospitality of the people of Papua New Guinea.

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Mi tok tenkyu long ol manmeri bilong Tau 1 na Tau 2. Tenkyu tru long lukautim mi na long skulim mi long pasin bilong ples. Mi sindaun gut wantaim yupela; nogat kros, nogat pait. Bikpela tenkyu na amamas i go long Hauseng, Sahamoku na Kiaru na long olgeta Wainassa long Himdenge City.

Chapter 1
Subject, Scope and Method

1.1. Rationale

Following the advice of Dr. M. Schindlbeck, who at that time was conducting field research among the southern Kwanga, N. Stephenson and I chose the northern Kwanga (East Sepik Province, Papua New Guinea) for our first field experience from July to September 1980. During this visit my attention focused on the daily life and work routine of village women. They took me to their forest clearings, sago swamps, coffee plantations and water-holes, to various social gatherings and into family homes. Living with them in their own environment opened my eyes to their competence and self-confidence and made me realize that their life centres around alimentation and child care. In the company of their children women leave the village early in the morning and return late in the afternoon carrying heavy baskets full of garden produce. After a brief rest they fetch water and prepare the main family meal. This general pattern is interrupted by special events, for instance a feast, and activities including community work and cash cropping.

Once a month, the village women are summoned to attend the Maternal and Child Health (MCH) clinic. In 1980, two nurses (from Australia and New Zealand) operated the MCH service in the Dreikikir area. They arrived by jeep, set up their mobile clinic and weighed and treated all the under-five-year-old village children. The crucial event was the clinical interview. The nurses would ask the mothers: "Has the child been ill since I last saw her? Did you seek treatment at the aid-post? What kind of food do you give her besides breastmilk? Does she eat and drink well?" Often, the women's answers did not correspond with the nurses' interpretation of the weight pattern and/or the clinical examination. For example, a woman claimed that her child ate all the recommended baby food but the child had lost weight since the last visit and there was no entry of a visit to the aid-post in the child's Health Booklet. This often led to verbal conflicts between nurses and village mothers, especially when the nurses' probing questions turned into accusations: "Why don't you tell me the truth? You do not feed your child properly. Look, he is losing weight again. No, no, he was not ill; at least you did not bring him to the aid-post. If he actually was ill, that's even worse. You are stubborn, that's what you are. You don't care for your child." Some women exchanged heated words with the nurses. More frequently, they stood there with bowed heads, discussed the matter among themselves in the vernacular language or expressed their anger after they had been dismissed. After one of these incidents a mother said to me: "Why do they tell us how to care for our children? Have we not learnt it from our mothers and grandmothers?"

These experiences prompted me to pay more attention to child feeding and child care. The general attitude of the village mothers seemed indulgent, nurturing and patient. Mothers carried their children wherever they went and fed them on demand. Small children

received breastmilk and/or small portions of the mothers' diet. To me as a lay person they looked small but healthy unless, of course, they were suffering a bout of illness.

Why then did the nurses scold the village mothers at the monthly clinics? At the next opportunity I approached the nurses, told them of my observations and the apparent contradictions between my observations and their view of local child care. As a result of these first discussions, the nurses invited me to join them on their patrols in the Dreikikir area. We spent ten days visiting various villages. They explained their work to me, briefed me on the method of assessing malnutrition, on the goals of the MCH service and on public health priorities in Papua New Guinea. Living with them in their environment taught me to view village child care "through their eyes".

These encounters made me aware of a sharp contrast between the interpretations and evaluations of "appropriate" child care held by the nurses and village mothers, respectively. This was all the more disturbing because, obviously, nurses and village women shared a concern: the welfare of the children. When I left the village after three months, I was determined to educate myself rapidly in the topics of food and health in Papua New Guinea.

These experiences drew my attention to the sub-discipline of Nutritional Anthropology, which focuses on the nutritional systems of communities including food preparation, dietary pattern, eating habits and the assessment of nutritional quality and quantity. Based on literary research I tried to conform to modern standards of nutritional anthropology in my M.A. thesis on the Simbu in the highlands of Papua New Guinea (Obrist 1981). However, many fundamental questions could not be answered on the basis of written sources, and this strengthened my resolve to conduct my own field research.

In 1981, Dr. L. Marshall encouraged me to join a group of American researchers from the fields of anthropology, nursing, nutrition, psychology and education who were interested in Papua New Guinean children. This group convened twice during the annual meetings of the Association for Social Anthropology in Oceania. We met first in a working session at Hilton Head, South Carolina, in March 1982 and again a year later at a Symposium on Infant Care and Feeding in Oceania in New Harmony, Indiana. Many of the contributions were later published by Marshall (1985). The participants addressed diverse topics ranging from women's conflicting roles to symbolic aspects of food, child feeding as socialization, observed effects of social and economic change, to health and nutrition.

In terms of my particular interest the contribution of Jenkins, Orr-Ewing and Heywood (1985) was especially valuable; they suggested an approach to the study of malnutrition which combined the methods of nutrition and anthropology. This team worked at the Madang Branch of the Papua New Guinea Institute of Medical Research. I contacted the Head of the Nutrition Division, Dr. P. Heywood, and during a brief visit in May 1984 discussed the possibilities of collaboration. My plan was to go back to Tauhundor village, where I had first been confronted with the problem of malnutrition, and to explore the social and cultural context of child feeding; at the same time, I intended to assess the nutritional status of northern Kwanga children and to investigate possible influences of maternal feeding patterns on child growth. This fitted into the Nutrition Research Program of Dr. Heywood because several research associates and staff members of the IMR had recently conducted nutrition surveys to the west and the east of the Kwanga. A few months

later, Dr. M. Alpers, the Director of the IMR, kindly granted me affiliation and accepted me as a research associate.

In October 1984 I returned to the northern Kwanga area and stayed for twelve months. My affiliation with the IMR enabled me to discuss various questions with biomedical experts, in the field and in Madang. I gradually became familiar with the biomedical interpretations of malnutrition in Papua New Guinea.

But at the same time, these discussions revealed striking differences between the general approaches of anthropologists and nutritionists respectively. Nutritionists try to identify factors and to measure the influence of these (often interrelated) factors on growth patterns. For example, in a recent nutrition survey on the Simbu in the highlands of Papua New Guinea, Harvey and Heywood (1983) analyzed child growth in relation to several factors including birth order, clinic attendance, education of the mother, employment of the father, road access, population density and absentee rate. The search for such links and their evaluation follows the logic of 20th century natural science and considers only those aspects which are considered relevant by the nutritionists.

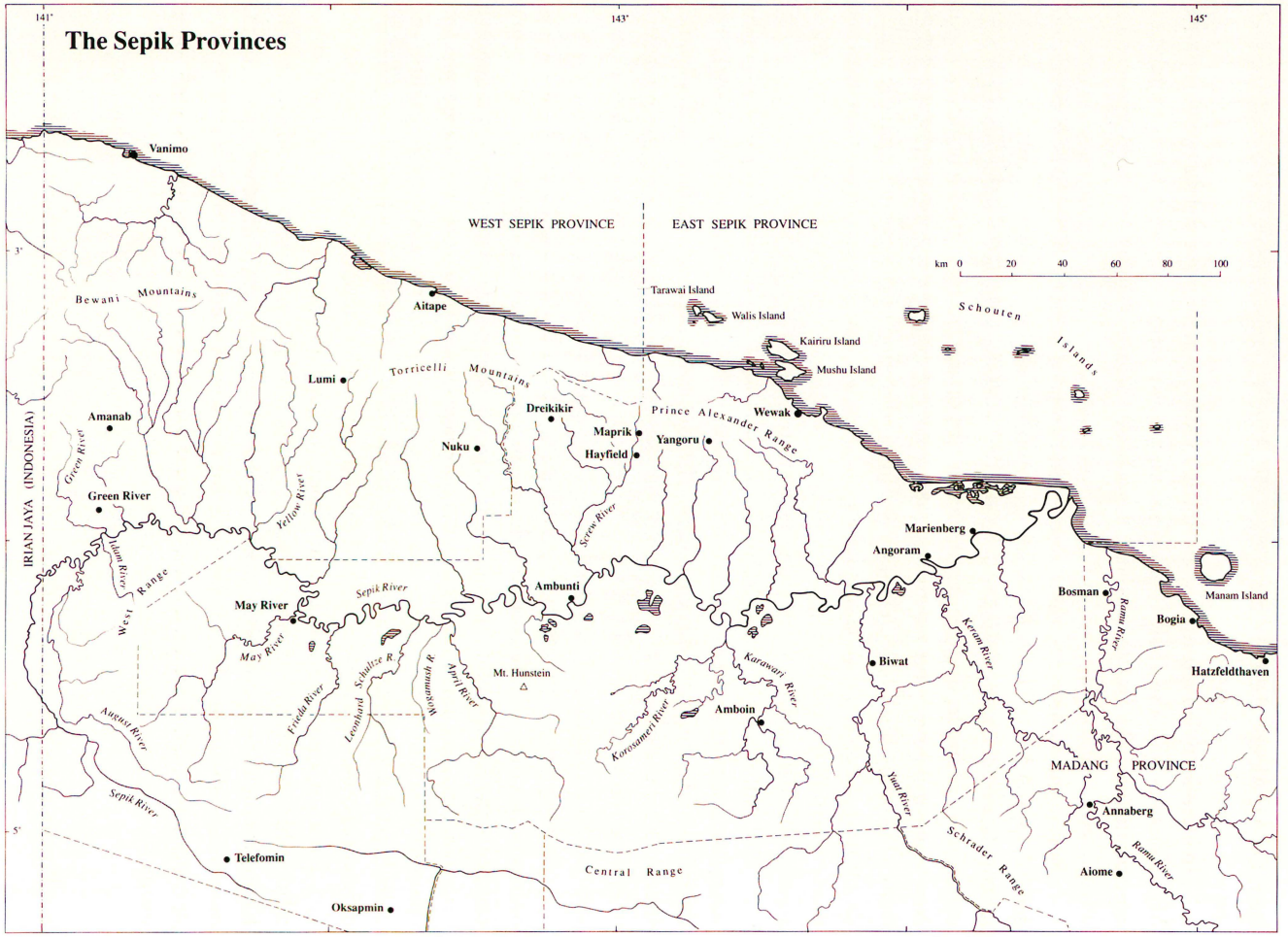
The anthropologist, on the other hand, studies child growth as one of many interrelated aspects of the social and cultural world. A basic axiom in anthropology is that the social and cultural worlds we observe already have particular meaning and relevance structures for the people who live, think and act in them. My task as an anthropologist is to explore those aspects of the Kwanga society and culture which constitute the meaning and relevance structure of child feeding and child growth.

An integration of these two approaches is extremely difficult. In my thesis I try to overcome this difficulty by assuming the role of a mediator between the social and cultural realities of the Kwanga and those of the biomedical experts. The goal of my investigation is threefold: First, I explore those aspects of the Kwanga reality which constitute the social and cultural context of child feeding. Second, I examine northern Kwanga child feeding and growth patterns in the context of the biomedical sub-culture. Third, I analyze the differences between local and biomedical concepts of child feeding, health and illness.

I am, of course, sensitive to the shortcomings of this thesis. My analysis of the relationships between child growth and other aspects of the social and cultural world of the Kwanga remains as incomplete as those between child growth and other aspects of the biomedical sub-culture. But I believe that the framework used in this thesis may be further developed to help diminish the misunderstandings between health workers and village people.

1.2. Previous Studies

The Kwanga live on the border dividing the East Sepik Province from the West Sepik Province of Papua New Guinea (see Maps 2 and 3). Although many anthropologists have conducted research in the Sepik area, the Kwanga remained, until recently, inadequately described. A few published reports exist on the southern Kwanga (Schindlbeck 1981, 1982, 1983, 1990) and the eastern Kwanga (Brison 1989). On the neighbouring Urat, the most important reference group of the northern Kwanga, several accounts have been written by the geographer Allen (see e.g. 1976, 1980, 1983, n.d.). My exploration of the social and


The Sepik Provinces
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Vanimo
WEST SEPIK PROVINCE
EAST SEPIK PROVINCE
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Bewani Mountains
Aitape
Tarawai Island
Walis Island
Schouten Islands
Kairiru Island
Mushu Island
Lumi
Torricelli Mountains
Dreikikir
Wewak
Prince Alexander Range
Maprik
Yangoru
Hayfield
Nuku
Amanab
Green River
IRIAN JAYA (INDONESIA)
Green River
Yellow River
Screw River
Marienberg
Angoram
Manam Island
Bosman
Bogia
Ramu River
Hatzfeldthaven
Ambunti
Sepik River
May River
May River
West Range
Mt. Hunstein
Karawari River
Keram River
Biwat
Amboin
Korosameri River
Wosimum R
April River
Schultze R
Leonhard
Frieda River
August River
MADANG PROVINCE
Annaberg
Yuat River
Schrader Range
Ramu River
Sepik River
Telefomin
Central Range
Aiome
Oksapmin

cultural context of northern Kwanga child feeding draws, of course, on these studies; but most data on this topic have been collected in the field.

The Kwanga live on the western fringes of the yams culture complex spreading along the southern foothills of the Prince Alexander and Torricelli Mountains which separate the vast Sepik Basin from the coastal areas in the north (see Map 2). Numerous ethnographic reports have been written about these Sepik yam cultures. The most famous and best documented representatives are the Abelam. It has long been recognized that among the Abelam the significance of yams extends far beyond their value as a staple crop (see e.g. Kaberry 1940/41, Lea 1964, Hauser-Schäublin 1987 and Huber-Greub 1988). A cultural elaboration of and emphasis on yams has also been reported from neighbouring groups (see Map 3), namely the Arapesh (Gerstner 1939, Mead 1947, Tuzin 1972), the Urat (Allen 1976, 1980, 1983, n.d.), the Kwoma (Bowden 1983, Kaufmann 1982a, 1982b, 1987) and the Manambu (Harrison 1982). However, a certain bias towards yams and their many cultural elaborations and/or different research priorities has kept most anthropologists from taking a closer look at the dietary patterns of the local people and the relationships between food intake, growth and desirable body stature.

In fact, few ethnographic accounts on Papua New Guinea provide accurate data on food intake, growth and body stature and their embeddedness in a particular cultural and social reality. Several studies describe subsistence systems (see e.g. Townsend 1969, Waddell 1972, Dornstreich 1973, Schindlbeck 1980 and Rappaport 1968), and some of them have tried to assess food intake.[1] Other studies focus on selective topics such as techniques of food procurement (see e.g. Watson 1967, Bulmer 1968 and Dwyer 1973), exchange systems including food items (see e.g. Hogbin 1970, Young 1971, Heyder 1972, Meggitt 1974, Leroy 1979 and Feil 1980), food taxonomies (see e.g. Bulmer and Menzies 1972, 1973, Dwyer 1976 and Hyndman 1984) and symbolic aspects of food (see e.g. Jones 1980 and Meigs 1984).

Nutritionists, on the other hand, have a long tradition of studying Papua New Guinean diets and associated growth patterns. The first nutrition survey was carried out by the Australian Department of Health in 1947 (Hipsley and Clements 1947). Many other investigations in various parts of the country followed (see e.g. Scragg 1955, Venchatachalam 1962, Bailey and Whiteman 1963, Bailey 1964, Oomen and Malcolm 1965, Malcolm 1974, Ferro-Luzzi et al. 1975, 1978, Harvey and Heywood 1983, Hide 1984). In the Sepik, research concentrated on the Abelam of the Maprik area to the east of the Kwanga (Bailey 1963, Whiteman 1965, Ross 1984) and on several groups speaking a Wapei-Palei language in the Lumi (Wark and Malcolm 1969) and Anguganak (Wyatt and Wyatt 1978, Thomason et al. 1983, Pumuye 1985) area to the west of the Kwanga.

Most of these nutrition studies fail to consider diet and growth in relation to the meaning and relevance structure of the people they study; but the usefulness of an ethnographic approach is becoming increasingly recognized in nutritional research in Papua New Guinea (see e.g. Ross 1984, Jenkins, Orr-Ewing and Heywood 1985).

1 Rappaport's famous study "Pigs for the Ancestors", first published in 1968, created a controversy. One point of criticism refers to his methods of assessing food intake and his interpretation of these data (see McArthur 1974). In the second, enlarged edition of his study, Rappaport (1984) replies to this and other points of criticism.

1.3. Theoretical Background

My theoretical orientation has been influenced by a sub-discipline of Medical Anthropology called Nutritional Anthropology. Perhaps the most famous exponents of this sub-discipline are Jerome, Kandel and Pelto (1980a). They have developed an ecological approach to the study of nutritional systems integrating biological, psychological, social, cultural and economic factors and visualize this approach in a box-diagram (see Jerome, Kandel and Pelto 1980b:14). At the core of this model are the biological and psychobiological needs of the individual. The box framing the core is labelled "diet" and indicates that the need for nutrients is satisfied through the ingestion of food. The five surrounding boxes form part of an open system (indicated by arrows) with the individual person and represent what the authors regard as the most important aspects of a given society's food system. These are:

- The **physical environment** comprising climate, soil characteristics, water resources and related features establishing the conditions for food production;
- The **social environment** encompassing other societies whose food production and distribution behaviour may have profound effects on the society in question;
- The **social organization** including a large set of features such as the economic and political structures related to food production and distribution, division of labour and features of household structure;
- The **technology** referring to the tools and techniques of food production and distribution, for instance agricultural practices, food processing and transportation systems, domestic storage and food preparation;
- The **culture/idea systems** encompassing concepts about the role of food in health, religious beliefs involving food, food preferences and restrictions, and the use of food in social interactions, among others.

In my opinion this approach opens new perspectives. First, it provides a framework for an anthropological analysis of foodways as sets of organized thought and behaviour on which individual persons of a given society draw to fulfil their food needs. Second, it links the anthropological analysis with the nutritional analysis by a common focus: individual food needs and diet.

Whether the selected aspects and their definitions are in line with the researcher's own views depends, among other things, on the concrete problem at hand. For the purpose of my investigation I suggest several modifications and qualifications.

First, the term "technology" emphasizes the tools and techniques of food production, preparation and distribution. This emphasis may be appropriate in a study of industrial food patterns in which the technology is highly refined. In a subsistence pattern such as that of the Kwanga technology plays a minor role. Furthermore, the technology of any food pattern is itself an expression of underlying social and cultural values. It seems difficult to separate one from the other, especially in a subsistence food system, where the underlying social and cultural values may be more important than the pragmatic aspects of technology. For these reasons, I suggest replacing the term "technology" by the general term "food pattern".

Second, I do not agree with the definition of the fifth aspect. In particular the use of the term "culture" as a synonym of "idea systems" is, in my opinion, too vague. This is not the place

for a discussion of these terms which are much debated among anthropologists. What I suggest is a redefinition of this aspect of the nutritional system as "religion and world view" encompassing myths about food and religious beliefs and practices relating to food. Other meanings of food (e.g. food use in social interactions, food classifications) can be deciphered in the context in which they occur. Some concepts about health and illness can be subsumed under this heading because religion, world view and medical beliefs and practices are closely interrelated; others have to be examined in relation to the social system.

Third, I suggest an examination of what we mean by "individual biological and psychobiological needs". Do we refer to the biomedical definition of individual food needs, to definitions of these needs which are **not** derived from the biomedical tradition or a combination of these definitions? This is a crucial issue and calls for a brief digression.

We ought to bear in mind that such concepts as "nutrients" and "metabolism" only occur within the sub-cultural context of biomedicine, which is a product of 19th and 20th century science. Since many concepts and models of biomedicine have proved to be very powerful in guiding treatment of disturbed biochemical processes and physiological reactions as well as other disorders, we tend to forget that these concepts and models are cultural and social constructs. They are not culture-free and universal; they cannot be understood if removed from their cultural and social context.

Medical anthropologists and sociologists have only recently begun to study the significance of culture and society for biomedical science and biomedical care in developed and developing countries.[1] A few years ago, Cassidy (1982) used this perspective to analyze the biomedical explanatory model of protein-energy malnutrition (PEM). Her analysis not only provides a good example of the impact of culture and society on biomedical science and care, but may also help us to specify what we mean by "biological and psychobiological needs".

Cassidy (1982:328-329) claims that PEM etiology and remedies are "culture-bound" to biomedicine. She argues that:

1) PEM is a concept developed in the 20th century using the world view, methodology and technology of biomedical science and cannot be readily understood or utilized outside this context because it draws on a pool of scientific knowledge and biomedical method and technique that are not known or not relevant to others;

2) the etiology and therapeutics of PEM are linked to core meanings and behavioural norms of biomedicine such as future orientation, activism, a belief in the value of science – and we could add, an ethical obligation to help and a belief in the authority of biomedical professionals;

3) diagnosis of PEM relies upon acceptance of nutrient and energy deficiency as a cause of malfunction and upon the use of technology (e.g. laboratory analysis of blood or urine nutrient levels, weighing and measuring children).

Today, the concept of PEM is known by all the members of the international biomedical community; but Cassidy points out that it is actually a recent construct. In 1867, the term "malnutrition" was first used in print, and in 1933, an expert described the symptoms and proposed protein as the limiting factor. Instead of following her description

1 Kleinman (1978, 1980), probably the most influential and prolific writer in contemporary medical anthropology, describes the development of this new approach.

of the further developments, it seems interesting to summarize a similar account by Beaton (1989), a biomedical expert who traces "the evolution of a perception" (i.e. malnutrition) in biomedicine. Beaton reports that in the 1950s and early 1960s, marasmus and kwashiorkor, two forms of severe malnutrition with clinical symptomology, were widely recognized. In 1959, the term "protein-calorie malnutrition" was coined and later changed into "protein-energy malnutrition". At the end of the 1960s, the role of infection in the etiology of marasmus and kwashiorkor was amply documented. Milder forms of malnutrition marked by general growth retardation without specific clinical symptomology became gradually accepted as a health problem. Such growth retardation was regarded as "pre-kwashiorkor". Attention was now directed towards the "undernourished". Marasmus and kwashiorkor were seen as two extremes that formed the tip of the iceberg. In the absence of specific clinical signs, there was a clear need for criteria by which one could identify early stages of malnutrition. Several classifications of growth patterns were developed. Within 15 years the biomedical community moved from a discovery of a new, dramatic form of malnutrition, kwashiorkor, through recognition that kwashiorkor and marasmus were really part of the same syndrome of protein-energy malnutrition, and on to a concept that many more children were displaying the effects of early malnutrition as reduced growth or thinness. In the course of this process, small size and "malnutrition" became synonyms. Beaton concludes that this was truly a fundamental evolution in constructs although it was essentially unconscious.

This historical sketch demonstrates that biomedicine tries hard to clarify the biological substratum of PEM. In her analysis of PEM as a construct of this biological substratum, Cassidy does not dispute that a certain constellation of symptoms occurs in many countries; in fact, she found evidence that a very similar constellation of symptoms is also recognized by several cultural groups (e.g. weight loss and associated changes in hair colour, skin colour and behaviour, especially in weanlings). Her argument is that biomedical research has resulted in an abstraction of the (shared) constellation of symptoms into an (unshared) biomedical disease category, protein-energy malnutrition. Other cultural groups she examined have cast the same constellation of symptoms into other categories of meaning which ignore diet and focus instead on child-sibling, child-parent, or family-society relationships.

Cassidy claims that interventions planned by biomedical experts often fail not only because of differences in the interpretation of symptoms but also because of preventive efforts including the nutritional education of mothers, food supplementation and agricultural education. These preventive efforts often carry a larger ideological package, whether the interventionists are aware of it or not. She claims that these problems could be overcome when both perspectives, the biomedical perspective and the perspective of the local population were combined in the design of intervention programs.

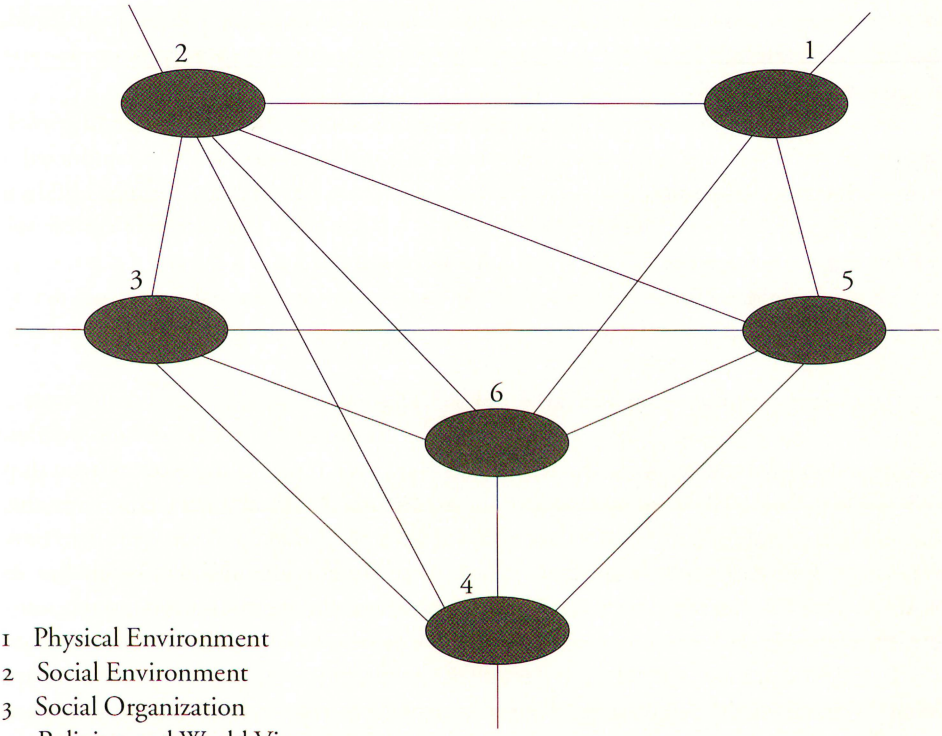
Although I do not agree with all points of Cassidy's analysis, it demonstrates the importance of studying health and illness including nutritional needs in relation to their social and cultural context. This applies not only to Susto, Amok and other exotic syndromes but also to seemingly universal and culture-free syndromes such as protein-energy malnutrition.

As a consequence of these considerations I suggest a third modification of the approach presented above. The term "individual biological and psychobiological needs"

should be replaced by the neutral term "individual nutritional needs". In the investigation of these individual nutritional needs the researcher should specify which definition of these needs (the biomedical definition, an indigenous definition or a combination of both) he or she uses as an analytical tool.

My theoretical orientation thus combines an approach suggested by nutritional anthropologists, namely by Jerome, Kandel and Pelto (1980b), with certain concepts developed by medical anthropologists, namely by Cassidy (1982), who draws on Kleinman (1980).

Figure 1 The Nutritional System



1 Physical Environment
2 Social Environment
3 Social Organization
4 Religion and World View
5 Food System
6 Diet and Nutritional Needs

Figure 1 visualizes my modified approach. Such models of the nutritional system present, like any other model, an abstraction created as an analytical simplification. In reality, the aspects of the nutritional system are, of course, not neatly separated entities as this network-diagram suggests; they consist of many elements which are intertwined or interwoven with one another, forming themselves a number of closely knit networks. They are dynamic; they influence one another and change over time. Still, I think that this model provides a useful framework for the analysis of my data.

1.4. Methods

Fieldwork in the East Sepik Province of Papua New Guinea was carried out in four spells: from August to October 1980, in May 1984, from October 1984 to September 1985 and from May to August, 1986. I spent most of these nineteen months in the northern Kwanga village Tauhundor (Dreikikir area).

My general approach combines the methods of ethnography and nutrition. Most of my ethnographic data have been collected with the standard anthropological methods of participant observation and interviews. The latter were conducted in the *lingua franca* Tok Pisin with interspersed Kwanga words and phrases. On the basis of my observations and interviews, I designed systematic surveys on selected topics such as food production, preparation and distribution, demography, menstruation, childbirth, lactation, supplementary feeding, clinic attendance, education, child development, beliefs about food, growth and illness and responses to illness. These data permit me to document diversity within certain patterns.[1]

In order to assess the diet and the nutritional status, surveys on food intake and growth patterns were carried out under the supervision of Dr. Heywood. We first conducted a cross-sectional anthropometric survey of all under-5-year-old northern Kwanga children attending the MCH clinic Tau on two key days in March 1985. The results of this survey and of comparable surveys in other parts of the country led us to select a cohort of 42 mothers with children under two years of age for a semi-longitudinal survey of dietary patterns and associated growth patterns. This approach enabled me to dovetail information on infant feeding patterns with growth outcome.

From the beginning of my fieldwork in 1980, I associated myself mainly with women. This enabled me to gain an understanding of their life situation, their concerns and worries, their hopes and wishes, in short, their points of view. As a result of my close relationship with women, initiated men were reluctant to discuss the local men's cult with me. Noninitiated or not fully initiated men explained what they knew, and some of them have been rather knowledgeable informants. My lack of insight into the men's cult has its disadvantages. Fortunately, Dr. Schindlbeck investigated the men's cult among the southern Kwanga; this allowed us to design our research priorities to complement one another.

In the presentation of my data, I examine the northern Kwanga against the ethnographic background of the Sepik yam cultures as defined at the beginning of this chapter. Among the anthropologists working in this area it is a well-known fact that similar cultural elements are arranged in varying patterns. A systematic and comprehensive inter-cultural comparison (within the yams culture complex and even more so within the Sepik as a culture area) is, of course, beyond the scope of this thesis. Yet, to define the characteristics, it seems necessary to point out remarkable similarities and differences (especially with regard to the subsistence system and associated beliefs and practices) between the northern Kwanga and the other Sepik yam cultures.

1 The documentation of intracultural diversity is an important methodological issue in the collaboration of anthropologists and nutritionists. Pelto and Jerome (1978) point out that anthropologists who wish to link their data with data of nutritionists must shift from an interest in normative description to a focus on intracultural diversity of behaviours and beliefs.

1.5. Overview

Since I am primarily interested in studying the cultural contexts of child feeding among a given group, namely the northern Kwanga, the above-mentioned model (see Figure 1) serves well as a general framework for my thesis. We begin with a consideration of each aspect of the food system and end with an analysis of the core.

Chapter 2 describes some aspects of the physical and social environment as defined above. Chapter 3 discusses some characteristics of the social organization and their interactions with other aspects of the nutritional system. Relevant data on the Kwanga religion and world view will be presented in Chapter 4. The next part (Chapters 5, 6 and 7) describes the food pattern and provides systematic information on food production, preparation and distribution respectively. The diet and different interpretations of children's food needs will be presented and analyzed in Chapter 8. The last chapter summarizes the interrelations between the aspects examined in the preceding chapters.

Chapter 2
Aspects of the Physical and Social Environment

In the approach presented above (see Chapter 1.3.), the physical and the social environment has been briefly defined and identified as two important aspects of a nutritional system. We shall now examine how this applies to the nutritional system of the northern Kwanga. The first part of this chapter contains a brief description of the physical characteristics of the study area. We shall then see to what extent these characteristics establish conditions for food production. In the second part of this chapter, we consider the northern Kwanga in relation to other groups living in this area and examine milestones in their history of contact with foreign societies. It will then be discussed in what respects these other societies have had an effect on the local nutritional system.

2.1. The Physical Environment[1]

It will be recalled that the Kwanga live on the southern foothills of the Torricelli Mountains (see Map 2). The Torricelli Mountains run parallel to the northern coast and reach a little over 2000 metres at their highest level. On the southern fall, tertiary sediments, mudstones, sandstones and conglomerates form a wide band of foothills which merge with the alluvial sediments of the Sepik plain in the south. South-flowing rivers and streams have cut an intricate ridge-and-valley pattern into the soft ground material. The biggest streams flowing south through the territory of the northern Kwanga are tributaries of the Karp River. The relief of the foothills in this area ranges from 200 to 300 metres.

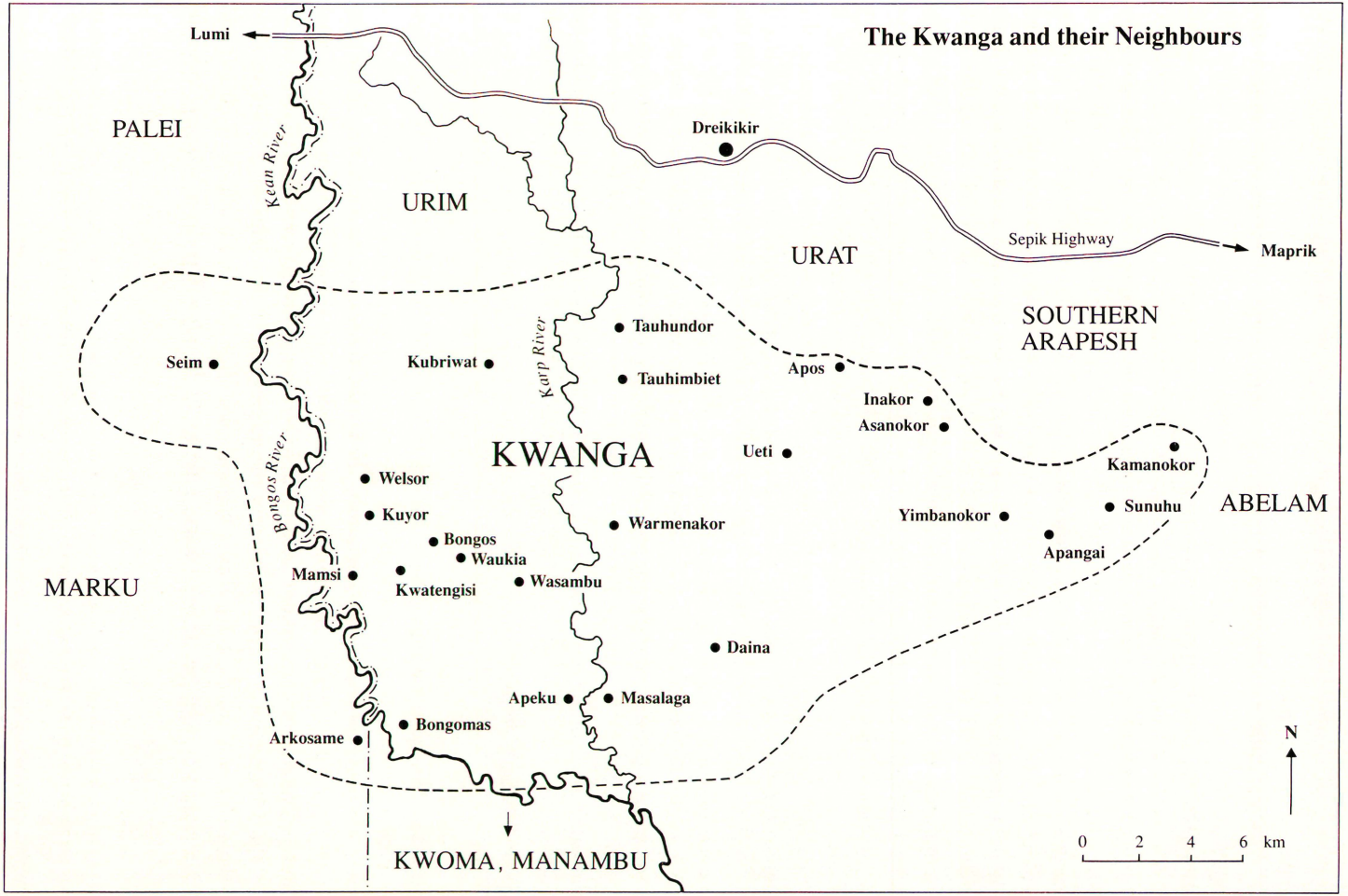
In this humid, tropical climate, temperatures range from 20 to 30 Celsius all year round.[2] The mornings are often misty and chilly, but at noon the sun burns down mercilessly. Thunderstorms followed by heavy downpours occur frequently in the late afternoon. Mean annual rainfall amounts to 2159 mm with an annual variability of approximately 11 per cent; there is a "dry" season from the end of April to the end of October and a "wet" season in the other half of the year (Allen n.d.:1).

During periods with increased rainfall, the ground gets saturated and turns into ankle-deep mud which is extremely slippery. Walking on the bush paths and even in the village becomes quite hazardous. This surface is not suited for driving cars: the wheels of vehicles form ruts in the tracks and eventually even jeeps and land-cruisers get bellied. Tracks graded and surfaced with gravel do not usually last more than a year.

Lowland hill forest with an irregular canopy covers the ground relief and smooths the short, steep slopes so that the general impression is that of a vast, green, wavy sea. It is the natural habitat of a variety of animals: cassowaries, wild pigs, snakes, lizards, marsupials,

1 Haantjens (1972) and Allen (1976, n.d.) contain detailed descriptions of the physical aspects of the area.
2 The mean minimum is 22.2C, the mean maximum 29.9C (Allen n.d.:1).

Map 3


The Kwanga and their Neighbours
Lumi
PALEI
Kean River
URIM
Dreikikir
Sepik Highway
Maprik
URAT
SOUTHERN ARAPESH
Tauhundor
Karp River
Seim
Kubriwat
Tauhimbiet
Apos
Inakor
Asanokor
KWANGA
Ueti
Kamanokor
Bongos River
Welsor
Kuyor
Warmenakor
Yimbanokor
Sunuhu
ABELAM
Bongos
Waukia
Apangai
Mamsi
Kwatengisi
Wasambu
MARKU
Daina
Apeku
Masalaga
Bongomas
Arkosame
N
0 2 4 6 km
KWOMA, MANAMBU

rodents and innumerable birds and butterflies. The primary hill forest has been extensively replaced by secondary forest.

Allen conducted several investigations into the interplay between environment and agroforestry systems in the Dreikikir area. He was based in the Urat village Tumam. We noted that the Urat are the most important reference group of the northern Kwanga; Allen's descriptions of Urat subsistence also apply to northern Kwanga subsistence. According to Allen (1980:2) earthquakes are partially to blame for the widespread nature of the secondary forest but the pattern is largely a result of the forest fallowing system[1] practised by the local gardeners. Today, the secondary vegetation ranges from active gardens, coffee gardens, fallow gardens, cane grass regrowth and sago palms to secondary forest of various ages. Apart from trees, the forest is rich in shrubs, herbs, woody lianas, rattan, tree and shrub palms, fleshy climbers, climbing fern and scrambling bamboo. Allen (n.d.:4) suggests that, in this area, the seasonal pattern of rainfall appears to lead to the establishment of a cane grass fallow, followed by a forest fallow. This means that soils[2] left without tree cover for any length of time will deteriorate and it will be difficult to re-establish tree cover on them. Experience with cattle enclosures on Urat, and also on northern Kwanga territory (e.g. at the C.M. Tau), tend to support this. As long as the fallow periods remain adequate, the agroforestry system is very effective in its protective service functions (Allen n.d.:11). If fallows are shortened, the ultimate result is likely to be a fire-climax *Imperata* cover and the destruction of the system. In Allen's assessment (Allen n.d.:15) the system is most vulnerable to increases in population[3] and/or increases in socio-economic demands. Today, supply of land is not a problem in the study area. Allen (n.d.:4-5) calculates population density to be about 25 persons per square kilometre. The system meets almost all food, shelter and firewood needs of the people who use it. It offers a means of continually exploiting forested hill country to provide food and cash at moderate levels with minimal inputs from outside (i.e. capital, fertilizer, etc.).

2.2. The Northern Kwanga

My fieldwork was carried out among the northern Kwanga, more precisely in the twin villages Tauhundor and Tauhimbiet, about 22 kilometres south of Dreikikir (see Maps 2 and 3). The names "Tauhundor" and "Tauhimbiet" supposedly mean "Tau 1" and "Tau 2" in the Urat language. The inhabitants themselves call their villages according to their relative location on the Karp River. "Sambunuku" (*sambu:* place name, *nuku:* head) and "Nukuyoko" (*nuku:* head, *yoko:* place) refer to Tauhundor (Up-River-Village), "Sambu-

1 Forest fallowing systems are characterized by short cultivation periods of 12 to 18 months and long fallow periods of up to 40 years (Allen 1983:3). In Chapter 5 the northern Kwanga forest fallowing system will be described in some detail.

2 Allen (1983:13) reports that "soils are dystropepts and tropudalfs, (slightly to moderately weathered red and brown clay soils, acid brown forest soils and brown forest soils), the commonest soil groups in Papua New Guinea (Bleeker 1983)".

3 In the Wosera, which has lower rainfall and a land shortage problem, the system described here has been degraded (see Lea 1964:156, Ross 1984, Allen n.d.:12). This is one of the major differences between the nutritional systems of the Wosera and the northern Kwanga.

tombo" and "Tomboyoko" (*tombo:* lower) to Tauhimbiet (Down-River-Village). The people from Tauhundor and Tauhimbiet call the neighbouring village Kubriwat "Kauyoko" (*kau(haba):* sago palm sheath).

The inhabitants of Tauhundor and Tauhimbiet, together with their neighbours in Kubriwat and Warmenakor, speak the Tau dialect of the Kwanga language. The local people themselves recognize these four villages as a linguistic and cultural unit and thus confirm the findings of Laycock (1975, 1981), who conducted a linguistic survey of the area. No vernacular name for this unit or for the much larger group of Kwanga speakers ever came to my ears or was elicited by my persistent interrogations. In this thesis, we use the ethno-geographical term "northern Kwanga" or the linguistic term "Tau" to refer to the inhabitants of Tauhundor, Tauhimbiet, Kubriwat and Warmenakor.

The Tau dialect is one of six dialects composing the Kwanga language.[1] The other dialects are Apos, Yubanokor, Bongomaise, Bongos and Seim. Laycock (1981) estimates the total number of Kwanga speakers to be 13,000; this is quite a big number for the Dreikikir area.[2]

Table 1
Northern Kwanga Population by Village

Village	Residents	Absentees	
		No.	%
Tauhundor	367	91	24.8
Tauhimbiet	352	120	34.1
Warmenakor	243	40	16.5
Kubriwat	776	128	16.5
Total	1738	379	21.8

Source: Dreikikir Census 1983

In 1983, the northern Kwanga population (i.e. speakers of the Tau dialect) numbered 2117; of these 2117 persons, 379 (22%) were absent at the time of the census (see Table 1). This latter category comprises temporary absentees (i.e. pupils in boarding schools, persons visiting relatives, persons signed up for work contracts or courses, persons in jail, etc.) and permanent absentees (i.e. people who have married outside the area or who have settled elsewhere to escape local conflicts or to build a professional career, etc.).

According to the linguistic classification suggested by Laycock (1981), the Kwanga, together with the Nukuma and Kwoma in the south and the Kwasengen and Abelam in the east, belong to the Middle Sepik Stock of the Sepik-Ramu Phylum. Based on this linguistic

1 The only grammar study of the Kwanga language has been conducted by T. and K. Manabe (1979) from the Summer Institute of Linguistics. They lived in the village Yubanokor and recorded what they label "eastern dialect". In Tauhundor people did not understand the sentences from the Manabes' manuscript. All the linguistic material presented in this thesis was collected by myself, and any errors are my responsibility.

2 Laycock (1981) estimates that there are 4840 Urat speakers, 2358 Urim speakers, 2146 Kombio speakers and 1885 Wam speakers.

situation, we could assume that the Kwanga have cultural affinities with their southern and eastern neighbours. However, as Schindlbeck (1981:1) points out, the Kwanga have closer contact with the cultures living in the north, east and west than with the Nukuma and Kwoma in the south.[1] This is certainly true of the northern Kwanga: In linguistic terms, Tauhundor is a border village; its northern neighbours in Yerhmain and Moihwak already speak Urat, a language belonging to the Torricelli Phylum.[2] In fact, the linguistic border between the Kwanga and the Urat is on the level of a stock boundary (see Laycock 1981)! Yet as in so many cases around the world, the linguistic border is not identical with the cultural border: the Urat, not the Abelam or the Kwoma, are culturally most similar to the northern Kwanga.

Even within the Kwanga speaking groups regional differences are remarkable.[3] My own findings support Schindlbeck who finds it difficult to perceive the Kwanga as a sharply delimited cultural group. In fact, his impression is "...that cultural differences are more remarked between distant Kwanga villages than between Kwanga and neighbouring villages of different language groups" (Schindlbeck 1990:236). Such regional differences may also affect local nutritional systems. In the course of this thesis, several examples of differences in food patterns between the northern and southern Kwanga will be mentioned.[4]

The oral history of local descent groups helps to explain the cultural affinity between the northern Kwanga and the neighbouring Urat (and Urim). Discussing the social organization of today, the Tauhundor distinguish between *au haba* (clay pot, bone) and *wargugwa* (breadfruit tree, leaf), in other words between the groups believed to have originated in or near Tauhundor and those groups reportedly immigrated from elsewhere.[5] The point is that only four of the eleven descent groups presently living in Tauhundor (see Chapter 3.6.) are generally acknowledged as "men of the ground", and even those have reportedly originated either in Kubriwat (the Apinchanokor, Hame?, and Wainassa) or on the border between Tauhundor and Yerhmain (the Simbimbi). The other seven descent groups have immigrated from further away: two from southern Kwanga villages (the Hoboai from Klafle and the Murghia from Arkosame) and five (the Flenokor, Samtihengi, Masinokor, Moioho and Yerhmain) from Urat villages. In other words, five (or if we include the Simbimbi, six) of the eleven descent groups presently living in Tauhundor came from the Urat area!

It is difficult to estimate when they settled in Tauhundor; none of the living descendants can trace their genealogical links back to these ancestors. Since the genealogies usually go back four generations, the immigration must have occurred more than a hundred years ago. It is interesting, however, that the grandfathers of Mambor, who was in his sixties

1 The Nukuma and Kwoma are separated from the Kwanga by a rather wide stretch of uninhabited or sparsely populated land.

2 Other languages belonging to the Torricelli Phylum are Urim, Kombio, Wam and Arapesh.

3 In the area of the Torricelli and Prince Alexander Mountains, regional differences within language groups have long been noticed (see e.g. Mead 1938:165, Lea 1965, Scaglion 1976:40-51). Lea (1964) documents a number of striking differences between the Abelam villages Yenigo and Stapikum which are only twelve miles apart!

4 Similar data on the eastern Kwanga (and the Urat) are not yet available.

5 This is a nice example of the rich imagery of the Tau dialect; the "original" groups are symbolically associated with clay pot and bone; they are "men of the ground", man bilong graun, as they often paraphrase it; the immigrant groups are referred to as "tree leaves", they have fallen from the tree and were blown to many places, as the informants explained.

at the time of my fieldwork, still spoke Urat rather than Kwanga among themselves. The southern half of the village still calls the northern half "Waneyi" (Urat, children). This evidence suggests that, at least in this village, recent migrations have occurred, blurring the potential cultural borders between the northern Kwanga and the Urat.

These historical facts have important implications for the present. Tauhundor has strong bonds not only with Tauhimbiet, Warmenakor and Kubriwat which speak the same dialect of the Kwanga language but also with villages in the north, especially with Yauatong (Urim speakers), Moihwak, Yerhmain and Tumam (Urat speakers). These links are expressed in several ways, as we shall see in later chapters. One example is the songs chanted during the first menstruation ritual (see Chapter 7.3.): they are in the Urat language, and all the older women I asked claimed not to know their meaning. Another example is the house-roofing festivities which have apparently been imported from an Urat village (see Chapter 7.2.). In terms of food, it is noteworthy that the northern Kwanga are proud of their soups and often point out that the southern Kwanga do not eat soups whereas the Urat do. My informants insisted that even the present yam cultivation cycle was introduced from the Urat only a generation ago (see Chapter 5.1.). The southern Kwanga still follow the "old" cycle. The orientation towards the north and, therefore, towards the Urat area, is further intensified by the vehicle track and the centre function of Dreikikir station which Allen (1976:112-127) has identified as important factors in the reception and adoption of innovations. Some of these innovations will be discussed in the next section.

2.3. Milestones in Recent History

The northern Kwanga never tire of talking about certain events which occurred during the sixty years of contact with our societies. Many of them have also been recorded and documented by Allen (1976). These events are: the first contact, the arrival of labour recruiters, the return of people with "station experience", the Second World War, the coming of the missionaries and the construction of the road.

After the turn of the century, a German botanist, several Malay and Chinese bird of paradise hunters and, after the First World War, Australian officers crossed the Torricelli Mountains and entered the Dreikikir area, but the northern Kwanga villages were not contacted until 1929, when an Australian patrol coming from the coastal town Aitape reached the villages (see Allen 1976:56-66). Mambor was a small boy when the Australian patrol entered Tauhundor village, and he recalls how he ran away with his mother to hide in the bush. He was later told by the men who stayed behind that the Australians offered salt to them. At that time, as local people recounted on several occasions, their great-grandfathers and grandfathers did not wear any clothes, used bamboo knifes and razors, fought with spears, shields and bows and arrows and worked with stone axes or iron blades traded from the north.

In the 1930s, three labour recruiters became active in the area: Charlie Gough, Walter John Hook and J. H. Wood (Allen 1976:72). The Tauhundor remember that the first labour recruiter who came to their village was accompanied by a man from Buka (North Solomons Province). He offered an iron axe to any father who was willing to let a son go away with him. After lengthy discussions, ten young men were hired; they belonged to the grandfather

generation of today. The recruiter first took them to Aitape, where they lived and worked on coconut plantations. After a year had passed, they were sent to Rabaul (East New Britain Province) and distributed among several plantations. Only one of these youngsters later returned to Tauhundor, got married and raised children. Three others married and stayed in New Britain, and the other six came back as old men. The second recruiter led a group of seven young men to the gold fields in Wau (Morobe Province). Mambor was one of them; he still did not shave when he left Tauhundor. Three of his mates died in Wau, the others came home later, got married and raised children. Mambor brought a young masta (a white man) to the Dreikikir area, and together they hired five more adolescent men from Tauhundor and took them along to Wau. All of these later returned home and raised families. A fourth group of recruitees was led away to Wau by a member of the first group. Three of these men are still alive and have grandchildren in Tauhundor.

While they were away "on station", the Second World War broke out. They found themselves far away from home and in the middle of fierce fighting between the Japanese and the Allied forces. Mambor, Namboho and Hingwandi, three men from Tauhundor, joined the 1st New Guinea Battalion of the Allied Forces, and the others were drafted into labour gangs by the Japanese in New Britain, or they served as carriers on either side until they could make their way back to the Sepik and to Tauhundor. In the Dreikikir area, the Japanese held major positions at Sumul, Porombil, Labuain, Musendai, Apos and Asanokor, and the 41st Division, about 4000 men, had its headquarters in Balif (see Allen 1976:88). The nearest villages, Musendai and Apos, are located only about 8 or 10 kilometres east of the northern Kwanga villages. A small band of Japanese entered Tauhundor scavenging for food, and the villagers attacked them with spears. In the ensuing fight, one local man was killed by bullets before the Japanese withdrew. In 1944, Australian troops launched an offensive from Aitape (see Allen 1976:86,91-96). They used numerous air strikes and mistakenly dropped a bomb in Tauhundor killing at least five people. Luckily the main thrust of the fierce fighting between dogged Australians and desperate Japanese just missed the northern Kwanga villages and no further damage was done; but news about the fighting reached the village and caused confusion and anxiety. Modern warfare was altogether different from the tribal fighting of the old times and wartime memories are still very much alive in the minds of the people.

After the Japanese surrender in August 1944, the Australian government policy on Papua New Guinea began to change, the pre-war "laissez faire" turned into a concern with rapid development (Allen 1976:94, 96-104). An officer was ordered to build a patrol-post at Dreikikir in 1946. Three years later, the area ceased to be under the administration of Aitape and became part of a new subdistrict with headquarter in Maprik, 50 kilometres to the east of Dreikikir. In 1966, a Local Government Council was established in Dreikikir which now is, together with the respective provincial departments, in charge of schools and aid-posts. After Independence in 1975, administration posts were nationalized.

Contract labour after the war operated under new legislation (Allen 1976:101): one-year and two-year contracts became the norm, and individuals were now able to seek employment on their own. Twenty-six of the now middle-aged men from Tauhundor made use of these new opportunities and went to work "on station" in other Provinces (e.g. Madang, Manus, North Solomons, East New Britain and New Ireland). Today, several educated men and women from Tauhundor have found permanent employment in town

and others have signed up for temporary jobs (see Table 1). Towns like Madang (Madang Province), Lae (Morobe Province) and Rabaul (East New Britain Province) are favourite destinations for northern Kwanga migrants.

Two missionaries of the Catholic mission became active in the Dreikikir area in the 1930s; but they remained based on the coast, in Yakamul and Ulau (see Allen 1976:80-81). After the Second World War, the missions expanded rapidly in the area (see Allen 1976:97-98). In 1950, the Protestant mission (SSEM) and the Catholic mission (SVD) established themselves near the newly opened patrol-post at Dreikikir. The Catholics set up out-stations in Bongos (1952), Yassip (1960), Dato and Tau (1968) and Arisili (1969), the Protestants in Ilahita and Balif (1951), Misim and Musendai (1957), Brukham and Yubanokor (1958), Yakrumbok (1961) and Tumam (1970). Many of the now middle-aged men and a few women from the northern Kwanga villages went to primary school in Bongos. Some of them were sent to a catechist training centre in the Boikin area, and after their return, they opened a Tok Pisin Bible School in Tauhundor. After the C.M. Tau was built in 1968, the children from the neighbouring villages attended primary school there. Today, Papua New Guineans employed by the Department of Education teach at this school. For higher education, the pupils are sent to boarding schools.

Since the opening of the St. John's Community School at the C.M. Tau in 1968, a number of villagers have received a basic Australian education.

Table 2
School Experience of Tau Mothers (by Age Group)

Age groups (years)	No school experience		Type of school experience					
			Bible school		Primary school		High school	
	No.	%	No.	%	No.	%	No.	%
<26	22	20.8	1	0.9	11	10.4	3	2.8
26–30	13	12.3	0	0	4	3.8	0	0
31–35	14	13.2	2	1.9	4	3.8	1	0.9
36–40	16	15.1	5	4.7	1	0.9	0	–
>40	6	5.7	3	2.8	–	–	–	–
Total	71	67.1	11	10.3	20	18.9	4	3.7

Source: Field notes

In order to assess the school experience of women a survey was conducted of all the 106 women from Tauhundor, Tauhimbiet and Warmenakor who were registered at the MCH clinic Tau. They are a relevant sample for this study because all of them had children under five years of age. Table 2 shows that less than 20% of these women have a primary school education and less than 4% high school education. About two thirds of the women in this sample had no school experience! Differences between the age groups are not as remarkable as one might expect. Of those who are over 30 years of age (52 out of 106) only one finished grade 8 at Yarapos High School; 5 received some primary education at St. John's Community School, 10 attended the Tok Pisin Bible School in Tauhundor, and 36 women

had no school training at all. Of those who are under 30 years of age (54 out of 106) 3 completed grade 8 at Yarapos High School, 15 passed at least one year at the St. John's Community School and 1 went to the Tok Pisin Bible School; but the majority (35 out of 54) has had no school education at all. Even in 1980, only 46 of the 159 pupils registered at the St. John's Community School were girls. Parents often feel that mothers need their daughters as childminders for younger siblings and for this reason they do not send them to school.

After the Second World War, the Australian administration began to build roads to facilitate communication and transport in this vast, forest-clad countryside (see Allen 1976:98-101). The first vehicle track in this area was built between Dreikikir and Maprik and completed in 1950. Twenty years later, an all-weather tarmac road for speeds up to 50 kilometres called the "Sepik Highway" reached Dreikikir from the east. Today, this highway is the arterial road south of the Torricelli Mountains linking Nuku and Lumi in the west and Wewak in the east. Since there is almost no manufacturing industry in the Sepik, most goods and supplies have to be imported and arrive in the coastal town of Wewak by sea and air. They find their way to the rural areas along the Sepik Highway, from where they travel along the usually unsurfaced side roads and the foot tracks until they reach the villages. Work on the road to the northern Kwanga villages (see Plate 1) began in 1977 and was completed in 1982 (Neumann 1977, 1982). In this climate and under these soil conditions, however, unsurfaced tracks do not usually last more than a year (see Chapter 2.1.). Today, even in the "dry" season when road conditions are fairly good, only a few cars, if any, pass through the northern Kwanga villages within one week. Transportation is regarded as one of the greatest difficulties, not only by the villagers, but also in the delivery of public health services (Sister Jacinta, personal communication). In spite of these difficulties, PHC services in the northern Kwanga area are optimal in comparison with those in other areas of Papua New Guinea.

In the early years of contact, in the 1930s, villagers sometimes carried seriously ill or injured persons all the way to the coastal town Aitape to get treatment from medical doctors or nurses. The middle-aged and old women in Tauhundor vividly recall strenuous four-day walks to the coast carrying food supplies for their sick relatives. Towards the end of the Second World War a field hospital was set up at Yambes, a Kombio village near Dreikikir (see Allen 1976:97). Four years later it was transferred to the new Patrol-Post Dreikikir, and in subsequent years it developed into a Rural Health Centre which today is staffed and sponsored by the Provincial Health Department.

Shortly after the war, a beginning was made on establishing aid-posts in the villages. The first aid-post in Tauhundor was built on the walking track from Tauhundor to the neighbouring village Kubriwat, down by the river. Later it was moved up to Nigriaka, a hamlet in the middle between Tauhundor and Tauhimbiet. Kubriwat got its own aid-post. In 1985, the LGC Dreikikir sponsored the construction of a new, pre-fabricated aid-post building in Nigriaka and a year later in Kubriwat. John, the APO resident in Nigriaka, was trained at the APO Training School in Timbunke on the Sepik River for two years. He is a Kwanga from one of the Bongos villages and speaks the local language, unlike his predecessor who was an Urim. The villagers, especially the women, find it easier to converse in the vernacular and prefer a doktaboi (doctor boy) who speaks their language. On the

other hand, the villagers complain, that if the home village is too close, the APO often leaves work and goes home to visit his family.

From 1968 to 1983, the then resident missionary, Father Theo Neumann, operated a dispensary and the C.M. Tau in Assawa. Especially after Sunday mass, the villagers crowded around his house waiting for treatment. The missionary also visited patients at home, if they were unable to come to Assawa, a service no APO is expected to provide. Serious cases were flown to Maprik or Wewak hospital by mission aircraft before the road to the C.M. Tau was built, and even after that, if time was running short.

The MCH service in the Dreikikir area was initiated by a Catholic Sister who set up an infant welfare hospital at the C.M. Yassip (Kombio area) in the early 1970s (see also Allen 1976:98). She held mobile clinics in the villages, travelling by aircraft or vehicle. Northern Kwanga women with malnourished children were brought to Yassip, where they spent a week or two learning to prepare milk from dried milk and special meals for their children. Today, they are sent to the Rural Health Centre at Dreikikir. The MCH base was also transferred to the C.M. Dreikikir. In 1984/85, an Australian Mercy Sister trained as a nurse and a local nurse-aid from the Wam area operated the MCH service in most Kwanga, Urim, Urat, Kombio and Wam villages. Kubriwat was served by the SSEM from Yakrumbok.

An important function of these clinics is the detection of nutritional disorders. Each child receives a Helt Buk (Health Booklet) at birth. Over the next five years, the nurses record the child's growth in a weight chart; a prolonged, significant departure from this standard weight chart is interpreted as dangerous for the child's nutritional status. The booklet also serves as a health record: the date of birth, a full examination of the new-born at the first visit to the clinic, an entry for each visit to the MCH clinic or the aid-post with the date, the diagnosis and the treatment, as well as vaccination data; all this information is contained in the Health Booklet. Mothers keep the booklets of each child and bring them along to the aid-post or the MCH clinics. In most cases, they handle them with care, as the nurses keep instructing them. Both the MCH nurses and the APO working in the northern Kwanga area conscientiously enter each visit, at least this was true during my fieldwork.

Minor cases of illness and injury can be treated by the APO in the village. His efforts are sometimes thwarted by temporary breakdowns in the supply line. If he feels out of his depth, he transfers his patients to the Rural Health Centre in Dreikikir. It is staffed with an HEO, a male and a female nurse and six medical assistants. Patients who cannot be successfully treated there are transferred to Maprik Hospital. Major surgery with anaesthesia is only performed at Boram Hospital in Wewak.

Here, we should also briefly mention the East Sepik Rural Development Project.[1] In 1978, the St. John's Community School at the C.M. Tau was one of the first pilot schools selected for the Agriculture and Nutritional Sub-Project of the East Sepik Rural Development Project funded by the Asian Development Bank. It was planned that each school should be supplied with tools and planting material to teach new agricultural techniques and booklets and cooking utensils to teach improved cooking methods and the basics of nutrition. The headmaster of the school had been trained for this project. The target group were schoolchildren but parents were also offered a course once a week. In 1980, the

1 For more information on the East Sepik Rural Development Project see Curtain and May (1981) and Weeks (1983).

headmaster was rather disillusioned and mentioned several difficulties in the implementation of the project: 1) the supplies rarely arrived and if they did, only in small quantities; 2) Agriculture Extension Officers did not support the subsistence and nutrition-oriented approach; they favoured cash cropping instead; 3) the supervisors rarely visited the pilot school and did not stay long enough; and 4) village women frequented the course for parents but after six months they stopped coming partly because of the problems in supplies, partly because they felt they already knew how to cultivate and cook food. Some of them said that they did not have the necessary cooking equipment in the village to practice what they learnt. People in the village did not mention the project. It was the headmaster who informed me and this fact confirms my general impression, namely that he was rather isolated with his project. He later applied to be transferred to another school and it seems that this was the end of the pilot project at the St. John's Community School.

This historical sketch summarizes the most dramatic changes and events which have occurred in the social environment of the northern Kwanga since the arrival of the first *masam nalo* (skin, red, i.e. white men) in 1929. These changes have affected the nutritional system of the northern Kwanga in many and often subtle ways.

One of the most fundamental changes is the expansion of the experience space of these villagers. Allen (1976:67) is right in saying that the experience space of these villagers expanded from 10 kilometres to 50, 100 – and we could add – 1000 and more. Before the Pax Australiana, warfare and homicide were imminent dangers restricting personal movements except for the relatively safe intervillage travelling generated by men's cult activities.

But the term "experience space" not only refers to geographical distances. The contact with white people widened the horizon of the villagers in many dimensions of the economic, social, political and religious reality. Today, this process is carried on by the "new elite", that is by the Papua New Guineans who have internalized the norm and value system of the white people.

The expansion of their experience space causes a new dilemma for many Kwanga leaders: Should they follow the traditional ways of gaining power and prestige, namely the men's cult and the exchange system, or the new ways, that is business and politics? This dilemma is usually discussed in terms of kastom versus bisnis. The Tok Pisin term kastom embraces all aspects of life which are influenced and even determined by the cult system of male initiation called *kwaramba* (see Schindlbeck 1990 and Chapter 4.4.).

The notion conveyed in the word bisnis should not be equated with Western concepts of business from which it has been derived. What Allen (1976:249,252) wrote in the 1970s still holds true in the 1980s: "Bisnis is a broad concept manifested in a number of ways, which include producing crops for sale, and investing money in enterprises which it is believed will cause large amounts of money to accrue to the individual. The processes by which the money is generated are poorly understood, if understood at all, by many people."

In the Dreikikir area, this strive for bisnis dominated the 1950s and 1960s and perhaps culminated in the 1970s in expectation of radical changes to be brought about by Independence. In the northern Kwanga area, milestones in "progress" were, as we have just seen, the construction of the C.M. Tau, the opening of their school, the building of the vehicle track, and their experiments with bisnis, for instance with cattle projects (see Chapter 5.3.), passenger motor vehicles, trade stores and coffee production (see Chapter 5.7.). Since many of them failed or did not bring the large amounts of money they

expected, the northern Kwanga resort(ed) to interpretations of reality known as kago[1] ideas. At the same time, they continue to experiment with the old and the new ways "...doing bisnis one season and dancing for *kwaramba* the next" (Schindlbeck 1984:240).

Northern Kwanga women also face the dilemma of following the old or the new ways. According to Kwanga tradition, the practical aspects of human procreation (i.e. contraception, menstruation and childbirth) form the core of the female realm (Chapter 3.5.). Child care also belongs to this female domain; new-born children are almost completely dependent on women until they can eat, walk and talk.

With the integration of the northern Kwanga into the colonial and later the national administration, new institutions of the missions and the state have progressively intruded into these formerly female realms. The most important of these institutions is the MCH service, as its policy formulated by Bell, Bignold and Mercardo (1973:465) demonstrates: "...(T)he work of the Maternal and Child Health Services is directed towards improving, wherever possible, the 'total health environment' of the family, in particular the mother and child throughout Papua New Guinea during and after pregnancy and before and during the child's attendance at school."

All of a sudden, from the point of view of the village women, a nurse began to work in the area and paid regular visits to the northern Kwanga villages. In the full swing of the 1970s the MCH service was regarded as another step towards the new life style, and – without giving up their old ways – women learnt to acknowledge the expertise of the nurse in curing many diseases.

However, their expectations have been disappointed; many small children continue to fall seriously ill and die. Northern Kwanga women partly attribute this situation to disparities in urban and rural income and living conditions. Although their experience space is more limited than that of their husbands – only 7 out of 106 women registered at the MCH clinic Tau had ever seen the provincial capital of Wewak –, they are well aware of the fact that urban people and government employees working in rural areas (i.e. teachers, APOs, MCH nurses, etc.) have a different life style.

For this reason the response of northern Kwanga women to the MCH service has to be interpreted against the background of village life as they know it. Like their husbands they continue to follow the old ways and, at the same time, experiment with the new.

1 The term kago (cargo) has become known by the phrase "kago movements", a Melanesian form of millenarianism. Allen (1976:254-282) offers a sympathetic account of three such movements which spread through the Dreikikir area after the Second World War.

Chapter 3
The Social Organization

This chapter describes those aspects of the social organization which influence the nutritional system. In the approach outlined in the first chapter, it was suggested that we should consider a large set of features, namely the economic and political structures related to food production and distribution, division of labour and characteristics of household structure (see Chapter 1.3.). Following this approach, we shall begin with a brief sketch of the political background of the northern Kwanga and then move on to a description of the village[1] Tauhundor. The relationships between the inhabitants of this village will then be examined for different social categories beginning with the family and other domestic groups, moving to men and women, descent groups and ending with the moieties. Every social category will be analyzed against the background of the nutritional system.

3.1. Political Background

Today, the northern Kwanga are integrated into a formal political framework, namely the nation of Papua New Guinea with its many divisions and sub-divisions. The northern Kwanga live in the Gawanga (or Kwanga) Census Division of the Dreikikir Sub-District which forms part of the Maprik District and is located in the East Sepik Province, one of the nineteen provinces constituting the independent state Papua New Guinea. In pre-colonial times, the political organization of the local people was altogether different: local groups were bound together by the organizing principles of a segmentary lineage system and a men's cult. They formed small, tribal societies in which descent groups maintained rights over adjoining territories. From these groups alliances crystallized, for instance the Tauhundor and Tauhimbiet and on a larger scale the northern Kwanga. These alliances of descent groups united against common enemies, in the case of the Tauhundor the Yerhmain and Moihwak in the north and the Daina and Masalakar in the south. The men's cult organization, on the other hand, consisted of small cells formed by cult communities, for instance the cult community of Tauhundor, and operated through a dual organization which cut across the descent system and linked the cells of the cult organization with one another.

Like many other societies in Papua New Guinea, the Kwanga are "aggressively egalitarian" (Forge 1970b:270). They have no form of ascribed status. A few men achieve a high status, formerly by passing through all stages of the men's cult up to the highest initiation grade, today by excellence in other activities (e.g. business). The sons of big men have no advantage in the unending struggle for prestige. Women were and are not formally

1 The term "village" is used here to refer to a named series of hamlet clusters. In pre-colonial times, the term "village" could well have been applied to Tauhundor and Tauhimbiet because they formed an alliance against common enemies in the north and south (see text).

involved in politics but on the informal level, they frequently voice their opinions. Their authority is based on their knowledge of the "women's secrets" (i.e. birth, menstruation and child rearing). Since northern Kwanga women are just as "aggressively egalitarian" as their male counterparts, each of them keeps her own counsel and rejects advice from other persons (i.e. other villagers or outsiders). We shall later argue that this deeply entrenched egalitarianism causes problems in the acceptance of nutritional education (see Chapter 8.4.).

We have seen that the oldest living members of the Tau communities were children when the first white men arrived in 1929 (see Chapter 2.3.). Their fathers grew up and lived within the framework of the pre-colonial political organization. Only during the last sixty years, the colonial and later the national administration have been imposed upon the traditional order. Underneath the new administrative structures, many elements of the old social organization continue to operate.

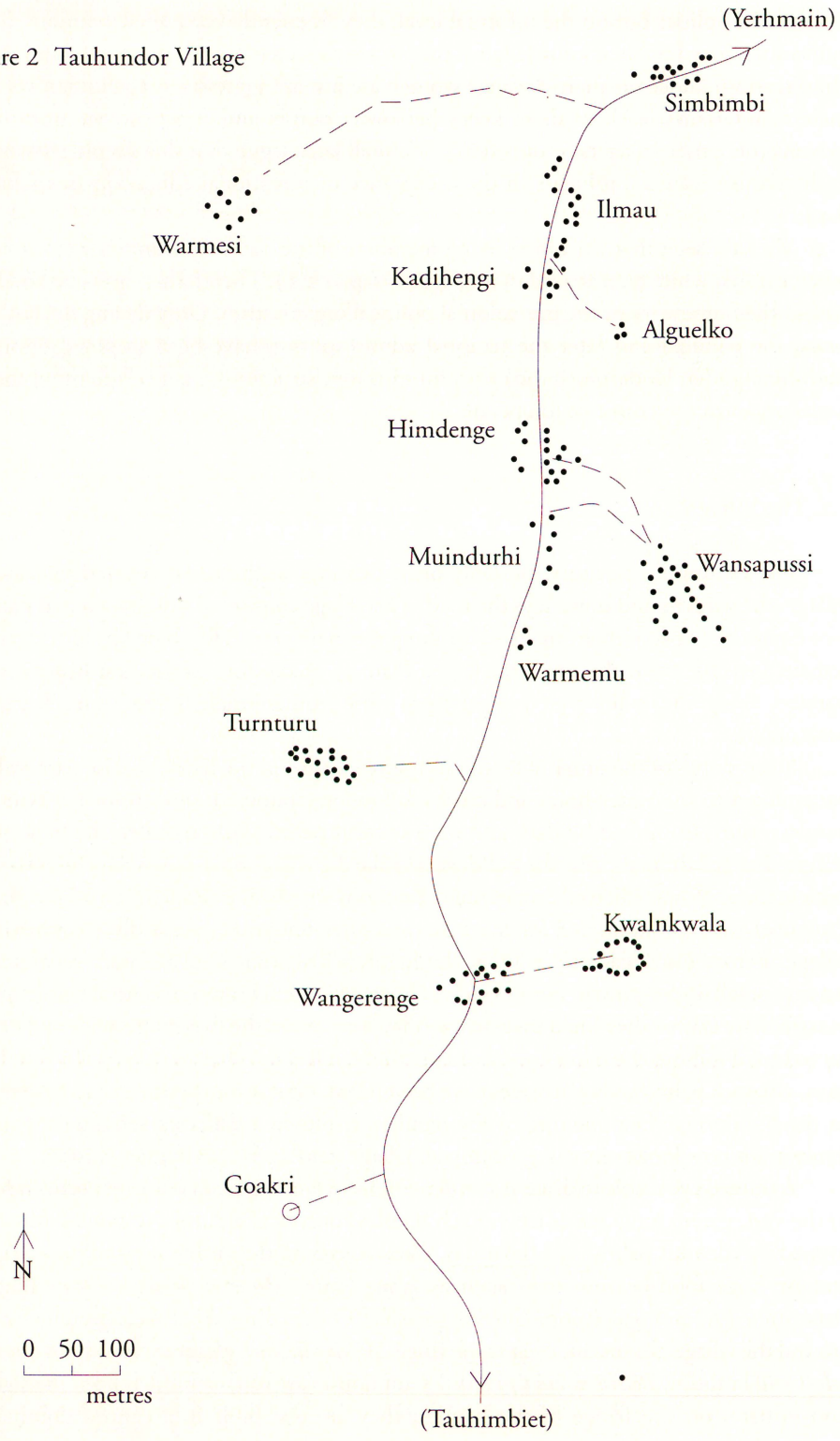
3.2. The Village

On Tauhundor territory, the only open clearings in the forest-covered hills are the village, the gardens and nowadays the road. The village consists of thirteen named hamlets (see Figure 2). Most of them are lined up along the main crest, a few hide on side ridges and remain invisible from the main track (see Plate 2). According to the oral history, some hamlets along the main crest existed from time immemorial, others were cleared by newcomers.

Steep slopes of the order of 80 to 140 metres surround the hamlets. The narrow bush paths down to the water-holes and creeks follow precipitous routes. In former days, the hamlets were also linked by dark and narrow bush paths. Only recently, the look of the village changed dramatically: the bulldozers broke the village open when they built the new vehicle track. When Michael Sombenuku Yainkom who lives in Rabaul (East New Britain Province) visited Tauhundor for the first time after ten years, he hardly recognized the village. Before his departure in 1974, the hamlets had been semi-isolated, separated by patches of tall undergrowth. Houses either clustered in a circle around central hamlet plazas of hard, bare clay or they lined the narrow ridge tops. Now, the five-metre-wide and deeply carved road follows the main crest and cuts the hamlets into halves. Many old breadfruit trees, coconut palms and other trees have been felled; even some dwellings had to give way to the bulldozers. The opening of the hamlets results in a different settlement pattern; Tauhundor now looks more like a compact village than a series of hamlet clusters.

A trained eye is able to discern a settlement from far away as an island of coconut palms in the vast, green, wavy sea of trees. Each hamlet consists of a cluster of houses which are topped by coconut palms, *siya* (kokonas, *Cocos nucifera)*, the visible signs of house rights, and by huge food-bearing trees such as *hame* (taun, *Pometia pinnata)*, *ware* (kapiak, *Artocarpus spp.)* and *ugia* (tulip, *Gnetum gnemon)*. Other palms are also cultivated near and around the village, for instance *mahambi* (buai, *Areca catechu)*, *gla* (aran, *Pandanus spp.)* and *sobo* (wail limbum, *Ptychococcus lepidotus)*. Cult houses are usually hidden from the sight of non-initiates on the fringe of the hamlet; they are not built in a central dominating

Figure 2 Tauhundor Village



position.[1] They are temporary structures; two or three years after use in ceremonies they fall into decay.

The hamlets of Tauhundor vary in size: the smallest hamlets (e.g. Alguelko and Warmemu) comprise only three houses, the largest one (Wansapussi) thirty-three houses. We shall later see that each hamlet is associated with one or several descent groups. The individual members mark their residential rights, as we just said, with coconut palms. Walking through the village the people often point out a coconut palm and say "*siya ahni sindua*" (coconut, mine, is there) and thus refer to their claims on village land.

Intra-village mobility in Tauhundor is remarkable.[2] During the six years covered by my records (1980-1986), the composition of the hamlets changed several times! Houses made of sago palm material last about eight or ten years, but often people move after shorter intervals. The flexibility of the social organization and the relatively simple technology of house construction allow the Tau to adjust their domestic arrangements to changes in their life history, personal choice and strategy. Sometimes people set up temporary camps near garden sites or in the sago swamps. In general, however, the settlement pattern of hamlet clusters does not seem to be a new pattern in this area, as we saw at the beginning of this section.

Not all the houses serve as sleeping quarters; some are yam store houses, *aka laka*, and others are small village stores. All these structures are built of sago palm and other bush material (see Obrist 1987). In this tropical climate, life is not confined by four walls; people eat, chat, sit and work outdoors. Only at night or on a rainy day do they disappear in their houses. Thus one could say, that the hamlet rather than the house is the actual living area in the village. In the "traditional" oval houses, *misambi aka* (earth or ground, house), a small section is walled off and used as a verandah. The low entrance opens upon a single, earth-floored and scarcely furnished room. A fireplace, bedsteads and a few shelves are the only fixtures. These houses have no windows so that even in bright daylight the room remains dark and cool – and often filled with smoke! In recent years, new house forms have been imported, apparently by returned plantation workers. They have a rectangular ground plan and higher side-walls. Often, these new houses rest on stilts which explains their name, *merhenge aka* (above, house). They are still built with local bush material but with nails instead of liana bindings.

The hamlet rather than the house and the forest rather than the village are the preferred living areas of the northern Kwanga. During the day, the village is devoid of people, except for the old and sick. Early in the mornings, long files of grown-ups and children crowd the paths to the forest which soon bristles with activity: hunting parties roam the undergrowth in old gardens, women carry heavy loads from an old to a new garden, men cut straight and slender trees as building material, adolescent boys and girls collect breadfruit or nuts, when they are in season, a woman and her children chop

1 The southern and the northern Kwanga do not build cult houses with painted facades like those of the Ilahita Arapesh (see Tuzin 1980) and the Abelam (see e.g. Forge 1966) or with decorated ceilings like those of the Kwoma (see Bowden 1983). In fact, as Schindlbeck (1981:3) points out, it is a typical feature of the Kwanga, which distinguishes them from many neighbouring societies, that any objects used in and in connection with the men's cult activities are not made to last a long time.

2 Lea (1964:55) and Hauser-Schäublin (1983b:342) also report a high intra-village mobility for the Abelam. I assume this to be a typical feature of the groups living on the southern foothills of the Prince Alexander and Torricelli Mountains.

firewood, boys with slingshots prey on birds, and some men gather under a large tree to chew betelnut and discuss village politics. It is fresh and cool in the forest, in marked contrast to the village, where the heat is often stifling. In the late afternoon, when the sun is about to go down, people return to the settlement.

This life style has several consequences for local food habits. If the hamlet rather than the house and the forest rather than the village are the preferred living areas, people need mobile kitchen equipment. We can expect meal patterns to be influenced, too. These and other direct consequences will be discussed in Chapter 6. An indirect consequence is perhaps not easily understood by an outside observer, and that is the local preference for "lightweight" children. Until the children can walk and talk, their mothers carry them wherever they go. Northern Kwanga women often pointed out that it is an additional burden to carry heavy and fat children from the village to the forest and back again. We shall resume this point later (see Chapter 8.3.).

The age (and sex) distribution of the Tauhundor population meets our expectations of a rural community in the tropics (see Table 3). Most people are young: almost half of the population (45.4%) is under 20 years, not even a fifth (15.6%) is over fifty. Children aged 0 to 9 years greatly outnumber persons over 60 years. People do not get old by our European standards; in fact, many of them die in childhood. A sharp decrease in the number of children from the first to the second age group indicates a high child mortality. Later in this text we shall see that especially infant mortality is a problem (see Chapter 8.2.).

Table 3
Percentage Distribution of Tauhundor Population by Age and Sex

Age group (years)	Males (N=191)	Females (N=201)	Total (N=392)
0– 9	26.7	27.4	27.0
10–19	16.8	19.9	18.4
20–29	18.8	15.4	17.1
30–39	10.5	9.0	9.7
40–49	11.5	12.9	12.2
50–59	9.9	9.5	9.7
>60	5.8	6.0	5.9
Total	100.0	100.0	100.0

Source: Field notes

The village community is geographically divided into an upper half and a lower half. The lower (i.e. southern) half of the village calls the upper (i.e. northern half) "Waneyi" (Urat, children). The upper village half calls the lower village half "Yaitela" (supposedly meaning "mother and children" in the Urat language). The Tauhundor people claim that this geographical division refers to immigration patterns (see Chapter 2.2.).[1] This division

1 A similar geographical division into geographical halves has also been reported from the Abelam (see Gorlin 1973:47, Scaglion 1976:56 and Huber-Greub 1988:92-94) and may represent a recurrent element of the social organization in these cultures.

manifests itself in the house roofing festivities which will be described later (see Chapter 7.2.). At these house roofing festivities, the geographical village halves act as two competitive groups.

Today, the people elect a village councillor (kaunsila), a magistrate and a secretary (kuskus) from their midst. However, the councillor often has a hard time making the villagers perform the new communal tasks such as the upkeep of the vehicle track or the construction of dwellings for the APO or the teachers. The villagers rarely identify with these tasks or expect "the government" to fulfil them. Their notion of "the government" and how it operates remains rather vague. The appointment of local "authorities" also runs contrary to the deeply entrenched egalitarianism mentioned above. Furthermore, their resistance reflects the fact that they do not conceive of themselves as a "community" in our sense of the word. In many spheres of life, the social organization operates along different lines, as we shall see in the next sections.

3.3. Family and Domestic Groups

The northern Kwanga family is an important social and economic unit. Most couples form monogamous, nuclear families (72 out of 78). Mother and father raise their children and collaborate in the domestic, market and exchange economy.

Table 4
Distribution of Women by Number of Surviving Children

No. of surviving children	Number of women aged (years)			
	<25	26-35	36-45	>45
1	22	5	0	0
2	8	15	1	0
3	2	0	6	0
4	1	8	6	1
5	–	8	7	2
6	–	2	8	0
7	–	–	1	1
8	–	–	1	–

Source: Field notes

Nuclear families are usually small in size. In a survey of 115 women I recorded the number of surviving children in relation to the age of the mother (see Table 4). The results show that only a few Tauhundor women (3 out of 115) have more than six children! High infant mortality may be a contributing factor (see Chapter 8.2.). Yet it is an important fact that northern Kwanga women regard small families and long birth intervals as an ideal. They often make contemptuous remarks about parents with many and badly spaced

children; they even compare them with pigs! Women frequently point out that a mother is hard put to it to care simultaneously for two small children while accomplishing all the other domestic tasks.

Although nuclear families are the core units, many of them operate as extended families based on multiple marriage, parent-child or sibling-sibling links. Only six men of various ages have two wives; in three of these polygynous families, the wives do not live in the same hamlet because they do not get along. Parents often continue to collaborate with their newly-wed sons and daughters; young families become only gradually independent of their parents. Bachelors, and divorced or widowed persons usually join one of their brothers' families. In these extended families, each woman has her own house and her own gardens. She regularly cooks for her dependent children and for the men who support her (e.g. her husband, brother, son, etc.). In other words, each mother is responsible for the feeding of her children and depends on a man to support her in food production and other domestic tasks. We shall see that the arrangements of extended families are influenced by kinship rights and obligations, by certain avoidance rules and by the division of labour by sex.

Kinship relations are (usually) warm, intimate and spontaneous. Children *(yi)* show genuine affection for their mother *(umai)* and father *(abui)*. Husband and wife address each other by their names and have close relationships[1] although domestic quarrels are frequent. It is considered right for a man to hit his wife if she is lazy, stubborn or disobedient; a wife, on the other hand, may withhold her labour and return to her parental hamlet if her husband does not take good care of her and her children. Grandchildren *(nira)* often visit their grandparents, *(arai)* who usually indulge them; it is not unusual for grandchildren to spend several days or weeks with their *arai*. A special relationship exists between mother's brothers *(mango)*, and sister's children *(ruai)*. The *mango* are expected to be generous, protective and nurturing; their *ruai* expect them to make frequent gifts (e.g. coconut and areca palms or large yam) and to take care of them if need arises (e.g. if their father dies). In the course of this text we shall come across many illustrations of these relationships between relatives. It is important to bear in mind that the Tau family is not an isolated unit; its members are linked with other families by an invisible and complicated network of relations.

The northern Kwanga do not seem to have terms for the different family forms. They paraphrase it and say "my group", in Tok Pisin ol lain bilong mi, in the Tau dialect *onto tonglo tira* or *onto ahni ma*.

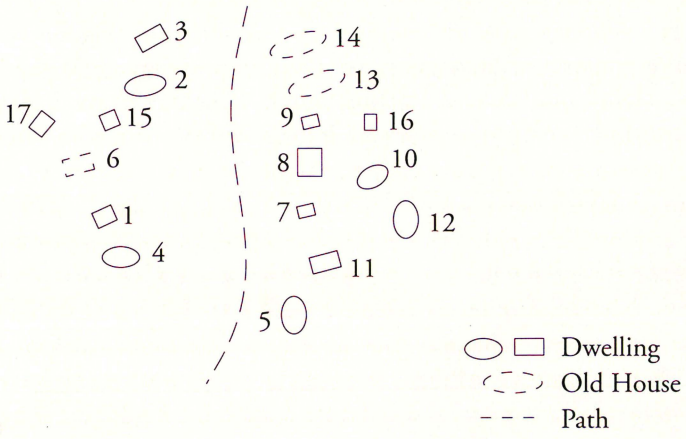
Special and close bonds exist between a person and his or her kindred. When someone is ill, the kindred brings food and firewood; when a house needs thatching, the kindred comes and helps to fetch sago palm fronds; when someone dies, the kindred assembles for mourning. Many more examples could be given because the kindred always mobilizes around a person in support, celebration and mourning. They emerge from the network of kinship and other ties.

We shall now examine these points in more detail and analyze some aspects of domestic life in a sample hamlet. Himdenge is a medium-sized hamlet with a cluster of seventeen houses arranged around an open space (see Figure 3a). On the key day (January 1,

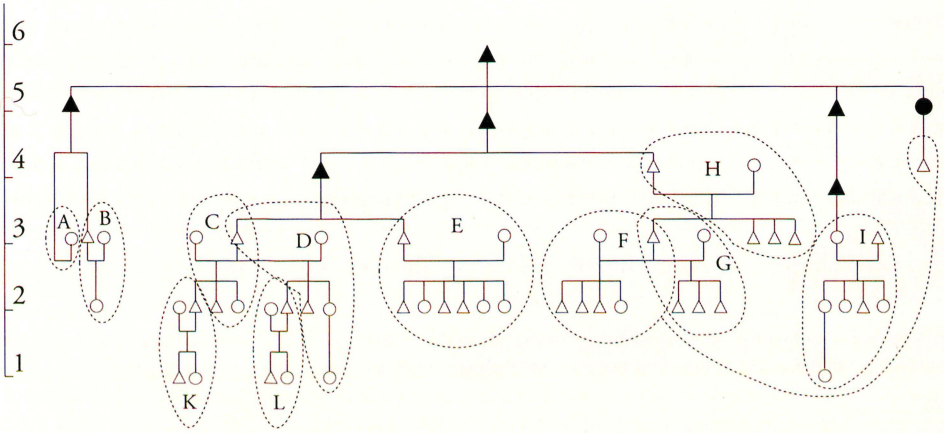
1 Although an avoidance relationship exists between northern Kwanga men and women, husband and wife closely collaborate in daily life (see Chapter 3.5.).

Figure 3: Domestic Groups

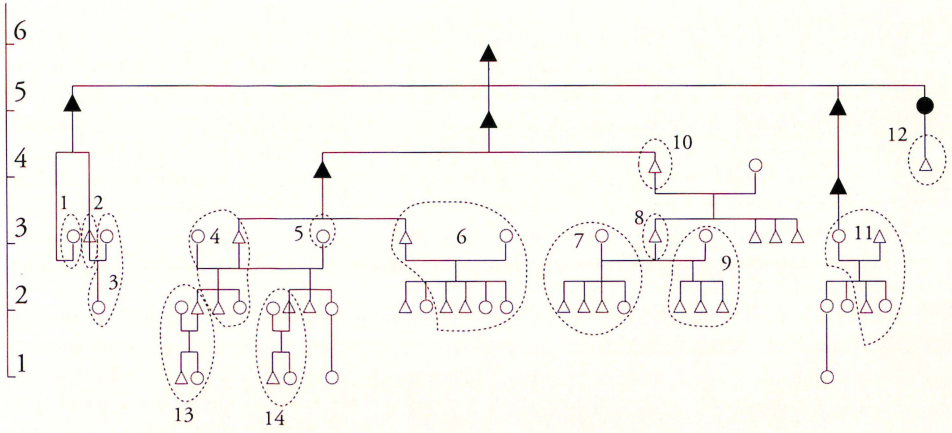
a) Hamlet Himdenge



b) Household Units



c) Residential Units



1985) it had twenty-three inhabitants. The genealogical charts show that most residents of Himdenge belong to the Wainassa Assatagumbi, a descent group sharing a common ancestor (see also Table 7).

For the purpose of my study, it seems useful to distinguish between three types of domestic groups: the "household unit" (or "consumption unit"), the "residential unit" and the "economic unit" (or "production unit"). We said that even in extended families, each woman usually cooks meals for her children and the men who care for them. However, women never cook for relatives belonging to the next older generation. These and other cooking arrangements can be explained by avoidance rules which will be discussed in the next section. We can say that people who regularly receive meals from the same woman form a distinct unit which I call a "household unit". Capital letters in Figure 3b identify household units. Sleeping arrangements are also affected by these avoidance rules so that father, mother and children do not always share the same dwelling. The group of people who regularly share a dwelling is referred to as a "residential unit". Numbers of residential units in Figure 3c correspond with house numbers in Figure 3a. The people who regularly collaborate in economic activities (e.g. gardening, house building, etc.) are called an "economic unit". It was impossible to depict these economic units in a similar chart not only because they change in size and composition but also because they comprise people who do not live in the same hamlet! In many cases, they correspond with what I have earlier called the "kindred"; however, since the kindred crystallizes around a person not only in economic activities but at all the focal points of life (i.e. at birth, menarche, marriage, death, etc.) and since the kindred comprises a much larger number of people, it seems justifiable to distinguish between these two categories (i.e. economic unit and kindred).

The following account from my field notes illustrates my abstract statements:

> After her husband's death, Misigmbahai kept her house (1) and household (A) until she was able to join her brother's extended family in the hamlet Wansapussi. Today, she collaborates mainly with other members of her own rather than with those of her late husband's descent group.
>
> A nuclear family lives in the houses 2 and 3. The mother, Ugsembe, cooks for her husband and daughter. In this household, mother and daughter form a separate residential unit; they do not share a house with husband and father. In many economic activities, this family closely collaborates with the Flenokor in the hamlet Warmesi, where the father has fictional kinship ties.
>
> The inhabitants of the houses 4, 5, 13, and 14 form an extended family based on multiple marriage and on parent-child links. Each wife regularly cooks for Walendala (the husband), herself and her dependent children so they form two household units (C and D) with the husband moving in between. In 1980, the eldest married son of each wife lived in the same hamlet and each daughter-in-law had her own household (K and L). Five years later, both sons moved their family to other hamlets, one to Wansapussi and the other to Turnturu. In terms of gardening the households C, D, K and L still form an economic unit although they now live in three different hamlets! In other activities the sons join forces with the descent groups who have granted them residential rights.
>
> A nuclear family dwelt in house 6 until the husband died. Before his death, he accused his neighbour (house 10) – one of his classificatory fathers – of sorcery (see Chapter 4.5.). His widow and children left the hamlet soon after his death. They first moved to the widow's brothers' hamlet Turnturu and then, a few weeks later, to Simbimbi where one of the widow's sisters lives with her affinal kin.
>
> The houses 7, 8, 9 and 10 are also occupied by an extended family based on multiple marriage and parent-child links. Each wife has her own house and household while the husband moves in between and sleeps in a house of his own. The husband's father inhabits house 10. In 1980, the husband's mother and youngest siblings dwelt there as well but the old couple did not get along so their son built a new house for his mother and siblings in an adjoining hamlet. Today, the old man

in house 10 still receives his daily meals from his wife. In other words, they still form a household unit although they live in separate hamlets. Economically they all depend on their eldest son and his two wives. It is perhaps because of this heavy workload that he allowed a bachelor (house 12) to join him. This bachelor receives "food and board" for his help in the domestic economy. Although this polygynous extended family is an economic unit when it comes to gardening (see Chapter 5.1.), it often works in collaboration with other descent groups, for instance in sago production (see Chapter 5.2.).

The nuclear family in house 11 resided uxorilocally until early in 1985, when they moved back to the husband's father's and brothers' hamlet. In preparation for this move and the feast held at the thatching of their new dwelling house (see Chapter 7.2.), they asked many of their patrilineal, matrilateral and affinal relatives to help them wash sago (see Chapter 5.2.). In other economic activities, for instance the coffee buyers' business group, they continue to collaborate with the wife's descent group.

The adolescent and sexually mature children of the genealogical example in Figure 3 either have their own little house in the hamlet, like the daughter of household E (house 15), or they join their age and sex mates in other hamlets.

Thus we see that only in a few cases are household or consumption identical with residential units (A1, K13, L14). It is much more common for people who share meals not to share dwellings. This shows that most people still observe avoidance rules, not only in theory but also in practice. Members of the parent generation never form a residential unit with sexually mature members of the child generation, and several husbands do not sleep in the same house as their wives. During menstruation and childbirth, women stay in small houses *(mas aka)* on the fringe of the hamlet (16, 17). Several women share the same small house, though not at the same time. Moreover, members of the parent generation never eat food cooked by sexually mature members of the child generation. Women of the parent generation cook their own meals, while women of the younger generation form their own household units. The old grandfather in house 10 cannot eat a meal prepared by his daughters-in-law who are his next-door neighbours; he receives his meals from his wife who moved to her parental hamlet fifty metres up the road. Other special arrangements will be presented later in this text.

The genealogical example in Figure 3 is a good illustration of my earlier remark about the high intra-village mobility (see Chapter 3.2.). We said that the flexibility of the social organization and the relatively simple technology of house construction allow the northern Kwanga to adjust their domestic arrangements to changes in their life history (e.g. death in households A and E), personal choice and strategy (e.g. quarrels in household H, change from patri- to avunculocal residence in households K and L and from uxori- to patrilocal residence in household I).

In many of the above-mentioned economic units of the Wainassa Assatagumbi descent group, a family collaborates with members of other descent groups. Household B, for instance, joins the Flenokor in Warmesi in many activities. The households C, D, K and L form an economic unit in several gardening activities but in other activities household K collaborates with the Yerhmain and household L with the Wainassa Assamasiki, who granted them residential rights. Many of these arrangements can be explained by strong matrilateral ties. They illustrate that matrilateral ties play an important role in domestic life although the norms stress patrilineal descent.

This example also demonstrates that depending on which aspect of domestic life we look at (e.g. cooking arrangements, residence patterns or collaboration in various economic

activities), we see different groups (e.g. household units, residential units or economic units) emerge from the network formed by kinship and other ties. When we consider other aspects of life (e.g. stages in the life cycle, house building, etc.), other groups will crystallize.

In the subsequent sections, many of the organizing principles underlying these domestic arrangements will be reconsidered in more detail. It is difficult to present them in neat order because in reality they are closely interrelated.

3.4. Avoidance Relationships

Avoidance rules cut across families and domestic groups creating avoidance relationships between certain social categories. As we have just seen, some of these rules concern housing arrangements, others the cooking, giving and eating of meals.

It is a well-known fact in anthropology that avoidance rules clarify and maintain definitions of boundaries between social categories (see Douglas 1975a). Social boundaries are marked by avoidance rules which limit physical contact. The rules are applied to products or functions of human physiology; they regulate contact with blood, excreta, urine, hair and nail clippings and cooked food. Like sex, the taking and ingesting of food has a biological component as well as a social one. Prohibitions regarding food and sex often become important symbolic expressions of social divisions. Among the northern Kwanga, avoidance rules mark the boundaries between the following social categories: 1) men and women, 2) older and younger generations and 3) members and non-members of the local men's cult. These categories are not so much defined by biological age and sex but by cultural constructions which form the structure of this society. In the subsequent sections (Chapters 3.5.–3.7.) we shall examine the social background and in Chapter 4 the religious background of these avoidance rules. First, however, we shall scrutinize the avoidance rules themselves and analyze the relationships they create.

In many societies of Papua New Guinea an avoidance relationship exists between men and women. Men often fear that an over-indulgence in sexual intercourse with women will drain their stamina and induce premature aging. In their natural sexuality, fertility and regenerative capacities women are frequently regarded as dangerous to men especially during menstruation and childbirth. Many anthropologists have used the concept of "sexual antagonism" to characterize male-female relationships in Papua New Guinea. In a recent publication, Poole and Herdt (1982) critically review the concept of "sexual antagonism" in New Guinea anthropology. Among many other things they suggest that "the idea of 'sexual antagonism' has often provided an awkward and unwieldy lens through which to view the significance – in behavioural, cultural, psychological, or social terms – of sex and gender in New Guinea societies" (Poole and Herdt 1982:5).

The results of my research among the northern Kwanga point in a similar direction. They suggest that the concept of "sexual antagonism" involves the danger of reducing the key concept of "regenerative power" to a mere male-female problem.[1] The analysis of

1 Bowden (1983:121-123) reaches similar conclusions for the Kwoma: ".. it is not so much femininity that men regard as polluting ... as women's active reproductive capacities. ... sexually mature men have something that sexually mature women (as distinct from females as a category) lack, viz. access to those creative and life-sustaining powers that guarantee the continuity and well-being of society."

avoidance rules yields first evidence to support my argument. Further evidence will be supplied in the chapter on Kwanga religion.

Table 5: List of Avoidance Rules

a) Avoidance rules between men and women
- During menstruation and childbed women may not enter men's living and sleeping quarters ;
- during menstruation and childbed women may not peel, break and/or pound tubers for men and children;
- a husband may not eat meat cut by his wife;
- a husband may not eat coconut scraped by his wife;
- after the first child has been born, a husband may not eat from the same plate, use the same cutlery and drink from the same cup as his wife and children;

b) Avoidance rules between generations
- Members of the older generation(s) may not eat any food prepared by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat any food or use any plates, cups, cutlery, pots and pans stored in the house of sexually mature members of the younger generation(s);
- members of the older generation(s) may not enter the house of sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat tubers peeled by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat meat cut up by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat any coconut scraped by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat any village pigs raised by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat any game hunted by sexually mature members of the younger generation(s);
- members of the older generation(s) may not eat sago washed by sexually mature members of the younger generation(s).

c) Avoidance rules between members and non-members of the men's cult
- Non-members may not eat from the same plates, cups, cutlery and pots as the initiated men;
- non-members may not eat tubers peeled by initiated men;
- non-members may not eat meat cut by initiated men;
- non-members may not eat coconut scraped by initated men.

Let me now specify the avoidance rules affecting food use and domestic life which express the social division between men and sexually mature women (see Table 5a). The first

two rules not only apply to husband and wife but to men and sexually mature women in general. During menstruation and childbed, women may not enter men's living and sleeping quarters and may not peel, break and/or pound tubers for men. Note that the proscriptions regarding food preparation and handling are very precise, not only in this but also in all other food avoidance rules listed in this table. A woman in the above-mentioned dangerous states cuts up the greens and waits for a neighbour or the co-wife to peel and break the tubers. Using cane nippers she then fills the food into the saucepan and puts it on the fire. When the food is done, she takes it out of the saucepan and serves it to her family. If she prepares a soup, her neighbour or co-wife pounds the cooked food for her; she then puts it back into the saucepan and stirs it until it is ready to be served. Although the northern Kwanga never stress this fact, it is obvious that these measures prevent the woman from reducing the firmness of food while she is in a "dangerous state" (i.e. during menstruation and childbed). We shall later reconsider these ideas regarding the peeling, breaking and/or pounding of tubers and those underlying the next two rules, namely the cutting of meat and the scraping of coconuts (see Chapter 6.4.). The last rule (see Table 5a) concerns the shared use of plates, cutlery and cups by husband and wife. After the first child has been born, the shared use of eating and drinking utensils becomes dangerous to the husband. Most probably this rule refers to local ideas about conception which will be touched upon in the subsequent section.

The avoidance rules expressing a social division between older and younger generations are just as rigorously defined as those between men and sexually mature women (see Table 5b). Behaviour is even restricted at second remove, thus including grandparents and grandchildren. Avoidance between generations is formulated in kinship terms referring to a person's genealogical position, not to biological age (see Chapter 3.6.)! It can happen, for instance that a grown-up man may not eat the food cooked by a woman of his age because the genealogy classifies her as his *yi* (child). Note that avoidance only begins to operate after the members of the younger generation(s) have reached puberty. From then on, members of the younger generation(s) are carriers of sexual power and energy. They will be the mothers and fathers of the next generation, and their regenerative power, if uncontrolled, is regarded as dangerous by the members of the older generation(s).

The relationship between the members and non-members of the local men's cult is modelled on the same principle (see Table 5c). These rules indicate that members of the men's cult (especially after ceremonies) are carriers of a ritual power which is dangerous to all non-members (to women and children in particular). This ritual power can supposedly also be transmitted by food.[1]

Thus we see that avoidance rules between three social divisions (i.e. men and women, older and younger generation and non-members and members of the men's cult) serve as a culturally defined mechanism to control regenerative powers[2]. The rules regulating behaviour between all three social divisions show striking parallels. Most of them are based on

1 In the next section we shall see that the rules listed in Table 5c are only a few examples of the avoidance relationship between members and non-members of the local men's cult.

2 Similar mechanisms have been reported for some neighbouring groups, for instance by Mead (1940:400-412, 419) for the Mountain Arapesh, by Tuzin (1972:236-237, 1978, 1980:113) for the Ilahita Arapesh and by Kaberry (1940/41:361, 364-365) and Huber-Greub (1988:55, 159-160, 204-207) for the Abelam. Local formulations of food avoidance rules differ in detail but they can be regarded as variations of a general theme, namely the control of regenerative powers.

the assumption that sleeping quarters, cooking utensils, eating and drinking utensils and food become contaminated by certain powers. While the power and energy of the younger generation(s) and women are concerned with human procreation, physical and social, the power and energy of the men's cult members are concerned with the reproduction of garden produce and pigs; but all three powers can be apostrophized as "regenerative powers". Furthermore, all three social boundaries are marked by the prohibition of accepting food which has been handled in certain ways, namely peeled (tubers), cut (meat), and scraped (coconut). In addition, members of the older generation(s) may not eat certain food which has been procured by members of the younger generation(s), namely raised village pigs, hunted game and washed sago. The meanings of these rules will be explored in various contexts throughout this text.

Moreover, the relations between these three social categories are rendered analogous by the fact that a transgression of the food avoidance rules is sanctioned by illness. Here, however, a subtle yet important distinction is introduced: a transgression of avoidance rules between men and women and between older and younger generations is sanctioned by an illness termed *wahapsila* (sotwin; loss of stamina or premature aging), whereas a transgression of avoidance rules between non-members and members of the men's cult is sanctioned by a more severe illness which the northern Kwanga paraphrase as *nalo orin tolo* (red or men's cult spirit, him, holds). Since this illness is regarded as more severe than that caused by a transgression of avoidance rules between generations and sexes, it cements the authority and control of the men's cult members, especially of those belonging to the highest initiation grades.

The members of the older generation(s), the men and the non-members of the men's cult are regarded as the "weaker" or "more vulnerable" partners in these relationships: If an avoidance rule between a grandparent *(arai)* and a grandchild *(nira)* or between a father/mother *(abui/ umai)* and a child *(yi)* is violated, then the member of the older generation is in danger of catching the illness *(wahapsila)*. An offence of the rules between non-members and members of the men's cult results in an illness *(nalo orin tolo)* of the non-member. If we reverse the argument, we could suggest that the regenerative powers of the younger generation, women and initiated men is believed to have health-threatening effects on their social counterparts. As we have seen in the previous section, the northern Kwanga still strictly observe these avoidance rules in their day to day life. The fear of illness is the main reason for adherence to these rules.

In conclusion we can say that among the northern Kwanga avoidance rules clarify and maintain cultural definitions of boundaries between several social categories. None of these rules affects the diet of young children! Boys and girls eat the same types of food. After the age of three or four years, they gradually learn to avoid food prepared by their classificatory children, by women during menstruation and childbed and by members of the men's cult. Later in this text (see Chapter 4.5.) we shall see that an offence of these rules may affect the health (not the diet!) of young children as well as adults. Avoidance rules separate social categories but at the same time, they link various spheres of life with one another including the social organization, the religion, the nutritional and the medical system. Furthermore they illustrate that the concept of "regenerative power(s)" is a key concept of the Kwanga culture which cannot be merely reduced to a "sexual antagonism". In the following sections we shall explore the social background on which the avoidance rules draw, namely the

relationship between men and women, the kinship and descent system and the ritual organization.

3.5. Men and Women

The cultural definition of the sexes is important among the northern Kwanga. They emphasize the male and female powers by stressing their danger. Each sex has to observe certain rules to control its powers; some of these rules have been discussed in the previous section. In the next chapter we shall explore the religious background of male-female relationships.

We have seen that during menstruation and childbed, women are confined to small houses on the fringe of the hamlet (see Figure 3a); they are not allowed to enter family dwellings, and they may not cook for their husbands. Menarche and childbirth are marked off by rites of passage (see Chapter 7.3., 7.4).

Certain beliefs about gardening and hunting also draw on gender concepts: in their sexuality but especially during menstruation and childbed, women are not only dangerous to men but also to (growing) yams and wild pigs.[1] If their help is urgently needed (e.g. to carry food produce for a food distribution), menstruating women only go as far as the fringe of the garden but do not enter it. Even if they are not menstruating, women may not leave a *noome* garden (i.e. a garden where the first yam crop is in the ground) to urinate, defecate or wash themselves and then re-enter it, as if any female body fluid, excrement or any water which came into contact with a female body were dangerous to the yams growing in the garden.[2] Thus we see that the northern Kwanga draw an analogy between relationships of women and growing yams and relationships of women and men. Moreover, women are not allowed to dig holes for planting yams and other crops (e.g. taro and bananas); they plant their yams, *asse*, in little earth-mounds. It is interesting that these rules only apply to women during their "mature" years (i.e. between menarche and menopause). Old women may and do dig holes for planting yams and other crops; they explain that they are past their childbearing age. Men plant yams in holes using digging sticks to open the ground. In my view the northern Kwanga see a symbolic association between human gestation and yams cultivation: men grow yams in ground holes as women grow human children in the womb.[3]

Similarly, women may not enter the deep forest (*glen gala:* forest, black) "lest the wild pigs smell them, run away and hide", as the northern Kwanga say.[4] It has actually happened that men blamed their hunting failure on women who had walked past the spot where the

1 Similar concepts have been reported from the neighbouring groups, for instance from the Abelam (Kaberry 1940/41:355), the Mountain Arapesh (Mead 1940:419) and the Kwoma (Williamson 1979:217).

2 The usual comment in Tok Pisin is: "Meri i no inap pispis, pekpek na waswas na go bek insait long gaten, mami mbai bagarap; wail pik mbai kam na bagarapim gaten." (A woman may not urinate, defecate or wash and go back into the garden, the yams will be harmed; wild pigs will come and destroy the garden).

3 Hauser-Schäublin (1983a:201) found evidence for the same concept among the Abelam and argues that it actually forms a fundamental theme of the local men's cult: "Der Yamskult ist ein Kult der Männer; langer Yams ist ein Kind des Mannes, wobei die Erde die Mutter ist. Die Geschlechtlichkeit der Frau, die im Gebären eines Kindes ihren stärksten Ausdruck findet, steht dem Yamskult diametral gegenüber."

4 Here, the reasoning seems to run contrary to the example mentioned above: in the forest wild pigs are said to be scared off by the smell of women but in the gardens they are said to be attracted by women.

men subsequently held a night watch! Hunting is regarded as a male activity and, as in yam cultivation, its success can be enhanced by magic, according to northern Kwanga belief. Parts of this secret knowledge are passed on from individual to individual, parts of it are learnt during initiations into the men's cult.

It is interesting that, at least in former days, the northern Kwanga regarded penis bleeding as an important preparatory act for hunting expeditions and yam planting. In many cultures, penis bleeding is regarded as the male counterpart of female menstruation. The latter is often considered as a natural purifying discharge of "bad blood" which men have to achieve artificially by letting blood from their penis.

Blood is an important concept among the Kwanga. Schindlbeck (1983:9) reports that the southern Kwanga express their belonging to a certain place with the word "blood", one is "blood" of a certain place. Like the northern Kwanga, they believe that blood substances of man and woman form the essential element for a new human being. Conception beliefs are a rather complex topic which I did not explore in detail. In the Tau dialect, the word for male semen is *ere ugu* (?, water) but people always use the term *fi* (blood) when they talk about conception. Northern Kwanga women say that male and female blood gets mixed during repeated intercourse. The first conception supposedly takes longer because the blood of the parents is not yet mixed and abundant. After the first child has been conceived and born, conception reportedly occurs sooner but one act of intercourse cannot possibly result in pregnancy. The northern Kwanga thus see a connection between menstruation, intercourse and childbearing but the physiological specifics are not understood in terms of ovum and semen but in terms of male and female blood substances.

In the last section we have seen that the avoidance rule regarding the husband's use of separate eating and drinking utensils only comes into effect after the first child has been born. According to northern Kwanga beliefs about conception, male and female blood substances are now mixed and abundant. We could infer that this is the reason for the timing of this rule: since the blood substances are now mixed, the husband has to protect himself against other close physical contact with his wife, for instance that created by using the same eating and drinking utensils.

Secret knowledge about yam planting, hunting and penis bleeding belongs to the male realm which is, at least partly, dominated by the men's cult *(kwaramba)*. In the southern Kwanga area, and to a lesser extent also in the northern Kwanga area, this has far-reaching consequences for daily life, as Schindlbeck (1990:237) reports: "Kwaramba men are regarded suspiciously when they move around in the village. Even months after their participation in cult ceremonies, they are still dangerous to noninitiates. They have to be very careful in their movements, particularly when they are near firewood, fire, cooking pots, knives, food, water containers, and net bags."

And in an earlier paragraph Schindlbeck (1990:236) writes: "The separation in daily life between initiates and non-initiates that is imposed by the taboo system is ... very demanding. Probably the most influential taboo for initiated men is the one concerning the preparation of food."

The middle-aged northern Kwanga men often voice an uneasiness about the consequences of *kwaramba* ceremonies in daily life. Many of them say that they refuse to be fully initiated because the separation between the sexes is more severe afterwards; in particular their interaction with wives and children is subject to too many avoidance rules. Perhaps

the segregation between the sexes was stricter in former days. Today, men and women collaborate in many daily activities.

Table 6
Division of Labour by Sex

Types of work	Men	Women
Slashing undergrowth	x	x
Cutting trees	x	
Burning garden	x	
Sweeping debris		x
Collecting leaves of *Pometia pinnata*		x
Planting with digging stick	x	
Planting without digging stick, sowing		x
Cutting stakes for yam vines	x	
Hanging up of yam vines	x	
Weeding		x
Harvesting yam and taro with digging stick	x	
Harvesting other crops		x
Carrying *sobo*-basket		x
Carrying *antombongri*-basket	x	
Cutting sago palms	x	
Constructing sago washing apparatus	x	
Pounding sago pith	x	
Washing sago pith		x
Planting and tending food-bearing trees	x	
Gathering plant food		x
Feeding village pigs		x
Collecting animal food	x	
Hunting	x	
Trading in food		x
Aquiring store foods	x	x
Collecting firewood		x
Fetching drinking and cooking water		x
Preparing main daily meal		x
Preparing snacks	x	x
Killing and cooking pigs	x	x
Child care	x	x

Activities and objects are also gendered (see Table 6). Men cut the forest trees, burn the garden, and use a digging stick to plant yams, taro and bananas and to harvest the tubers. Women clear the undergrowth, sweep the debris, plant and harvest all those crops for which the ground does not have to be opened, weed the gardens, collect firewood and leafy greens, carry water and cook the daily meals. Child care is often shared but women are mainly

responsible for the young children until they can walk and talk. They also do most of the carrying, for instance transporting planting material from the storehouse to the new garden and harvested produce from the garden to the storehouse or the dwelling. Women carry large *sobo* baskets on their backs which are suspended from a headsling. Men carry on their shoulders, using a men's basket, *antombongri*, or a pole where convenient.

The division of labour presented in Table 6 mirrors my observations. Theoretically, several tasks can be performed by both sexes (e.g. pounding and washing sago pith, planting of food-bearing trees and collecting animal food). In most cases, however, northern Kwanga men and women perform complementary tasks in the same activity (e.g. house building, gardening, sago extraction etc.). In the course of this text we shall come across many more examples.

Here it is important to note that northern Kwanga men and women are dependent on one another in the domestic economy, precisely because they are assigned different tasks. Men often point out that they need their wives, mothers and/or sisters because they cook their daily meals; women, on the other hand, say they could not eat good food if their husbands, fathers and/or brothers did not plant and hunt it for them.

Although northern Kwanga children begin to learn the skills and duties associated with gender roles at an early age, this is a long-drawn-out process. Young men and women only gradually achieve mastery of male and female skills, acquire knowledge and establish their social status in the community. Even after marriage and the birth of their first children, young couples usually work as a joint force with members of their parent generation.

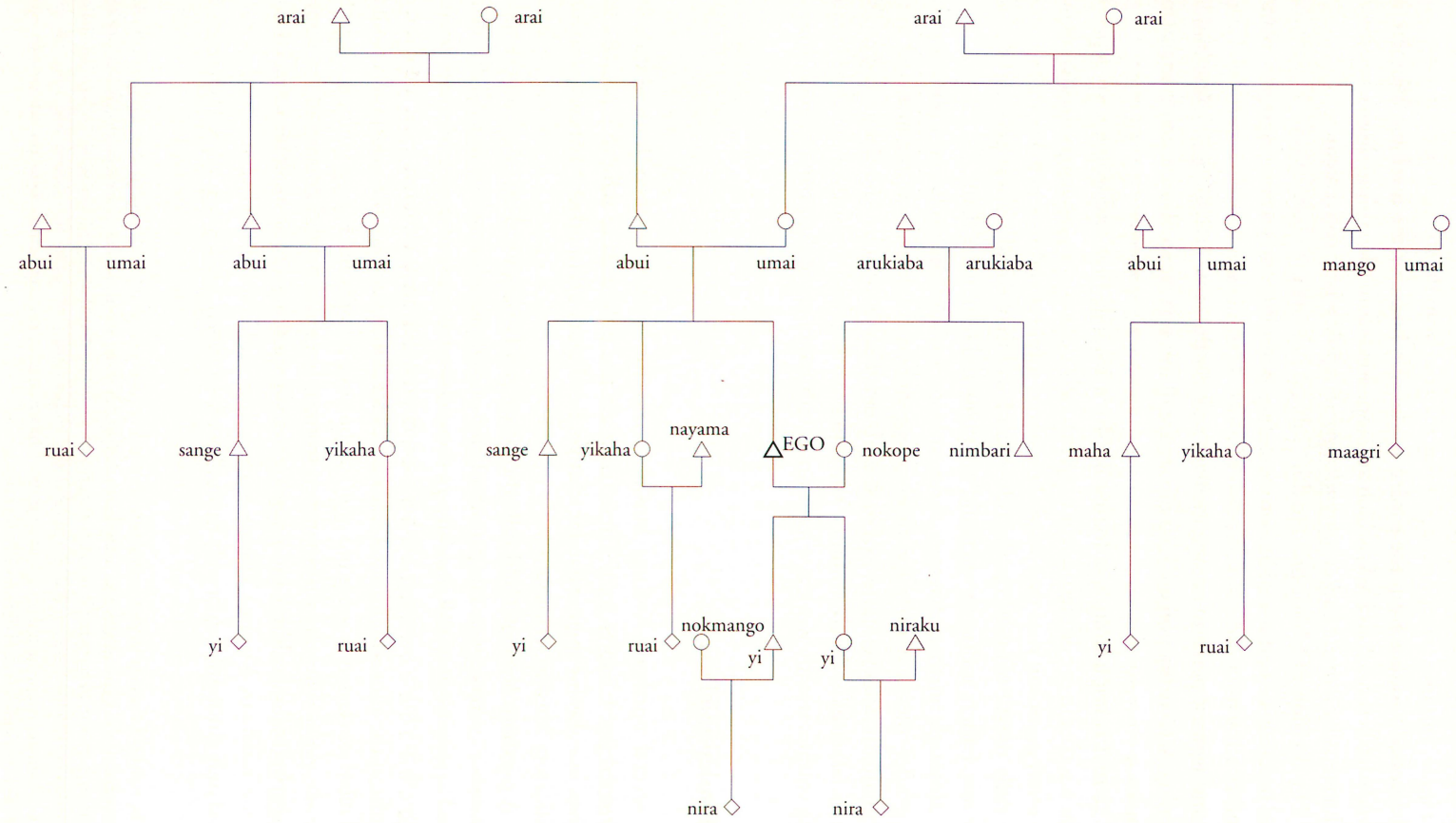
3.6. Kinship and Descent

Several northern Kwanga kinship terms for family members have already been mentioned (see Chapter 3.3.). These terms are not only used to refer to a person's lineal relatives but also for their collateral relatives (see Figure 4). In other words, the Tau have a classificatory kinship terminology.[1]

A northern Kwanga child calls the father and father's brothers *abui* and the mother and mother's sisters *umai*. The parents of *abui* or *umai* are addressed as *arai*. All the relatives classed as *abui* or *umai* call the child *yi*, those classed as *arai* call it *nira*. Mother's brothers, *mango*, their children, *maagri*, father's sisters, *toro*, and their children, *ruai*, are clearly set apart from the above-mentioned relatives. Elder siblings and parallel cousins (i.e. children of all relatives classed as *umai* and *abui)* of the same sex are called *sange*, younger ones of the same sex *maha*. They are distinguished from siblings and parallel cousins of the opposite sex, *yikaha* (male speaking) and *mundala* (female speaking). In abstract terms we could say that the northern Kwanga kinship terminology differentiates between persons who are related only through men or only through women *(umai, abui, sange, maha)* and those who

1 The northern Kwanga kinship terms were obtained by asking many informants what they call specified relatives recorded in their genealogies and what these relatives call them in return. The chart reproduced here depicts the kinship terms used by men. It is interesting that none of the neighbouring groups seems to have an analogous kinship terminology (see e.g. Kaberry 1940/41:249, Huber-Greub 1988:49 for the Abelam; Mead 1947:185-187 for the Mountain Arapesh; and Tuzin 1977 for the Ilahita Arapesh). Kinship terminologies provide another example of the remarkable cultural differentiation in this area.

Figure 4 Kinship Terminology



are related through a man-woman or a woman-man sequence *(toro, ruai, mango, maagri, mundala, yikaha)*.

Many rules regarding social conduct are expressed in kinship terms, for instance marriage rules. Ego may not marry any of his or her relatives classed as *arai*, *nira*, *umai*, *abui*, *yi*, *maha*, *sange*, *yikaha*, and *mundala*. Ego's cross-cousins, *maagri* and *ruai* are preferential marriage partners. Certain avoidance rules, we have seen (Table 5), are also expressed in kinship terms separating the real and classificatory fathers, *abui*, and mothers, *umai*, and/or grandparents, *arai* (i.e. the older generations), from those classed as children, *yi*, or grandchildren, *nira* (i.e. the younger generations). We said that biological age is not considered in these avoidance rules, only the person's genealogical position. It happens, for instance, that the parents scold a child of five years for having accepted a meal from a woman of more than twenty years because, in genealogical terms, the child is the "mother", *umai*, of the woman! Another example for the expression of rules in kinship terms has also been mentioned earlier (see Chapter 3.3.), namely that of the ideal behaviour of a *mango* (mother's brother) towards his *ruai* (sister's son). The binding force of these norms varies, of course, with genealogical distance.

The network of kinship relations through ancestors and living persons is memorized in genealogies. If we compare the genealogies of all the contemporary inhabitants of Tauhundor, we find that the community today consists of a number of named units (or descent groups). The members of these groups have mainly been recruited by reference to a common ancestor. Strictly speaking, these groups are "clans", if the living members have forgotten the actual links but believe themselves to be descended from an apical ancestor, and "lineage", if they can trace their descent from an ancestor through a series of known links (Keesing 1981:509,513).

In Tauhundor we find "clans" and "lineages" (see Table 7). Some clans comprise only one patrilineage (e.g. the Hoboai, Murghia, Samtihengi and Yerhmain), others as many as five patrilineages (e.g. the Moioho). Still others have named sub-divisions to which we refer as "sub-clans". The Hame clan, for instance, comprises four lineages, two of which are named sub-clans (Waihem and Hamgua) while the other two do not seem to have a name.[1]

The co-existence of clans, sub-clans and lineages represents, of course, various stages in the process of segmentation. In this text, we shall use the term "descent group" for all segmentation stages, unless it is necessary to specify.

Many of these names or parts of these names refer to plants or animals: *apincha* is the Tau word for the hornbill, *fle* means "pig", *hoboai* is the name of a snake, *hame* is the word for the *Pometia pinnata* tree, *murghia* means "red ant" and *wainassa* "tree kangaroo". Masinokor, Samtihengi, Moioho and Simbimbi seem to be place names. Some of the sub-clan names also refer to plants and animals or parts of them, for instance *nainome* (long yam, meat) and *nainsingri* (long yam, head) or *assamasiki* (dog, head) and *assatagumbi* (dog, jaw bone).

The term offered as translation for pisin (clan, lineage) is *samba*, and this term also designates drum signals. Today, admittedly only a few men know the drum language and the *samba* signals. They beat them at funerals and to send messages to group members. Certain images used in the drum signals, for instance the bird *apnanchi* and the spring

1 One explanation offered was that the forebears of these two unnamed lineages had been adopted by the Hame clan.

Table 7
Structure of Descent Group Organization

Clan	Sub-clan	Patrilineage[a]	Members[b]
Apinchanokor	–	1) Koumba	5
	–	2) Wasehei-Namdaroho	18
Flenokor	–	1) Masohoi	14
	–	2) Jaihoi	27
Hame	Waihem	1) Minjako	14
	Hamgua	2) Nainsembi	12
	–	3) Makini	22
	–	4) Wakasa-Wiripman	5
Hoboai	–	1) Mamende	11
Masinokor	Samaseng (?)	1) Lomhabamba	12
	Siakomba (?)	2) Binansi	14
Moioho	–	1) Jeiehe	13
	–	2) Kahnau	13
	–	3) Samsuo	2
	–	4) Samsuo	7
	–	5) Krispaai	1
Murghia	–	1) Maanglo	6
Samtihengi	Wasdenge	1) Waanam	19
Simbimbi	Nainome	1) Jengaas	14
		2) Jewan	5
	Nainsingri	3) Aukisa	10
		4) Kepinis	6
		5) Kepinis	9
Wainassa	Assamasiki	1) Jepme	4
	Assatagumbi	2) Aukle	45
	–	3) Klasamba	3
Yerhmain	–	1) Flembasa	26

[a] Names of last remembered ancestor linking the patrilineage.
[b] Male and female members living in Tauhundor on January 1, 1985.

wonhaie in the drum signal of the Simbimbi clan, play a role in the origin myth of the groups.

Northern Kwanga descent groups are most explicitly recognized in marriage arrangements and in the occupation of village and forest land. Theoretically, clans are exogamous units and owners of landed property. Today, this order exists more in theory than in practice. Many old men complain that people marry, live and garden where and as they please instead of following the correct rules.

Traces of the old system can still be seen: Most married women in Tauhundor were born in the same village (61 %) or in one of the northern Kwanga villages (31 %). A survey of the Wainassa Assatagumbi demonstrated that this descent group (a sub-clan) has exchanged women with all the other descent groups of Tauhundor, including the Wainassa Assamasiki. The only exception are the Murghia, a very small descent group, which closely collaborates with the Assatagumbi. Thus we see that the rule of exogamy is not necessarily practised on the clan level; in this case, the sub-clan is the exogamous unit. Also among the Urat (Allen 1976:35) and the speakers of other Kwanga dialects (Schindlbeck 1990:235) clans are not always the exogamous unit.

As among the Urat (Allen 1976:36), the northern Kwanga descent groups which have descended from the original settlers, the *au haba*, occupy the more elevated knolls in the village (e.g. Wangerenge, Turnturu[1], Himdenge, and Simbimbi), while the lower areas between them are occupied by the sub-groups of the original clans and immigrant groups, the *wargugwa*, who have been given land at various times in the past. A closer look reveals that sub-divisions of the same clans often hold residential claims in separate hamlets: one lineage of the Apinchanokor clan lives in Goakri, the other in Alguelko; one lineage of the Flenokor in Warmesi, the other in Turnturu; one lineage of the Hame in Wangerenge, the other in Wansapussi, and so on. Moreover, members of various descent groups often live in the same hamlet, while their agnatic relatives live in other hamlets. We shall see in the next section that their occupation of village land mirrors the dual organization of the men's cult (see Chapter 3.7).

This brings us to a typical feature of the contemporary descent group organization: Although northern Kwanga children inherit from their father an affiliation to a group larger than the nuclear and extended family, they are often "adopted" by other descent groups.[2] The result is that small, agnatic groups form core units to which matrilateral and affinal relatives get attached. These arrangements are often only temporary, sometimes they last many years.

The northern Kwanga land tenure system[3] and residence rules mirror this flexibility of the social system. Groups and individuals, not the land, are redistributed. In the forest and the village, boundaries are rather static and well-known; it is the land users who change.

We have already seen that intra-village mobility is high, for instance in the hamlet Himdenge. This can be partly explained by residence rules dictated by marriage. Marriage

1 The Yerhmain have displaced the Apinchanokor who still claim house rights in this hamlet.

2 Adoption seems to be another common feature of the cultures in these region (see e.g. Kaberry 1940/41, Lea 1964:50-51, Gorlin 1973:66, and Huber-Greub 1988:64-70 for the Abelam and Tuzin 1976:101 for the Ilahita Arapesh).

3 A similar flexibility of the social system in land tenure and residence rules has also been noted as an interesting feature of neighbouring groups, for instance by Allen (1976:38) for the Urat and Lea (1964:66-68) and Huber-Greub (1988:190-202) for the Abelam.

usually means that a woman moves to live with her husband (virilocal residence) but it is not uncommon for the man to accompany his wife to live with her descent group (uxorilocal residence), at least for a few years. Sister exchange does occur but if there is no sister to exchange, a child of the next generation will later return to balance the debt. If this child is a son, he will probably be "adopted" by his mother's brother. The young couple then lives with the mother's descent group (avunculocal residence). In real life, for instance in discussions about descent and inheritance, matrilateral ties are almost as important as agnatic ties.

The use of forest land operates along similar lines. Agricultural and forest land is divided among descent groups and sub-divided among families; the eldest active male member of the family controls access. He usually invites some matrilateral and/or affine relatives to join his agnatic group in clearing the forest for new gardens. Access to sago swamps is also similarly arranged. This system ensures that each descent group and family has relatively equal access to natural resources.

In the preceding sections we have seen, that in domestic life, the social organization influences many aspects of the nutritional system, for instance restrictions regarding the production, preparation, distribution and consumption of food, the division of labour in these activities, land tenure, and so on. The intra-village and inter-village exchange systems and associated activities reflect another important principle of the social organization, namely the dual organization of the men's cult. Succession in the position of the dual organization is also regulated by the rule of patrifiliation. An examination of actual practice will shed some light on the issue of "adoption" which has already been mentioned several times. Furthermore, the ritual organization provides a third aspect of the social background for the avoidance rules mentioned in previous sections.

3.7. Ritual Organization

At the beginning of this chapter I said that the men's cult organization of the northern Kwanga actually belongs to a network spreading over the whole Dreikikir area.[1] Local cult communities form the nodal points or cells of this network. Tauhundor, Tauhimbiet and Kubriwat are three such cult communities. Each of them maintains regular and reciprocal links with many other cult communities. Allen (1976:105-112) recorded and mapped this network. Based on his graphic representation, I singled out the Tauhundor community and traced its ceremonial links. These links radiate in all directions; they cross language borders (i.e. to the Urim villages Pagilo, Yakrumbok and Lainingwap, and to the Urat villages Moihwak, Yerhmain, Musengwa, Musilo, Tumam, Musendai and Moseng) and enter enemy territory (i.e. Moihwak and Yerhmain in the north and Daina in the south).

Each cell of the men's cult organization is divided into two halves or moieties. This social structure is usually called "dual organization". Whenever the members of one moiety in a cult community plan to stage a ceremony, they summon the men belonging to the corresponding moiety in partner villages. These men come and provide food, labour and

1 The basic pattern of the Kwanga men's cult organization resembles that of other Sepik yam cultures, for instance that of the Abelam (Forge 1970a) and that of the southern Arapesh (Tuzin 1976, 1980).

other services; at a later date, the inviting cult community reciprocates whatever help it received. The same principle of delayed exchange operates on all levels of the dual organization. As we should expect in this area, the men's cult ceremonies are initiation ceremonies, and the moiety system is closely interrelated with the initiation system. To put it very simply: the elder members of Moiety A initiate the younger members of Moiety B and vice versa. At each initiation, the candidates "see" the cult spirit and learn the ritual knowledge associated with this particular stage; the newly initiated grade is then named after the cult spirit; these names change with every initiation. It is to state the obvious to say that initiations divide the village community into members (initiated men) and non-members (women, children, non-initiated men) of the local men's cult (see Table 5c).

It seems that the initiation cycle was interrupted in the 1930s. The elder members of Moiety B initiated the younger members of Moiety A into a stage called Nakunalo, but Moiety A did not "give it back" to Moiety B. Perhaps this interruption was caused by the increasing activities of white people in this area (see Chapter 2.3.). Ceremonial activities were resumed after the Second World War and ended in Tauhundor in the 1950s and in Tauhimbiet in 1965 with the last full initiation. In the early 1980s, the village Apos east of Tauhundor staged a Nakunalo initiation in which several northern Kwanga men participated. However, most elders claimed that it had not been a "true" initiation; not all the candidates had gone through the full ordeal.

Traditionally, each initiation was a long-drawn-out affair and lasted several months. It cost the initiators a tremendous effort in terms of food and labour. They were rewarded by the fathers of the initiates in a series of *sukusa* ceremonies held during several months after the initiation.[1] The highlights of these ceremonies were a large-scale yam exchange and a prestation of village pigs. In recent years, the northern Kwanga held *sukusa* ceremonies without a preceding initiation. The description of a *sukusa* cycle follows later in this thesis (see Chapter 7.9.)

The internal structure of the northern Kwanga dual organization is further differentiated and of a modular construction: the smallest unit represents an individual exchange partner, *auanalo*[2] (*aua:* cordyline plant, *nalo:* red; men's cult spirit); several *auanalo* (exchange partners) form a *tonglo* (a named sub-division of a moiety), and several *tonglo* form a moiety. This implies that the key unit of the dual organization is the individual man holding an *auanalo* position. At an initiation or a *sukusa* ceremony, when one moiety makes a gift to the other moiety, this gift actually consists of as many acts as there are partnerships; each man gives something to his partner. In other words, the dual organization operates through a multitude of *auanalo* partnerships. Therefore, symmetry is an important criterion; there should be an equal number of men on both sides of the dividing line. At the time of my fieldwork, the dual organization of Tauhundor comprised thirty-one *auanalo* partnerships (see Table 8). Moiety A consisted of thirty-one men, Moiety B of thirty-two; the difference can be explained by the fact that one man in Moiety A had two partners in Moiety B.

1 Some northern Kwanga men explained in Tok Pisin: "Ol i stretim ol man husat i lukautim ol long taim ol i stap insait long Tambaran."

2 The local terms for these culturally important exchange partnerships again illustrate regional differences among otherwise closely related neighbours: the Urat call them *wheniyat* (Allen 1976:41) and the southern Kwanga *aunombo* (Schindlbeck 1981:5).

Table 8: Dual Organization

Moiety A			Moiety B		
Sub Division	Descent Group[a]	Number of Men	Sub Division	Descent Group[a]	Number of Men
Wargugwa	Moioho	4	Wargugwa	Wainassa	1
	Simbimbi	1		Hame	2
				Moioho	1
				Masinokor	2
Warome	Moioho	3	Warome	Masinokor	6
	Wainassa	1			
	(Kubriwat)	2			
Ambamusa	Flenokor	3	Ambamusa	Hame	6
	Hame	3			
Wainassa	Wainassa	2	Wainassa	Wainassa	2
	Simbimbi	1		Simbimbi	1
Samtihengi	Samtihengi	2	Yerhmain	Yerhmain	5
	Simbimbi	1			
Apinchanokor	Apinchanokor	1			
Murghia	Murghia	1			
Simbimbi	Simbimbi	2	Flenokor	Flenokor	2
	Apinchanokor	1		Samtihengi	2
	Wainassa	2		Wainassa	1
Total Members		31	Total Members		32

a) The Hoboai descent group does not appear on this list because its members have their exchange partners in Tauhimbiet.

It was noted above that the moiety system is closely interrelated with the descent system. Many names of moiety sub-divisions in Table 8 are identical with those of descent groups (Wainassa, Samtihengi, Apinchanokor, Murghia, Simbimbi, Yerhmain and Flenokor), others are different (Wargugwa, Warome and Ambamusa). The latter refer, it was explained, to the "bottom", that is "the group that goes ahead" at ceremonies, of the Kware men's cult spirit (Wargugwa and Warome) or to the "bottom" of the Amba men's cult spirit (Ambamusa).

Traces of an order can be discerned although the rules are not strictly followed. The dual organization cuts across the descent group organization. Some lineages of the same clan are in Moiety A, others in Moiety B. The lineage 1 of the Hame clan, for instance, belongs to Moiety A, the lineages 2, 3 and 4 of the same clan to Moiety B. However, there are a number of "irregularities". All the Yerhmain and all the Masinokor belong to Moiety B, all Apinchanokor and all Murghia to Moiety A. We see that the sub-division Simbimbi in Moiety A includes two Simbimbi men, one Apinchanokor and two Wainassa men. Some of the latter irregularities can be explained by matrifiliation, as I shall explain in a moment.

The dual organization is mirrored in the residence pattern, as I have already mentioned in the preceding section. Lineage 1 of the Flenokor clan belongs to Moiety B and resides in Warmesi; lineage 2 of the same clan is part of Moiety A and lives in Turnturu. The majority of the inhabitants in each of these two hamlets belong to the same moiety. This also applies to most other hamlets if they are not completely occupied by one moiety. It seems that members of the same moiety or even of the same sub-division tend to occupy neighbouring blocks of village land. Most members of the sub-division Warome of Moiety B, for instance, live in Wansapussi, those of the sub-division Ambamusa of the same moiety in Wangerenge. Whether a similar rule operates with regard to the occupation of forest land cannot be ascertained on the basis of my data.

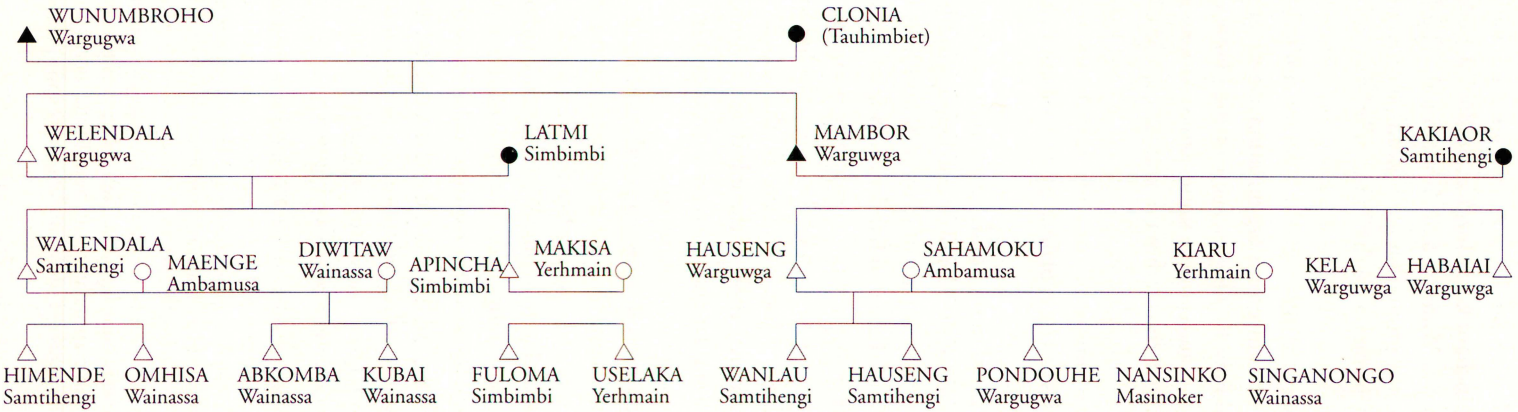
According to the norms, succession in *auanalo* positions is regulated by the rule of patrifiliation. Ideally, a man inherits a name[1], village and forest land and an *auanalo* position from his father. Demographic factors often jeopardize the ideal model: What happens, if one man has no sons and another man has five sons? With reference to land tenure we have said (see Chapter 3.6.) that groups and individuals, not the land, are redistributed. This is also the case in *auanalo* succession. The northern Kwanga redistribute their male descendants among the available "pigeon-holes" of the descent system and the moiety system. This redistribution of descendants is usually called "adoption" in the literature.

In order to illustrate succession, I have traced the *auanalo* positions held by a Wainassa Assatagumbi sub-lineage over several generations (see Figure 5).

> The ancestor Wunumbroho held a position in the Wargugwa sub-division of Moiety B which actually belongs to the Moioho descent group. This arrangement was explained by a marriage in an earlier generation. His successor in the next generation was Mambor, who is now in his sixties and "retired". At present, the position is held by Hauseng, a man in his forties. There actually exists a descendant of the Moioho clan who has legal claims to this position; but he lives in Rabaul and just recently wrote a letter to Hauseng, in which he relinquishes his *auanalo* position and his land-rights to the latter. Thus Hauseng's claims became legalized. Kela, Hauseng's twenty-year-old brother, is beginning to assist Hauseng and will eventually replace him. In the fourth generation, Pondouhe, now a boy of nine years, has been appointed successor. Wunumbroho's position in the Wargugwa

1 Not all clans own names; however, I did not systematically investigate this subject.

Figure 5: Successions in Exchange Partnerships



sub-division of Moiety B, we can conclude, passes down through the male line from one generation to the next although it does not belong to the Wainassa descent group.

Wunumbroho's other son, Walendala, temporarily kept the position of a Hame descendant in the Wargugwa sub-division which was reclaimed by the Hame, as soon as the rightful heir was old enough to fulfil his obligations. However, this man has no sons, and the only other potential heir lives in Madang. So Hauseng's younger brother Habaiai has been nominated to replace him; it was said that this arrangement, too, formed part of a marriage contract in an earlier generation. Again we see that the position ideally moves from father to son; since there was no male heir, Wainassa men were called as temporary substitutes until a Hame man was old enough to take over.

Let us now turn to Walendala's son who carries the same name. Walendala holds a position in the Samtihengi sub-division of the opposed side of the dual organization! What happened here was that Mambor married a Samtihengi woman but paid no bridewealth; instead, he sent his classificatory son Walendala to fill in the bride's father's position as there was no male heir. Walendala is now in his fifties and his twenty-six-year-old son Himende helps him. Himende will keep the position until Wanlau, now thirteen, and Hauseng, now eight, are old enough to take over. In this case, the position in the Samtihengi sub-division is passed down patrilineally except for a missing link in the chain of male descendants, where a matrifilial descendant was adopted.

The same principle is at work in the other cases. Apincha was adopted by his mother's father (Simbimbi) and his son Fuloma will follow him; his other son Uselaka has been claimed by his wife's brothers (Yerhmain). Abkomba inherits the position of his mother's father (Wainassa), and his younger brothers Omhissa, Kubai and Singanongo join him. The little boy Nansinko, now six years old, has been adopted by the Warome sub-division to carry on an almost extinct Masinokor line.

This genealogical example demonstrates that the northern Kwanga often have to bend the rule of patrifiliation. In nine out of eighteen cases a missing male heir was substituted by matrifiliation. It also illustrates that the moiety system cuts across the descent system: The nineteen men of this Wainassa Assatagumbi sample are distributed among six sub-divisions of the dual organization, namely the Wargugwa, Samtihengi, Wainassa, Simbimbi, Yerhmain and Flenokor; one of these sub-divisions belongs to Moiety A, five belong to Moiety B.

The inheritance of *auanalo* positions is as important to the northern Kwanga as the inheritance of garden and village land. The flexibility of the system ensures that each descent group and family has relatively equal access to food resources, in production and distribution.

Auanalo partnerships are regularly cemented by small-scale gifts which are also called *auanalo*. These gifts consist of pigs, bananas, coconuts, yam and taro; again, the giving of goods operates on the principle of delayed reciprocity. Unlike the (former) initiations and the *sukusa* ceremonies, which are joint enterprises involving all the members of a moiety, the *auanalo* food exchanges are carried out by an agnatic group and a few additional helpers. Again we find that small agnatic groups act as important social units. *Auanalo* food exchanges occur much more frequently than the large-scale ceremonies. Later in this thesis follows an account of *auanalo* food gifts based on eight observed events (see Chapter 7.8.).

The dual organization not only manifests itself in residence patterns and food gifts but also in certain aspects of domestic life. We have seen earlier that in most economic units a family collaborates with members of other descent groups; also we have said that many of these arrangements could be explained by matrilateral ties (see Chapter 3.3.). We can now go a step further and argue that a family's economic collaboration with different kin groups is a fall-back strategy to gain access to as many "pigeon-holes" of the descent system and the moiety system as are needed for its sons. In fact, the genealogical example has just demonstrated that the agnatic groups rather than the family plan these strategies.

Hauseng, one of the most active members of the above-mentioned Wainassa Assatagumbi descent group, explained their strategies to me. Young children, he said, are usually claimed by several descent groups. The members of the child's patrilineage weigh their claims against one another and decide to which descent group they give preference. The child is named accordingly. Infant boys and girls[1] are thus often adopted at an early age; but they continue to live with their real parents until they are grown-up. The adopting parents usually contribute to the child's upbringing by occasional food gifts, by participation in family ceremonies, by paying a portion of the school fees and bridewealth, and so on. The real parents, on the other hand, have to utilize the rights granted by adoption; if these rights are not utilized, they become forfeited.

A father with several male children has to work hard to maintain relationships with all adopting kin groups: He cuts forest and cultivates land on their territory; years later, his sons will use these forest sites again; he plants food-bearing trees on these garden plots; he clears and tends sago groves; he cultivates young sago palms on their forest land, sprouted coconuts on their village land and alleys of areca palms on the bush paths leading to the sons' future garden plots; he starts small coffee plantations; he increases his seed yam and other planting material. In short, a father cements the relations with the adopting kin groups by economic collaboration.

At any point of time, the relations between the real and adopting parents may deteriorate; according to the law, the conflict will be solved by weighing the claims of the involved parties in terms of what they contributed to the child's upbringing. If the adopting parents neglected their obligations, they will lose their claims on the child; if, on the other hand, the real parents did not utilize the child's future rights, they may lose their claims on forest and village land as well as on a position in the moiety system.

In conclusion we can say that the dual organization has, like the other levels of the social organization, an effect on several aspects of the nutritional system. Together with the descent system, the moiety system ensures that each group and family has relatively equal access to the local resources, in production and distribution. Moreover, it provides a family with several options in terms of collaboration with other kin groups in the domestic economy. Since food is the major exchange item between moieties, the dual organization also acts as a motor in food production; but surplus production for exchanges and food gifts takes up a lot of men's time and energy. Today, as we have already mentioned, many men complain that it competes with their new business activities (see Chapter 2.3.).

1 Girls are adopted by parents who have many male descendants; they later help to balance marriage arrangements.

Chapter 4
Religion and World View

This chapter discusses those aspects of the Kwanga religion and world view on which the nutritional system draws. In the approach outlined at the beginning of this text (see Chapter 1.3.) we suggested considering myths about food, religious beliefs and practices involving food, food preferences and food restrictions and concepts about the role of food in health and illness. Over the last decades, the Kwanga religion has been confronted with various denominations representing Christian religion. We shall briefly describe the contemporary influence of Christian missions before we move on to outline important features of the Kwanga religion.

4.1. Christian Missions

A brief history of mission activities in the Dreikikir area has been given earlier (see Chapter 2.3.). This section outlines the influence of Christian missions on northern Kwanga village life at the time of my fieldwork (1980-1986).

In 1968, the Catholic mission (SVD) set up a station in a forest clearing called Assawa between Tauhimbiet and Kubriwat (see Map 3). The late Father Th. Neumann was in charge of the C. M. Tau, as the station was named, and invested most of his time and energy in its construction and administration. He built a large wooden church, school buildings, dwellings for himself, the catechists and the teachers, a grass-covered runway for mission aircraft and, shortly before he left, a pre-fabricated community hall. Health reasons forced him to leave the C. M. Tau in 1983, and four years later he died in Wewak hospital. After Father Neumann left the C. M. Tau, catechist Camillus from the Wam area looked after the station under the supervision of Father F. Mitterbauer, the parish priest of the C. M. Dreikikir.

The schoolchildren of the four northern Kwanga villages walk to the station every day; the grown-ups go there only for Mass on Sunday or for weekday courses in preparation for baptism, first communion, confirmation or marriage. The villagers hardly feel the presence of the Catholic mission in day-to-day life. In their dealings with outsiders, however, they often seek the advice of the Catholic missionaries and are glad to use their infrastructure (e.g. the wireless, the mailing and transportation system, etc.). The Catholic mission has not only set up a school but also provided the first PHC services in the northern Kwanga villages. It has already been mentioned that Father Neumann operated a dispensary at the C. M. Tau and that an Australian Mercy Sister, who was affiliated with the Catholic mission, initiated a mobile MCH service. The dispensary closed down when Father Neumann left the C. M. Tau, but the MCH service of the Mercy Sisters continues to operate up to this date. The Protestant mission (SSEM) based in Yakrumbok provides the MCH service for Kubriwat.

In contrast to the Catholic mission, which builds its own stations and staffs them with resident missionaries in charge of several villages, the SSEM primarily operates through a network of trained Papua New Guineans who live in the villages. Among the northern Kwanga the SSEM have representatives in Tauhimbiet and Kubriwat. These men are in charge of the prayer houses and prayer meetings. Smaller meetings are often held in the hamlets, also in Tauhundor. Conflicts between the members of the SSEM and tradition-conscious villagers often disturb village life. The latter claim that secrets of the local male cult are revealed during public confessions (see also Chapter 7.9.). Rumours about possessions by the Holy Spirit and about revival movements spread throughout the area and cause much confusion. The conflicting parties of Kubriwat sometimes send for the police, but the police never got involved in these conflicts during my fieldwork.

The third active Christian mission in the northern Kwanga area are the SDA. Two men from Tauhundor joined this congregation while they were "on station" in New Ireland. After their return to Tauhundor, they gained the support of the SDA in Maprik, but during my first spells of fieldwork, they were not active in the villages. In 1985, they recruited a group of school-leavers for a course at the SDA centre in Maprik. They also built a new prayer house and a dwelling house for a pastor in the Ilmau and Simbimbi hamlets of Tauhundor and engaged a pastor from Seim (West Sepik Province) to take up residence. Since then they hold a prayer meeting every morning and afternoon and attract many people, some of whom are already baptized Catholics. They keep the Sabbath and observe a number of taboos: they refrain from smoking, from chewing betelnuts and from eating the meat of four-legged animals.

In spite of these various mission influences, the Kwanga religion still persists in the minds of many villagers. These "traditionalists" defend their kastom, a concept embracing all aspects of life which are influenced and even determined by Kwanga religion (see Chapter 2.3.). The subsequent sections discuss some of the main features of the Kwanga religion.

4.2. Major Themes of Kwanga Mythology

The northern Kwanga transmit their oral tradition about the mythical past and the invisible world in the origin myths of their descent groups, in mythological stories *(wasklabu)* and ritual songs *(ukwasumbu)*. Today, origin myths exist, if remembered at all, in one brief version and are only known to a few male members of the respective descent group. Several men enjoy narrating mythical stories *(wasklabu)*. The audience regards them as amusing tales not as sacred texts. Each man usually specializes in a few stories.[1] The *ukwasumbu* songs are a different matter. They are coded in a language of metaphors only understood by a few initiated men.[2] Food imagery is often used in these metaphors, as an example from the southern Kwanga illustrates. The term "village" can be replaced by any of the following terms: coconut palm, breadfruit tree, fire or embers, fragrant leaf, taro and

1 My main informant, Hauseng from Tauhundor, was an exception: of his own accord he collected mythical stories from elder men who did not speak Tok Pisin and then reported them to me.

2 The Abelam also possess a coded language which Huber-Greub (1988:254) paraphrases as a "discourse in metaphors".

bamboo (Schindlbeck 1983:9). It would be a fascinating and formidable task to analyze the food imagery in *ukwasumbu* songs. However, these songs cannot be considered in this thesis. Not only have they been kept secret from me, but their analysis would constitute a research topic in itself. The subsequent discussion refers to origin myths and mythical stories. My intention is to summarize major themes rather than to interpret these stories in detail.

As far as we can tell from the publicly known mythology, the northern Kwanga do not pay much attention to cosmology. They treat the universe as something which can be taken for granted. Only one mythological story refers to an element of the cosmos, namely the moon *(niaka)*.[1] In this story which was narrated by Hauseng of Tauhundor, a man and a woman search for the moon. They walk from hamlet to hamlet and finally find it in Simbimbi, where a family keeps it in a leaf bundle. While the parents are at work, the visitors trick the children: they ask them to bring the bundle and release the moon. The moon jumps onto a small tree *(assamani)*, then onto a higher tree *(ugia)* and finally up to the sky.

Like some of their neighbours, the northern Kwanga recognize certain relationships between themselves, yams and elements of the cosmos.[2] The sun *(ta)* is conceptualized as male and hot, the moon *(niaka)* as female and cold. Yam cultivation is sometimes described as dependent on the benevolent influence of the sun, whereas women sing to the moon during first menstruation rituals. The Kwanga use a gendered categorization of sun and moon and link it with other categorizations (hot-cold, yam cultivation-female fertility). In the course of this thesis we shall see that the Kwanga often construct symbolic analogies based on these and other categorizations and thus link various spheres of life with one another.

A recurrent theme in the publicly known northern Kwanga mythology is the origin of man, plants and animals and of plant and animal food. Several descent groups claim to have originated in stone caves together with certain animals and plants, for instance the Wainassa with the dog *(assa)*, the Flenokor with the pig *(fle)* and the Hoboai with a snake *(hobo)*. A few clans do not explicitly claim to have originated in a stone cave: Aufenanger (n.d.:301) recorded a story about a Tauhimbiet descent group (Kernokor) and a species of yam *(bake)* which, together with other plants, was created by a mythical man called Lakai. This story is of particular interest because, as far as I know, it is the only one about yams. We shall render it verbatim in a subsequent paragraph. The Apinchanokor believe they originated together with a bush spirit of the ground, where remains unclear, and the Simbimbi report they have come up out of a salt-water spring *wonhaie* together with the bird *apnanchi*.[3] All of these myths are rooted in a totemic belief system. These myths explain

1 Variations of this story have been recorded in the northern Kwanga village Kubriwat (Aufenanger n.d.:289-290), among the Urat speakers in Dreikikir (Aufenanger 1972:447) and among the Abelam (Huber-Greub 1988:282).

2 The Abelam recognize relationships between man, yams, the sun, the moon and certain stars and organize their agricultural calendar accordingly (see e.g. Kaberry 1940/41:356, Hauser-Schäublin 1983a:187-188 and Huber-Greub 1988:119-123). We shall later see (Chapter 5.1.) that the northern Kwanga have only recently adopted a new agricultural cycle which no longer follows the former ritual calendar. It is possible that the old ritual calendar was also organized according to cosmic references, but this can neither be affirmed nor denied on the basis of my data.

3 Totemic beliefs are widespread in this area (see e.g. Allen 1976:35 for the Urat; Tuzin 1976:165 for the Ilahita Arapesh; Lea 1964:48 and Huber-Greub 1988:83-88 for the Abelam). According to Schindlbeck (personal communication) it is difficult to judge whether the contemporary totemic beliefs of the Kwanga represent the traces of a formerly elaborated system, whether they have never been elaborated or whether they have been imported.

the origin of men and certain plants and animals; they do not offer an overall account of the origin of all natural phenomena. Unfortunately, the memory of this mythological past is waning; only traces of a totemic system remain.

Stone caves and stones play an important role in the religion of the Kwanga and some neighbouring groups.[1] Schindlbeck (1983:7-8) renders a mythical story about a stone of the name Waimula. According to this story the stone bore a child called Wolokayi Kerengwa. He grew and became the ancestor of men. In another myth recorded by Schindlbeck the head of Wolokayi Kerengwa turned into the first coconut palm. Pigs and men originated from this stone. In one village, the members of the men's cult still keep a stone which refers to this mythical past. "To set up stones" is a metaphor for performing men's cult ceremonies which guarantee the abundance of pigs and garden produce. These stones are used to build fireplaces on the ceremonial ground on which the food for initiates is cooked. During the men's cult ceremonies held in Tauhimbiet in 1980 and 1984, stones also played an important part but their use was shrouded in cult secrecy and therefore remained hidden from me. Mandu from Tauhundor told me the following story *(wasklabu)* about stones which does not overtly relate to the male cult but carries a message which seems to be elaborated in the men's cult.

> "At first, a long, long time ago, people did not have food of the ground. Alright. They went to cut the bush of a man. A long time ago. They went to cut the bush of a man. They cut and cut and cut. The men were very hungry. They almost died. There was no food. At that time, there was no taro, no banana, whatever kind of food, papaya, whatever, none at all. No food. They cut bush, cut and cut, they almost died. They almost died. The man saw it and said: 'Oh, poor people, they are going to die.' He said: 'Oh, what shall we eat?' He said, and they said. 'No, we work only, we don't have food.' The man got a big stone. He made a big heap and cooked it. A big stone. He made a big fire and cooked it. You saw the men. Oh my, their stomachs were swollen up. They ate, and they were full. They all went back to the village. They said: 'Aye, this man knows how to make food.' The next morning, they got up and went again to cut bush. Alright. The same thing happened. They said: 'What shall we eat? No, this man must cook a stone, then all the men are full.' All these men cut bush, cut all the trees, they were hungry. Their stomachs were swollen up. What did they eat to make their stomachs full? The man cooked a stone, and they were full of this stone. That's it."

In this story a man cooks a stone and thus makes food for other men who came to cut his bush. We cannot interpret this story in detail but it probably draws on the above-mentioned beliefs regarding symbolic associations of stones and food.

In Tauhundor, perhaps the most often told mythical story is that of the coconut palm.[2] The following version was reported by Mambor:

> "The village had no coconuts. There were people. No coconuts. It was empty, the whole village. I think not only here in Tauhundor. All the people in the east and west did not have coconuts.
>
> It all began with a bachelor. A bachelor washed sago. He washed it. He wrapped it in a leaf. He put it in his house in the village. He went to work in the garden. He stayed in the forest. He stayed and stayed.

1 Each Abelam village keeps a large stone in the house of a guardian (Hauser-Schäublin 1983a:187-188); these secret stones are associated with clans and are thought to have some influence on planting, on the growth of food crops and on the well-being of pigs (Hauser-Schäublin 1983b:338). Among the Urat (or Kombio?), Aufenanger (1972:449-450) recorded a story about stones which make yams grow large and which are kept in a house by a guardian. The northern Kwanga term for gardening rites is *aksumbu (aka:* house, *sumbu:* "magic") and indicates the special functions of certain houses. Perhaps guardians also keep special stones in these houses.

2 Aufenanger (n.d.:273) recorded a similar version of another informant from Tauhundor. For the neighbouring groups, however, this story is not documented.

After two weeks, this sago here, it turned into a woman. It turned into a woman. It was not a woman. It was something like a bird-of-paradise. A good, nice woman. Some men saw now. Smoke came up. She swept the house and made fire. 'What woman, it is the bachelor.' They went to see, and what a woman stayed there! They looked and said: 'Ah, it is this kind of woman.' Some men said: 'I think I want to marry her.' Some men said: 'I want to get married.'

A boy like Pondouhe went and said: 'Aye, you sleep in the forest. A woman came to stay in your house. A good woman.' He said: 'You lie.' They went to tease him: 'Aye, I don't lie. You fetch food and greens. We go to see this woman.' Another went, he said the same, the same words. 'You should not think I lie. It is true. You cannot stay here. You have to go. Go to see this woman.'

He fetched food, greens, firewood, everything. He carried everything. He came, he came up to the village. He came, came, came, stood and looked. The house here, smoke rose. He came, came, came, stood, looked through the door. It was open. He did not see her. She was in the house. He put the basket down. He went inside. Now he saw her. 'My, what a woman. She is a good, nice woman.' She stood, watched, smiled. He stood, watched, smiled. Alright, he came to the door, fetched the food basket, went into the house. He said: 'You go to fetch water.' She said: 'I cannot go to the water.' Afterwards he went to look for the sago. It was gone. He thought now, this man: 'I think, it is this sago which has turned into a woman.' He thought and said: 'You go to fetch water.' He said to the woman. She obeyed and fetched water. She came, he said: 'Wash your hands.' She said: 'No, I can't wash my hands. You wash your hands, I can't.' He knew now. Alright. Water ran down, it did not hold his foot. It followed the foot and fell to the ground.

They stayed. All the village, up to Simbimbi, down to Warmemu, Wangerenge, Kwalnkwala, they all came to look at this woman. They said: 'You got a good woman.' He said: 'She came up by herself.' He kept her, and they stayed.

A long time afterwards, some men of Kubriwat agreed. They agreed to hold a singsing[1]. Alright. All the people from Tauhundor went to the singsing. The woman said: 'I stay. You go.' He said: 'You get up, and we go.' She said: 'No, I can't go. I stay. You go by yourself. You go singsing until day breaks, then you come back.' No, the man was stubborn. He was stubborn, and she thought: 'Ah, I think of you, and I say, I stay. You are stubborn and want me to go. That's your problem. I have to go.'

They went and came to Kubriwat, to the place of the singsing. They joined in the singsing. It went on and on. After midnight. Alright. Thundering and lightning, a cloud-burst. All the houses, they were there, empty. All the people ran, some houses were empty. A man sat at the door. The two of them like to hide in this house, he said: 'You go to another house. This house is full.' They went to another house, they said: 'This house is full. You go to another house.' Always like that. He went and cut wild taro. He brought it and gave it to her. She alone, she stood and covered herself. The rain was pouring. It poured and poured and poured. She felt it now. The water began to hold her foot, it held her foot. It came up, she said: 'Earlier, what did I tell you? Let me stay in the village. You were stubborn, and I came. Now look.' Her foot was gone. The rain poured. The water held her leg, her hip. She talked, her words became strange. The man heard them, he cried: 'Earlier, she talked to me, I didn't let her stay. I didn't come alone to the singsing. It is my fault. I was stubborn, I took her along. I lost.' The water came up to her shoulder now. Only the head was left on the ground. All the people of the singsing came to watch. They all clapped their hands.

He held her head, cried, he held and held and came. He came and came to his land. He came to his land, he put the head down. He saw flat ground, a flat ground with grass. He put the head down into the grass.

The head of the woman stayed there, in the grass, it stayed and stayed. Afterwards, a shoot began to grow, it began to sprout. One leaf, two leaves began to grow in the grass. Four leaves, five leaves. They grew higher than the grass. The man saw them and said. 'Aye, what's this? I put the woman's head here.' Alright. He got the knife, cut the grass, cleaned it, fetched ground and put it at the bottom of the plant. It grew. Two leaves opened, food began to grow at the joint, the joint of a man. It bore food now. Food grew here, it made food. It was big, it wanted to come down. He cut a flower sheath, put it on the ground. The coconut sat down on the flower sheath. It carried a lot of food, this little coconut. It stayed and stayed, it was dry and ripe.

1 The Tok Pisin term singsing means "a festive occasion with singing and dancing".

An old woman. He fetched a dry coconut. Only one. He thought: 'I shall give it to the old woman to eat. Will she die or...? I cannot eat it. What, if I ate and died. Alright, I shall give it to the old mother.' She tore off the husk, she shook it, there was water inside. She fetched a stone, hit it, it broke. She tasted the water. It was very good. She waited and waited, she tried some more. She felt nothing. Her skin did not get ill. No, her skin was good. Alright. She cut the white flesh, she ate it. She ate, she did not eat much, only a little bit. It tasted very, very good. Her child sat and watched her. His old mother ate. It turned afternoon, evening, night, she slept.

The next morning, she ate some more. She did not die. She stayed well. Aye, it was good. She stayed and stayed. He fetched all the coconuts, gave them to the mother to taste. His mother ate them. She stayed and stayed. She did not fall ill. He said: 'The old mother ate, and she did not die. She did not fall ill. I shall try and eat.' This man of the coconut ate now. He ate. He did not fall ill. He ate, it was good. He drank and ate.

All the people from Himdenge came. They all came to buy them. They all came, bought and planted them. Up to Kadihengi, Ilmau, Simbimbi, down to Wansapussi, to Tauhimbiet. They all came, bought and planted coconuts. Then the people from Kubriwat came. Then the people from Yerhmain, Moihwak, Apos, Musendai, Moseng. All of them came. Now they all have coconuts. They all eat coconuts now. This is the story of the coconut."

In this story sago turns into a woman, and from the head of the woman grows the first coconut. Sago and especially coconuts play a significant role in northern Kwanga rituals and exchanges. Whether sago and coconuts are conceived as female symbols in the contexts of these rituals and exchanges is not clear to me.

Another *wasklabu* explains the origin of the pandanus. It was not recorded in public; the informant insisted on privacy.[1]

"A long, long time ago, there was no pandanus. There was a man, who had a long penis. It was very big and long. All the time, when this man thought of a woman, this penis became like a snake. It went to the place, where he thought the woman was, and this penis followed the woman. Always like this. It went on and on. The women saw this go on and on. They did not like it. They were angry. Always this man thought of them, and his penis, a snake, followed and followed them. It went on and on, the women were very angry.

One day, a woman was very, very angry. She held a stone knife. She held this knife. The snake came to see this woman. It came, came, came right up to her. She aimed, and this knife – sssst – finished. She cut the snake. The snake turned and turned. Oh my, its blood was not a joke! Its blood ran like water, it came and went. This spot, where she cut the snake, this spot was covered with blood. Blood was everywhere.

The blood was there, it was dry. It was there for some weeks. Now, this blood was dry on the ground. It grew into a pandanus. It grew and grew. The pandanus became big. It carried fruit. They stood and turned growing down. It fell down. Afterwards, the young pandanus again grew and grew.

The men now came and broke the young pandanus. They planted them. They planted them. They grew big. They bore fruit. They saw it and got them. Now they cooked and ate. Now the men from all villages planted them. Now all the villages had pandanus. They got pandanus. We eat pandanus.

This pandanus grew from a man. It did not grow by itself. They cut the penis of a man. Blood flowed and dried. Pandanus grew. This is the story of pandanus."

In the story of the pandanus *(gla)* the penis of a man turns into a snake; women kill this snake and from the blood grows the first pandanus. It seems possible that pandanus is a male symbol in certain contexts. Schindlbeck (personal communication) pointed out that the red colour and the fruit of pandanus play a role in the men's cult.

My informants told the *wasklabu* of the coconut and the pandanus as isolated stories, and my attempts at eliciting symbolic meanings of these two food types from other contexts

1 This story is not documented for the neighbouring groups.

have not been successful. The example of the pandanus again demonstrates that the men's cult is an important context for eliciting symbolic beliefs about food.

A detailed interpretation of these two *wasklabu* cannot be offered but what we can say is that they are variations of a pervasive theme in the mythological traditions of the Sepik yam cultures and many other groups in Papua New Guinea: the metamorphosis of the physical appearance.[1] The underlying concept of this pervasive theme is that of repeated cyclings of life and death[2] which is implicit in many beliefs and practices of the northern Kwanga. In the next sections we shall see that the Kwanga believe that such metamorphoses not only occurred in the mythological past but that certain beings still possess the ability to change their physical appearance (e.g. bush and water spirits, one type of sorcerer, and to a certain extent also initiates).

As previously stated, all of my informants denied knowledge of a *wasklabu* about the origin of yams.[3] Despite my persistent interrogations they claimed that no such story exists in their (publicly known) oral tradition. Father Aufenanger (n.d.:297-299) who collected oral texts in the Sepik recorded the following story from a man from Tauhimbiet:

> "At first there was only the earth.[4] Lakai[5] brought the first men into existence, making them from our ground. Lakai also made dogs, snakes, birds of paradise, etc. The man stood in the centre. All other animals were destitute. Only our man had enough to eat: mami[6], yam, etc., Lakai having produced mamis together with the man. Now Lakai asked the man "What do you eat?" "I have no food to eat," he answered. Then Lakai said: "Eat this mami tuber." But the man told him: "But this is my body!" Now they all ate.
>
> Then they asked Lakai:"What shall we do, when we have eaten?" "Clear the bush and fire it," he said. "Then dig holes and plant!" They did so, went home and slept. Then they beat the log drum and blew the bamboo trumpet. The men slept, but the mamis walked about and slept in all the holes. They grew. Some of them had thorns.
>
> Later the men again asked Lakai: "What shall we do now?" "Thrust sticks in the ground – the mami tendrils will climb up on them," he replied.
>
> They followed his advice. It took the mamis one year to ripen, then they took them out, made a heap of them in the garden and left them there. After that they beat the log drum and sounded the bamboo trumpet. Our ancestors saw the mamis and asked: "Did they come into existence like men?" They did not eat the mamis, which got sick and soft, and the other mamis gave them to the men to

1 Mythological metamorphoses have been reported from the Kwoma (see e.g. Kaufmann 1987:219-220), from the Ilahita Arapesh (see e.g. Tuzin 1980), from the Mountain Arapesh (see e.g. Mead 1940:360-389), from the Abelam (see e.g. Hauser-Schäublin 1983a, 1983b, 1987 and Huber-Greub 1988:276-292).

2 This has been well captured by A. and H. Kelm (1975:60) who have analyzed the oral tradition of Wapei speakers to the west of the Kwanga: "Es gibt keinen endgültigen Tod. Leben ist ewig, und jedes Sterben birgt in sich den Keim für neues Leben, sei es auch in anderer Gestalt".

3 The northern Kwanga are aware of the fact that several neighbouring groups have stories about a cassowary woman from whom yams (and in the case of the Ilahita Arapesh most other crops) originated (see e.g. Aufenanger 1972:433-434 for the southern Kwanga, Mead 1940:364-365 for the Mountain Arapesh and Tuzin 1980:1-8 for the Ilahita Arapesh). However, my informants insisted that they have no such story in their oral tradition.

4 This and other phrases may have been borrowed from the Christian Genesis.

5 Lakai and his younger brother Kworsai appear in several mythological stories recorded by Father Aufenanger. They usually play the role of creators and/or culture heroes and are sometimes referred to as "our ancestors". My informants claimed not to know of Lakai and Kworsai. Some of them even claimed that Aufenanger's informants had invented these names. It is possible that Lakai and Kworsai belong to a mythological tradition of some clans in Tauhimbiet, whereas most of my informants on the oral tradition came from Tauhundor. In most of the stories I recorded, my informants said they did not remember the names of the actors.

6 "Mami" is the (local) Tok Pisin term for a species of yam (*Dioscorea esculenta*); in Tok Pisin the term "yam" refers to another yam species *(Dioscorea alata)*.

eat. All the mami tubers had a mouth and said to the men: "You are men. So are we. You may eat us!"

They planted them again, but the mamis got angry. Now the *kernokor* = ground-man took the mamis out and placed them in the garden house. There he slept with them in the same house. When it became dark the yams went to the garden house, saw the mamis there and asked them: "What kind of man sleeps with you?" Then the mamis said to the man: "You may not sleep with us!" "You are men and women, and so are we! You eat us, so we are going to eat you too." Then they killed and ate the man.

Next morning the villagers went to the garden and found the dead man's finger. "Who ate him?" they asked. A woman took a sharp stone and cut one mami with it. She saw that there was human blood in it. She shouted: "We all have the same blood; we are all one family. Look here! The mamis have eaten my husband." They all saw it, then they slept. Later they sharpened sticks, took the mamis out of the house and pierced them all like enemies, tied the broken pieces together and left them to decay. Since then the mamis do not eat men anymore.

Within another year the mamis sprouted again, the people made a new garden and planted the yams and mamis. Other people came to us and bought mamis for rings. My ancestors took the sprouting mamis to Bongos.

My ground, where my ancestors originated, is Sakuba Warewatuku. My *samba kernokor*=totem ground is man.[1]"

This story illustrates that the northern Kwanga also share in the belief that yams are human-like beings who walk, sleep, talk and eat, a belief which is widespread in this area.[2] We shall see later (Chapter 5.1.) that certain gardening rites of the northern Kwanga draw on this idea. However, let me anticipate by mentioning that, at least today, the yams cult of the northern Kwanga is not as pronounced as among some of the neighbouring groups (see Chapter 4.4.).

The origin of fire is the topic of the last *wasklabu* rendered here; it was also narrated by Hauseng in Tauhundor.

"A long time ago, there was no fire. Everybody ate uncooked food. They broke yams and put it into the sun. They took away the skin of taro, cut it into four, five pieces and put it into or dried it in the sun. Afterwards they ate. Just like that. They ate food which was not cooked.

Then, one day, an old woman held her genitals and rubbed them with a wooden stick. This wood was dry and began to burn. The old woman looked at the fire. She tried to put her hand close to the fire. Her hand almost began to burn, too. Now she said: 'Aye, what is that?' She got a tree leaf and wild grass and tried to choke the fire but no, all this began to burn also. The old woman saw that and quickly hid the fire and carried it to the village. When she came back to the village, did she show this thing to the other people? No, not at all. She put it into her house and hid it. In the house, she hid it in a broken saucepan. She hid it very well in her house. When all the people went to the garden, she began to make fire and cooked food. Nobody saw her.

One day, one of her sons said. 'Aye, old one, you will look after my child and stay in the village.' The old woman said: 'Come, grandchild, we stay in the village and your parents go to work.'

When she stayed in the village and looked after her grandchild, she used to make fire and cook food on the fire. She and the grandchild ate the food. She always did it this way. The people of the village did not know. Only the small grandchild knew.

When the grandchild ate this food, he did not want to eat uncooked food. Now he cried all the time and harassed his parents. The parents knew now and said: 'Aye, this child does not like to eat with us. No. What does he eat with his grandmother that his stomach is full?'

1 This translation is not correct. *Samba ahni Kernokor* means "my descent group is Kernokor". The narrator mentions the name of his descent group.

2 The idea that at least certain yams are animate human beings has been reported from the Kwoma (Kaufmann 1982b:16), the Ilahita Arapesh (Tuzin 1972:233-235) and the Abelam (see e.g. Kaberry 1940/41:356, Hauser-Schäublin 1987:94).

So, one day, the mother of this child and her eldest son said to the grandmother: 'Aye, old one, you look after the grandchild and stay in the village. We go to the garden.' The old one said: 'Alright. I can look after him.' The mother and the son gave her food for the child. For both of them. Then they went to the garden. When they came to the garden, the mother did not want to work. She wanted to watch the old woman. She left the garden. She came back to the village. When she came and stood far away, she saw something like smoke come out of the house of the old woman. Now she knew and said: 'What's that? It looks like fog. This thing which looks like fog sticks to the house of the old woman. What do the old woman and my child do in this house? I shall soon find out.' She did not show herself to the eyes of the old woman. No, she hid and watched what the old woman and the child did. The old woman did not know. She was busy cooking yams on the fire. When they were cooked, the old woman began to scrape her yam and the yam of her grandchild. She finished scraping, and both began to eat. The mother now jumped outside and saw the two of them. Her child got up and went to his mother with the yam which was cooked on fire. The mother said: 'Aye, you two, what does the old grandmother do? Ah, old one, all the time you do it this way, ha? What am I, your pig, ah?' The old woman heard this and felt ashamed. Very ashamed.

The mother left the old woman and the child. She went to the garden to see her husband. When she came back to the garden, she said: 'Sorry, my husband, I feel a bit sick. Tomorrow I shall sleep in the house and stay in the village.' She was not really ill.

When she stayed in the village, she went to the forest and saw a ripe tree fruit. When she came to the village, she waited for the husband. The husband came, and she told him. 'Sorry, my husband, you will go to make a bird-house on this tree. Many pigs come and eat (the fruit of) this tree. One pig has piglets and takes the piglets to eat (the fruit of) this tree.' – 'Alright,' her husband said, 'I shall make it.'

Her husband made a bird-house. Afterwards he told her: 'The bird-house is finished. Tomorrow I go and watch.' His wife told him: 'You cannot go in the morning and come back soon. You have to stay until about 9 o'clock, 10 o'clock, then you come.'

He left. The mother gathered all her children. Earlier, she had tried on all her children, tried a pig skin on all. A pig skin like a shirt. She got one for the first, it fitted, he looked like a pig. Her second child also. The third and fourth child also. Now the mother tried one on herself. She tried, it fit. She called all her children. She led all of them down to the bottom of this tree. All went close to the bottom of this tree. She pushed the first child to go close to the tree which bore food. The father took the arrow and the bow, put the arrow on the bow, pulled it and let it go to shoot him. It did not hit him. He missed. Now it snored like a pig. It ran to another spot, snored, waited for its mother. The second child went. To the same spot. He shot another arrow. It went and missed. The third child went to the bottom of the tree. He shot another arrow. He did not hit, he missed. The fourth child went. He shot the fourth arrow and hit the leg of the fourth child. It was like a pig. He hit it. It made the sound of a pig. The mother got up now, ran very fast, shot to the bird-house. She wanted to bite her husband but missed. She broke off a branch of the tree. She went and said: 'You go to see your mother. We eat uncooked food. I am not a woman, I am a pig. I go now. I go. You stay with your mother.' Her husband heard this, and he cried. He tried to catch her. She ran. She left. He cried and cried.

He got his fourth child. The child he shot into the leg. He carried it and came back to the village. He was very angry. He went into the house, hit his mother, pulled her outside, took the fire, too, took it outside.

A lizard lay on the firewood. It protected the firewood. A frog wanted to urinate and to make the fire die. Yet the lizard protected the firewood and called out a bird. The name of this bird is *apserekunia*. This bird makes its nest on white ants. It came and held the firewood in his beak. It flew to its nest inside the white ants. The fire started to burn the white ants. It lit like fire on a tree.

All the people of Tauhundor and Tauhimbiet saw it. They thought: 'What's that?' They went close to, stood, looked up to the tree. When the fire broke and fell down, they went closer. They felt their legs, their skin was hot. They thought: 'What's that?' They looked. All the tree leaves, all the undergrowth on the bottom of the tree were dry. They tried and fetched some food. They cooked it, and it was cooked. And they thought: 'Shall we eat it, or shall we not eat it? What if we eat and something inside our stomach cooks, and we die?' That is what they thought. They cooked and gave it to a couple without children. They said: 'You two can eat it. You two don't have children.' Those two ate. They felt good. They did not die. They were still alive the next day, and the next and the

next. All of them knew now, they did not die. They cooked a second time. They gave it to old men. They ate. They did not die. Now all the young men and women cooked and ate, only those of Tauhundor and Tauhimbiet.

Afterwards, all the other villages came, they came to visit their brothers, their sisters, their in-laws. They came to Tauhundor. They cooked food on fire and gave it to them to eat. They asked: 'Aye, what kind of food is this? We don't eat this way.' The Tauhundor said: 'We, too, we ate like you do. Now we have this thing here.' They said: 'Where is this thing?' They said: 'This thing is with us.' They left. They carried the story to all the villages. It said: 'The Tauhundor have fire.' They all began to bind pigs, to get shell rings. They came to buy fire in Tauhundor. They carried it to their villages. Now all the villages have fire. They all cook food. This is the story of Mahasari."

In this story, fire originated when a mythological woman rubbed her genitals with a wooden stick.[1] In other words, female genitals are symbolically associated with fire. Fire itself plays a significant role in Kwanga thinking. Ritual power (of initiated men) and sexuality (of women and younger generations) are often described as "hot". Fire also is the means of converting natural substances to human use. Cooking food is the most obvious example, but it is equally true with regard to gardens. Like many other peoples in Papua New Guinea, the northern Kwanga refer to the burning of gardens as "cooking a garden". We shall later see that fire (and "hot air") and water are the basic elements of a classification which links various spheres of the Kwanga culture (see Chapter 6.4.).

4.3. The Cosmic Order of the Kwanga

Like many other groups in Papua New Guinea (see e.g. Lawrence and Meggitt 1965, Lawrence 1987:22) the Kwanga believe that an aggregation of spirits and men co-exist in this limited physical environment. Broadly speaking the Kwanga conceive of two aspects of nature: the Visible World (i.e. what they see with their eyes) and the Invisible World (i.e. what they see in dreams or in special, "hot" states). The physical appearance of human beings, plants, animals and other manifestations of nature can be seen "with the eyes". Men's cult spirits *(kwaramba)*, bush and water spirits *(siklawase)* and the dead *(makamba, misumu)* cannot be seen unless they slip into a visible cover (e.g. a human or animal skin) or the onlooker dreams or possesses special powers (e.g. sorcerers or members of the male cult).

The Kwanga use the same term, *kwaramba*, for the men's cult and the men's cult spirits. The names of these men's cult spirits are Kware (Kwarkle and Kwarome), Amba (Ambaome and Ambakle) and Nakunalo.[2] Kware is associated with the highest, Nakunalo with the lowest initiation grade. According to local beliefs, these spirits (especially Kware) are extremely dangerous to the non-members of the male cult (see Chapter 4.5.); at the same time, the cult members claim that these spirits are mainly responsible for the productivity of the gardens and the pigs (see Chapter 4.4.).[3]

1 Neighbouring groups maintain that fire originated from the pubic hair of a mythological female being (see e.g. Mead 1940:367 for the Mountain Arapesh and Huber-Greub 1988:282-283 for the Abelam).

2 Tuzin (1980) mentions the Ilahita Arapesh term *nggwal* for all men's cult spirits and for a specific spirit associated with the highest initiation grade. He suggests that the latter may have been imported from the Kwanga area. Schindlbeck (personal communication) suggests that Nggwal and Kware may be the same word.

3 The men's cult spirits of the Ilahita Arapesh (see Tuzin 1980:208-210) and the Abelam (see e.g. Forge 1966, Hauser-Schäublin 1983a) are closely related with descent groups. Whether the *kwaramba* also represent clan spirits can neither be affirmed nor denied on the basis of my data.

The oral literature of the northern Kwanga contains many mythical stories *(wasklabu)* about bush and water spirits *(siklawase*, masalai).[1] The following paragraphs are free translations of some of Mambor's narratives:

"The bush spirits live their own life on (in?) the same ground as human beings. In dreams, they appear as men and women, and you can ask their names. They take you along to their feasts, as it happened to Kambahe with the *siklawase* Jaimo, you know the story. In our language we say: *Masikome ahninga orhinga osmu ira* ('Soul', mine, and, his, and, they went: My 'soul' went with his 'soul'). When you see them with your eyes (i.e. when you are not asleep or in a special state), male bush spirits look like big snakes *(hopma)*, female bush spirits like land crabs *(walungu)*; only one female bush spirit appears as a snake *(hopkosi)*.

Jaimo is the name of a bush spirit who used to live on the highest hill of our territory, which is still named after him, although he no longer lives there. There are many signs of Jaimo: a stone, where Jaimo sharpened his knife, the place where he cooked a small amount of food and made it become so plentiful that he could feed all his guests, and the huge rock which is his back, among many others.

Other *siklawase* appear in our dreams. You go about your work as usual, and at night, you dream and see a *siklawase*. You ask for his or her name. In the morning, you tell your family and think: 'Yesterday I went to that place, and now I dreamt about this *siklawase*. I think he (or she) lives there.' Often, we name our children after bush spirits. Lopokupa, the father of Kakiaor, worked in Jehelou. The following night he dreamt and saw a man. He asked him, and he said his name was Hauseng. The next morning, Lopokupa told his family about this dream. When Kakiaor later gave birth to a boy, she remembered her father's dream and named the child Hauseng after the *siklawase* of Jehelou. Other *siklawase* names are, for instance, Pondouhe, Bungaioho, Temau, Neirubu, Waali, and Walmesumbai.

These bush spirits are good and bad to us but mainly bad. They make us ill; they make our crops grow; they steal food from our gardens; they often fool us. In one story, Jaimo enchants young men and women and transforms them into tree fruit. In another story, a *siklawase* appears in the shape of a husband, sleeps with the wife, and when she gave birth, the child's skin was white as yours; that's the story of Abkomboi who lives in Kwalnkwala[2]."

On another occasion Mambor narrated one of the above-mentioned stories of the bush spirit Jaimo:

"Jaimo called all the people. These people were not like men and women. No. These people were small. He put the young women on a mango tree. They slept hung up on a mango tree. The skin of the men was like parrot feathers. He collected and collected them, put them into a cane tube. He put them away. During the night, he fetched the cane tube, opened the lid, took the parrot feathers. He took them, threw them, they became men. Alright. He got them all. He called out to the mango. They came down. They became young women. During the night, you could hear them. They held a singsing. It went on and on and on. All the villages heard it. It went on and on and on until dawn. 'Which village holds a singsing?' They came from all sides. At dawn, he collected all the men like feathers of a parrot. He put them in the cane tube. Then he closed it with a lid and hung it up in the house. And all the young women, he threw the young women up on the mango tree. They went up and turned into mango.

A man came. 'Eh, who holds a singsing here? It can't be this one here. He is too old.' His hair was white like mine. They all came to see. 'Aye, old one, who holds a singsing here?' – 'I don't know. I think they hold a singsing over there.' – 'No. We heard a singsing here.' – 'Oh, I don't know.' – 'Hm, you don't know?' They looked around. They could not see anything. They left. Thus it went on and on and on. All the time, it happened the same way.

1 In Tok Pisin the term "masalai" is used in many parts of Papua New Guinea to denote such bush and water spirits. The Abelam and the Mountain Arapesh believe in spirits called *wale* which, like the *siklawase* of the northern Kwanga supposedly live in streams or springs but always attached to a definite tract of land (see e.g. Mead 1933, Kaberry 1940/41:348, Forge 1966:25 and Huber-Greub 1988:186). The Kwoma term for these spirits *sikilowas* (Bowden 1983:88-98, 1987:184) is very similar to that of the northern Kwanga.

2 Abkomboi is an albino.

One time, one of his kantre[1] came, a kantre of this bush spirit, of Jaimo. The kantre and his grandchild. No, it was not his grandchild. Two men. Two men came to visit him. Alright, he said: 'Alright.' They stayed and stayed, he said: 'Alright, you two, you get some mango. You get one, and you get one.' They went. Alright. One of them went, took it by hand. Took it and put in his netbag. The other one went, got a spear and shot a mango. Alright, he shot one, and the mango fell down. He put it inside his netbag. Alright, they put them inside and walked away.

They walked and walked and walked and came to the *falambe* (Karp River). They came to the big river. They took their netbags and hung them up. They went to wash, up over there. They left the netbags. The two mango came up. They came up in the netbag. They went to wash. Two young women. Very nice women. Both of them. One of them had a wound on the bottom. He shot her with a spear. Her bottom had a wound. The other one was unhurt. Two nice women. Alright. They began to hit the water. They hit the water. The two men heard it and said: 'Aye, there are some women. We go to see them.' They came, stood hidden and looked. They looked down. They saw the women who washed themselves. One of them looked and said: 'Aye, friend, let's go to these women.' Alright, they went. They went to look at their netbags. They looked at their netbags. The two mango were gone. 'Where are the mango? No, I think that's it.' They went to see. They went to see and watched a long time. They washed and laughed. They saw them and laughed. Alright. One of them walked. The one who was hit by the spear. She had a wounded bottom. The woman of the man who got her by hand was unhurt. He wanted to get her. The man whose woman had a wound said: 'Ah, no, I get her.' – 'No, she is mine. You get the one with the wound.' – 'Ah, no. I don't like that.' He wanted to get the other woman. They talked and talked. 'Earlier, it was your fault. You shot her with a spear. Now she is wounded. I got her by hand. She is unhurt.' They went to watch. They watched, and they fought. They fought and the women left. The women left and came to the village. Alright. All the men came to look at them. They came to look and said: 'It is your fault. You held a spear and shot her. Her bottom is wounded. You cannot get the other woman. His woman is not hurt. He got her by hand. She is fine. You shot her with a spear. Alright. That's your fault.' The two men fought.

Afterwards, people began to talk. This man, he is like that. One of his kantre came. He came and went. He went to visit him. He stayed with him. He had no food. He was old. He had no food. He slept without eating. He slept without eating, and he heard the singsing. He heard it, and he asked: 'Which village holds a singsing? You tell me the name of this village.'

Alright. He came and went. He walked and walked and walked. He came to see him, he stayed. He stayed and stayed until the afternoon. In the afternoon, he said: 'What shall we eat?' There was no food. A big saucepan. He got it and put it down. He made a fire. He made fire and poured some water. A banana, a yam, he got them, peeled them, cut them. He cut them and put them into the saucepan. They were very small, small like this. A green leaf, a small leaf like this. He put it inside. He put it on the fire. He fetched a breadfruit leaf. He came and covered this little food. The big saucepan which was almost empty. He went inside, got some water, poured it inside. Only a few drops. That was it.

The other man sat and watched him: 'Aye, what kind of rubbish,' he thought. 'We eat this. The stomach won't be full.' Alright. He thought and watched. He heard now. The water boiled and rose. Only a few drops of water, but it boiled and wanted to rise. It rose, and the masalai said: 'Come, you are strong. Go and fetch something to fan the fire.' They fanned, the fire burnt very strong. The other one thought. 'He makes a fire for nothing. What is this? They cook food like a pig.' He kept silent and fanned the fire. He was angry. He fanned and fanned and fanned. The water boiled and rose. The water boiled and shot up. The head of the yam, the leg of a pig, the leg of a tree kangaroo, the leg of a bush rat, the leg of a ground kangaroo, they all pushed against the leaf covering the food.

Alright, he saw it. He walked up and down. He sat down and said: 'Aye, I made fire. What is about to break the leaf?' He saw it now. The head of the yam, the meat, they pushed against the leaf. He fetched a limbum (palm flower sheath). He fetched a fork. He gave them to him. The masalai of Jaimo said: 'You open the saucepan. You take away the leaf. Make soup, and we eat.' He took the leaf, he put it. He got all the meat, he got and got and got it, the limbum was full. He got the head of yams. He got and got and got, the limbum was full. 'How are we going to eat?' The man looked at it, and he was angry. He thought: 'There are only the two of us. With whom shall we eat?'

1 The term "kantre" in Tok Pisin refers to cross-cousins, mother's brothers and father's sisters.

He did not take out the mango and the parrot feathers. They stayed. What if he took them out, and the man saw them? He let them stay. The two men ate now. They ate and slept. They divided the food and ate. They slept.

The next morning, he said: 'Come, we eat.' – 'I don't want to. You eat.' Alright, he sat, the masalai of *apdoku*, the chicken here, he ate and ate and ate until afternoon.

In the afternoon, he said: 'You make fire.' He got the saucepan, he got the food. A tiny yam. He pared it, he cut it in halves. He put it into the saucepan. A green leaf, he cut and put it. He fetched water. He poured the water into the saucepan. Alright. He fetched a breadfruit leaf. He covered it. He made a fire. The man knew now. Tears fell down. They waited and waited and waited. Then they heard it. The water boiled and rose. The head of the yam, the meat, they pushed against the leaf. The water boiled over. The meat, the yam, they broke the leaf. He got up, fetched a limbum, a fork. He wanted to stir the food. No. The food rose. 'Man, how do you do this? Look, there was only water, no food. Not much water, only a few drops. He makes fire under an empty saucepan. The water begins to boil. Look. A lot of food is there. A lot of meat. How come?' They ate and slept until dawn.

In the morning, he collected this cold food. He put and put and put everything on a limbum. Meat, yams, he gave him. He carried it. He walked and walked, he reached the road. He sat down. He ate. Alright. He hung it up. 'What happened? I shall go back. I go to see this man. How does he do it? What is inside this house? He goes to fetch only a little bit of water inside the house. He pours it into the saucepan. Look. There is a lot of meat, a lot of greens, a lot of yams in the saucepan.' He went to see. He went to break in.

The old man had left. He went down to the water. He washed. He washed his body. He went to see him. He saw, he was not there. He broke the first door. He broke the second door. He broke the third door. He heard it now, as if it was thundering. He broke the fourth door. The water broke and came. A pig came and ran away. A cassowary came and ran away. A tree kangaroo, a ground kangaroo, a bush rat, all kind (of animals), snakes, all kind (of animals), they came and ran away. The man stood in the water and looked. The pig came and ran away. The cassowary came and ran away. The bush rat came and ran away. He tried to catch them. He could not. 'What happened? Who made this happen?' He was weak. His strength was gone. He went up. He saw the house. It was empty. All his things were finished. The man had run away.

The man worried about his belongings. He called the women. He called the grown-up women. They came. He looked at them and said: 'I didn't call you. I want to marry another kind of woman.' He stood there and called. His footprints are still there, on the hill of Jaimo. He said: 'Your breasts hang down. I want women with breasts which stand up.' They went back and told the other women. 'You go now, the women with breasts which stand up.' They went and came up, he looked at them and said: 'I didn't call you. I want women who have borne one child.' They all left. They went and said: 'You go now, the women with one child.' They went and came up. He looked at them and said: 'I didn't call you. I want women who have two or three children.' Always like that. It went on and on, until he called for the old ones, the blind ones, like Kakiarke in Ilmau. It went on and on. He called all the young ones, on and on, until he called for the young babies in the carrying sling.

The women said: 'He is a liar. He calls us all. Then he sends us away.' All the women were angry. They all talked: 'What kind of man is this? We go to test him.'

Alright. What was his worry? All his things, they were completely wrecked. They all ran away. He wanted to catch them but they ran away. He was unable (to catch them). They came and ran away. Alright. He was worried.

The women cut a big cane. Not a spear. They broke it. They did not sharpen it. They did not cut it with the knife and sharpen it. No. They only broke it. They broke and broke and broke, all the women. All the women from east and west. They all went together. They walked and walked and walked. They came to the forest of Jaimo. He was alone. A fight broke out. They hit him. They hit him with the cane. They hit and hit and killed him. They killed him, and he died. Before he died, he said: 'You can't bury me up there. You have to dig a hole. You must bury me in a hole. My forefinger, you cannot cover it with earth. Let it be. Don't cover it.' He said. They killed him. They sat and looked. Alright. They dug a hole. They buried him. His forefinger stood up.

The women left now. They went up, they went down, they went this way and that way. They stayed here. The women of the village stayed here. Some it caught on the mountain, some it caught on the road, some it caught in the water. Many women from all villages, from east and west. He stood and looked at them. He pointed at them. He looked at them. Some sat down to eat, some washed

themselves, whatever they did. He stood looking at them. He caused this trouble now. He turned them all into stone. There were no more women, only stones.

He stayed, worried, he got up and walked away. He did not die and stay in the hole. He came out and walked away. Where he went, we do not know. Did he go to the waterside? We do not know.

Now we stay like this. The food does not come up by itself. It is us who go to harvest greens, yams, pare it and cut it, cut, cut, cut and put it into the saucepan. Some greens we cut in the middle, some water, coconut we squeeze and put it into the saucepan. We make fire. A lot of food comes up in the saucepan. There is no food that just comes up. No more. It is the fault of this man. He did this, and now we work hard. He said: 'This will now be your work.' Alright, now, we work hard now. We cut bush, we cut trees, we plant food, it is too hard. This is our story, the story of Jaimo."

According to Kwanga belief bush spirits did not only live in the mythological past but also in the recent past as the following story illustrates.

"This man stayed in Moimabi. He stayed in Moimabi and worked in his garden. Alright. He worked in the garden. When he finished his work, he came down to Togole. His name was Kepinis. He was our father. He was the real father of Singanongo here.

Alright. It rained. It rained, and he ran away to hide. He hid under the mountain. There was a cave, and he hid there, under the mountain. It rained. A masalai woman, she carried her child, carried food in her basket. She followed the water and climbed up. Her husband stayed in the cave. Kepinis stood outside, in something like a *telaka* (verandah). Alright, this masalai woman came, she saw Kepinis, she saw him as if he was her husband. Her husband stayed in the cave. He slept and stayed. Alright. She said: 'Alright, you hold the child, and I go to put the limbum (basket) down inside the cave.' Alright. He held the child. She gave it to him in the carrying sling. Kepinis carried it and stood there. She went inside, put the limbum down on the floor. She rested a moment near the fire. She came and saw her husband. She asked him: 'And where is the child? I gave it to you.' – 'You didn't give it to me. I stayed in the cave.' – 'No. You were outside in the *telaka*, and I gave it to you. I gave you the child with the carrying sling. I carried the limbum inside and put it down.' – 'You didn't give me the child.' – 'I gave it to you.' – 'No, you didn't.' They quarrelled with each other. They went on and on. She came outside. She said: 'Look. You stood here, and I gave you the child.' Alright. She stood there. She put her nose and smelled. 'How shall I find this man?'

Kepinis carried (the child) down and came to the water-hole Numut in Wangu. He climbed and climbed. He came, came, came and came, he reached the road, he looked at the child. The child turned into a possum. A young, white possum. 'Ah,' this man said in the Urat language. 'I carried it, it was a child. I climbed this mountain, and now it turned into a white possum. What has happened?' He talked with his wife. They stayed in Simbimbi. Now they heard it. Heavy rain and wind, the wind began to blow. A cloud-burst. The rain poured and poured and poured. It came and reached Simbimbi. It was dark, completely dark. They were scared. They threw the child, this white possum here, into the water. It stopped. The rain stopped. The wind stopped. They stopped completely.

This story here, this masalai woman here, only recently our father told us about it. It did not happen long ago, just now. The father died, the mother died, now we stay. This is the story of Kepinis."

Today, bush spirits and the special category of spirits called Wild Men still exist in the minds of the Kwanga. Mambor told me the following story:

"This Sumar, in Tok Pisin we call him 'wail man' (wild man). In our language we call him Sumar. He stays in a big tree and sleeps. He is not a tall man. He is a small child. Alright. He carries his spear, he carries his basket. A man's basket. He carries a paint in his basket. He carries a big dog. A dog goes to find game, he kills it, puts it in his basket, carries it. He comes up to a tree at his place. Alright. He goes like this. He knocks, a door opens, he goes inside, the door closes. He goes to the middle of the tree. He eats only meat. He does not eat other food, no yams, he eats only meat. He eats meat and throws the bones down. He sleeps and sleeps and sleeps until dusk. At dusk, he sleeps and sleeps and sleeps until four o'clock. At four o'clock, if you are up, you can hear him. This tree makes a loud noise. He calls out: 'Iiiiiiiooooooaaaaa.' He calls out like this. He wants to get up now. At dawn, he goes to look for meat.

When he goes and meets a man, he says: 'Come, we tay.' This is the way he talks. He does not talk correctly. He says: 'Aye, friend, you come, we tay. We tmoke firt.' He says: 'True, we smoke first? Alright, let us smoke.' They sit down and smoke. Afterwards, he says, the outside man says: 'Friend, you give me a story.' – 'What kind of tory can I give you?' – 'What kind of story, the story of meat here.' – 'Alright, I can give you a tory.' They story, and he says: 'Give me some paint.' – 'You want tome paint?' – 'Yes, I want some paint.' – 'I put tome in my patket.' – 'That's it. Give it to me.' He gives it to him, to this outside man. He walks away with it.

If his thoughts are not good, if he wants to kill this man, the man with the name Sumar, alright, he holds his hair on the back. His hair is long, like the tail of the tree kangaroo. He pulls this tail and cuts his throat. Alright. He falls down. He leaves him and tells the other men. They all come and take this man. They go and burn him. They burn and burn and burn the body. They get some of his ash, a paint. Some of them put it into a cane and go to prepare the food of sanguma (sorcerer). The paint of this bad man, of Sumar. Those who do not know sanguma, they go and prepare it for the dog, for the killing of game. The men who have a shotgun, they hold this paint, and they go to keep watch. This is the story of Sumar. I heard him once, now they live further away, in Daina and Masalakar. A man from Kubriwat got his hunting magic from Sumar and then sold it."

Many of these beliefs manifest themselves most clearly in local explanations and treatment of illness, as we shall see in a moment (see Chapter 4.5.). First, however, we have to sketch the local men's cult.

4.4. The Male Cult of the Kwanga

The male cult of the Kwanga shares its basic features with other "rituals of manhood" (Herdt 1982) in many parts of Papua New Guinea.[1] In essence, it consists of a cycle of initiation ceremonies which takes about 20 to 30 years to complete. These initiations entail both secrecy from those who are excluded (among the northern Kwanga women, children and, today, non-initiated men) and the revelation of esoteric knowledge to initiates (see Keesing 1982:9). At the initiation into consecutive grades initiates are shown certain sacred objects which represent the spirit associated with each particular grade. In the previous section we have seen that the lowest grade of the northern Kwanga male cult is associated with Nakunalo, the highest with Kware.

The male cults of the Sepik operate through a multilayered dual organization or moiety system which has already been described for the Kwanga (see Chapter 3.7.). The principle of delayed exchange of goods and services dominates on all levels of the dual organization.[2] Among the northern Kwanga, the major exchange items are foods, namely pigs, yams and coconuts. These foods are conspicuously important in most male cult ceremonies, rituals and exchanges (see Chapter 7).

It was already briefly mentioned (see Chapter 3.5.) that the members of the northern Kwanga men's cult are primarily concerned with the reproduction of garden produce and wild pigs. Their official goal is to guarantee abundant food resources, or as Schindlbeck (1990:237) puts it: "The main reason that initiates give for the existence of the cult is that only through *kwaramba* will there be plenty of food." Non-initiates know that food plays

1 Male cults of the Sepik yam cultures have been described, for instance, by Mead (1938:169-171, 1940:422-427) for the Mountain Arapesh, by Tuzin (1980) for the Ilahita Arapesh, by Forge (1967) for the Abelam and by Bowden (1983) for the Kwoma.

2 Tuzin (1980:27) even epitomized the Ilahita Arapesh male cult as "an immense framework for the reciprocation of goods and services".

a significant role in the male cult; they have to work hard to help to produce the surplus. However, as Schindlbeck (1990:237) points out, non-members of the male cult often reject the above-mentioned explanation and remark that *kwaramba* men eat most of the food. In Tauhundor, many people made similar remarks.

Nevertheless, at least from the official (i.e. the members') point of view, the men's cult ceremonies have to be interpreted as rituals of regeneration, social and physical. Tuzin (1980:25), the expert on the male cult of the Ilahita Arapesh, put it as follows: "Birth, death, fertility, sexuality, growth – these are the biological mysteries of which the cult claims privileged knowledge and control; its authority rests in part on the urgency of these matters in the thoughts and emotions of the people."

In recent years, the authority of the male cult members has been challenged by various outside influences (see Chapter 2.3.). It will be recalled that the last full initiations in Tauhundor were performed in the 1950s, those in Tauhimbiet in the 1960s. However, the 1970s and 1980s saw a resurgence of male cult activities in several Kwanga villages and beliefs relating to the men's cult continue to influence the life of the local people.

In all these cultures, yam growing is closely linked with the male cult.[1] Formerly, only those northern Kwanga men who had obtained the necessary secret knowledge were allowed to plant yams. The gardening cycle followed the ritual calendar, and both were controlled by men of the higher initiation grades. As we shall see in the next chapter, yam cultivation and hunting are the only food-getting activities of the northern Kwanga which are accompanied by special rites. However, it has already been noted that, at least today, the yam cult of the northern Kwanga is less pronounced than among some of their neighbours.[2] We shall later see (Chapter 5.1.) that northern Kwanga men do not grow very long yams in separate ceremonial gardens; their gardening rites focus on short yams, and they apply the rites only when they grow crops for a special ceremony (i.e. the large scale *sukusa* food gifts); apart from menstruating women and women in childbed, the northern Kwanga do not take many precautions (e.g abstinence from sexual intercourse, food avoidances, etc.) during the yam growing period; yam is not the only crop planted exclusively by men (or women past their regenerative period); not only yams, but also taro, coconuts and bananas are important items of the small-scale *auanalo* food gifts. This and other evidence indicates that, although yam plays a significant role in certain contexts of the Kwanga culture, the yam cult is not as much emphasized as elsewhere in this region.

Hauser-Schäublin who recently explored the meanings of yam festivals in this region also considers initiations as renewals and regenerations[3] and refers to the local notion which identifies or draws a close parallel between ancestors, initiated men and yams.[4] The initiate

1 A close correlation between yam cultivation and the male cult has been reported, for instance, by Forge (1962:10, 1970a:272-273), Lea (1964:62) and Huber-Greub (1988:248) for the Abelam, Kaufmann (1983:16, 1987:217) for the Kwoma and Harrison (1982) for the Manambu.

2 The Abelam are most famous for their elaborate yams cult (see e.g. Forge 1962, Hauser-Schäublin 1983a, 1987, Huber-Greub 1988:145-178), but among the Kwoma (Kaufmann 1982b, 1987) and the Ilahita Arapesh (Tuzin 1972) yams cultivation also underlies many elaborate rules.

3 "Initiationen sind Erneuerungen, so wie aus einem Setzling eine neue Feldfrucht hervorgeht und diese später wiederum selbst zum Setzling wird" (Hauser-Schäublin (1987:97).

4 Several authors emphasize the identification of initiates, yams and ancestors provided by the stylistic unity of their several faces in local art forms (see e.g. Tuzin 1980:222, footnote 25 for the Ilahita Arapesh and Forge 1970a:280 and Hauser-Schäublin 1987:96-97 for the Abelam). We shall see later (Chapter 7.9.) that traces of such conceptual links can also be found among the northern Kwanga.

dies and is reborn like the seed yam which dies and grows into a tuber before it again becomes seed yam. The repeated cycling of human and plant generations is one of the key concepts in these cultures. Among the northern Kwanga this concept applies to taro, bananas, coconuts and other plants as well as yams; people often point out that the mother plant has grown children.

Avoidance rules also have to be considered in the context of repeated cyclings. The notion that males and females are radically different in their physiological and psychological being and that the fluids, essences and powers of women are dangerous and inimical to those of men is a pervasive theme in New Guinea male cults (see Keesing 1982:7). Among the Kwanga, the fluids, essences and powers of initiated men, conversely, become dangerous and inimical to those of women, children and non-initiated men. Moreover, we have emphasized earlier (see Chapter 3.5.) that the opposition between the sexes is not the only element involved: Similar and rigorous avoidance rules also exist between the generations.[1] For this reason we have already suggested earlier (see Chapter 3.4.) that these avoidance rules serve as culturally defined mechanisms to control the regenerative powers of several social categories, namely those of women, younger generations and members of the men's cult.

4.5. Kwanga Concepts of Health and Illness

Avoidance rules between social categories can be considered from yet another perspective. We have seen that many of these rules concern the cooking, giving and eating of food. Food has a biological component, and the Kwanga are well aware of this fact. The food man ingests in order to live becomes assimilated into his body. Based on this biological fact the Kwanga have constructed sets of rules concerning food. Some of their rules refer to the culturally defined avoidance relationships (see Chapter 3.4.); these rules are shared by all members of the society. Other rules draw on a classification which constructs analogies between the human body and the consistency of food (see Chapter 6.4.); as among many other cultures (see Messer 1981), this knowledge is less codified and not shared by all. Even more idiosyncratic are other food pro- and prescriptions observed by individuals based on their personal experience. We shall now have a look at each type of such rules.

Let us reconsider the avoidance rules. It has been noted that a transgression of the rules between generations and between sexes causes *wahapsila* (loss of stamina), an offence of those between members and non-members of the *kwaramba* cult a more severe illness paraphrased as *nalo orin tolo* (men's cult spirit, him, holds). The illness *wahapsila* can also be caused by a breach of other rules: a planter who used magic may not eat his own yams (see Chapter 5.1.); a person who planted food-bearing trees may not eat the first crop (see Chapter 5.2.); a woman who raised a pig on her own spittle (i.e. with premasticated food)

1 Similar ideas have also been suggested by (female) anthropologists who worked among neighbouring groups. Mead (1940:344-347,350-352) demonstrates that Mountain Arapesh concepts about men and women are closely interrelated with concepts about sexual growth in general. Although the concepts of the Mountain Arapesh and those of the Kwanga differ in detail, the general idea is similar. Writing about the Abelam, Huber-Greub (1988:162) also discusses the relationship between men and women in the context of growth.

may not eat its meat (see Chapter 5.3.); and a man who used magic may not eat the meat of the wild pigs he killed (see Chapter 5.5.). In other words, the northern Kwanga see affinities between all these various rules inasmuch as their breach is punished by the illness *wahapsila*. The implicit meanings of many of these rules will be examined in their appropriate contexts throughout this thesis, but let me already anticipate by saying that a recurrent theme is the analogy between human procreation and food production.

The rules based on the classification which constructs analogies between the body and the consistency of food primarily concern persons in liminal stages. Women during seclusion after menarche (see Chapter 7.3.) and childbirth (see Chapter 7.4.) and men in preparation of rituals, for instance the *sukusa* yams exchange (see Chapter 7.9.), may only eat food classed as *hakla/kwambu* (dry/strong), for instance roasted yams. Small children, on the other hand, should only receive food classed as *ugu/hangu* (wet/weak), for instance breastmilk and premasticated food (see Chapters 6.4., 8.1. and 8.3.). In "normal" life, people should eat a "balanced diet" in order to stay healthy, for instance stews and soups. These rules construct analogies between the consistency of the body and the consistency of the food.

Formerly, northern Kwanga women also observed certain food avoidances during lactation but only for mothers who gave birth to the first male child.[1] These mothers were not allowed, for instance, to eat bush rats, big lizards, village pigs, big yam tubers, big pandanus, big banana, and birds which were baked in the fire. Certain water-holes had to be avoided, too. Elder women say these avoidance rules had been shared by all women until very recently. Up to this date, women still prepare a special soup from the leaves of a plant (*kwasmaabu*) to increase the flow of milk (see Chapter 6.2.).

Today, some women claim to avoid eating certain foods, especially fish and leaves with a rough, lower side (e.g. *menglegisa* and *wasarkia*). They fear that these foods cause scabies (kaskas). Since these beliefs are not shared by all northern Kwanga women, not even within the village Tauhundor, they fall into the third category mentioned above, namely the idiosyncratic food beliefs. Other examples can be quoted. Some people stay away from their gardens for a about a week after eating small fish because they "know from experience" that otherwise their food will not grow well. Others never eat the meat of bush rats because they believe certain bananas do not grow well afterwards. The recipe for a soup prepared as part of planting rites contains further examples (see Chapter 6.2.). All these latter beliefs draw on the assumption that the food ingested by the gardener (and his wife) affects the growing of his cultivars, either in a positive or in a negative way.

In order to gain a better understanding of northern Kwanga beliefs regarding food and illness, we have to consider them in a wider context. Probably like most Melanesians, the northern Kwanga see a difference between illness (and deaths) that are "natural" and those caused by malevolent agents. In the first category there are boils, sores, skin diseases and so forth for which there are local remedies (e.g. herbal medicine) and deaths of old people. The second category includes prolonged and/or serious illness and deaths of young and middle-aged persons: the local people regard them as inflictions of malevolent agents. In these latter cases, the patient, his or her relatives and the healer(s) may choose an

1 Again we see a parallel between human procreation and food production. Women had to observe certain avoidance rules during the lactation of the first (male) child whereas planters may not eat the first crop of food-bearing trees.

explanation from a number of alternatives, namely a transgression of avoidance rules (a contamination) or an attack by non-human beings or by men with special powers. These non-human beings include the men's cult spirits (*kwaramba*, tambaran), the bush and water spirits (*siklawase*, masalai), and the dead (*makamba* or *misumu*); men with special powers are called *singama* (poison man) and *wase* (sanguma). Thus we see that healing practices form an integral part of traditional religion of which they are a component. This point has recently been emphasized by Peter Lawrence (1987:21), who refers to Melanesia in general: "In short, to be studied properly, sorcery and healing practices must be placed within the total cosmic framework that the people conceive to exist: not only in the human socio-political structure and not only in the religious system but simultaneously in both."

The causes of the second category of illness can only be detected by divination and experimentation. Within the culturally defined spectrum of possible causes and their treatment, there always exists a certain flexibility because each cause can produce almost every symptom. There is no rigorous association between symptoms and illness-causing agents or behaviour. The following three cases serve as illustrations.

Case 1: Woswa

Woswa is a man in his fifties and lives in the hamlet Kwalnkwala. While his brother Bungaioho plays a prominent role as a village leader, Woswa spent many years "on station" and broke with tradition after his return to the village. In June 1985, his skin suddenly became covered with an itching rash, and he developed a fever.[1] He gave us the following explanation for his illness.

Suaho, a man of his own age from the Masinokor clan, came to see him the other day, and they shared a coconut. In 1983, Suaho had "seen" the cult spirit Nakunalo in Apos. Woswa now fell ill because Suaho's coconut had been contaminated by Nakunalo. The Nakunalo "held him" and "made him hot". Therefore, he sent word to Suaho who lives in the Wansapussi hamlet to come back and cure him. Suaho collected powerful substances which are known only to Nakunalo initiates and brought them to Woswa's house in Kwalnkwala. He put them in a coconut shell, added water, heated a stone in an open fire and dropped the hot stone into the coconut shell. The water boiled and produced a lot of steam. Suaho swept this steam over Woswa's body; it made his body become very hot and then cold. The cure worked, he affirmed, and they repeated it again after a few days.

Thus we see that although Woswa claims to have broken with tradition, he still believes in the power of initiated men. At the same time, however, he consulted the APO and obtained Sarlon solution. Following the instructions, he dissolved the solution in water and washed his body. This treatment was also repeated several times. As a third measure, he said, he also prayed to God to drive away Satan.[2] It was difficult to tell which of these cures had been most effective from Woswa's point of view.

Case 2: Kwehesingla

Kwehesingla is a woman of about sixty years. During a heavy storm, a branch broke off a tree, fell down and hit her on her right shoulder. Her brother-in-law, Brunga, heard her scream and found her on the road to the village. His first reaction was to fetch nettles to beat her skin. Back home, they cut her skin with razor blades to get rid of the "bad blood". They then walked with her to the aid-post in Nikriaka, where the APO examined her. He gave her an injection and wrote a letter to the HEO in Dreikikir saying that he had to transfer this patient to his care. Early the next morning, Kwehesingla and her husband, Glaihugwa, left the village and walked the three hours to Dreikikir. The HEO called an ambulance and sent her to Boram Hospital in Wewak.

1 Dr. Paul Garner, a medical doctor from the Papua New Guinea Institute of Medical Research in Madang, visited me in the field at that time and diagnosed chickenpox.

2 Woswa is a member of the SSEM which is, as we already mentioned, opposed to men's cult activities and identifies men's cult spirits with Satan.

About three months later, Kwehesingla and Glaihugwa returned to Tauhundor. She carried her right arm in a sling and was in great pain.[1] Since she had obviously not been cured in the hospital, the village people felt she was suffering from "an illness of the village" *(koyanga hi belebele*: village, hot, some kind).[2] All the *kungwaima* (curers) assembled, made a divination and systematically experimented with one cure after the other. First they treated her for an attack by bush spirits, then for an attack by sorcerers, then for an infliction by men's cult spirits, to no avail; she still suffered great pain. After a few weeks, her brother-in-law, himself a *kungwaima*, told me: "We cannot do it. The illness holds her too strongly. We give up. We tried everything, but we cannot win the illness."

One night, not long after this conversation, young and old assembled in the hamlet Turnturu, where Kwehesingla lives, to hear a public sorcery debate. In the course of the evening, Wanile, a young man from the Wayhem clan, reported the result of a visit to a clairvoyant in the Urim area and accused Mahalassa of *singa* sorcery against his classificatory sister-in-law. The relations between Mahalassa and Glaihugwa are strained because Mahalassa is the last "real" patrilineal descendant of the Apinchanokor clan, while Glaihugwa has been raised and adopted by this clan, more precisely by his mother's brothers. The patient, Kwehesingla, comes from the neighbouring village Kubriwat. A heated debate and finally a fist fight broke out. The village councillor, the magistrate and several other men intervened and ended the meeting. This was shortly before my departure; most probably, the conflict continued for weeks or even months afterwards.

Case 3: Maria

Maria was born on the Gazella Island of East New Britain. She was trained as a primary school teacher and married Michael Sombenuku Yainkom, a man from Tauhundor, who worked first as a policeman, later as a Senior Inspector of the Rabaul City Council. In 1984, they spent their Christmas holiday in Tauhundor. It was their first visit for eight years. Maria, an educated city woman, adapted herself well to village life. She exchanged her dress for a wrap-around cloth, joined the women to fetch water and collect firewood, accompanied them to the garden, cooked local food and looked after their children as well as her own. Her out-going and cheerful attitude and Michael's story-telling talent attracted young and old, so that their house became a focal point of social life in the village.

All went well until the fourth week of their holiday, when, one after the other, her five children developed high fever and complained about headaches. Maria and Michael diagnosed malaria, brought the children to the aid-post and treated them with chloroquine. The children slowly recovered, but now Maria suffered from splitting headaches. She took aspirin and chloroquine and went to bed. The next morning, she sat around listlessly, went to bed, got up again, lay down, and, all of a sudden, walked out of her room and fell flat on the floor. The noise caused by her fall made everyone nearby jump to their feet, and several women rushed to her help. Maria lay on the floor, motionless. The next moment, she struggled up, kicked, knocked her head against the wall, laid about herself, muttered unintelligible words, turned up the whites of her eyes and pushed off the women around her.[3] Her husband and their host sent word to a *kungwaima*. Maria crawled back to her bed, the women gathered around her, stroked her gently, murmured comforting words and tried to make her comfortable. The *kungwaima* Singanongo entered the room and sat down at the head of the bed. He spoke soothingly, telling her that he knew her home town from several years "on station". Then he reached for her head and pulled it on his lap. Maria fought him, bit his hand, yelled at him to go away, but Singanongo remained calm. He took a piece of bark out of his netbag, lit a

1 Dr. Garner also examined this patient. He diagnosed a crush injury of the shoulder with or without shoulder fraction and dislocation causing brachial plexus damage. She also had a forearm fracture which he thought was pinned and plated by open reduction. She now had no motor function in her right arm with paraesthesia, and a dependent oedema on the right hand which was also scarred extensively following soft tissue injury at the time of the accident. In a case like this, biomedical doctors could do no more than wait and see whether the motor functions returned or not, so the patient was discharged from hospital.

2 Huber-Greub (1988:105) mentions an illness concept paraphrased as "something of the ground" *(kepmanamusi)* for the Abelam. According to her this concept refers to a certain type of sorcery (poison). The northern Kwanga phrase *koyanga hi belebele*, in contrast, refers to all illness caused by malevolent agents.

3 No medical doctor was present at the time, but Dr. Garner later discussed this case with me. He suggested that the original symptoms (fever and headaches) could have been caused by malaria. Maria's paroxysm, on the other hand, could be interpreted as an expression of her mounting anxiety when, one after the other, her children and finally herself fell ill in this foreign village.

match and held the bark in the flames. With his right hand, he moved the bark over her skin, touching various parts of her body, her chest, her throat, her upper lip, her forehead, and again the chest. Suddenly Maria vomited. "That's it," Singanongo exclaimed, "there are two *wase* spears in her chest. They fight each other trying to leave her body and thus cause her illness". Singanongo promised to return the same evening. Maria asked for water but Singanongo forbade her to drink anything until he had cured her. He threatened she would die if she drank water. After he left, Maria was calm and slept through the whole afternoon.

In the evening, people crowded around the house chatting excitedly, expressing anxiety, fear, anticipation and thrill. The longer they waited, the louder they talked. As if on command, there was an abrupt silence: Singanongo had arrived. People were ordered to hide behind the walls and to turn down the kerosene lamp lest one of the extracted spears should find a new victim. Singanongo entered Maria's room. One could hear the netbag touching the door, rustling noises, whistles, hissing, quick steps, and then something fell to the floor. "A spear," whispered someone. More rustling, whistling, hissing and quick steps, again something hit the floor. "Another spear," people told each other. Finally, a man asked: "Singanongo, is it all over?" Singanongo came out of the room, carrying a leaf on his outstretched palms. Everybody got up, talked, pushed and tried to get near him. Someone turned up the kerosene lamp. Four lumps of limestone lay on the leaf: the wase spears. Singanongo walked away, joined the big men, sat down and began to chew betelnut. Slowly, the crowd dissipated, small groups gathering near a fire here and there. This was the time for story-telling. Even the boys and girls chatted animatedly among themselves until, one after the other, they fell asleep. Maria moved from group to group, giving away details of her experience. No longer as cheerful as she had been, she appeared more responsive now than before the curing ritual. In the early hours of the morning, the parents collected their sleeping children and returned to their houses.

Two days later, Maria and her family left Tauhundor. After her departure, some women said, "a cult spirit had held Maria". She had accepted lime from an initiated man, when they sat around chewing betelnut one evening. Since she was not treated for this infliction, only for *wase* sorcery, they explained, she never really recovered.

These three cases illustrate that the northern Kwanga do not associate certain symptoms with certain causes of illness. In the first case, Woswa transferred this flexibility of interpretation to new "medical" contexts, namely to biomedicine represented by the APO and to Christianity represented by the SSEM. Kwehesingla's case confirmed the popular view that biomedicine is only one possible option, which does not always work. Therefore, when she returned to the village, the *kungwaima* experimented with the whole spectrum of local explanations and treatments. The explanation and treatment of Maria's illness were partially successful; but as her behaviour had slightly changed since the illness, people continued to suggest other explanations.

In search of explanations, divination plays an important role in the local medical system. The northern Kwanga have an array of divination procedures. The *kungwaima* usually begin by asking the patient where he or she has been during the last few days and whether anything unusual happened. It is generally considered dangerous to walk by oneself because the non-human and human agents causing illness lurk everywhere. Maria went to fetch water by herself, and most people agreed that this was the time when *wase* struck her. Tolongle, another woman, was near a water-hole when she heard the noise of a small pig. Women sometimes find a wild piglet and take it home to domesticate. She walked into the bush in search of the animal but returned empty-handed. After she died, this story was taken as a proof that *wase*, who are believed to transform themselves into any animal they like, had killed her.

In public debates, especially after death, possible grudges held against the dead person and his or her relatives are discussed at length. People accuse each other, and the accused

then have to justify their movements over the last few weeks because they might have hired a sorcerer. If someone is suspected of *singa* sorcery, his house may be searched for evidence. The most important debates, however, are not held in public; only men take part, mainly the *kungwaima*.

In times of illness and death, dreams are taken very seriously. Kambahe had a dream of Jaimo, a *siklawase* (bush spirit), before he died. He told his companions that Jaimo visited him and took him along to exchange feasts of the *siklawase* who carried bound dogs on poles instead of pigs, as human people do. A sick person or close relative may also dream of a *makamba* (dead person). This is often interpreted as a sign that the *makamba* wants to pull a living person into the world of the dead.

An instrument of divination has already been mentioned in the case history of Maria, namely a piece of tree bark. Another instrument may be coconut shells, or rather the water poured into these shells.[1] If a person is seriously ill, all the big men meet, discuss the patient's latest movements, and then assign certain tasks to certain men. Some of them go and dig out *sekler* plants (a grass) and plant them where the path turns off to each hamlet. Others are sent to the patient's garden to search for *walungu* (land crabs). Another group collects soil and water from the water-holes the patient visited before he or she fell ill. Representatives of each initiation grade, who safeguard secret knowledge, collect the substances associated with each cult spirit. The men then assemble and bring along what they have collected. Coconut shell halves are filled with water, then the men put each *sekler* plant, each *walungu*, each lot of water and each of the other substances into a separate shell. They heat stones in fire and drop them into each coconut shell, watch and wait. If the water in one of these shells turns red or dries up completely, the men know this is where the illness comes from. They can now begin the treatment. The corpse of a deceased person may also be used as a divination instrument. Only the *kungwaima* can see the signs, ordinary people see nothing.

Let us now briefly consider each of the illness-causing agents. We know that certain spirits are associated with the initiation grades of the men's cult. Kwaramba is the general term for all these spirits. Each of them can "hold" a person, can "make her hot" and cause illness. In most cases, the patient gets contaminated by an initiated man. This is the reason for the avoidance rules regulating the behaviour of members and non-members of the men's cult. All the initiated men know the secret and powerful substances associated with the spirit of their grade, but only one of them safeguards them. It is a rather dangerous assignment, especially for his wife and children living in the same household. This man is called *kungwaima*.[2] He can cure patients who have been contaminated by the spirit of his initiation grade. Suaho and Singanongo are such *kungwaima*, as we have seen in the above-mentioned cases. The treatment does not differ from one men's cult spirit to the other; the cure is always called *nalo rolo*. The seriousness of the illness inflicted by men's cult

1 Information on divination among the neighbouring groups is scarce. Forge (1970b:264) mentions a very similar divination technique for the Abelam. The divination techniques of the Mountain Arapesh, on the other hand, are strikingly different (see Mead 1940:433-437).

2 Ritual experts among the Kwoma (Bowden 1987) and among the Ilahita Arapesh (Tuzin 1980:197) often act as sorcerers as well. A similar personal union also seems to exist between ritual experts, healers and *singa* sorcerers among the northern Kwanga. This assumption is further supported by the fact that the northern Kwanga are as secretive about *singa* sorcery as about the *kwaramba* cult.

spirits decreases from Kware to Amba and to Nakunalo according to the hierarchy of the initiation grades.

Men's cult spirits not only cause illness in adult persons. A mother told me the following story:

> Case 4: Pondouhe
> Her fourth child, now an eight-year-old boy, had been *habamba* (bones, all: emaciated) when he was a baby. The nurses told her to take him to the Dreikikir Health Centre, where she was taught to feed him with milk made from dried milk, and the nurses treated him. He put on some weight, they returned to the village, and he lost it again. This went on and on, she was always moving back and forth between Tauhundor and Dreikikir. Finally, the village elders decided to make a divination and found that a certain *kwaramba* caused the illness. They collected secret substances belonging to Nakunalo, put them into a coconut shell, added water, heated a stone in the fire, dropped it into the coconut shell, and let the steam cover the body of the ill child to take away the illness. It worked, she said; ever since he received this local treatment, the boy has grown well.

Thus we see that the northern Kwanga attribute growth failure in children not necessarily to a poor diet but to an illness, for instance, to an illness caused by the infliction by men's cult spirits (see Chapter 8.3.). Another frequently mentioned explanation for growth failure is a breach of the postpartum taboo. The rule says that parents should not resume sexual intercourse until the last child can walk and talk; it is believed that the semen will mix with breastmilk and thus harm the child. In reality, parents often quarrel and even fight because the husbands try to force their wives to have sexual intercourse too early. Still another reason for growth failure is attributed to sorcerers, who find the umbilical cord and the placenta of the young child. We shall return to sorcery in a moment.

We have seen that the oral literature of the northern Kwanga contains many mythical tales about bush and water spirits *(siklawase)*. The following story was told by Abkomba, an educated man of about thirty years:

> "When we feel sick, we say: '*Ugun yiu*' (water, struck). There is a brook, and the *siklawase* follows this brook in the shape of a *hopma* until he comes to a water-hole or a pool encircled by rocks. His skin feels hot, and he is thirsty, so he takes a bath in this pool. He washes, and his dirt remains in the water. If we later use the same water to wash or drink, we fall ill. We say: '*Ugun yiu*.' Now all the big men come and watch the illness. They ask, and you reply: 'I went down to wash at Wortihiengi.' So they know, Wortihiengi is where the illness roots. They call the leader of the clan, on whose land the water-hole Wortihiengi is situated, and he listens. They tell him, and he leaves with a group of his men. First, they follow the brook until they come to the water-hole. The leader holds a coconut and beats it against the rocks. Another man pulls a stick of wild pandanus *(marngla)*. The *siklawase* gets up and holds the coconut. They go and come to the water-hole. There, they build a small platform, cook food and decorate the platform. Now they eat together, the men and the *siklawase*. Afterwards, they return to the village together and carry a coconut, a yam and a taro. At the house of the patient, they peel the tubers, scrape the coconut, cook them and give them to the patient to eat. Now they watch the illness. If it goes away, they say: 'Alright, that was that. The *siklawase* blew his ear, told him he was sorry and took away the illness.' If our skin feels tight and tired, and if our whole body aches, we say: '*Ugun yiu*.'"

This narrative is the only evidence for such a healing ritual. More commonly, people fetch water and soil from the "contaminated" water-hole and "steam" the patient. According to several informants, any water can make a person ill if a *siklawase* happened to have washed there. A visitor from another village can also be "struck by water", as the following case illustrates:

Case 5: Lasauhe

Lasauhe, an adolescent girl, visited relatives in Musengwa, a neighbouring Urat village, and fell ill after she returned to Tauhundor. They diagnosed "*ugun yiu*" as the cause of her illness. Her brother walked all the way to Musengwa to fetch water and ground from the pool where she had washed, and they "steamed" her. This cure did not have the desired effect; other cures were tried, later on.

Small children can also be afflicted by this cause of illness:

Case 6: Linda

Linda was twenty months old when all of a sudden she suffered from severe convulsions. The mother took her to the aid-post, but the APO had left for his home village. The grandparents diagnosed *ugun yiu* as the cause of her illness. They fetched water and "steamed" her. The next day, she had another bout of convulsions. Her mother, an educated young woman, who had spent several years in Wewak and Lae, almost panicked until she was able to stop a car which took them to the Health Centre in Dreikikir. The girl received treatment and got well.

Bush spirits can also cause illness by shooting spears *(kormesayi)*. The *kungwaima* know how to extract these spears. The extraction method is the same for the spears of bush spirits *(kormesayi siklawase)* and for the spears of sorcerers *(kormesayi wase)*. It is usually performed at night. The curer holds leaves in his hands and sweeps over the body of the patient, making whistling and hissing noises. The spears then fall to the ground in the form of limestone lumps. We have already encountered this method in the case of Maria.

The following story on female bush spirits was told by Hauseng and by Abkomba on two separate occasions:

"When people work in their gardens or in the bush, they cook their meals there. The *walungu* (female bush spirits in the shape of land crabs) live in the ground in all these places; they steal the food scraps thrown away by careless people. They carry them away and hide them in their ground-holes. There, they hold the food scraps in their claws or sit upon them. The person from whom the *walungu* stole the food scraps cannot defecate or urinate, he or she loses appetite and the skin feels heavy and tight. The diviner, the patient, or a relative send someone to the places where the patient ate food before he or she fell ill. This person digs the ground and kills all the *walungu*, breaks their shell and cuts off the claws. Most of them are thrown into the bush, but a few are taken home for divination and cure. The healer puts the claws of the *walungu* in a coconut shell, adds water, heats a stone in the fire, drops it into the water and steams the patient."

In the local language, people paraphrase this cause of illness as *walungu kor insiu* (land crab, cuts, tightens).[1] This explanation and treatment of illness is also applied to young children:

Case 7: Tasinole

When Tasinole, a chubby little fellow of fifteen months, suddenly fell ill one evening, the mother watched him all night. Early the next morning, she took him to the aid-post. The APO gave him an injection, but, during the day, the fever continued to rise. The child's breathing became very fast. In the meantime, his father had hurriedly left for their gardens to fetch *walungu*. By the time he returned, however, the child had already died.[2]

It is interesting that both informants drew a parallel between female bush spirits in the shape of land crabs *(walungu)* and a sorcerer *(singama*, poison man). Both agents cause illness by "tightening" something which had been in close contact with the patient. In fact, people say this type of sorcerer imitates the bush spirits. In one story, the wild man Sumar,

1 Tuzin (1980:297-298) mentions ground crab holes which the Ilahita Arapesh believe to be alternative abodes of the dead. The Ilahita name for these ground crabs *(wala'anga)* is similar to that of the Kwanga *(walungu)* although the concept differs.

2 According to Dr. Garner, who discussed this death with the child's parents, Tasinole died of pneumonia.

who is not a *siklawase*, but also a type of bush spirit, teaches sorcery techniques to any man who manages to meet him in the bush (see Chapter 4.2.). This is the only example from the oral literature, at least the only one known to me, that bears directly on the relationship between sorcerer and bush spirit. Yet the northern Kwanga often hint at this link, and some go so far as to make the sweeping statement: "It is all the same."

Bush spirits know still another way of causing illness: They steal the *masikome* of small children. Such children never learn to speak, and they may develop psychomotor problems. Two such cases have been brought to my attention. One was a boy of about five years, the other a man in his late thirties. The northern Kwanga say: *Masikome orhi am lasik ir* ("soul", his, led away). The women fear such attacks of bush spirits on their small children, especially when the new yam crop is almost ready for harvest. This is the time when the bush spirits lurk in and near the gardens to steal the food.

At this point it is necessary to make a brief digression to discuss the concept of *masikome*. Literally translated the term means "head" *(masiki)* "inside" *(ome)*.[1] The northern Kwanga say *masikome* is like the shadow and the reflection of a being or object in water or in a mirror. Not only human beings but also animals, plants and houses have *masikome*. When a person dreams, the *masikome* leaves the body and wanders around in a "spirit world". As we have seen, the *siklawase* Jaimo visited Kambahe in his dream and Kambahe's *masikome* left with Jaimo's *masikome* to see the exchange feasts of the *siklawase*. Case 11 renders a dream of Fleassa in which the *makamba* of Koki (a man recently dead) calls on him and tries to lead his *masikome* away. Bush and water spirits *(siklawase)* and sorcerers *(singama)* sometimes steal a person's *masikome*. As we have just seen, the northern Kwanga say *"masikome orhi am lasik ir"* (soul, his, led away) referring to a mentally retarded person. Below we shall see that *singa* sorcerers – like female bush spirits in the form of land crabs *(walungu)* – catch a person's *masikome* by stealing objects which have been in close physical contact with the victim. If the *masikome* does not return to the body, the person becomes mentally disturbed, falls ill and eventually dies. In common with many other people in Melanesia, the northern Kwanga use one term to refer to two soul concepts, namely to a "dream ego" and a "spiritual double".[2] The concepts of a "dream ego" and a "spiritual double" can be easily detected in the above-mentioned examples referring to the term *masikome*. The fact that the northern Kwanga believe that a person either becomes mentally retarded, seriously ill or even dies, when the *masikome* is "stolen" or "led away" implies that the presence of *masikome* in the human body is a prerequisite for conscious life, in fact for life itself.[3]

1 The semantic field of the term *ome* will be explored in Chapter 6.4..

2 Fischer (1965:244) who studied soul concepts in Oceania writes:"Den lebenden Menschen verlässt das 'Traumego' teils aus eigenem Willen, teils bewusst vom Menschen ausgesandt, häufig aber unfreiwillig durch Zauberei oder von Geistern gestohlen". And he continues (Fischer 1965:262): "Ueberall scheint neben der Vorstellung eines 'Traumego' die Konzeption einer 'ausserkörperlichen Erscheinungsform', eines 'spiritual double' (Fortune), eines 'spiritual substitute' (Williams), einer 'Bildseele' zu existieren. Diese Vorstellung, die nichts anderes besagt, als dass jede Person oder Sache ein 'spirituelles Doppel' hat, wird gestärkt durch Traumerlebnisse ... ."

3 The Abelam apparently use three terms for the life principle but the authors do not quite agree in the rendering and interpretation of the local terminology (see e.g. Stöcklin 1977:27-31, Hauser-Schäublin 1983a:189 and Huber-Greub 1988:101-102). The northern Kwanga always use the term *masikome* for "dream ego" and "spiritual double" as defined above and *makamba* for "soul of the dead" and never mention another term for a different function of the life principle.

It will be recalled that the northern Kwanga believe in two types of sorcery, namely in *singa* (poison) and in *wase* (sanguma).[1] The northern Kwanga are very tight-lipped when asked about *singa* sorcery.[2] Some informants say: "*Singama masikome insiu*" (sorcerer, "soul", tightens). We have just seen that *singa* sorcerers, like bush spirits in the form of land crabs, supposedly steal objects which have been in close physical contact with the victim (e.g. food, fingernails, cigarette butts, excreta, semen, etc.) and thus catch some of his "soul substance". Later in this text (see Chapter 7.3.), it will be recounted that during seclusion following menarche, a girl is admonished to carefully collect all the leftovers of food in a big leaf which her father later collects and deposits in a safe place. If a sorcerer found the bundle, the girl would lose all her strength. Similarly, after childbirth, the umbilical cord and the placenta have to be carefully hidden by a close male relative; if a sorcerer found them, as we have seen, the child will lose all strength. The northern Kwanga thus construct an analogy between the tightening of the stolen object and the tightening of the patient's *masikome*. By tightening the stolen object, the sorcerer tightens the patient's "soul substance" and thus causes illness or even death. Accusations of *singa* sorcery occur frequently, often within the clan and/or hamlet. Whether the accused is believed to have paid a sorcerer and provided the stolen objects, or whether the accused himself is believed to be the active sorcerer, remains unclear.

Case 8: Koki

Koki was an ambitious man, and he competed with his classificatory brother Hauseng. In 1980, he was a man full of vigour, but four years later, he was emaciated and weak, unable to leave his bed. Dr. Thomas Burkott, who carried out a malaria survey in Tauhundor, arranged transport and persuaded him to seek biomedical help in Maprik Hospital. Apparently they diagnosed advanced cancer and sent him back to the village, where he died soon afterwards. His widow took her children and left the hamlet. Throughout his illness, Koki maintained *singa* sorcery accusations against Mambor, Hauseng's father, who lived across the road. Hauseng insisted that their case be brought up in the village court and finally taken to the sub-district court in Dreikikir. There was no evidence against Mambor, so the case was officially closed. Koki and his family refused to bury their grudges. He died with an angry heart, and for this reason, we shall shortly see, his *makamba* was particularly feared.

The northern Kwanga are more out-spoken about *wase* sorcery; in fact, innumerable horror stories circulate in the villages.[3] *Wase* sorcerers are credited with the knowledge of

1 Patterson (1974) reviews the literature on both types of sorcery in Melanesia. She tries to establish a relationship between sorcery techniques and social structure and interprets them within the theoretical framework of conflict theory. More recently, Stephen (1987) published a critical appraisal of research on sorcery and witchcraft in Melanesia. She follows Lawrence (1987) in suggesting that a very narrow focus has been imposed on the interpretation of Melanesian sorcery by the prevailing sociological models and argues that we should understand sorcery as part of a magico-religious world view.

2 Detailed accounts on beliefs and techniques relating to this type of sorcery have been recorded for the Abelam (Forge 1970b, Stöcklin 1977, Huber-Greub 1988:101-102) and the Kwoma (Bowden 1987:187). The Kwoma term *siiga* for this type of sorcery is similar to that of the northern Kwanga *(singa)*. It is difficult to assess whether, in detail, northern Kwanga beliefs and practices are similar to or different from those reported by these authors because the local people are extremely secretive about this type of sorcery, but the general principles are the same.

3 Patterson (1974:142) calls this type of sorcery vada or vela sorcery and reports that it is widely distributed throughout Melanesia. Whether any part of this sorcery is actually practised or not has caused quite a controversy among anthropologists and other social scientists. We agree with Patterson, who writes: "While all the ethnographers refuse to credit the sorcerer with the more superhuman feats in the alleged technique, there is some evidence to suggest that vada-type sorcery is sometimes attempted" (Patterson 1974:143). This is also my stance, especially in those cases where a person is found dead or badly injured in the forest.

certain formulae and substances which render them invisible, or make them capable of transforming themselves into animals. They then attack their victims, render them unconscious, operate upon them or assault them, heal them and restore their consciousness. The victims feel weak and fall ill but cannot remember what happened to them. In contrast to beliefs among other groups, the victims of a *wase* attack do not always die; there are remedies against *wase* sorcery.

One remedy is paraphrased as *nombo insi* (road, close). *Wase* roads can be closed by paying cash and/or pig to the right people.[1] The following account from my field notes illustrates this mechanism.

> Case 9: An epidemic
>
> In 1985, Tauhundor was plagued by an epidemic in the course of which seven people died after a brief sickness. Most victims were middle-aged men and women, and they died in quick succession. Only two patients recovered from the sickness. The victims felt dizzy and displayed a strange form of behaviour, similar to drunkenness; soon general weakness overcame them, so that they stayed in or near the houses, their urine changed from red to brown to black to red; this was the final stage before they died.[2]
>
> Anxiety spread among the villagers in the face of this lethal and unknown disease. No one dared to leave the village unless it was absolutely necessary, and they never ventured far away. The daily walk to the water-holes was considered particularly dangerous, and so were the visits to the gardens or the bush. In the evenings, most families retired early; they were too scared to sit and chat around their outdoor fireplaces, as they usually do in good times. The men assembled very frequently and debated the sudden affliction of their community. First they were misled by the above-mentioned dreams of Kambahe, who was one of the victims. He not only dreamt about going to *siklawase* feasts with Jaimo, he also said that Jaimo accused him of sharpening the blade of his bush knife on 'his back' (i.e. the rock on the Jaimo hill). The *kungwaima* did their best to save the victims, to no avail. Then, one day, Tolongle told her story about the noise of piglets she had heard near the water-hole before she fell ill. This put the men on the right track. They discussed the matter and finally agreed *wase* sorcery was at the root of the epidemic. Since they did not know where the sorcery came from, they 'shot' their accusations in all directions. Eventually they sent a payment consisting of two pigs and K 200 to the Urat villages, the enemies of the past, where it vanished. Apparently, they said, it reached the right people, namely the sorcerers, because the epidemic stopped.

The northern Kwanga sketched these transactions as follows: At the beginning, there is a payment of K 100 to K 150. A person from the village thus hires a sorcerer and his assistants. They arrive to do the job. They follow the paths where the villagers defecate and throw their garbage. The person who hired them prepares food for them and takes care of their needs. He guides them to the victim's house, where the sorcerers keep watch. If the victim leaves the house at night to urinate or defecate, they assault him or her. The guide also shows the sorcerers the garden of the victim, and they hide along the path. After they have assaulted, operated upon and magically healed the victim, they leave. The relatives of the victim turn to the person who hired a sorcerer and then "close the road". Once the

1 Forge, a specialist on the Abelam, also mentions roads on which "paints" (all intrinsically powerful materials) and "sorcery payments" travel: "This paint likewise is not a local product and must be obtained from a distance; it travels down 'roads' from its origin, linking at most one or two big-men in each village through which the road passes" (Forge 1970b:264). When people try to find and pay off the sorcerer, the reverse route is taken: "Close kin of the afflicted approach every big-man within the village and important contacts outside it, trying to find one who will accept a large ring, acceptance implying that the man concerned believes that he may know others who may know the sorcerer. Should the victim die, the ring is returned – but by whom it is impossible to find out. These sorcery payments, like the yam paint roads, vanish into mild denials and smiling silence." (Forge 1970b:264-265)

2 This epidemic broke out between my third and fourth period of fieldwork. Since the APO and the HEO believe in *wase* sorcery and the nurses were on leave, a biomedical diagnosis of this illness is not available.

villagers found out that the father of a now middle-aged man had hired a *wase*. They went and killed him, then they sent a pig to the *wase*. Usually, however, they do not succeed in finding the person who made the initial payment.

Sorcery payments are not the only remedy. In 1982, the Tauhundor sent a group of eleven men to a "training course" in *wase* sorcery. Specialists from Urat villages taught them the art of divining and curing illness caused by *wase*. For a whole week they lived in a secret area of the bush, and the Tauhundor supplied them with food. They "ate" something and learnt about substances (and formulae?) which gave them the power to "fight the illness". For many months, these eleven men and their families had to observe a number of avoidance rules limiting physical contact. However, these men cannot cure all *wase* victims, only those who were shot with spears. We have already seen a description of such a cure (see Case 3). Apparently, the healer puts a piece of bark in his mouth and spits on the leaves. Then he clamps bones or lumps of limestone under his armpits. When he approaches the patient and sweeps his or her body with the leaves, he exhales. The bark then "smells" the illness, and the spears, the visible signs of the illness, fall to the ground. This divination method is called *hako*; the same term is used for sweeping the ground with a broom. After this ritual, the healer goes to a swampy area and fetches a herbal medicine for the patient to drink. This medicine is said "to make the body cold".

If *wase* sorcerers assault the victims with an axe, kill them or operate on them before magically healing them, the healers say they are helpless; they can only diagnose the cause of death by examining the corpse. Again, they put a powerful substance into their mouth which "makes their eyes clear" and they "see where the victim was struck by the axe". Ordinary people, they ascertained, cannot see these signs.

The eleven healers who have learnt about divination and the healing of *wase* sorcery cannot make themselves invisible and assault, kill or operate victims. They are not "real" *wase*.[1] Some people in the village call them "quacks". In their opinion, these men know hardly more than the *kungwaima* of the old days, who are able to extract the spears of the bush spirits. The only difference is that they have learnt about new and powerful *wase* substances. Indeed, the concepts and methods involved resemble those used in the cure of patients inflicted by bush spirits.[2]

Like the other illness-causing agents, *wase* not only attack grown-ups but also small children:

> Case 10: Woniai
>
> One day, the two-and-a-half-months-old boy developed high fever. His skin and the white of his eyes turned yellow, he stopped nursing and his body became "floppy". His mother took him to the APO in Moihwak, a good two hours' walk from Tauhundor, because the resident APO had left the village for a week. She was told that the baby did not have enough blood; the APO gave him an

1 The northern Kwanga always emphasize that *wase* sorcery is a new threat in their area. They claim their forefathers never mentioned *wase*, only *singa* sorcery. When Allen (1976:176-179) did his field work in the early 1970s, he heard similar comments throughout the area. He traced the origin of this new type of sorcery to Selnau of the Wam language group, and suggests that Dreikikir men might have brought this new type of sorcery from the New Britain plantations, where they worked as indentured labourers. The spread of this type of sorcery in the Sepik can only be clarified by future research; it may well have been imported earlier and/or along other routes than Allen suggested. In 1931/32, Mead (1938:340) already recorded it among the Mountain Arapesh and mentions that it "...has swept the entire coast from Madang to beyond Wewak in recent years".

2 The three terms *wase* (sanguma), *siklawase* (masalai) and *wasklabu* (stori bilong tumbuna) all contain the word segment *was(e)*; whether this is of semantic relevance would have to be analyzed by linguists.

injection. Back home, a *kungwaima* diagnosed that a *wase* had shot a spear into the boy's body and extracted it. Both treatments failed to heal the boy; he died twelve days later.

We now come to the last category of illness-causing agents, namely the ancestral spirits *(makamba* and *misumu)*. The northern Kwanga bury their deceased relatives near their homesteads and believe that they turn into spirits after death.[1] The recent dead are called *makamba*, remote ancestors (from the third generation upwards) are subsumed under the name *misumu*. *Makamba* and *misumu* reportedly remain in and near the village and inhabit the invisible part of the environment. Due to mission influence, people are reluctant to talk about local views of afterlife, but there is no question that they believe in *misumu* and *makamba*. The ancestors and the recently dead, like the other spirits, are regarded as malevolent and benevolent depending on the situation. We shall later see that they watch over the ground and help the hunter catch his prey. During the reconciliation feast, ancestral spirits *(misumu)* are invoked and asked not to destroy the crops (see Chapter 7.7.). They are also held responsible for illness and the treatment of such an illness is similar to that caused by *siklawase* and *kwaramba*. Most often, the recent dead are accused of causing trouble. When a woman suffered prolonged labour, for instance, her husband went to the grave of a recently dead kinswoman, spat on the grave and cursed her for tightening the birth channel. The same action is taken whenever people feel troubled by the dead (e.g. when the crops do not grow well, when people frequently dream of a *makamba*, etc.). This can be illustrated by the following account:

Case 11: Fleassa

During the epidemic mentioned above, Fleassa caught the sickness and retired to bed. In one of his dreams, he saw the recently deceased Koki arrive in a big car. Koki stopped in front of Fleassa's house and invited him into his car. Fleassa was scared; he said he was not yet ready to join him. Koki insisted and they argued back and forth. Finally, Koki mounted his car and drove away. Several people agreed that Fleassa would have died if his *masikome* had followed the *makamba* of Koki.

We have already seen that Koki died with an angry heart and, as it turned out, his name now and again cropped up in discussions about illness and death. The following example concerns his daughter, Lasauhe. We have already mentioned her earlier. At some stage of her illness relatives diagnosed that remote ancestors caused her illness.

Case 12: Lasauhe

About nine months after Koki's death, his daughter Lasauhe, then eighteen years old, began to complain about general weakness, loss of stamina and loss of voice. She had recently visited relatives in Musengwa, and it was first suspected she was "struck by water" when she washed there. Her brother fetched water and soil from this water-hole, they "steamed" her, but she was not cured. Her relatives built a stretcher for her and carried her several times to the aid-post in Nikriaka. The APO examined her but found no biomedical cause.[2] Her brother explained that the conflict caused by Koki's illness and death was the root of her worries. Koki's brother, Walendala, argued that the ancestral spirits were troubling the girl because they were angry about the conflict in their clan. He believed that they were holding her throat so that she could not breathe and speak well. As a cure he suggested that Mambor should sweep Lasauhe's body with leaves, put the leaves into coconut shells, add water and hot stones and "steam" her. Walendala collected the leaves, but Mambor stayed inside his house, protesting loudly: "I did nothing to cause the illness of Lasauhe; she is my granddaughter." After a while, Walendala gave up and threw the leaves into the forest. Lasauhe was finally

1 Formerly, the northern Kwanga buried their dead on wooden shelves up in the trees.

2 At this time, Dr. W. Schiefenhövel visited me in the field and examined the girl. He confirmed the diagnosis of the APO. According to him, the girl's symptoms were psychosomatic.

brought to the Health Centre in Dreikikir, where they treated her with iron injections. Half a year later, she was fully recovered and newly married.

Death in small children may also be explained by a *makamba* stealing the *masikome*:

Case 13: Nawi

Omarenge participated in her sister's *klebi* feast (see Chapter 7.4.). Her daughter Nawi was a month and twelve days old and seemed to be well and happy.[1] It was already dark when they left. In the middle of the night, Nawi began to cry and woke the mother. Omarenge tried to soothe her and felt that the skin was very hot. Nawi continued to cry "as if someone was holding her throat" and rolled her eyes. Her parents became alarmed. They got up, walked the five minutes to the aid-post and woke the APO. He examined the child and gave her an injection. It was too late. Nawi died before the sun rose. Her mother explained that the *makamba* of her father-in-law had stolen the *masikome* of her daughter. Her husband had repeatedly dreamt of his father during the last few weeks. In the mornings, he went to his father's grave, cursed him and spat on the grave but apparently he had not been able to chase him away.[2]

Several interesting themes emerged in this section. It was noted earlier that the metamorphosis of the physical appearance, a pervasive theme of the Kwanga mythology, supposedly not only occurred in the mythological past; certain beings still possess the ability to change their physical appearance: In day-to-day life, people see bush and water spirits as snakes or land crabs; in their dreams, they appear as men and women. The *wase* sorcerer is also believed to transform himself into an animal.[3]

Like the spirits of the dead (and those of yams), bush and water spirits are held to be benevolent and malevolent toward human beings. They reportedly make the crops grow but they also steal food, trick man and cause illness: water which was in contact with bush spirits makes people ill. This concept is similar to that expressed in avoidance rules between certain social categories: food which has been in contact with carriers of power causes illness in their social counterparts.

Local healers *(kungwaima)* and other men possess the ability to establish communication with the powers of the Invisible World. This communication is often established with meals. In the healing ritual for an illness caused by contaminated water, the male members of the clan who owns the water-hole attract the bush spirit with a coconut. They build a platform, decorate it and hold a feast with the *siklawase*, as they do with human people.[4] Some of this food is brought back to the village, where the men cook it and give it to the patient to eat.

According to the Kwanga, food not only causes illness, it is also used to establish contact with the "the other world" and even to treat illness. Furthermore, by eating certain secret substances, men gain special power, for instance those men who were trained to divine and heal illness caused by *wase* sorcery. We ought to bear in mind that the ingestion of food and medicine (i.e. a powerful substance) is basically the same process, for man knows what he eats will become assimilated into his body and his being.

1 That afternoon, I observed this mother and her baby for three hours as part of my time-sample survey on child development.

2 The father of this man had died more than six years ago.

3 Hauser-Schäublin (1983b:353-357)) reports that the Abelam regard pigs as transformations of the dead which act as intermediaries between "this world" and the "other world". It remained unclear whether the Kwanga have similar beliefs.

4 Similarly, people use food to establish communication with the spirit of a dead man during the *hi nunguhu* (see Chapter 7.6.) and the men's cult spirit during the *sukusa* (see Chapter 7.9.).

Some northern Kwanga ideas draw on a classification which constructs analogies between the consistency of the human body and the consistency of food (see Chapter 6.4.). Illness and special physical states are associated with heat. In Case 2, we have seen, "illness of the village" is called *koyanga hi belebele* (village, hot or heat, some kind). Illness caused by *kwaramba*, *wase* or *siklawase* is said "to make the body hot"; to cool it, people may not drink water, otherwise they would die (see Case 3). The curers either "steam" the patients or give them medicine "to make the body cold".

Thus we see that an analysis not only of beliefs regarding food production but also of beliefs regarding food consumption lead us to spiritual or religious domains. Northern Kwanga ideas regarding the growth and health of children have to be seen against the same background: severe growth failure of children is regarded as an illness attributed to any of the following causes: an infliction by men's cult spirits (see Case 4); a breach of the postpartum taboo; or the manipulation of the umbilical cord and the placenta by a sorcerer. Bush and water spirits as well as any of the other illness-causing agents are held responsible for illness in children as well as grown-ups (see Cases 6, 7, 10 and 13). Later in this text (see Chapter 8.4.) I shall argue that these local illness concepts influence the response of northern Kwanga mothers to the MCH services.

Chapter 5
Food Procurement

This chapter is the first of three describing those aspects of the nutritional system which have been subsumed under the heading "food pattern" in the approach outlined at the beginning of this thesis (see Chapter 1.3.). It is concerned with tools and techniques of food production and other ways of food procurement as well as with social and cultural values expressed in these techniques.

We have seen that the northern Kwanga practice is an agroforestry or forest fallowing system (see Chapter 2.1.). This system is used over much of lowland Papua New Guinea, with adaptations to local environmental differences (see Allen n.d.:4).

The subsistence activities within the northern Kwanga agroforestry system range from gardening to forestry, animal husbandry, fishing, hunting and collecting animal food. These subsistence activities meet almost all the food needs of the local people. In addition, the northern Kwanga also trade in local foods, namely in sodium salt and village pigs. More recently, they have begun to spend some of the money earned in cash cropping and other business activities on store foods. Each of these different ways of food procurement will be described in this chapter.

5.1. Gardening

Crop cultivation techniques among the northern Kwanga are closely similar to those described by Allen (1980) for the Urat. After the selection of a forest site, undergrowth is cleared and left to dry, the branches of taller trees are cut off, the fallen debris is chopped into smaller pieces and spread evenly over the garden site. The site is burned, tidied and small heaps of rubbish are burned again. The women sweep the site by hand and make little heaps for planting *asse*, women's yams.

Unlike the Urat, the northern Kwanga do not start planting before burning; it is only after burning that men plant taro *(Colocasia spp., nansi)* and banana *(Musa spp., lobo)* cuttings which the women have fetched from an old garden (see Plate 3). Since women may not break the soil with a digging stick, *gira*, (see Chapter 3.5.), they sow seeds and stick cuttings into the ground. The men then secure steep slopes with soil retainers (i.e. with horizontal wooden planks fastened with pegs). When this task is accomplished the men begin to dig holes for the yams *(Dioscorea spp.)*. Like the Urat, the northern Kwanga plant "long" yams *(D. alata)* and "short" yams *(D. esculenta)* in the same gardens.[1]

Twenty-six varieties and subvarieties of *D. esculenta (bake)* and nineteen varieties of *D. alata (naini)* have been recorded in Tauhundor. *D. esculenta* are subdivided into three

1 The Abelam (see e.g. Lea 1964:76 and Ross 1984:14) and the Ilahita Arapesh (Tuzin 1972:232) have two types of gardens: ceremonial gardens for the very long yams and "ordinary" gardens for mixed cropping.

Figure 6: Classification of *Dioscorea esculenta (bake)*

bake	bake	bakfayi	bakfayi	b. hula
				b. noko
			apeingoro	a. hula
				a. noko
			siyahawu	s. hula
				s. noko
			bakbarka	
			bakgale	
		wanebake	wanebakemandumu	
			wanebakelangri	
			wanebakesiangla	
			apeworhaba	
		bakwaa	bakfahange	
			bakwaamandumu	
			bakuraba	
			haukle	
			haussuboho	
		bakhakla	bakhakla nigri	
			bakhakla nalo	
	aku	taguelaku		
		fleaku		
	asse	assekubnansi		
		assebakware		
		assemi		
		assehambulbul		
		assenomboando		

groups: *bake*, which are planted shoots downwards, *aku*, all of which are planted shoots upwards, and *asse*, which are always planted by women in earth mounds. Each of these groups comprises several subvarieties (see Figure 6). People say, for instance, that *bakfayi* and *bakhakla* are short, *wanebake* and *bakwaa* long. *Bakfayi* is further divided into *bakfayihula*, described as "fat, longer, with thorns" and *bakfayinoko*, described as "fat, longer, without thorns".[1] Long yams are divided into two groups, *naihula*, always planted by men with a digging stick, and *nainoko*, all of which are planted by women in earth mounds.

The food classification of the northern Kwanga is often gendered. As among the Urat (see e.g. Allen 1983:9) the distinction between male and female yams may refer to the fact that the tubers produced are suggestive of human characteristics (e.g. in the case of *bakfayihula* and *bakfayinoko)*; a second distinction marks, however, whether the yams are planted by men or women (e.g. in the cases of *asse*, *naihula* and *nainoko)*.

Not only yams but also taro, banana, pitpit *(Saccharum edule, hinsi)*, sugarcane *(Saccharum officinarum, ayi)*, and other food plants (e.g. coconut, sago and pandanus palms) are divided into varieties and subvarieties. The greatest number of varietal taxa apart from those for yams have been recorded for banana (42), taro (33), pitpit (10) and pandanus (9).[2] This may be an indication of the cultural significance of these food plants.

In his report on Urat yam cultivation techniques, Allen (1980:9-11) discusses the use of *Pometia pinnata* leaves in some detail. The northern Kwanga women also collect large bundles of dead and dry leaves of this tree *(hame)* and carry them to the new gardens, where the men place them in the holes beneath or on top of the seed yams. This is an interesting feature of local cultivation techniques because it illustrates the interaction between forest and gardens and the clever use of local resources by the villagers.[3] Like the Urat, the northern Kwanga explain that this gives the developing tubers "room to move" and results in a smoother, aesthetically more pleasing shaped tuber. Allen had a sample of these leaves analysed and suggests that they may be supplying nitrogen and other minerals to the developing plant at a critical period of growth.

Once the yam vines have grown to a length of about two or three metres, the men cut posts *(fome)* and liana in the forest for tying up the yam vines. The staking of yam vines seems to be the most important factor influencing total tuber production (Enyi 1972, in: Allen 1980:13). Northern Kwanga gardeners invest a lot of time and energy in staking their yam vines, making skilful use of the many pollarded trees left standing in the gardens (see Plate 4).

Men harvest their yams about six months after planting. The tubers are lifted by using sticks and hands, and great care is taken not to damage the skin so as to avoid decay in the storehouse. Women then carry the tubers to a cool, dark house *(aka laka:* house, big), built by men especially for this purpose, either in the garden or the village. The men then carefully store their yams.

1 At present, I can only translate parts of these names (e.g. *wane:* Urat, *waa:* white, *ape:* bird, *siya:* coconut, *noko:* female, *hula:* male) without understanding their implications.

2 Northern Kwanga food crops and their botanical identification (if available) are listed in Appendix A.

3 The use of *Pometia pinnata* leaves has not been documented among the neighbouring groups!

New gardens are called *noome* until the first yam crop, *noombake*, is harvested. As soon as the first crop is safely in store, the second yam crop, *ungwambake*, is planted in the holes left by the removal of the first; the garden now turns into the *ungwamu* stage of the cultivation cycle.

At any given time, the local people have some plots under cultivation and other sites at different fallow stages.[1] Let us assume that on garden site A the second yam crop has been harvested and is now stored in the yam house. A portion of this crop is consumed by the people, the rest is left to sprout until it is planted on garden site B. There, the first yam crop has just been harvested and is now stored in the yam house. The biggest of these tubers go into the exchange between *auanalo* partners (see Chapter 4.4.); those received are divided into planting material and food. Small and/or damaged tubers are consumed from store. The sprouted planting material is brought to garden site C, as soon as the new plot has been cleared, burnt and swept.

Following garden plot C through all four stages of the cultivation cycle (s. Plates 5-6), we find that the forest site ready for clearing is called *buhungwa*; it is characterized by the growth of certain trees. As soon as clearing begins, it is named *taussubu*. It turns into *noome* when the first, and into *ungwamu*, when the second yam crop is in the ground. Banana, taro, and other cultivars which have been planted during the *noome* stage are now ready to be harvested. After the second yam harvest, women stop weeding the garden; it passes into the first fallow stage, *ungwamse*. Weeds and creepers rapidly take over and by nine to twelve months, cane grass (*Saccharum robustum*) regrowth marks the first stage in the fallow sequence. The northern Kwanga do not seem to name the next stage, called *penande* by the Urat (Allen 1980:15). Once "good trees" have developed and the forest site is judged to be ready for clearing, it is again called *buhungwa* and a new cycle begins.

Thus we see that time is an important aspect of yam gardening, first in the sense that the cultivation of each crop takes about one year to complete, and second in the sense that the forest fallow cycle requires long-term planning. The growth cycle of yams clearly dominates the definition of the cultivated stages.

As long as the first yam crop is in the ground, people have to observe several restrictions: in a *noome*, people may not cook food in a saucepan or bring hot water inside the garden "lest the tubers in the ground begin to rot"; people should not drink green coconuts in a *noome* because "it makes the ground turn cold and yams do not grow in cold ground"; women may not enter a *noome* after the sun has climbed the sky, during their menstruation or after they left it to urinate, defecate or wash themselves "lest the pigs come and destroy the gardens". All of these rules apply only to gardens in the *noome* stage. Many people from Tauhundor continue to observe these rules. Allen (1980:5) mentions similar restrictions and concludes: "Most of these restrictions are enforced because the yams which possess spirits are at their best mischievous and at their worst delinquent, and demand respect and mollycoddling, and are extremely sens(i)tive to female sexuality."

We have already seen that the northern Kwanga formulate similar beliefs (see Chapters 3.5. and 4.2.). The following evidence further supports these statements: One man gave a long report of his gardening magic *(aksumbu:* house, feast ?) which centres around the

1 The data on yam growing cycles were systematically collected among all the 67 economic units identified in Tauhundor and cover a period of 24 months, from October 1983 to September 1985.

planter's efforts to stop the yams from running away to another garden and to make them grow big and plentiful.[1] These efforts begin right after harvest and accompany the tubers from that point on to sprouting and through all other growth stages until the next harvest. Yam magic can be learnt, as I have already mentioned, during initiations into the local men's cult, by individual experiments and from outsiders.[2] A man who uses planting magic may not eat his own yams; he has to prestate it to his exchange partner. These examples illustrate the cultural significance of yams among the northern Kwanga; they also demonstrate that their yam cult is less pronounced than that of some neighbouring groups.[3]

We said that the cultivation of yams also provides a frame-of-reference for the yearly calendar. The northern Kwanga call the period from clearing to harvest of the first yam crop *assama*. In former days, they cleared a new forest site after the completion of the *assama* period. Apparently, this cultivation cycle is still practised among the southern Kwanga. The northern Kwanga, as we have seen, adopted a new schedule from the Urat only a generation ago (see Chapter 2.2.). They now clear smaller plots and cultivate them twice before moving to the next plot.

The gardens which are cleared in January, February and March can be harvested in September, October and November. If only one yam crop is grown, this cultivation cycle results in a seasonal availability of yams from about September to March, depending on the date of planting, the size of the garden and the quantity of yams harvested. The southern Kwanga still rely more heavily on sago exploitation, especially during the months after planting yams (Schindlbeck 1990:235). According to some northern Kwanga informants, their forefathers suffered a taim hangre (a period of hunger) during the "dry" season from April to October (i.e. after yam planting). It is not clear whether the northern Kwanga ever suffered from "hunger" or whether the phrase taim hangre refers to the fact that yams were replaced by sago as a staple food. The latter interpretation has been confirmed by many spontaneous statements of the villagers and implies that sago is less valued as a staple food than yams.[4] In fact, the northern Kwanga look down on the Kombio in the north because they "only eat taro" and on the southern Kwanga because they often eat sago. Yams clearly are the most appreciated staple food of the northern Kwanga.

The old cultivation cycle and associated rituals were controlled by the men of the higher initiation grades of the local men's cult (see Schindlbeck 1990:238). With the introduction of a second yam crop, the yearly calendar has not been upset, although it seems probable that the clearing of a second new garden competes with (former) ritual activities. Thus we can assume that the northern Kwanga not only face a dilemma between kastom and bisnis, which was mentioned earlier (see Chapter 2.3.), but also between kastom and new subsistence activities.

1 Unlike the Abelam (Lea 1964) and the Ilahita Arapesh (Tuzin 1972) who concentrate their yam magic on the cultivation of long *Dioscorea alata* the Kwanga focus their yam magic on *Dioscorea esculenta* (see also Schindlbeck 1990:235).

2 Some men claimed to have obtained their yam magic from neighbouring villages or as far away as Seim in the west and Wosera in the east.

3 Huber-Greub (1988:145-189) describes contemporary Abelam beliefs and practices relating to yam cultivation. These are much more elaborate than those of the contemporary Kwanga.

4 Hauser-Schäublin (1983a:180) reports a similar interpretation of the term taim hangre among the Abelam: "Die Zeit, in der sie Sago und Bananen essen, bezeichnen sie als 'Zeit des Hungers' und warten ungeduldig auf die neue Yamsernte."

Allen (n.d.:10) writes that yam production is strongly seasonal and influenced mainly by the seasonal pattern of rainfall. The Urat harvest the first crop between April and May, the second harvest between November and December. Among the northern Kwanga, who live only a few kilometres to the south of the Urat, yam production is also seasonal but slightly deferred. They harvest the first yam crop between September and November, the second between May and July. In other words, the first yam crop of the Urat matures during the "wet" season (from November to April), the first yam crop of the northern Kwanga in the "dry" season (from May to October). Looking at these facts from a different angle we can say that the first yam crop of the Urat matures at about the same time as the second yam crop of the northern Kwanga. This has several implications: First, the northern Kwanga have adopted the Urat practice of growing two yam crops per year but they have changed the schedule of planting the first and the second crop. Second, the seasonal pattern of rainfall is less important in the timing of the cultivation cycle than Allen suggests because the northern Kwanga clear and burn a new garden in the second half of the "wet" season. We ought to bear in mind that the annual variability of rainfall is only about 11 percent in this humid, tropical climate. Third, the schedule of yam exchanges is closely linked with the cultivation cycle and therefore the Urat exchange the best tubers of their first crop in June and July, the northern Kwanga in December and January. In conclusion I suggest that in this humid, tropical climate the yam cultivation cycle is less influenced by climatic factors than by cultural factors.[1]

From a nutritional point of view it is important to note that because of the introduction of a second crop, yams now are available almost all year round. It would be interesting to investigate whether this agricultural innovation has resulted in an improved nutritional status among the northern Kwanga. However, a comparison with the nutritional status of the southern Kwanga[2] and a systematic investigation into the possible effect of the seasonal availability of yams on the nutritional status is not possible on the basis of my data.

Apart from yams, the northern Kwanga grow a variety of other crops in the same gardens which are mainly valued as complementary and staple foods. A survey of cultivars grown on half a garden plot (425 m^2) in the *ungwamu* stage serves as an illustration of this technique of mixed cropping (see Plate 5). "Long yams" were grown in only seven holes, "short yams" in eighty holes. Bananas (100 stalks) and taro (180 plants) were planted in between. Sugarcane, pitpit, pumpkin, leafy greens, corn, pineapples, cassava, watermelons and a few sweet potatoes grew interspersed between the staple crops. Thus we see that recently introduced and "old" plants grow side by side. Eleven papaya trees and seedlings of other food-bearing trees have also been planted in the garden; this is another example of the interaction between the forest and the garden.

The variety of garden produce is mirrored, of course, in the northern Kwanga diet. However, it is difficult to extrapolate information on food consumption from data on food

1 Kaufmann (1982b:12) comes to similar conclusions in his examination of yam cultivation cycles and associated rituals among the Kwoma: "Bemerkenswerterweise sind die Bindungen, wie die heutige Verteilung der Termine über das ganze Jahr zeigt, im Lokalklima des Kwoma-Gebietes nicht von biologischen Faktoren beim Anbau der Knollenpflanzen diktiert, sondern vom Menschen aufgrund religiöser Ueberlegungen gestiftet worden."

2 The nurses of the MCH service often mentioned that the children of the Bongos area suffered from worse nutritional disorders than those of the northern Kwanga area.

production. In Chapter 8.1. the place of garden produce in the northern Kwanga diet will be assessed on the basis of food intake data .

The previous chapter analyzed the influence of the social organization on domestic activities. The organization of gardening within an extended family and the division of labour by sex is illustrated in the following account from my field notes of May 25, 1985.

> After a forty-five-minute walk from Tauhundor, Sahamoku and her three children arrive in the first of her garden plots. She takes off her *sobo* basket, adjusts the baby's carrying sling, picks up a fallen breadfruit leaf, covers the ground and sits down. It is time for a rest. Over a glowing piece of firewood, which she brought along from the village, she dries a tobacco leaf and rolls a cigarette. Her children Mangrima and Oie ask for food, and she deals out cold sago from the meal they had the evening before. Tasinole, the baby, intermittently sucks her breast.
>
> Sahamoku unwraps a leaf parcel containing pumpkin and watermelon seeds, a gift from another woman. She now sows them along the top fringe of the garden. Tasinole still sits in the carrying sling on her left hip.
>
> She then picks up her *sobo* basket and climbs down the steep terrain to the adjoining garden plots. We pass through a second plot to which she refers as *noome Mangrima hi*, explaining that, at her marriage, her little daughter will one day receive seed yams and other planting material propagated from that grown on this plot. In a third garden plot, an *ungwamu*, Sahamoku collects cuttings of taro, banana and green vegetables and carries them back to the first plot, also a *noome*, where she begins to plant the greens.
>
> In the meantime, her husband Hauseng has arrived. He tells her to fetch his digging stick from the yams storehouse at the lower edge of the garden. He then plants the taro and banana cuttings with his digging stick, while Sahamoku merely scratches the ground with her bush knife and plants the vegetable cuttings. In order to move more freely, she has adjusted the carrying sling so that Tasinole now sits on her back.
>
> After she has finished planting, she fetches her *sobo* basket and calls out to her children, who try to catch insects at the bottom of the *noome*. They refuse to join her; she leaves them with her husband while she walks back to her *ungwamu* and begins weeding. Hauseng and the children arrive there after about twenty minutes. With his digging stick he carefully opens four or five holes containing several yam tubers. Sahamoku joins him, collects and cleans the tubers, packs some of them into her *sobo* basket for immediate consumption and piles up the rest at the bottom of a banana stalk, covering them with dry banana leaves.
>
> Together with Hauseng and her children, she then leaves her garden plots and goes back to meet her co-wife, Kiaru, in her *taussubu* where they had left her and her children earlier that day. Kiaru has also fetched food in her *ungwamu* and waits for them with a full *sobo* basket. Manaru, a bachelor who lives with Hauseng's family, has already climbed one of the tall trees and is busy chopping off the branches. Hauseng chooses another tree and begins to work there.
>
> Sahamoku and Kiaru gather firewood, light two fires, peel their yam tubers, cut them into small pieces, add leafy vegetables and water, and cook a pot of food each. Several bananas bake in the fire, and as soon as they are done, the women peel them and put them on large leaves which the children have gathered. Both women have taken off their carrying slings and hold their babies on their laps while they sit, smoke, chat and wait. When the food is ready, they call out for Hauseng and Manaru and deal out the vegetable stew on a separate plate for each person.
>
> After the meal, the women go to chop up the branches which have fallen to the ground, the men move on to the next trees. They leave the two babies in the care of their older children. For several hours, they work hard and exchange only a few words.
>
> In the late afternoon, Sahamoku rekindles the fire and bakes some breadfruit seeds which she collected earlier that morning on her way to the garden. The other members of the family join her, eat the seeds, finish the leftovers from the earlier meal, smoke and chat until it is time to go home. While the women wash the plates, pots and children at the nearest water-hole, Hauseng cuts a large piece of firewood which will keep his old father warm during the coming nights. When everybody is ready, the family slowly climbs the narrow bush path leading up to the vehicle track and walks back to the village.

This account demonstrates that each family works in several garden plots at the same time. In polygynous families, each wife has her own gardens, although they join forces to accomplish laborious tasks such as clearing the forest. On this particular day, the extended family of Hauseng collaborated as an economic unit but, on other days, some relatives join them or they assist other relatives on their garden plots. The younger brothers of Hauseng often help him in garden work and together they take care of their mother's garden. Sometimes, a sister who is married to a man from the hamlet Wangerenge comes and offers a hand to her old mother. Apart from his closest kin, Hauseng often assists other relatives, especially in those years when he cultivates a garden on the land of their descent groups. In 1984/85, he had his gardens on Samtihengi territory and justified his claims by the fact that his mother belongs to this clan.

Like Urat gardeners (see Allen 1980:11), the northern Kwanga also enjoy being in their gardens and spend a great deal of their time there. Children accompany their parents unless they have to attend school; especially the smallest ones always stay near their mother. Since the gardens are quite far away from the village, the families leave early in the morning and do not return until late in the afternoon. They usually prepare and eat small meals whenever they are hungry; only in the *noome* they may not cook, as we have seen earlier.

5.2. Forestry

In an agroforestry system such as that of the northern Kwanga, the food crops of trees and other woody perennials are almost as important as the other vegetable crops mentioned in the previous section.[1] The northern Kwanga are proud of their skills in silviculture, and their exploitation of the forest is, of course, not limited to food production. Most of the locally produced objects are made of bush material (see Obrist 1987). In many respects, the use of trees and other woody perennials is similar to that described by Allen (n.d.:7) for the Urat. Comparative data on other Kwanga groups are not available.

On their way to and from the gardens, the northern Kwanga often point out whether a tree has been cultivated (man i planim) or whether it has grown spontaneously (em i kamap nating) from suckers or seeds.[2] Some seeds are dropped by flying foxes (male: *apkumbu*, female: *apkwasi)* or birds. People often comment on the maturity stage of the trees and explain who has the right to harvest them and why. They plant seeds and suckers for their children and grandchildren, sometimes to mark land rights, sometimes as memorial signs for important events (e.g. a large food exchange), sometimes as a present (e.g. by the mother's brother for the sister's son). Men and women plant trees; men are more likely to plant pandanus and sago palms, while women preferably cultivate tulip trees and other trees providing edible leaves.

The planter and his or her parents may not eat the first harvest of their own tree or palm. A transgression of this rule is believed to cause the illness *wahapsila* (see Chapter 4.5.). We have already noted that the northern Kwanga often construct a parallel between human

1 A similar statement has been made by Ross (1984:20): "The Wosera are thus silviculturalists as much as horticulturalists."

2 According to Huber-Greub (1988:128) the Abelam also distinguish between forest food which has been planted and forest food which grows spontaneously.

procreation and food reproduction by the sanction *wahapsila*. Here, the parallel is further stressed by an emphasis on the first-born child and the first tree crop; in both cases, special rules have to be observed, either by the mother (i.e. food avoidances during lactation) or the planter (i.e. a proscription against eating the first crop).

Food-bearing trees and shrubs are not only cultivated but also tended by the people who own them. Especially the men regularly visit plantations and cut back the undergrowth around the young plants. In the sago, pandanus and banana groves, they clear out some of the young plants to give room to the others. If they cultivate trees and palms near or in the village, they often build small fences to prevent the village pigs from eating the young plants.

With regard to nutritional returns, the sago palm has to be considered first. The Tau term for sago palms *(Metroxylon sp.)* is *naku*. The northern Kwanga differentiate between sago palms which grow wild from palm seeds *(siknaku)* and those which grow from cuttings cultivated by man *(tinanaku)*. They further distinguish between sago palms with thorns, *naklame*, and without thorns, *nakwaa*. Long sago palms are commonly called *hulanaku* (male, sago palm), short ones *minaku* (tree, sago palm).

In the context of this study, it seems particularly interesting to investigate how many sago palms have been felled, for what reason, by whom and for whom. For this purpose, records were kept on all sixty-seven economic units of Tauhundor.

Table 9
Distribution of Felled Sago Palms by Month and Purpose

Year	Month	Home consumption	House roofing	*Sukusa*	Party	Total
1984	Nov.	–	–	–	–	–
	Dec.	7	–	3	–	10
1985	Jan.	8	4	–	–	12
	Feb.	5	–	–	–	5
	March	7	–	–	–	7
	April	12	–	–	–	12
	May	3	1	–	–	4
	June	–	–	–	–	–
	July	5	8	–	4	17
	Aug.	–	–	–	–	–
	Sept.	–	–	–	–	–
	Oct.	–	–	–	–	–
Total		47	13	3	4	67

Source: Field notes

Table 9 shows the number of sago palms felled per month. Twenty-one sago palms were processed during the "dry" season (from May to October), forty-six during the "wet" season (from November to April). In April, twelve sago palms were felled and processed; therefore, our interpretation of seasonality is greatly influenced by the decision whether we

count the month of April as belonging to the "dry" or the "wet" season. According to Allen (n.d.:1), as we have seen, the "wet" season lasts until the end of April. However, since the annual variability of rainfall is only about 11 percent in this climate, the division of the year into a "dry" and a "wet" season seems not very decisive. In my opinion, it is more to the point to interpret data on sago production in relation to the use of sago than to climatic factors.

If we associate the date of production with the use of sago, we find that sago for home consumption was produced between December and May and in July. People explained that the harvest of the first yams crop in October/November 1984 had been poor and the "wet" season in 1984/1985 unusually rainy and long. Already in January 1985, some families complained that their yam stores were empty. According to the survey results, the starch extracted from forty-seven sago palms (71.5%) had been used for home consumption.

However, a closer examination revealed that even if people said they produced sago for their own consumption, they passed small portions on to their relatives. On the other hand, some of the sago allegedly produced for certain feasts was kept for home consumption. Thus we see that data on food production do not always provide reliable information on food consumption.

This is also true of the survey results regarding the number of sago palms felled by each economic unit. More than a third of all economic units (38.8%) did not process a sago palm during the survey period; but they received raw or cooked sago as an informal gift from relatives or as a formal gift at a feast. These examples show that data on food production have to be correlated with data on food distribution and consumption. In Chapter 7 various food distributions including sago meals will be discussed; data on food intake and the place of sago in the northern Kwanga diet are presented later (see Chapter 8.1.).

Another third (37%) of all economic units felled and processed one sago palm, 15% processed two and only 9% three or more sago palms. Thus we see that there is quite a remarkable variation between the economic units in terms of sago production. This variation can be attributed partly to success or failure in yam growing, partly to participation or non-participation in feast preparation. The latter point is illustrated by the fact that all six economic units which felled three or more sago palms contributed sago to more than one of the feasts held at a house roofing, at a *sukusa* or at a party.

The following account from my field notes of January 30 and 31, 1985 serves as an illustration of sago extraction as a food-getting activity.[1]

> A group of five women, three girls, two boys and a toddler leave the village early in the morning and follow the steep bush paths leading to the Mosaii sago swamp. After about half an hour they hear the sounds of sago pounding. Yesterday, two of their husbands and three adolescent sons felled a sago palm, opened a section of the palm rind and built four washing apparatuses. Early this morning, a group of young men have returned to the site and begun to loosen the pith by pounding it with special tools *(nakleremb)*. As they come closer, the women call out to them but do not stop as they pass and head on towards the washing site. Here, they inspect the washing apparatus in the rivulet and settle down for a brief rest.
>
> After a few minutes, Akahung gets up to wash the laundry she brought along. Sahamoku keeps chatting for a while, then she searches her *sobo* basket for the coconut bast cloth *(saya)*; she finds it

1 Sago extraction techniques have also been documented for the Kwoma (Kaufmann 1987:188-189) and the Abelam (Lea 1964:120-122 and Huber-Greub 1988:126). Their techniques are very similar to those of the Kwanga; but the division of labour by sex varies from group to group.

and walks to the water to soak it. Maenge soon joins her. They leave the cloth on the washing trough and disappear in the forest to cut palm frond linings for the settling trough. In the meantime, Akahung and Akamau prepare pegs *(nakria)* and fasten their bast cloth to the washing trough. The women go through the same routine and work side by side until the washing apparatus is equipped.

After about two hours, all four women get their *sobo* baskets and walk about fifty metres to the site where the men felled the sago palm. The young men are still busy pounding the pith. The women grab handfuls of pith, put it into the baskets and carry it back to the washing site. Each woman dumps a portion of the pith on the upper end of the washing trough, pushes a few handfuls down the trough towards the barrier made of bast cloth, scoops water with an enamel bowl or a coconut shell, pours it on top of the sago pith and kneads the fibrous pulp to express the water. After the squeezing, the water runs down through the bast cloth and into the settling trough. The washed-out pith is tossed out onto a pile near the river bank. The water in the settling trough is of an orange colour. It remains there until the fine sediment (*nakome*) has been deposited at the bottom of the trough.

While the four women are busy extracting the starch, Nauili and two almost adolescent girls prepare a meal. She has brought some dry sago flour, pitpit, bananas, pumpkin, taro and leafy greens. With the first two ingredients, they cook a soup, with the rest a vegetable stew.

It takes each of the four women approximately an hour to process a *sobo* full of sago pith. After finishing the first lot, they join Nauili and the girls, light their cigarettes, rest, chat and wait for the washed-out starch to settle down. While they wait, they eat a snack of baked banana and breadfruit and a fresh papaya. Before they fetch the next load of sago pith, they drain the water which has collected in the settling trough. Again, each of the four women performs the same routine.

After about an hour, the second lot has been processed. The meal is now ready and the women sit down to eat. Nauili and her helpers deal out the food on separate plates for each woman and her children. The latter have played nearby and now join their mothers.

The four women do not rest after their meal but resume their work. It is rather strenuous, and they have another two rounds to go. Just before they fetch the last baskets of sago pith, they carefully turn the sedimented starch to make it "strong" *(kwambu)*.

At about 5 p.m., they have finished the fourth basket. Each of the four women now searches for a container to preserve the sedimented starch. Akahung and Akamau fold the spathes of a limbum palm *(sobo)* and form two plant containers. Maenge brought a metal container, and Sahamoku uses midribs of a sago palm leaf *(kauhaba)* to construct a small reservoir. They put the starch into these containers, cover them and stow them away in a little shelter.

Finally, they are ready to leave. It takes them more than an hour to climb the mountain path, and when they reach the village, it is almost dark. One after the other, the women disappear in their houses. It is time to prepare the main family meal.

Early the next morning, they gather again for the second day of sago washing. Akamau has been replaced by two young women who come along as carriers and child minders. They may not process sago; if they did, the elder generation could not eat any meal prepared from this sago flour. Also, they are not allowed to cook for the four other women because they call them *umai* (mother); as always, the *umai* and *yi* use separate fires and saucepans to prepare their meals.

Eleven children accompany the six women today. Their ages vary from two to sixteen years. Mundalisa (8 years) and Mahembilmbil (11 years) practise the technique of sago extraction with discarded pith, help with the cooking and play with the younger children. The elder boys soon disappear in the forest and return first with a few small lizards and fishes, then with pockets full of breadfruit seeds. They roast the animal food and later the seeds in hot ashes and share this snack with the smaller children. One of the young men who pound sago today brings a ripe pandanus. He found it on his way to the washing site. The young girls and a woman of the *umai* generation get organized at once, cut it up and cook it with bananas, taro and wild sugarcane.

The other three women of the *umai* generation are busy washing sago. Since they processed two thirds of the palm on the day before, their work is less strenuous today. They chat and laugh with their kinswomen and their children, exchange gossip and discuss the latest news. As soon as the meal is ready, they all sit down and eat.

Only one more load of sago pith has to be processed after the meal. The women finish working at about 5 p.m., put the starch into the containers, clean the working site and return to the village.

The use of this sago palm falls into the category of "house roofing" (see Table 9). In my account of domestic life in a sample hamlet (see Chapter 3.3.), I mentioned the family of Nandebe who lived uxorilocally with the Wainassa Assatagumbi. In January 1985, he and his family were ready to move back to the hamlet of Nandebe's agnatic group. His brother Kubai used this opportunity also to construct a new dwelling for his own family. The two brothers and their families joined to prepare the feast which is always held at the roofing of a new dwelling. Later in this text, such a feast will be described in detail (see Chapter 7.2.).

In this case, access to sago palms was gained through patrilineal and affinal ties. Nandebe and Kubai felled two sago palms, one in a grove belonging to their own descent group (Apinchanokor), one in a grove belonging to their wives' descent group (Wainassa Assatagumbi). In other cases, access to sago palms was granted by matrilateral kin.

In sago making, a family often collaborates with members of other descent groups, especially if they are preparing a feast. In this case, the two Apinchanokor families called on the help of three other descent groups, namely the Wainassa Assatagumbi, the Flenokor and the Simbimbi. Strong matrilateral and affinal ties exist between these four descent groups. Nandebe's wife, Akahung, formed a washing team and, as we have seen above, led them to the Mosaii sago swamp. Kubai's wife, Taptihieng, headed a second washing team and took them far away to Apinchanokor territory across the river.

With regard to the division of labour (see Chapter 3.5.), we have seen that men fell the palm, open it, build the washing apparatus and pound the pith. The women then equip the washing apparatus, carry the pith from the sago palm to the washing site and extract the starch. The northern Kwanga say that both sexes perform all these activities, but in most observed cases the above-mentioned division of labour was practised.

In order to estimate the productivity of sago making, records were kept on the number of *sobo* baskets full of sago pith washed by each woman. On the first day, four women processed the contents of four baskets each, on the second day, three women those of two baskets each, and one woman those of one basket. All in all, this palm yielded twenty-three *sobo* baskets of sago pith. Unfortunately, data on the weight of these *sobo* baskets or the extracted sago starch are not available.

The production of sago palms differs in quantity and quality from those of other tree crops. Although considerable variability exists in yields among the various *Metroxylon* palms and among the sago productivity of different ethnic groups, it is generally acknowledged that sago production offers a highly effective means of food provisioning. As we have just seen, one sago palm yielded twenty-three *sobo* baskets full of sago pith! Furthermore, sago is rich in carbohydrates and can be considered a staple food, whereas most other tree crops are complementary foods, contributing nutrients other than carbohydrates (e.g. protein, fat, minerals and vitamins).

Small portions of the extracted sago were later informally distributed by the members of the two washing teams, each woman favouring her kinswomen. This sago was used for home consumption. The larger part of the extracted starch, however, was preserved for the formal distribution at the house-roofing feast held a week later.

While the sago palm grows in the swampy areas of the forest, the coconut palms *(Cocos nucifera, siya)* are usually planted only around house sites and in settlements. I have already mentioned that islands of coconut palms demarcate human settlements in the vast sea of forested hills. A new settlement (e.g. Warmenakor) is easily recognized by the young, short

coconut palms, a deserted one by the old, tall coconut palms in the middle of the forest. The names of three varieties of coconut palms have been recorded in Tauhundor (see Appendix A). Data on their life cycle and productivity are not available for the study area. Botanists report that coconut palms produce a good harvest after about twelve years and, over the next forty years, they produce approximately fifty to eighty fruit per year (Franke 1976:177). Since each family owns several coconut palms, this fruit is available all year round. Men climb coconut palms with the help of liana foot slings *(kubu)*, women use long sections *(kwaia)* of the *sisa* cane species, with wooden forks attached to the front, to make the fruit fall down.

The breadfruit tree *(Artocarpus altilis, ware)* is planted in gardens, along ridge-top tracks and on the fringe of hamlets. According to Franke (1976:107) breadfruit can be harvested about five years after planting and, for the next sixty to seventy years, the tree produces three harvests of about fifty fruit per year. When we examine the northern Kwanga food intake data (see Chapter 8.1.), we shall see that breadfruit from different trees are available almost all year round.[1] The northern Kwanga distinguish between two varieties of breadfruit tree, *warhula* (breadfruit, male) and *warmi* (breadfruit, tree); they eat only the seeds of the fruit *(warsiki)* of the *warhula* but the whole fruit of the *warmi*. At harvest, men usually climb the trees; women use the long canes.

The pandanus palm *(Pandanus conoideus, gla)* is also planted in gardens during periods of cultivation; some families even have special pandanus groves and/or plant these palms on the fringe of their hamlet. The names of nine varieties have been recorded in Tauhundor (see Appendix A). Again we have to refer to botanists for information about their life cycle and productivity. Purseglove (1983:515) writes that pandanus palms flower three to four years after planting, the spadices mature in about a fortnight, and a fully-grown tree produces thirty to forty spadices a year. My food intake data indicate that in the northern Kwanga area, pandanus can be harvested all year round. Men climb the palms to harvest the fruit, women use the long canes.

Other cultivated trees produce seasonal crops, namely a kind of wild cherry *(warkamba)*, mango trees *(Mangifera indica, kimbia)*, soursop *(Morinda citrifolia, mblasi)*, certain nut trees *(Canarium sp., yili* and *kumolo)*, and the taun tree *(Pometia pinnata, hame)*. The latter produces fruit *(hamesiki)* which look and taste like litchi; on the basis of their colour, the northern Kwanga distinguish between three varieties (see Appendix A). When it is in season (e.g. from August to October 1985)[2], the fruit is eaten to excess. According to botanists, the *Pometia pinnata* tree grows about 100 to 120 kilograms of fruit per year (Franke 1976:252-253). At harvest, men cut the branches with axes and let them fall to the ground where the bunches of fruit are removed. During yam planting, as we have seen, women collect the dry leaves and carry them to the gardens, where the men plant them together with the seed yams.

Women plant a number of trees and shrubs with edible leaves on the fringe of the hamlets, namely the tulip tree *(Gnetum gnemon, ugia)*, *wasarkia (Ficus wassa)*, *mengle, (Ficus copiosa)* and *waingusa (Abelmoschus manihot)*. The latter are also cultivated in gardens. In order to harvest leafy vegetables, women often climb the trees and collect the leaves in *sobo*

1 Lea (1964:124) noted that among the Abelam breadfruit is eaten from August to February (see also footnote 16).

2 In the Urat area the taun tree was in season from December to February (Allen n.d.:4), in the Abelam area from January to April (Lea 1964:124). Perhaps there exists no regular seasonality in tree crops in this climate.

baskets. In addition to the leaves of wild forms of tree mentioned above, women also systematically gather other wild trees, ferns, creepers and herbs growing in the forest near the village including *Ficus hispidioides (kware)*, *Cyathea sp. (apsaka, sahabklamba)*, *Stenochlaena palustris (wariangu)*, *Polyporandra scandens (wainsalambau)*, *Callipteris prolifera (aiai)*, *Pneumatopteris sogerensis (paiafarme)*, *Limnophila rugosa (bermbo)*, *Neoalsomitra trifoliolata (kwasmabu)*, *Diplocyclos palmatus (yarkike)* and *Trichosanthes ovigera (mosarngle)* (see Appendix A). Some of these plants are favoured for particular meals, especially for festive meals (e.g. the feast held at the roofing of a new house). Mainly children collect certain edible seeds of trees and palms (e.g. *menglesiki*, *ugiasiki*, and *korhapsiki*).

When the women cook sago dumplings, they add mango leaves *(kimbiagugwa)*, taun leaves *(hamgugwa)* or tree barks *(bukia-gisa)* to the water for special flavouring (see Chapter 6.2.). The inflorescence of wild-growing bananas *(klebinglo)* plays an important role in the first menstruation feast (see Chapter 7.3.). Apparently, the northern Kwanga also gather and eat the shoots of certain wild plants (e.g. bamboo shoots).

Most probably, this list of wild plant foods is not complete, but it suffices to show that the northern Kwanga consider a number of wild plants as a contribution to their diet, not merely in times of food shortage but also in day-to-day life and even on special occasions (e.g. the first menstruation feast or the house-roofing feast).

Although I have mentioned banana and papaya cultivation under the heading "Gardening", it could equally well be mentioned here. In fact, the northern Kwanga cultivate banana trees not only in gardens; small banana plantations also line the paths and skirt the hamlets. The betelnut *(Areca catechu, mahambi)* is not a food in the strict sense; but since the local people claim that betelnut is effective in suppressing hunger and increasing energy, it may also be mentioned in this context.

Cultivated trees are individually owned, whereas wild trees and other woody perennials belong to the landowners of the ground on which they grow. Since northern Kwanga families often cultivate gardens on the territory of other patrilineages (see Chapter 3.6.), they are very much concerned about their claims to cultivated trees. The following account from my field notes of June 7, 1986 illustrates that trees and other landmarks are important signs in the social and cultural landscape of the northern Kwanga.

> On the way to their garden, Paiafarme and his family follow the vehicle track as far as Boromani, then they turn right and follow a bush path leading uphill towards Jaimo, the highest elevation in this sea of green hills. Jaimo is the name of a "bush spirit" (masalai, *siklawase)*. According to northern Kwanga belief, Jaimo lived on this hill (see Chapter 4.3.). As they pass a stone, for instance, Paiafarme tells his children that Jaimo once sharpened his knife here.
>
> Jauating, his wife, notices some sago mushrooms, and they decide to collect them soon. A bit further down they pass under breadfruit trees, tulip trees and coconut palms. Jauating explains that until a few years ago, an agnatic group of the Samtihengi had a camp here. These people have planted the food-bearing trees and regularly return to harvest them.
>
> The couple notices many more signs as they move along: a bird announcing rain, a breadfruit tree almost ready for harvest, a spot where a pig has rooted during the night, a palm formerly used by Paiafarme's father for making spears, a path leading down to a water-hole, and many other things.

This account gives an impression of how the northern Kwanga read their environment. Cultivated trees are important elements of this environment because they signify the presence of human beings in a forest which is the habitat of animals, plants and "bush spirits".

5.3. Animal Husbandry

As in most other parts of Papua New Guinea, animal husbandry among the northern Kwanga focuses on pig raising.[1] Pig raising is an integral part of their agroforestry system. Feral boars mate with semi-domesticated sows. The sows litter in the forest, and their owners cajole them into returning or fetch them back to the village. A few weeks after birth, women separate the piglets from the sow; they hand feed them and carry them in netbags, almost like children. Once they are a little older, men castrate the male piglets. Male and female piglets are blinded and marked by cutting their ears. Semi-domesticated pigs are free-ranging; during the day, they roam the hamlet, the forest and old gardens for food. In the evenings, women prepare a special pig meal consisting of cooked taro, bananas and yams in clay pots reserved for this purpose. Papaya is also mainly considered as pig food. Leftovers from family meals are either kept until the next morning and consumed as breakfast or fed to pigs.

The following account from my field notes illustrates pig raising among a northern Kwanga family.

> November 19, 1984: Sahamoku waits in vain for her bigger pig to return to the homestead for the evening feeding. Only the smaller pig is there to claim its share. Sahamoku discusses the sow's absence with the other family members, and they all agree that the animal has probably hidden in the forest to litter.
>
> Since attention is focused on pigs tonight, Sahamoku spontaneously tells her "pig-raising history": Her first pig ran away after about two years. It died in the forest, and its meat was already rotten by the time they found it. She was more successful with the next two pigs. The second pig, a rather small boar for his age, fetched K 150 when she sold him to a fellow villager. The third pig grew fat and big; she and her husband presented it to their exchange partner during a *sukusa* held in the late 1970s. Her fourth and fifth pigs are still alive. They are females, and both have littered twice. Sahamoku twice tried to raise a piglet of these litters, but she failed; after several months, both of them ran away and disappeared in the forest.
>
> November 20, 1984: Omhissa, an adolescent boy and clan brother of Sahamoku's husband, reports the whereabouts of the sow. Sahamoku and her children follow him and find the sow and five piglets hidden in the undergrowth. Each child claims one of them but Sahamoku admonishes them to be patient. If they leave the sow in peace, she explains, the animal will soon return to the village with all five piglets.
>
> November 28, 1984: The sow still hides in the forest. Sahamoku and her family decide to fetch the litter because, all too often, piglets become the prey of stray hunting dogs. They collect the piglets, bring them back to the village and distribute them: Sahamoku gives a female each to her co-wife and to her mother-in-law, a male each to her sister-in-law and to a classificatory mother in the Assamasiki lineage and keeps the last male piglet for herself. Each woman lines an old netbag or a coffee bag with dry leaves, puts the piglet inside and hangs it on a house beam. The animals squeak and kick until they are tired. Twice a day, Sahamoku feeds her piglet with papaya and premasticated food (i.e. yams, taro and bananas). During the feeding, she sits on the ground and holds the piglet between her outstretched legs. With a little stick, she smears the food in and around the piglet's mouth. After each feeding, she washes the animal with water before she puts it back into the bag. Day by day, the piglet gets more accustomed to Sahamoku. She lets it run free for longer and longer periods until she considers it safe to let it roam all day long.

1 Pig raising has been documented for the Abelam (see e.g. Lea 1964:125-127 and Hauser-Schäublin 1983b); the Abelam of central Wosera (Ross 1984:20) and the Kwoma (Bowden 1983:11-12) no longer keep pigs; apparently, local laws banned the keeping of domesticated pigs in some of these villages.

March 10, 1985: Hauseng, Sahamoku's husband, and Mambor, her father-in-law, castrate, blind and mark the young pig. With a razor blade they cut and sever the testicles. Sahamoku digs a hole in the ground near the house door and buries the testicles; this will make the pig return to the homestead, she explains.[1] The men smear clay on the wound. Then they rub a brew of dry banana leaves on the pig's eyes. After a few days, it will be blind. Finally, they cut the end of its ears. After this painful procedure, the pig is considered a *fle waa*, a village pig (*fle:* pig, *waa:* white?).

Sahamoku's young boar is the only one of the five piglets which has survived the first four months of life. Adolescent boys of the village shot one of the other piglets with bow and arrow. The second piglet was killed and steamed in a tree bark when Hauseng took a few men to the forest to hew planks for a new dwelling. The third one disappeared in the forest, and the fourth was apparently killed by Hauseng's hunting dog, Mahwong; the dog brought the pig's head back to the village.

March 13, 1985: Several men from Yerhmain call on Mambor and ask about the smaller of Sahamoku's two sows. He sends word to her and Hauseng who are working in their gardens. While the men wait for their return, they chew betelnut and exchange the latest news and rumours. About an hour later, Hauseng joins them, and the long-drawn-out negotiations begin. Mambor argues that the sow has littered only twice; it is too young to be sold; its meat is not "strong" *(kwambu)*. The men from Yerhmain insist on buying the pig, bargain for a lower price, and finally get it for K 110.

Sahamoku has attentively followed the men's discussions. She knows that they will soon bind the pig and cooks a pot of food to lure it. The animal has remained nearby and eagerly responds when Sahamoku calls its name and clicks her tongue. The men watch and wait, ready to bind the pig. All at once, they jump on the animal, turn it on its back and firmly press it to the ground. Hauseng deftly binds its legs with liana strips, a man from Yerhmain brings a wooden pole and, in a combined effort, they fasten the pig's legs to the pole.

As soon as they hear the pig's shrieking, men, women and children rush to the scene; only Sahamoku has disappeared. She hides in her house and begins to chant ritual lamentations: "*Fle ahni na, sarkamba noho hari. Ahni na ma yi hom noho hari. Ahni na tau haban giri.*" (Pig, mine, food, spittle, I gave. Mine, human, child, like, spittle I gave. Mine, garden, bone, ?). As she chants, she adds verse to verse.

The visitors from Yerhmain get ready to leave. They seize the pole, heave it up and place its ends on the shoulders of two men. The pig hangs upside down between the two carriers. It is getting dark; they make off in a hurry.

March 20, 1985: Sahamoku receives a three-week-old piglet from her mother-in-law. The other small pigs from the same litter have been sold to Bongos for K 25 each. Sahamoku now looks after two young pigs and a large sow.

August 26, 1985: During the day, Sahamoku lets the two young pigs range freely; they regularly return to her homestead for the evening feedings. It looks as if she has succeeded in domesticating them.

This account demonstrates several interesting aspects of pig raising. Most important in the context of this thesis is the conceptual link between pig raising and child rearing.[2] Each pig has an individual name, and the woman who feeds and cares for the pig is called *fle nukiaba* (pig, mother). There are many parallels between the behaviour of a mother towards her child and towards her pig: small babies and pigs are carried in netbags; the mother premasticates food for them; she fondles them, washes them and, if they die, she chants lamentations in verse form.

1 Tuzin (1976:268) mentions a similar belief for the Ilahita Arapesh: they place the testicles under a heavy rock in the home hamlet so that the boar will not wander far.

2 The account by Hauser-Schäublin (1983b) demonstrates many parallels between Abelam and northern Kwanga pig raising. She also stresses the close relationship between a woman and her pigs and compares it with the relationship between a mother and her children. In fact, it has often been reported that women breast-feed their piglets; neither the Abelam nor the Kwanga follow this practice. However, the Kwanga give premasticated food to their piglets, a practice which is not documented for the Abelam or other neighbouring groups.

Lamentations for a pig have already been rendered above. When Tasinole, Sahamoku's fifteen-month-old boy, died, she chanted similar lamentations whenever grief overcame her (see Chapter 7.6.). In the lamentations for her pig, Sahamoku chanted that she gave food spittle to the pig as if it was a human child.

The ingestion of spittle is also given as the reason for certain avoidance rules regarding the consumption of meat from village pigs.[1] According to these rules, a woman and her husband are forbidden to eat meat from their own pig and from any pig that was raised by relatives classed as *sange* (elder sibling or parallel cousin of the same sex), *maha* (younger sibling or parallel cousin of the same sex), *yikaha* (sibling or parallel cousin of opposite sex, male speaking), *mundala* (sibling or parallel cousin of opposite sex, female speaking), *yi* (child), *nira* (grandchild) and *ruai* (sister's child). The sanction for a transgression of these avoidance rules is again the illness *wahapsila* (see Chapter 4.5.).

Only the mother who bore the child may feed him on her premasticated food. Other women, even a co-wife or grandmother, are not allowed to do so; they can only hand feed. The distinction between hand feeding and mouth feeding can be interpreted in terms of avoidance rules. We have earlier seen that avoidance rules are often applied to products and functions of human physiology (see Chapter 3.4.). Spittle *(noho)* is such a product. The giving of food which is mixed with spittle is used to clarify the boundary between the relations of different "types" of women to a child. In other words, the relation between mouth feeding and hand feeding is used to symbolize the difference between the relation of a mother to her child and of other women to her child. The relation of a human mother to a piglet is made equivalent to that between a human mother and a human child by reasons of analogous feeding patterns. Moreover, the analogous feeding pattern is also given as a reason for the fact that the relationship between a patrilineage and a piglet is made equivalent to that between a patrilineage and a child. This can be illustrated by the following incident:

> Lintumbu from Kubriwat comes to bind Buka, the pig of Akahung. As *fle nukiaba*, Akahung begins to cry and lament as is expected of her. When Diwitaw, another woman, also starts to cry and lament, people explain, that if Akamun, a *ruai* (husband's sister's child) of Diwitaw, was about to die, she would cry as she now does for Buka. Buka is her *ruai*.

Thus we see that the northern Kwanga model their relationships with pigs on human kinship. The pig of a sister is a *yi* (child), that of a father's sister a *ruai* (father's sister's child), that of a child a *nira* (grandchild), and so on. To eat one's own pig or those of another member of one's descent group would be symbolically equal to eating a child or a child of a member of one's patrilineage! Only with pigs do the northern Kwanga create such a special bond; it is typical that other domesticated animals (e.g. dogs, cats) are not fed premasticated food. In fact, if people buy or exchange young pigs and do not feed them premasticated food, all the relatives can later eat the meat.

In earlier interpretations of food avoidance rules, the symbolic association between "reproductive powers" and food has been repeatedly mentioned. Again it seems that the northern Kwanga see a parallel between human procreation and the procreation of food.

1 The Abelam also know a rule which forbids them to eat their own pigs; they say that the pig has the same blood as the woman who regularly feeds the animal (Hauser-Schäublin 1983b:348). It is not clear whether the Abelam extend this rule to other members of the descent group (see text).

In the case of village pigs, this parallel is particularly close. The avoidance rules regarding the consumption of meat from village pigs mainly concern a very specific group of people, namely the patrilineage of the husband of the *fle nukiaba*. The pigs raised by a mother's brother *(mango)* and his children *(maagri)* are exempted from these rules. However, information on the consumption of meat from village pigs raised by cross-cousins was contradictory. Some people said that avoidance rules only applied to pigs raised by *ruai* (sister's sons), others said to those raised by *ruai* and *maagri*, still others said they did not apply at all to pigs of cross-cousins. The last statement seems most plausible to me because it corresponds with the rules of exogamy. As we have seen earlier, Ego's *ruai* and Ego's *maagri* are preferential marriage partners because cross-cousins are not counted as members of Ego's descent group (see Chapter 3.6.). If the relationships of people towards their pigs are modelled on kinship, it follows that the pigs of *ruai* and *maagri* do not belong to Ego's descent group and, therefore, Ego can eat their meat.

In the course of the food-getting survey, several women – like Sahamoku in the above rendered account – spontaneously told their pig-raising histories. This inspired me to collect such information systematically. When prompted, every woman was able to provide detailed information on each pig she had raised including the pig's name, its physical characteristics, special traits, and final fate. In fact, northern Kwanga women use strips of coconut husk *(siangla)*, as mnemonic devices, one strip for each village pig. We shall see later that men also keep *siangla* to count hunted wild pigs. In the death rituals, the *siangla* and other mnemonic devices help the relatives of the deceased person to accurately display his or her achievements (see Chapter 7.6.). The pig-raising histories of ninety women have been systematically recorded. It soon became obvious that great variation existed in terms of the number of pigs raised by individual women. In order to interpret this variation, the number of raised pigs was analyzed in relation to the age of the women.

Table 10 shows the total number of village pigs raised by women of different age groups. Most of the women under twenty-five years of age have never raised a pig. The picture changes in the next age group: 10 out of 14 women have raised one or more pigs; 1 woman already has a record of seven pigs. This conforms with the general rule that young women only gradually assume the responsibilities of grown-ups. It was already mentioned earlier that young couples remain economically dependent on their parents, usually until the second child is born. All the women over thirty-six years of age have raised one or more pigs. The variation in the number of pigs raised by these women is remarkable: In the age group of thirty-six to forty-five years, the number of pigs ranges from 1 to 11, in the next age group from 1 to 19 and, in the last age group from 1 to 13. Northern Kwanga women explain this variation in terms of personal skill, preference or experience.

Table 11 demonstrates the number of pigs kept by ninety northern Kwanga women on a key date in March 1985. The age distribution is similar to that discussed above. What is interesting here is that fifty women had no pigs, twenty-four had one, fourteen two and only two women three or more pigs. One woman had as many as eight pigs; however, this included a litter of five piglets which had not yet been distributed. Thus we see that northern Kwanga women rarely keep more than two or three pigs at a time.

The total number of pigs in Tauhundor was sixty-four in March 1985; the human population, as we have seen, was 392 at about the same time. Six months earlier, eighty pigs

Table 10
Distribution of Women by Total Number of Raised Village Pigs

No. of raised pigs	Number of women aged (years)				
	<25	26-35	36-45	46-55	>56
0	15	4	0	0	0
1	2	0	3	0	0
2	1	3	5	1	1
3	–	2	1	0	0
4	–	2	3	0	0
5	–	2	4	0	0
6	–	0	2	2	2
7	–	1	1	2	2
8	–	–	2	2	3
9	–	–	4	0	4
10	–	–	0	0	0
11	–	–	1	1	2
12	–	–	–	1	1
13	–	–	–	1	1
14	–	–	–	0	–
15	–	–	–	1	–
16	–	–	–	1	–
17	–	–	–	0	–
18	–	–	–	0	–
19	–	–	–	1	–

Source: Field notes

Table 11
Distribution of Women by Number of Village Pigs Kept at Time of Survey

No. of kept pigs	Number of women aged (years)				
	<25	26-35	36-45	46-55	>56
0	18	6	15	7	4
1	–	4	9	2	9
2	–	4	2	5	3
3	–	–	–	0	–
4	–	–	–	1	–
5	–	–	–	0	–
6	–	–	–	0	–
7	–	–	–	0	–
8	–	–	–	1	–

Source: Field notes

had been counted. The difference can be explained by the great demand for village pigs in Tauhimbiet and Kubriwat during the *sukusa* and in Tauhundor during the *auanalo*.[1]

These figures illustrate that today pig husbandry plays a fairly important role in the agroforestry system of the northern Kwanga. Since, as we have seen above, the pig owners do not raise the animals for home consumption, I was interested to assess the "fate" of these village pigs.

Table 12
Distribution of Village Pigs by Use

Use	Village Pigs No.	%
Inter-village trade	144	39.9
Auanalo or *sukusa*	122	33.8
Life cycle and other rituals	23	6.4
Butchered and sold	8	2.2
Lost	64	17.7
Total	361	100.0

Source: Field notes

Table 12 shows that 74% of these pigs went into the exchange system, either into inter-village trade (40%) or into *auanalo* or *sukusa* exchanges (34%). Details on inter-village pig trade, *auanalo* and *sukusa* exchanges will be presented later (see Chapters 5.6., 7.8. and 7.9.). A rather large number of pigs (18%) was declared lost by their owners. The women explained that some of these pigs died of an illness or disappeared in the bush; others got caught in a pig trap or were accidentally shot by a hunter. Even if they found them before the meat began to rot they could no longer present them to an exchange partner. These figures and the last statement indicate that the exchange system is still the major incentive for pig raising in Tauhundor.

The category "life cycle and other rituals" encompasses a variety of feasts. At most of these feasts, the meat of village pigs can be replaced by the meat of cows, chicken or wild animals (e.g. wild pigs, bush rats, lizards, tree kangaroos or possums). Ten of these twenty-three village pigs were killed and cooked during death rituals, one at the inauguration of a new signal drum; one pig had been given away as a part of a marriage arrangement, and two in connection with sorcery accusations.[2]

It is a new custom to butcher and sell the meat of village pigs in rural areas, probably inspired by the supermarkets in town. The northern Kwanga regard it as a form of business. During my fieldwork, one pig was cut and sold in Tauhimbiet and another one in

1 Lea (1964:126) correctly points out that "a permanent pig population indicates a regular surplus of food". A grown-up pig eats about the same amount of food as a grown-up person.

2 The relatives of the supposed victim pay a pig to placate those fellow villagers who are accused of having contacted a sorcerer in another village (see Chapter 4.5.).

Tauhundor, the latter at a pati[1]. The people who sold the pig meat charged T 10 to K 4 per piece.

Thus we see that most village pigs are raised for exchange and/or rituals, not for everyday consumption, and that, therefore, the size of the total pig population varies according to the cycle of food exchanges. We can further conclude that the variation in the number of pigs raised per woman can be partly explained by her age, partly by her willingness or refusal to produce a surplus which can be used in food gifts to the husband's exchange partner, in the family's life-cycle ceremonies, and in the intra- or inter-village exchange system. All these factors contribute to the variation in pig husbandry between individual women. It is difficult to judge, of course, whether some women exaggerated the number of pigs they reportedly raised. However, the survey of the pig population on a key date in March, 1985 confirmed individual variations. Since pigs are not raised for home consumption, we find once again that data on food production offer little information about the actual diet of the local people. The place of meat in the northern Kwanga diet will have to be examined in the light of food intake data (see Chapter 8.1.).

Although the northern Kwanga concentrate their efforts in animal husbandry on pigs, they keep other animals as well, namely fowl and cows. They have learnt the basics of poultry and cattle farming from white people, mainly from missionaries. It is a recently introduced form of business.

Chickens are valued not so much for their eggs as for their meat. If the northern Kwanga find chicken eggs, they eat them just like the eggs of wild birds and fowl. Most chickens are free-ranging, searching for food in the hamlet and the nearby forest. During my fieldwork, several young men made an effort to develop poultry farming into a flourishing business, selling their chickens to other villagers. They constructed special chicken yards and regularly fed the animals. However, their hopes soon vanished when youths repeatedly broke in and stole their chickens. Since the village authorities did nothing to control these youngsters, all three innovators gave up. They say it is much more difficult to catch free-ranging chickens, and my observations confirm their experience: In preparation for a small feast, several men hunted a rooster of gay plumage with bows and arrows; they only caught the animal when it was tired! Most fowl are consumed as special treats at small feasts; if the host does not own chickens, he buys one from a fellow villager. The northern Kwanga usually charge about K 5 for a rooster.

In the northern Kwanga area, several groups of men have experimented with cattle projects. In 1972, Allen recorded six cattle projects in the Dreikikir area, which were supported by the Department of Agriculture, Stock and Fisheries (DASF) with loans from the Papua New Guinea Development Bank, and he comments (Allen 1976:225): "My impression was that none of the projects at Dreikikir were successful, socially or financially, and that they placed gross demands on DASF staff, who spent much of their time working on cattle to the disadvantage of other forms of commercial and subsistence agriculture."

In Tauhundor, a cattle project was launched by a man who had spent some years as a "cowboy" on the C.M. Timbunke. When he left Timbunke, he brought several cows back to the village and built a cattle yard down on the river banks. Today, the cattle yard is completely covered with undergrowth and difficult to spot in the forest. The remaining

1 The term pati is derived from the English word "party" but its meaning is slightly changed (see Chapter 7.11.).

cows have gone wild. During my fieldwork, three wild cows were hunted, shot and butchered for feasts, one for a house-roofing feast, two for a pati. The original owner received K 150 per cow. He explained the failure of his cattle project by the fact that none of his kinsmen or fellow villagers supported his efforts; according to him they envied his flair for business.

A second cattle project also failed. It was sponsored and supervised by the late Father Th. Neumann who built the C.M. Tau in 1968 and maintained it until 1983. Several men from Tauhimbiet were involved in this venture; in 1984, however, no cows were kept on or near the mission station. The villagers explained that only a few wild cows were left of this cattle project.

5.4. Fishing

In the description of the physical environment we have seen that the territory of the northern Kwanga is dissected by many rivers and streams, the biggest being the Karp River (see Map 3). The Karp River originates approximately 14 kilometres to the north near the Urim villages Lainingwap and Klimanglen; it joins the Bongos (Kean) River about 20 kilometres to the south near the Kwanga village Masalakar. From there on, it is called Yimi (Yipung) River until it flows into the Screw River and finally the Sepik River near the Manambu village Avatip.

None of the four northern Kwanga villages lies directly on the river banks. The river cannot be seen from the villages because they are situated on the tops of forest-covered ridges, and the river meanders in between. Steep paths lead almost vertically down the escarpments. The shortest route from Tauhundor to the Falambe (Karp River) takes about half an hour.

Fishing plays a minor part in the overall food pattern of the local people: at least this is true for the northern Kwanga. Data on other Kwanga groups and on the Urat are not available.[1] In my food-getting survey of the 67 economic units of Tauhundor village, only twelve out of eighty men regularly reported fishing activities. All these men were under forty years of age. Their catches usually ranged between fifteen and thirty fishes. Young and adolescent boys also enjoy fishing; they often spend whole days down at the river, especially at the weekends. As far as I know, northern Kwanga women do not fish.

The men use two fishing techniques: shooting with harpoons and fish poisoning. The first technique became popular in the 1960s, after some men brought goggles and harpoons from the towns. Fish poisoning, on the other hand, is an old technique. The northern Kwanga use the plant *makupnansi*[2] for the production of fish poison. They dig a hole in the sand, line it with the leaf of wild taro, pound and squeeze the roots of *makupnansi*, collect the fluid in the taro leaf, carefully lift and bundle it. At the river, they immerse the bundle

1 Among the Kwoma (see Bowden 1983:12) and the Manambu (Harrison 1982) who live near or on the banks of the Sepik River fishing is much more important.

2 During his visit in Tauhundor, W. Schiefenhövel identified *makupnansi* as *Cassia alata*. In a recent publication, Schiefenhövel (1985) shows that the same plant is often used for the treatment of *Tinea imbricata* (grile). The northern Kwanga use it as fish poison and grile treatment and thus support Schiefenhövel's findings.

in water and open it. According to the northern Kwanga, the poison affects the eyes of the fish and finally kills them.

The northern Kwanga report that they eat the following fish species: *yende* (mausgras), *mari* (garua), *omse* (bikmaus), *luwu*, *marka*, *yenogwe* (kolpis) and *ugiobo* (maleo). Zoological identification is not available, and I doubt whether the Tok Pisin terms are standardized.

In the Karp River, the northern Kwanga not only catch fish but also turtles (*suri* and *waha*). Once, a man even caught a young crocodile (*moho*)! Himende, who caught it, suggested that the mother crocodile could not be far away and they searched for it, in vain. Nobody in the village remembered anybody ever catching a crocodile in the Karp River. They assumed that it had travelled up river from the tributaries of the Sepik. In Tauhundor and the neighbouring villages, nobody wanted to eat the crocodile. Himende finally took it all the way to Maprik, where he put it on the market for K 10. However, this price was considered too high; instead of lowering the price, Himende brought the animal back to the village. It twice managed to break loose, and the neighbours eventually persuaded Himende to kill the animal. He threw the dead crocodile into the forest where it rotted away since no one liked the taste of crocodile meat. This example illustrates that the northern Kwanga, like most other ethnic groups, have their own food preferences. Although they always say they crave for meat, and although they are well aware of the fact that the Sepik River people eat crocodile meat, they preferred throwing it away to eating it.

Today, as has already been mentioned, the northern Kwanga have their own little stores where they also sell and buy industrially processed fish (see Chapter 5.7.). It is an interesting question whether the local, fresh fish has been gradually replaced by the imported, tinned fish. This question, however, is difficult to answer. The local people claim that formerly fish was abundant in their streams, whereas today, only a few are left. They blame the excessive fishing activities of the 1960s for the reduction of the stock. Later in this text we will examine the place of fresh and tinned fish respectively in the northern Kwanga diet (see Chapter 8.1.).

5.5. Hunting and Collecting[1]

The forest is the natural habitat of a number of animals, and like most other ethnic groups of Papua New Guinea, the northern Kwanga hunt and collect many of these animals. Hunting and collecting has to be considered as an integral part of their agroforestry system.[2]

The wild pig *(fle tarambe)* and the cassowary *(afsambu)* are the most prestigious prey. Apart from these, the northern Kwanga hunt a variety of other animals, for instance bush rats *(bansi)* but not house rats *(akabansi)*, tree wallabies *(wainassa)*, ground wallabies *(nahawe)*, various possum and cuscus species *(omdurmbu, omgle, omsarnge, omawe,* and *omdasi)* and lizards. Smaller lizards often fall prey to boys and young men. Adult men hunt

1 Anthropologists usually speak of "hunting and gathering". In this thesis, the term "gathering" is used for plant food, the term "collecting" for animal food.

2 Hunting has been and, to a lesser extent, still is an important food-getting activity among the Kwanga (see Schindlbeck 1981:5), the Ilahita Arapesh (Tuzin 1976:79, 82-83) and some western Abelam villages (Scaglion 1976:55); it is less important in the Wosera area (Ross 1984:20).

the large lizards *(wakngaii, wafrapsiki, wangsulang* and *waksiya)*. Birds are also a favourite hunting prey, for instance *apmuma* (balus 1), *ugiabe* (balus 2), *afari* (kokomo), *apane* (wild fowl), *apnduawi* (guria), *apkiandai* (bengbeng), *apange* (blak koki) and *apsala* (kalangar). Flying foxes (male: *apkombo*, female: *apkwasi)* are also killed and eaten.

Wainsaka, a man in his early thirties, spent several years in town before he returned to Tauhundor. During my 1984/85 food-getting survey, people told me that he was successful in hunting smaller animals, but he had not yet killed a wild pig. My regular questioning inspired him to keep a written record over the next twelve months (from March 1985 to February 1986). According to this record he killed several small animals (8 bush rats, 5 wallabies and 1 wild fowl) and embarked on a new career killing 5 wild pigs.

As mentioned above in the case of local fish stocks, the northern Kwanga claim that the number of wild cassowaries and other animals (e.g. large pigeons) has declined. This information has been confirmed by Father F. Mitterbauer, who arrived in this area more than thirty years ago. Father Mitterbauer and the local people blame this decline on excessive hunting activities since the introduction of shotguns.

Today, the northern Kwanga use several hunting techniques. Most men carry bows *(saingiaba)* and arrows *(saya)* or spears *(korme)* when they leave the village early in the morning. They say they are always ready to kill if an animal shows up. Often, they roam the forest on their way to and from the gardens; once in a while they happen to discover the burrow of a bush rat, the track of a wild pig, flying foxes feeding on a tree fruit or a large lizard hiding in a pandanus palm. If a feast is approaching, some men stalk the bush more frequently than usual, accompanied by their hunting dogs. Only six men in Tauhundor have a licence for shotguns. They take one along if they have to procure meat for a special occasion. Some men hold night watches in sweet potato gardens or near recently felled sago palms where wild pigs often come to feed. A few men build hide-outs near or on food-bearing trees and wait for birds, flying foxes and marsupials. Groups of men organize battues in old gardens if they have found pig tracks there. In former days, some men constructed special pig traps *(fle naku* and *naklassa)* near sago palms. Only a few old men remember how to construct these traps. Allen (n.d.:2) mentions the use of nets in hunting among the Urat; the northern Kwanga denied having ever used this technique.[1]

I already mentioned that magic plays a central role in hunting (see Chapter 3.5.). Its aim is to attract wild pigs and other animals. Until a generation ago, men prepared themselves carefully before they went on hunting expeditions. They abstained from intercourse, bled their penises and slapped their legs and armpits with nettles. Then they brewed a potion or mixed certain ingredients called *wuo*[2]. There is a *wuo* for the hunter to make him "see" the game, a *wuo* for the dog[3] and a *wuo* for the sago palm[4]. Today, most men reportedly skip the preparations but still know about and apply wuo. As in the case of garden magic, hunting magic can be learnt during initiations into the local men's cult, by individual experiments and from outsiders. Two shotgun holders claimed that a man nating

1 Hunting with nets has also been reported from the Ilahita Arapesh (Tuzin 1976:268-269) and the Abelam (Kaberry 1940/41:345, Scaglion 1976:55).

2 The word *wuo* is also used for betel lime and for any paint or colour used in magic.

3 The northern Kwanga often keep special hunting dogs; *wuo* "makes the dog hot", it strengthens their ability to find game.

4 Here, the northern Kwanga refer to the sago traps; the *wuo* for the sago should stupefy the pigs so that they fall into the trap.

(man nothing, here: man without magic) rarely succeeds in killing an animal, even if he carries a shotgun. Other men contested these statements. It seems that there is no general agreement on this point.

During several conversations the hunters Nandebe, Samio and Mahandum explained their use of hunting magic:

> "The road of finding game, there is something, there is something we have from before, our fathers used it, they told us, their children. We follow this road. Our kastom, it goes like this: The man has kauvar (a magical substance), whatever, the bone of his mother or father, or something to find game, he holds it and we find game. The man who does not have anything, he won't find anything. We who have something on our body, we walk with our guardian. We who have something for pigs, we cannot find bush rats. We find only pigs. The men who hunt bush rats have their own guardian. We hold *masigugwa* (hair) of our father or mother, we hold *mahamba* (bones) of our father or mother and we go to hunt. ... This mother or father then closes the eye of the pig. They 'throw' the pig to come out, to show itself to us, and we kill it. It is not able to run away because they closed its eyes or ears. They pull the pig to come close to us, they close its eyes, they bind its legs, we kill it.
>
> The father goes to the forest, he gathers certain plants, he collects things from different places, many different things, some water from a pool where the pig comes to wallow, some bark from a tree on which the pig rubbed its skin. He gets all these things, he collects nettles, he puts it down. Alright. He cooks them in a saucepan. He fetches paint, now, red, white, blue, all these paints, he scrapes them. Some of it he adds to the soup. Some of it he puts on greens. He cuts the greens, puts the paint, wraps them in a pig leaf and puts them on the fire. ... First, he gives some greens to the dog. Then he gets the midribs of nettles and holds them to the nose of the dog. Then he opens the leaf parcel and gives it to the dog. Last, he pours the soup. The dog eats the soup. They sleep, the next morning, they go to hunt.
>
> My father killed many pigs with the sago trap. He told me. When they felled the sago, he didn't cut it just like this. He got a red nettle and 'heated his bones'. He slapped the ankles, the wrists. He had to put the nettle to 'heat the veins', then he felled the sago with his stone knife. ... Then he built the trap. ... When it was ready, he could not kill a pig in daylight. No, he had to kill at night. ... When a man goes to keep a night-watch, he sees all kinds of things. A light like a star goes and hangs on the sago. His guardian tests him. A weak man is afraid and runs away. Only a strong man stays. It's his guardian, the bone of his father or whatever he holds. You must not be afraid. You go, its the pig, the pig which the father gives to you, you will kill it. This is the story of killing pigs with sago."

These accounts illustrate what has been said earlier, namely that the Visible and the Invisible World belong to the same physical environment (see Chapter 4.3.). Their dead (father and mother!) or other guardians (e.g. the wild man Sumar) actually do the hunting: the hunter carries a substance belonging to the guardian and waits until the latter presents the game to him.

If a hunter uses magic, he, his brothers and several of his relatives may not eat any meat of the animal he kills.[1] Especially those relatives who call him *yi* (child) or *nira* (grandchild) have to avoid the meat he provides (see Table 5). His wife and children (and his sisters ?) are the only close relatives who may eat the meat of any animal he kills.

Several parallels exist between the raising of village pigs by women and the hunting of wild pigs by men. Northern Kwanga men also count the number of animals they killed.

1 This belief is widespread among the neighbouring groups. The Kwoma hunters may not eat the animals they kill (Bowden 1983:53 and Kaufmann 1987:187). Tuzin (1976:222-223) reports that among the Ilahita Arapesh pig hunting is the most important ritual function of sub-moieties: "He (the magician, B.O.) and his nuclear family and patrilineal segment may not eat pork caught with his magic, believing that the pigs under his 'parentage' will take offence and never strike his net again." Whether the northern Kwanga avoidance rule could be explained in similar terms remains unclear to me. The Abelam appear to be the only group in this area who do not observe any restrictions regarding the consumption of wild pig meat (see Hauser-Schäublin 1983b:350).

Strips of coconut husks *(siangla)* or pig mandibles *(fle tagumbi)* are kept as mnemonic devices for wild pigs. These mnemonic devices enable them to give accounts of their hunting successes, and after death, they help the relatives of the deceased man to remember his personal achievements as a hunter, especially in the preparation of the *hi nunguhu* (see Chapter 7.6.).

In the course of my food-getting survey, I systematically interviewed eighty out of ninety-one men about their hunting history. Again we find a great variation, this time in terms of hunting successes; some men seem to be very keen and successful pig hunters, while other men either concentrate on other animals or do not hunt at all. In order to interpret this variation, hunting success was also first examined in relation to age (see Table 13).

Table 13
Distribution of Men by Total Number of Hunted Wild Pigs

No. of	Number of men aged (years)				
hunted pigs	<25	26-35	36-45	46-55	>56
0	20	12	7	7	1
1- 10	-	3	4	4	3
11- 20	-	-	3	3	2
21- 30	-	-	1	0	0
31- 40	-	-	1	1	1
41- 50	-	-	0	0	0
51- 60	-	-	0	0	2
61- 70	-	-	0	0	0
71- 80	-	-	0	0	0
81- 91	-	-	1	1	0
91-100	-	-	-	0	0
100+	-	-	-	2	1

Source: Field notes

Not surprisingly, the number of wild pigs killed varies in relation to age because older men have had a greater chance to kill pigs than younger men. As in women's pig-raising histories, the youngest age group has not yet scored, and the picture changes between twenty-six and thirty-five years.

Yet again we see that age alone does not account for the variation within the same age group. Some men never killed a wild pig, other have killed a great many. In the second age group, the number of pigs per man ranges from 0 to 9, in the third age group from 0 to 84, in the fourth age group from 0 to 288, and in the last one from 0 to 109! Although some of these figures may be exaggerated, they clearly indicate that some men are more successful than others. Like the women with regard to pig-raising histories, the men explain variation in terms of personal skill, preference and experience.

Hunting records, to a certain extent, mirror the gradual achievement of social status. In their thirties, a few men just begin to outstrip their peers and ten years later, the

differences in terms of hunting success become remarkable. It is no mere coincidence that the northern Kwanga paraphrase the term big man as *fle tarambe alamori* (wild pig, a bush rat). We have to bear in mind that certain magic associated with hunting was formerly learnt during initiations into the local men's cult; I assume that men had to be a certain age before they learnt the secret knowledge associated with hunting. It has already been mentioned that certain men's cult rituals were believed to increase the number of pigs. According to Schindlbeck (1981:5) hunting plays a central role in the ritual; he deduces from this fact that hunting was probably more important formerly than it is today.

While formerly, and to a certain extent also today a good hunting record was attributed to the possession of powerful magic, today, it is closely related to possession of a shotgun. The influence of this new weapon on hunting success becomes evident when we have a closer look at those seven men in my survey who killed more than 50 wild pigs.

In the oldest age group, the most successful hunter is Namhoi from the Flenokor clan. He never used a shotgun and killed 109 pigs. His peers Mambor and Naingia killed 52 and 54 pigs respectively and neither of them used a shotgun. Bungaioho from the Hoboai and Suaho from the Masinokor clan are about ten years younger than Namhoi, Mambor and Naingia. Both of them hold a shotgun; the former claims to have killed 232, the latter 288 wild pigs! Next comes Abelong of the Yerhmain clan. He is only a few years younger than Bungaioho and Suaho, he holds a gun and has a record of 88 wild pigs. The seventh man, Samio of the Wainassa clan, had already killed 84 pigs by the age of only thirty-seven years when he fell from a tree and broke his breastbone. After this accident, he gave up hunting and passed his gun over to Nandebe of the Apinchanokor clan, who collaborates closely with the Wainassa clan, as we have seen in the account on sago making. Nandebe is about fifty years old and has killed 39 pigs; he started to hunt with a shotgun only about six years ago.

A superficial evaluation of these results appears to prove that men with shotguns have the highest hunting records. However, the situation is more complicated than that. First, the oldest hunters in my survey were not the most skilled hunters of their generation, as people kept pointing out to me. Second, the five licensed shotgun holders of Tauhundor occasionally lend their arms to one of their fellow villagers although this is illegal. Thus the use of shotguns is not strictly the privilege of a few. On the other hand, the distribution of shotguns in the community indicates that the five most powerful descent groups own a shotgun each. It seems that each of these descent groups gives its shotgun to the member who is most keen on and skilled in hunting; armed with this efficient weapon, these men achieve the highest hunting records. They have the guns because they are the best hunters, and they become even more successful because they have shotguns.

The holding of a shotgun also creates obligations, the official holder has to lend his weapon to other members of the group and, what is even more important, the official holder has to kill animals for other members of his group. In practice, the arrangements operate as follows: A man who wants a shotgun holder to kill an animal for him buys a cartridge in one of the stores in Maprik or Wewak and gives it to him. If the hunter is successful, he gets the credit for killing the pig, the other man gets the credit for supplying the cartridge, which means that he is entitled to distribute the meat.

Again we find that data on food production do not yield accurate information on food consumption. The family of the hunter does not necessarily eat the meat of the animals he

kills. Avoidance rules even forbid certain members of his descent group to do so. Moreover, northern Kwanga men rarely hunt for everyday home consumption. Feasts, including men's cult rituals, act as spurs for individual and collective hunting activities. The meat of hunted animals is then usually preserved and later passed on in food distributions. In fact, the distribution and consumption of meat marks festive occasions. In Chapter 7 we shall come across many examples illustrating this pattern. Here, it suffices to note that data on hunting have to be considered in relation to meat distribution and actual consumption.

The collecting of animal foods is more difficult to record than hunting because the northern Kwanga rarely mention it and do not remember the details after a few weeks have passed. However, their collecting is often less spontaneous and haphazard than it appears. They observe their environment and know where to look for food. A few weeks after sago making, for instance, mothers send their daughters to check whether sago mushrooms have grown on the discarded pith. Similarly, it occurs quite frequently that fathers tell their sons about a tree full of grubs they noticed when wandering through the forest.

The word *owe* means "grub". The northern Kwanga distinguish, collect and eat several kinds of grubs (i.e. *siklawangharowe*, *nankrahaowe*, *kalasaboowe* and *kaharblaowe*). All of these grubs feed on the leaves of wild-growing trees and their names refer to these trees. If they fall to the ground, women and children collect them; if they stay on the branches high above the ground, men fetch them down. Two kinds of grubs do not eat leaves but develop in fallen tree trunks, namely in breadfruit tree trunks (*warowe*) or sago palm trunks (*nakombi*)[1]. Similarly, the word *gunia* means "mushrooms", and the names of different types of mushrooms indicate the trees on which they grow (e.g. *nakgunia*, *workimbiagunia*, *binalangugunia*). The quantity of collected grubs and mushrooms varies. When we discuss northern Kwanga recipes (Chapter 6.2.), we shall see that one or two handfuls of grubs and mushrooms are sometimes added as special ingredients to vegetable soups.

Apart from grubs and mushrooms, the northern Kwanga do not collect many wild animals. Young boys sometimes catch and eat frogs (*bori*), turtles (*waha* and *suri*) or small lizards (*wakngamainalo*). Once they were observed roasting shrimps on the river bank. Grown-ups and youngsters say they collect and eat the eggs of turtles and wild fowl, if they happen to find them. Unlike other ethnic groups in Papua New Guinea, the northern Kwanga do not eat caterpillars, crickets, grasshoppers, and snakes. This is another example of the well-known fact that each ethnic group defines what is food and what is not.

The flying beetle *malwange* is a special case. In June 1985, these beetles suddenly appeared in great numbers. At night, they eat the leaves of various *Ficus* trees (*kware*, *wasarkia* and *mengle*), and during the day, they hide in ground holes. Parents sometimes take their children to collect *malwange* by torchlight. The youngsters, and also their parents, enjoy catching and eating them.

Apparently, most adult men and women know a Kwanga song about *malwange*. This song is interesting because the northern Kwanga say it describes the arrival of the *malwange* as a sign of the impending yam harvest. People even use yam names to refer to differently coloured *malwange* (e.g. *bakfayi*, *aku* or *ao*). In the current cultivation cycle, the second yam crop is harvested from May to July. However, as we have seen earlier, the current cultivation

1 This is the only grub which is called *-ombi*. Why the northern Kwanga linguistically differentiate this type of grub from the others is not known to me.

cycle was imported only two generations ago (Chapter 5.1.). I should be surprised if the northern Kwanga composed this song such a short time ago. Other songs, for instance those chanted during the first menstruation ritual, have been imported from Urat and are still in the Urat language; but the *malwange* songs are in the Kwanga language. Perhaps they were composed by the forebears of the contemporary northern Kwanga villagers and do not refer to the impending second but to the first and only harvest of the old cultivation cycle.

5.6. Trade

The northern Kwanga villages have been and still are almost autonomous in subsistence production. Nevertheless, they maintain trade relationships with other villages of the Dreikikir area, as Allen (1976:49-53) convincingly demonstrates. The major trade items of the pre-colonial times were sodium salt, shell rings and clay. Although the latter are non-food items, they will be briefly mentioned below.

According to Allen, potassium salt was the most common source of salt in the Dreikikir area. It was manufactured by burning parts of the green sago palm spathe, leaves from a forest tree or from a vine together with dry coconut husks. In the early 1970s, Allen still observed this method of salt manufacturing in villages throughout the area. Ten years later, the people of Tauhundor still remembered the manufacturing process but preferred to purchase industrially manufactured salt in local trade stores (see Chapter 5.7.).

The trade item, however, was not potassium salt but sodium salt. It was collected from a number of salt springs located within the area. One of them lies on the territory of Tauhundor. Allen (1976:50) visited this spring and describes it as follows:

> "At Tau, fairly clear water carrying a lot of rusty coloured fine sediment, wells up slowly from an artificially enlarged spring. There is no evidence of salt manufacture at the site now, and informants state salt was never made there. Rather water from the spring was collected in bamboos and used as saline water in soups and for drinking. Trade involved allowing another village access to the water, and presumably because of the widespread manufacture of potassium salt and the difficulty of transporting salt water, the water from springs does not appear to have moved very far."

At the time of my fieldwork, the people of Tauhundor still used water from these salt springs, especially in the preparation of feast food (see Chapter 6.2.); but I have never heard of other villages having access to these springs.

The trade in pottery exists up to this date although most northern Kwanga women own one or several metal pots (see Chapter 6.1.). Women from Tauhundor often walk to the southern Kombio villages to exchange their tobacco and betelnuts[1] for clay pots. Even though they have clay deposits in Tauhimbiet, Tauhundor women prefer the finely decorated Kombio pots to the locally produced ones.

The trade in shell rings and other shell valuables seems to have disappeared, perhaps because of the arrival of industrially produced money. Several families still own shells,

1 Allen (1976::53) was informed that only the Kwanga speakers traditionally chewed betelnut in the Dreikikir area, but he never found an explanation for the non-diffusion of the Areca palm in pre-colonial times. In the 1970s and 1980s, the betelnut was cultivated throughout the area, but the northern Kwanga claimed that the Kombio were always short of betelnut and tobacco.

namely *kiasiki* (a shell necklace) and *tamberugu* (small shell discs worn on the wrist), but many others claim to have thrown them away during cargo movements (see Chapter 2.3.).

In addition to those mentioned by Allen, pigs can also be considered as a trade item. In the discussion of the fate of village pigs (Chapter 5.3.), I mentioned that 74% of these pigs went into the exchange system, either into inter-village trade (40%) or into *auanalo* or *sukusa* exchanges (34%). The difference between "exchange of pigs" and "trade in pigs" is not self-evident. Both activities operate on the principle of delayed exchange because not every traded pig is paid for in cash (formerly shell money). However, the northern Kwanga see a difference. In recounting pig-raising histories, women clearly distinguished whether a pig was prestated to the ritual exchange partner during a food exchange or whether it was "obtained" by men from another village.

Table 14 shows a breakdown of traded pigs by language group, region and/or village.

Table 14: Distribution of Pigs from Tauhundor Received in Trade by Village

Village	Area	Pigs No.	Pigs No.	%
Tauhimbiet	Kwanga	26		
Kubriwat		15		
Bongos		10		
Wosambu		5		
Apos		5		
Warmenakor		4		
Daina		1		
Masalaga		1		
Apegu		1		
Waukia		1	69	47.9
Mosendai	Urat	17		
Moseng		17		
Tumam		14		
Moihwak		10		
Yerhmain		7		
Musilo		4		
Musingwik		3		
Nanaha		3		
Mosenau		2		
Musengwa		2		
Dreikikir		1	70	48.6
Wahleng	Wam	1	1	0.7
	Urim	2	2	1.4
	Nuku	1	1	0.7
	Yangoru	1	1	0.7
Total		144	144	100.0

Source: Field notes

Sixty-nine Tauhundor pigs were traded with other Kwanga villages, of these almost 80% within the villages speaking the Tau dialect. Eighty Tauhundor pigs were obtained by men from Urat villages, and only a few by men from Urim and Wam villages. Most pigs, we can conclude, were traded within the limits of the networks established by the men's cult (see Chapter 4.4.). In recent years, trade relationships have begun to expand as far as Yangoru in the east and Nuku in the west. This is another illustration of the "expansion of the experience space" mentioned earlier (see Chapter 2.3.) and, of course, a result of new means of transport.

In Table 14, only one direction of the pig trade has been documented, namely that out of Tauhundor. The Tauhundor people not only "sell" their pigs to these villages, they also "buy" pigs there. This flourishing pig trade can be partly explained by the avoidance rules which forbid the northern Kwanga to eat their own pigs and those of other members of their patrilineage. In the preparation of death rituals, for instance, the northern Kwanga often prefer to buy a pig in a neighbouring village because all the inhabitants of their own village may then eat the meat. Another reason for the pig trade is the fact that, especially in preparation of a *sukusa* exchange, the demand for village pigs often surpasses the local supply. In this case, men obtain pigs through trade and then prestate them to their exchange partners.

5.7. Acquiring Store Foods

As mentioned at the outset of this chapter, the northern Kwanga recently began to spend some of the money earned in cash cropping and other business activities on store foods. We shall now examine some aspects of their market-oriented economy in more detail.

According to Allen (1976:226-229) trade stores were the first form of business to appear in the Dreikikir area. Three locally owned stores opened between 1948 and 1950 in the Urat villages Emul, Moseng and Misim. During the next twenty years, stores spread to almost all villages in the area. These stores were stocked with salt, cloth, beads, bush knives, and other industrially manufactured goods purchased from Chinese merchants in Aitape or Wewak. Stores were individual, not communal enterprises, typically initiated by men returning from the war or periods in the police, army or as indentured labourers. New stores opened, others closed temporarily within the same village. Closures were explained by loss of capital, loss of interest often caused by lack of transport, or by death or illness of the owner.

In Tauhundor and Tauhimbiet, the first two locally owned stores were set up quite early, namely in the 1950s. In 1985, three trade stores existed in Tauhundor, one in the hamlet Simbimbi, one in Turnturu and one in Kwalnkwala (see Figure 2). Each of them belonged not to an individual but to a business group. Individual men take the initiative but depend on the support of others for the construction of a building, the starting capital and the practical aspects of purchasing and selling goods (e.g. carrying the cartons, guarding the store, bookkeeping, etc.). Storekeepers in Tauhundor are not professionals, either in terms of education or in terms of practice. None of them has been through a course at the Skul bilong Stuakipa (School of Store Keepers) in Wewak, although a man from Tauhundor,

Julius Makisa, teaches there. They run their stores on a part-time basis, working as "all-round men"[1] during the day and as storekeepers early in the mornings and late in the afternoons. There are no strict opening hours, and frequently, the stores remain closed for several weeks until the shopkeeper makes another shopping trip to Maprik or Wewak.

One of the shopkeepers' major problems is transport from Tauhundor to Maprik or Wewak and back again. They use PMVs[2] like everybody else. In Tauhundor, two men have experimented with the operation of a PMV business, and they fared rather as Allen (1976:226) described for Tumam in the early 1970s: "At Tumam a second vehicle was purchased with earnings from the first, but when both broke down together in 1973, people demanded back their investment and received what they had originally contributed, leaving both vehicles without funds to cover their repair".

The vehicles of the two men from Tauhundor have also been out of action for many months due to lack of funds, spare parts and mechanical skill. Today, the Kubriwat and the Tauhimbiet own a vehicle each but neither of them worked for more than a few weeks during my fieldwork. To make matters even worse, the road to Tauhundor and beyond is not in a good condition, and therefore, not a commonly used PMV route. For these reasons, the shopkeepers and anybody else who wants to go to town has to walk to the junction at Nanaha (about a 3 or 4 hours' walk) and try to hitch a ride on one of the PMVs driving along the Sepik Highway. The passenger fare from there to Maprik is about K 2, to Wewak about K 7. Shopping trips to Wewak take at least two or three days, not only because of the transport problems and the long distance but also because of the attractions of town life. For the return trip to Tauhundor, shopkeepers have to hire a PMV unless they want to carry all the purchased goods from Nanaha to Tauhundor. Hiring is very costly compared to passenger fares, about K 40 from Maprik and about K 160 from Wewak. This puts the shopkeepers in a difficult position. If they add transportation costs to the wholesale prices at which they purchased the products in town, the retail prices become so inflated that they can hardly sell the products in the village, let alone make any profit. Usually, they sell at slightly higher prices than those they paid and gradually lose instead of gaining money from their trade store business. The villagers often buy a bag of rice, canned fish or some salt in local trade stores, but they complain about the inflated prices, which they attribute to high profit margins rather than to transportation costs. If they plan a feast, they prefer to organize their own shopping trips to town. Thus they have the fun of visiting town and pay more or less the same price for the products.

The inventory of trade stores keeps changing, but even a newly stocked store sells only a small range of commodities. On May 16, 1985 the inventory of such a newly stocked store was recorded in the Simbimbi hamlet (see Table 15). Besides OMO washing powder, Palmolive soap and cartridges, they sold five food products, namely Sais dripping, Wopa biscuits, Nescafé, salt and rice. Tinned fish and corned beef are two other processed food items which are usually sold in village stores. Until a short time ago, only the biscuits were

1 As in most other ethnic groups of Papua New Guinea, which follow the "old" way of life, northern Kwanga men do not specialize in certain activities, although some may be more skilled than others (e.g. in hunting). Every man cultivates yams and other crops, builds dwellings, binds and exchanges pigs, in short, performs all activities expected from male members of the society.

2 PMVs are vehicles, light trucks and utilities, usually of Japanese manufacture, which are registered to carry fare-paying passengers and freight.

produced in Papua New Guinea. The food industry in Papua New Guinea is beginning to increase production but many processed foods are imported from Japan, Australia and other countries.[1]

Table 15
Inventory of Simbimbi Trade Store

Number	Item	Price (Kina)
12	OMO	–.80
20	Palmolive soap	–.40
12	Cartridges	–.10
10	Sais dripping	–.60
30	Wopa biscuits	–.20
16	Nescafé	1.20
19	Salt	–.55
30	Rice	–.65

Source: Field notes

The acquisition of store foods is directly related, of course, to cash income. The major source of income in this area is coffee production. Based on the records of the Sepik Producers' Cooperative Association, Allen (1976:320-321) calculated the income from coffee production for all the villages in the Dreikikir Local Government Council area for 1970 and 1971. According to his figures for Tauhundor, the mean annual income from coffee per grower amounted to A$ 29.57 in 1970 and A$ 37.51 in 1971. At the time of my fieldwork, they may have earned a few Kina more than in the early 1970s. Although I do not have precise figures, Allen's new estimate, based on data from the early 1980s (Allen n.d.:11), of an average family income of just on A$ 100 per year seems optimistic. The northern Kwanga probably have a lower income than the villagers along the Sepik Highway but a higher income than the southern Kwanga, who live in an even more remote area.[2]

Later in this thesis, the proportion of purchased food in the northern Kwanga diet will be assessed (Chapter 8.1.). This will serve as an indicator of the purchasing power of the northern Kwanga, although we have to bear in mind that they need their money not only for food but also for drink (i.e. beer!), clothing, tools, school fees, and transportation fares, among other things.

5.8. The Overall Food-Getting Pattern

In my opinion, the most interesting feature of the northern Kwanga food-getting pattern is the great variety of subsistence options. It is true that yam cultivation, pig

1 In 1983, Papua New Guinea's imports of food and live animals amounted to K 139 million (Young 1984:7).

2 Among the northern Abelam who live near Maprik Lea (1964:128) observed in the early 1960s that it was already common to mix a tin of fish or meat into the daily meals!

husbandry and hunting are culturally more significant than other food-getting activities (e.g. the cultivation of other crops, the gathering of wild plants, the collecting of animal foods, etc.). The men's cult rituals focus on increasing the yam harvest and the number of wild pigs. Yams and pigs are the most highly valued exchange items. In order to achieve high social status, a man has to succeed as a hunter, a gardener, an exchange partner and, in former days, as a warrior; these are the virtues which are honoured during the final death ritual (see Chapter 7.6.). Women keep records of raised village pigs and these are also displayed during the death ritual.

Despite this cultural emphasis on pigs and yams, the agroforestry system provides other options as well. The cultivation cycle is dominated by the growth cycle of yams, yet the gardens produce mixed crops; rituals and rites focus on (short) yams and pigs, yet they have to be understood as *pars pro toto*; forestry, fishing, hunting small animals and collecting play a minor role in terms of labour and energy input, but they are an integral part of total food procurement. Each food-getting activity consists of many different tasks which follow culturally defined patterns; nevertheless, these patterns allow for variations: some women do not raise village pigs, some men do not hunt pigs, only small animals or none at all, only a few men go fishing, and so on.

This diversity not only allows for flexibility in times of natural or man-made crises, it also meets almost all daily and festive food needs of the local people and provides a means to continually exploit the various ecological zones of forested hill country. Since the stress is on diversity, new activities can be integrated into this flexible food pattern.

Today, most rural villages in Papua New Guinea are undergoing a transition as villagers increasingly supplement production of their own consumption with production for the market (see Harris 1982:1). These market activities (e.g. coffee production) provide the cash needed for such new activities as "Acquiring Store Foods". However, it is typical of the northern Kwanga that they regard each of these activities only as one of many options.

Earlier in this thesis I said that the local system is most vulnerable to increases in population and/or increases in socio-economic demands (see Chapter 2.1.). If the northern Kwanga sacrificed the diversity of their subsistence activities to a concentration on a few, high-yielding subsistence activities and/or production for the market, they might increase the nutritional returns and their spending power for processed foods but they would greatly endanger the balance of the local subsistence system. This might also have an effect on the nutritional status of the communities, a problem which is of particular relevance to this investigation. Therefore, a brief digression to a study in another area of Papua New Guinea, namely the Simbu area, seems justified.

Harvey and Heywood (1983:113) conducted this study and present evidence that, to this point, cash cropping appears to have decreased, rather than increased, malnutrition in the Simbu area. Their study documents improvements in the intake of energy and protein and the associated increase in the growth rate of children (see Chapter 8.2.). Several factors seem to have contributed to these improvements (Harvey and Heywood 1983:69): 1) A wide distribution of cash income through economic development in the form of smallholder coffee production; 2) higher intakes of energy and protein related to availability of cash; 3) earlier introduction of supplementary food and maintenance of breast-feeding; 4) improved government services, particularly of Health, but also Education and Department of Primary Industry; 5) the increase in heights and weights of mothers; 6) the increase of 200g

in the mean birthweights of Simbu infants. Several of these factors are probably related to one another. The increased intakes of energy and protein seem to have occurred largely because of increased consumption of imported foods (e.g. cereals, tinned meat and tinned fish). To buy increasing amounts of store foods became possible only because cash from coffee sales was available in sufficient amounts. Factors 5) and 6) are probably related to one another and to the improved quality of the diet (factor 2). However, the same authors also state that the overall effect of the improved growth and the resultant decrease in mortality will have been an increase in population and in pressure on available land. If this trend is not relieved by out-migration and, in fact, accompanied by an increase in cash cropping, the population pressure on available land will increase. As a result the agricultural system has been placed under increased stress. They conclude that it is likely that Simbu areas in which agricultural stress is already high may be on the verge of further, and rapid, environmental degradation, which will eventually lead to a deterioration in nutritional status.

The ways environmental, demographic, social and economic factors are related to nutritional status are extremely complex and difficult to study. It is not my intention to simplify the problems by repeating the deceptively easy hypothesis that increased involvement in the cash economy has negative effects on child health and nutrition. However, I wish to stress the fact that rural people like the northern Kwanga should not be discouraged in their tremendous effort to subsist on what they procure. If they begin to lose faith in their locally grown food system, they become increasingly dependent on help from outside. Too much emphasis on the benefits of market-oriented economy and the harms of subsistence-oriented economy build expectations that cannot be fulfilled within the near future.

Chapter 6
Food Preparation

This chapter continues the description of those aspects of the nutritional system which have been subsumed under the heading "food pattern" in the approach outlined at the beginning of this thesis (see Chapter 1.3.). It provides detailed information on tools and techniques used in food preparation and analyzes certain social and cultural values which are expressed in these tools and techniques.

Various aspects of food preparation among the northern Kwanga will be examined, moving from the most pragmatic to the more interpretative levels. We begin with a description of the equipment used in food preparation, come to cooking methods, recipes and food storage, continue with meal patterns and explore local concepts expressed in terms of food terminology. The chapter ends with a consideration of the northern Kwanga cuisine in relation to other culinary arts of Papua New Guinea.

6.1. Equipment[1]

The forest supplies the northern Kwanga with most raw materials for their cooking equipment and, in fact, their material culture (see Obrist 1987). The coconut palm, the limbum palm, the sago palm, the leaves of trees, shrubs and banana plants, tree barks, wood, cane and liana can be used in a number of ways, as the following description will demonstrate.

The ripe fruit of the coconut palm is protected by a thick, fibrous husk *(siangla)*. It has to be removed before the fruit can be used in food preparation. For this purpose, the northern Kwanga sharpen short sticks and ram one end into the ground, usually at the back of their dwellings. They impale the coconuts on these sticks *(graha)* and move them back and forth until the husk becomes loose. They break it away by hand and throw it onto a pile near the *graha*. The northern Kwanga have several uses for these coconut husks, namely as a kind of improvised seat, as tinder and as a mnemonic device to count village pigs (see Chapter 5.3.) and wild pigs (see Chapter 5.5.). The use of coconut husks as tinder is of particular interest in the context of cooking. The northern Kwanga always keep a fire burning, day and night. If it happens to die, they fetch a coconut husk, blow a few sparks from a burning piece of firewood *(hi nukiaba*: fire, mother) onto the husk and swing it up and down until the dry fibres begin to glow. Within a few minutes, the fire catches hold and produces enough heat to kindle dry firewood.

Well-formed coconut shells are not thrown away. Old men carefully clean them out

1 Information on the cooking equipment of the neighbouring groups is scarce. Fifty years ago, Mead (1938:294-300) collected information on cooking utensils of the Mountain Arapesh; the other authors make only a few scattered remarks.

and polish their rough, outer surface on a stone. Before the northern Kwanga could buy cheap metalware in town stores, they all ate from coconut shells *(siya hambiya)*. Today, many women and children continue to do so. When they cook a soup, northern Kwanga women pound cooked tubers, banana and greens with coconut shells *(angwi)*. To scoop hot water, they hold the shells with cane nippers. The bast *(siya saya)* of the coconut palm rind is used as a strainer, for instance in sago washing (see Chapter 5.2.) or in the preparation of coconut water, as we shall see in a later section.

The northern Kwanga distinguish between several limbum palms *(sobo, nduo, serepe, korhapsiki, kalasayi)*. When these palms mature, they develop flowers which are protected by a spathe. These spathes burst lengthwise when the fruit are ripe, and after a few days, they fall to the ground. Men and women collect them there. The *sobo* palm produces the biggest sheaths, those of the *nduo* palm are smaller; both are of such a tensile strength that they serve many purposes. In every dwelling and in every shelter in the gardens or the sago swamps the northern Kwanga keep a supply of these *sobo* and *nduo* in store.

If the men happen to find a long, red pandanus fruit, a bush rat or some other food in the forest, they search for a *nduo* or cut a big leaf, wrap the food in it and tie the bundle with a length of the ubiquitous liana. They often return with such improvised bags from the forest. At large food distributions, men line spathes with banana leaves and fill them with sago dumplings and other food. They fold the spathes, lace them with liana and place them next to the saucepans full of cooked food. The northern Kwanga further use these flower spathes to steam-cook tubers and other food by placing the tightly wrapped bundles directly onto hot embers. Instead of flower spathes, they use big leaves, tree bark and cane tubes for the same purpose.

Men and women also make durable baskets with these palm spathes. Unlike the people of the Maprik or the Middle Sepik area who transport most loads in netbags, the people of the Dreikikir area, with the exception of the southern Kwanga, use such baskets made of palm spathes. Men shape *nduo* into an oblong basket *(antombongri)*, sew it up with split liana, fasten a sling of pounded tree bark to each side of the basket and carry it on their shoulders. Men's baskets are rather small in size and cannot hold many items, only four, five yam tubers and smoking and betelnut utensils. Women use *sobo* for much larger baskets of the same name as the palm and the spathe. They can enlarge the size even more by sticking two folded *sobo* into the basket. Each woman is able to make such baskets, although some are more skilled than others. They fold the rectangular spathe to make a container, use a cassowary bone to pierce the overlapping parts and sew them up in a few, big stitches with split liana. A sling of pounded tree bark is led through these stitches, down the side, underneath the basket and up again through the stitches of the other side. The loose ends are tied in a knot, and the basket is ready. Every woman owns several such baskets and replaces them every few weeks. Men's baskets have gone out of fashion, although a few old men still make them. Many younger men prefer cloth or plastic bags, although some men, and most women, use these baskets to store food and other items. It is difficult to imagine a woman without a *sobo*. When she returns from the gardens, the basket is filled with yams, taro, banana, several leaf bundles of green vegetables, perhaps topped with an orange pandanus and several pieces of firewood (see Plate 7). When she goes down to the water-hole, she stows the dirty pots and dishes in it. When she goes to break firewood or to gather green leaves, she takes it along. When her son climbs a coconut palm to harvest

coconuts, he throws the fruit down, she picks them up and packs them in her basket. Without the *sobo*, there is no food, say the northern Kwanga women. Three-year-old girls already ask their mothers for a toy-basket; at five years they begin to practise with a middle-sized one (see Plate 8), and at ten years, they already carry the woman's basket. Year by year, the weight of the load is increased, until they can carry fifty kilograms and more. It has already been mentioned several times that they carry these baskets on their backs, suspended from a headsling.

These palm spathes further serve as working pads, for instance in food preparation. Women pare and cut the tubers on these pads, collect the parings, and then carry them to the fringe of the hamlet, where they throw them into the forest to decompose. They also pile and pound cooked food on these pads.

Sago palm wood is used as building material, for instance for shelves. Men construct such shelves in the dwellings and under the shelters to store cooking and eating equipment as well as food. Formerly, women cut special utensils *(sango)* out of the sago palm rind. They had a spade-like shape, and one edge was sharpened on a stone. Women used new *sango* to pare and break tubers, and old ones to weed the gardens. Today, industrially manufactured steel utensils (i.e. knives and spades) have replaced the *sango*.

For the local people, the forest provides a rich store of leaves *(minga, gugwa)* of every size and form. Large leaves such as those of the breadfruit tree *(wargugwa)* and of banana stalks *(lobgugwa)* are used like the spathes of the limbum palm as wrapping material, but for smaller items such as harvested green leaves, leftovers from meals, or seeds. On special occasions, men distribute small portions of raw, cooked or roasted pig meat in leaf bundles. People also collect the carbonized skin of baked bananas on such leaves and throw the waste into the forest to decompose. On the way back to the village, women often gather large leaves to cover the clay pots which have no lids. Lumps of newly washed sago are wrapped in such leaves *(lobgugwa, humbu, sulupu)*, strung to bundles *(nakminga)* and hung up to dry. A pair of oblong leaves *(merkuia)* serve another, well-defined purpose. The northern Kwanga fold them at the lower end, stick the short stems through the leaves and use them to fan the fire. In the village, people keep *merkuia* near every fireplace. In the vicinity of the artificially enlarged fresh water springs or pools, women cultivate certain shrubs. The leaves of these shrubs *(minga engle)* have a rough lower surface. The women use them to scrub the soot off the pots; metal pots shine like new afterwards. If a child wants to drink water and the mother does not have a suitable container at hand, she shapes a leaf into a cup *(tangwaiamo)*. Leaves are also used as a kind of plate, for instance when the northern Kwanga eat baked bananas. They commonly eat baked food with their hands, breaking small pieces off as they eat.

Tree barks *(mi sinsi)* are also used as raw material for cooking equipment. It was said above that the local people wrap food in pieces of tree bark and other material to steam-cook food directly on hot ashes. On a special occasion, men build a big, round bark oven of about 2 metres diameter (see Plate 17). For this purpose, they use the bark of the *mande* tree. They set the bark on end, form a ring, and fasten it between two circles of sticks, which are rammed into the ground and bound together with liana strings. Big leaves and palm fronds are used to line and cover the oven.

Since the northern Kwanga cook their food on open fires, the chopping of firewood is an important preparatory task. Women often make special trips to the forest, to food

gardens and coffee plantations to break firewood *(hiraba)*. Many branches can be broken off by hand, others have to be chopped with the bush knife. When the women return from garden work, they often carry several pieces of firewood on top of the food. At home, they add them to the stacks at the back of their dwellings. In order to protect the dry wood against sudden downpours, they cover the stacks with two or three spathes. Men occasionally bring a heavy log back to the village; these slow-burning logs are used as fuel and keep the people warm during cold nights. On rainy days, women either cook in the house, under the walled-off verandah or under an open shelter. Since the hamlet rather than the house is the actual living area of the northern Kwanga, many women prefer to cook outdoors, if the weather allows. Whether inside or outside, the northern Kwanga always make their fires directly on the hard, bare clay.

We have already come across several examples in which wooden sticks and forks have been put to use in food preparation. More will be listed here. Out in the forest or in the gardens, women often build a wooden frame to suspend the pot over the fire. For this frame, they cut two forks, sharpen them at the lower end, stick them into the ground and put a third branch across. Men construct similar frames to hang up the leaf bundles of newly washed sago. At the back of many houses, they erect wooden grates *(omdeie)* to roast meat. Two long poles are arranged lengthwise, one end resting on vertical forks which have been rammed into the ground, the other end being attached to a coconut palm. Many short poles are fastened crosswise. The northern Kwanga also keep short, wooden forks *(omdenge)* and spits *(omkorme)* for smoking small animals in every household.

Various canes also serve manifold purposes. Most of them grow wild in the forest, only one species *(ugu)* is cultivated by men. Up to two-metre-long sections of *ugu* are used as water containers, especially if women go to fetch saline water at the sodium salt spring (see Chapter 5.6.). These long cane tubes are preferred to other containers (e.g. plastic buckets or metal saucepans) commonly employed to fetch the daily fresh water supply because they have a greater volumetric capacity and they are easier to carry over the long distance from the spring to the village. The approximately one-metre-long cane tubes for steam-cooking *(tintiyi)* are cut from the same species. Split cane sections of another cane species *(wasamba)* are sharpened along the edge and serve as scrapers *(minsaba)*, for instance to scrape the carbonized skin off the tubers which have been baked on hot ashes or to abrade the hairs of a bush rat after they have been singed off. Longer split sections of the same cane species are folded to form nippers *(nakria)*. The northern Kwanga make nippers in several sizes depending on their use, small ones to take hot food out of a saucepan, very long ones to fetch heated stones out of the fire. It was briefly mentioned above that the local women hold a coconut shell with nippers to scoop hot water or soup; if the two objects are bound together, these ladles are called *hambiya nugu*.

Thin liana *(kubu)* can be used as strings, for example to lace leaf bundles, as we have seen above. Men use the same type of liana to make a foot sling for climbing coconut palms. If food items have to be hung up to protect them against the house rats (e.g. a bundle of sago flour), people also fetch this liana. To fasten objects to each other, they prefer other types of liana, which they split lengthwise.

Apart from plant material, the northern Kwanga also use bones, clay and stones as raw material for cooking and eating equipment. Especially old men still prefer to eat with spoons made of cassowary bones *(afsambu haba)* or pig bones *(fle haba)*. The locally

produced saucepans *(au)* are made of clay. There is a clay deposit in Tauhimbiet, but as we have seen earlier, many women prefer to trade some of their tobacco and betelnuts for clay pots manufactured by Kombio women (see Chapter 5.6.). Clay pots have a rounded bottom and always have to be secured by stones against turning over, whether they are placed over the fire or on the bare ground. Metal saucepans have flat bottoms; they are either put on empty tins to leave enough room for the burning firewood or suspended over the fire from a wooden frame. In pre-colonial times, the northern Kwanga shafted stones as knife, axe or adze blades *(le sungia)*. These stone blades have been completely replaced by imported steel blades and industrially manufactured tools. Certain hard river stones are still used to sharpen and polish objects made of plant material.

Most objects of the material culture of the northern Kwanga are purely functional. They are not decorated with carved, incised and/or painted ornaments.[1] The fringe of some clay pots are adorned with chip carved, triangular patterns but they have been traded from the Kombio. Many of the objects mentioned here are not made to last a long time; often, they are not processed but used in their raw form (e.g. tree barks, cane tubes, leaves etc.). They can be easily reproduced because the material is always available. Discarded objects can simply be thrown into the forest, where they decompose without leaving any traces.

Today, many objects of locally available material have been, at least partly, replaced by cheap, industrially manufactured goods. We find that especially metalware (e.g. spoons, forks, knives, pots, plates, bowls, cups, wire and tins) and plastic containers have been substituted for several local objects made of plant, bone, stone and clay material. This causes a problem hitherto unknown to the northern Kwanga, namely that of not (so easily) decomposable garbage. Discarded plastic bags, cans, beer bottles, and other garbage collect on the fringes of the hamlets. Children sometimes use cans and beer bottles as toys. Boys construct cars with tin wheels, and girls sometimes place a bottle in a carrying sling, pretending it is a baby.

We have seen several examples in which locally produced and imported objects have been interchangeable in their use. Many more could be cited. One day, for instance, a woman uses a metal strainer, the next day a strainer made of coconut bast. The same holds true of saucepans. Sometimes, a woman uses her clay pot, covers it with leaves and supports it with stones; at other times, she cooks in a metal pot with lid and handle and sets it on empty tins. Many women prefer to cook festive meals in large clay pots, mainly because of their size, as they assured me. A great advantage of metal pots is that they do not break. Northern Kwanga women, of course, recognize this advantage and usually take metal pots along to the forest or gardens. They also point out that metal pots have handles and can be suspended from wooden frames. The most important innovation, from their point of view, is the introduction of steel utensils, namely the bush knife and the kitchen knife. They consider them as time- and energy-saving implements. It is interesting, though, that the local women use the kitchen knife much in the same way as the *sango*, the "old" object made of sago palm rind. When they pare a tuber, they place it on end and chip the skin off. Also, they do not really cut but break the tubers into small pieces. To scrape the meat of ripe

1 The Kwoma (see Kaufmann 1972) and the Abelam (see Hauser-Schäublin 1989) produce and use various types of ceramic pots; only ceremonial pots and other ritual objects (e.g. coconut shells) are richly decorated. My informants claimed that their fathers formerly also possessed decorated ritual objects (e.g. clay pots) of local manufacture; however, none of these ritual objects have been preserved up to this date.

coconuts, many northern Kwanga women now use sharpened spoons or a serrated blade mounted on a low stool. However, the *guso* are still in use, especially among old women.

From the northern Kwanga point of view, many of the new objects have their advantages, but except for the steel blades, these advantages are considered as limited and do not necessarily justify a complete replacement of the locally produced objects. The limiting factors are cost and availability. It has already been mentioned a couple of times that the average annual income of a northern Kwanga family is less than A$ 100 (see Chapter 5.7.). This amount does not allow them to buy many industrially manufactured goods. Transport is another problem I mentioned earlier.

If we consider the cooking equipment in relation to the life style of the northern Kwanga in general, it is easy to see that it serves their purposes very well. The local people spend most of their days out of the village, and therefore their implements have to be light and transportable. The women pack a basic cooking kit consisting of a small saucepan, a bush knife, a kitchen knife, a few eating bowls and spoons into their *sobo* baskets and carry a glowing piece of firewood in their hands. Thus equipped, they can cook a hot meal, whether they work in the forest, the gardens or the sago swamps. A few pieces of dry firewood, water, and all the raw material used for wrapping and packing are readily available. Even if northern Kwanga women attend a festive occasion in another hamlet or village, they usually take their own cooking and eating equipment. We shall see later that a great number of women usually help to prepare a feast and each of them prefers to employ her own utensils. These cooking arrangements are, of course, influenced by the avoidance rules between generations; but also in polygynous families or extended families based on sibling-sibling links, each woman owns a complete cooking kit. If a husband or brother buys a new saucepan or other utensils for one woman, the other women of the extended family often envy her; constant nagging and sometimes even domestic quarrels are the result.

6.2. Cooking Methods and Recipes

The following description explores the northern Kwanga definition of local menus and snacks and documents the cooking methods. The place of these menus and snacks in the local diet will be assessed in Chapter 8.1. Many names of local menus refer to the cooking methods, others to a ("humoral") classification system (see Chapter 6.4.).

The northern Kwanga distinguish between several cooking methods, namely between steaming food in a saucepan *(u)*, making sago jelly and twisting sago dumplings *(tau)*, baking or roasting food in plant wrappings, cane tubes *(insi* or *fasi)* or in a saucepan *(tuambu)*, smoking meat *(hi)* on wooden grates, forks or spits and baking food directly on hot embers *(su)*.[1]

The first method *(u)* is employed for various vegetable stews *(isakaba hakla)* and soups *(ugmaha)*. The standard procedure is as follows: The women fetch some firewood from their

1 Information on cooking methods among the Sepik yams cultures is scanty. Systematic but brief descriptions exist for the Kwoma (Kaufmann 1982c:11-13), the Mountain Arapesh (Mead 1938:296-300) and the Abelam (Ross 1984:68-73 and Huber-Greub 1988:125, footnote 15).

stack and arrange it around the glowing end of the piece which they always carry with them. They place some tins or stones between the pieces of firewood and set the saucepan on top. Next, they pour some water into the saucepan until the bottom is covered, fetch a palm spathe and sit down to pare the taro and/or yam tubers (see Plate 9). They chip the skin off, collect the parings on the palm spathe and break the tubers into small pieces. Some of the bananas are peeled before cooking, others only afterwards. Greens are picked and cut up. Women fill the saucepan up to the rim, placing a few greens on the bottom, so that the tubers will not stick. Before they cover the pot, they add some more water and some salt. Only on festive occasions do northern Kwanga women cook with saline water from their spring. They push the wood together, fan the fire and leave the food to steam-cook. The amount of time it takes until the food is done depends, of course, on the size of the pot and the quantity of food. The quality of the food (i.e. its water content) also plays a role. The women then carry the palm spathe with the parings to the fringe of the hamlet, throw them into the forest, walk back to the house, pour some water over the *sobo* and clean it with their hands. They never leave a clean plant spathe lying on the floor because of the pigs and dogs; they always lean them against the house wall. From time to time, they check the fire and push the embers closer together. When the food is done, they distribute it among the plates and pour the vegetable water over it.

For a soup, the women first prepare a stew.[1] They select different types of bananas and, if they have any, fresh yam tubers because they have a higher moisture content. Instead of breaking the yam tubers into small morsels, they half them. The upper half *(baksingri*: yams, head) is split lengthwise into two big pieces. They will be eaten as a side dish. The lower half *(bakserembo*: yams, bottom) is then chopped up. When the stew is done (see Plates 10-12), the women push the firewood apart, take the pot from the fire and arrange the cooked food on two palm spathes, separating the big yam pieces from the rest. With the rounded part of half a coconut shell they then pound the vegetables into a smooth, fluid pap. Using the shell as a spoon, they put the pap back into the vegetable water and stir it to a thick soup. They put the saucepan back on the fire, push the wood together and fan it to reheat the soup.

Northern Kwanga women cook several variations of these stews and soups. One variation is to change the composition of the ingredients. The palate of the local people is able to sense the specific tastes of various yam and taro species. Green vegetables and banana also have different flavours. Depending on which of the core foods dominates, the northern Kwanga speak of a yam soup *(bakugu)*, of a banana soup *(lobnibugu)* or a taro soup *(nansugu)*. Sweet potatoes, pumpkins, beans and mushrooms are sometimes added to stews and soups.

A special vegetable stew is named after its main ingredient, namely pandanus *(gla)*.[2] To cook pandanus, women place the saucepan on the fire, add some water and prepare the

1 Most of the neighbouring groups, namely the Kwoma (Kaufmann 1982c), the Mountain Arapesh (Mead 1938:297-298) and the Abelam (Lea 1964:123, Ross 1984:68-73 and Huber-Greub 1988:125, footnote 15) apparently eat vegetable soups. Kaberry (1940/41:353, footnote 30) mentions that yams are frequently put on hot stones and steamed under a cover of banana leaves, a method I never observed among the northern Kwanga. Vegetable stews cooked in pots seem to be less widespread than soups; the only evidence, apart from the northern Kwanga, comes from the Kwoma (Kaufmann 1982c:11) and the Abelam of the Wosera (Ross 1984:68-73).

2 Unlike the Kwoma, who prepare a special pandanus soup (Kaufmann 1982c), the northern Kwanga cook only a pandanus stew.

fruit. They cut it first lengthwise, then into sections of about 5 to 10 centimetres, carve out the central pith and put the cleaned pieces into the saucepan. Sometimes they cook pandanus by itself, but usually they add some bananas and green vegetables, occasionally some tubers. They pour on some more water and add salt. Then they cover the saucepan, increase the heat and leave the food to steam-cook. When it is done, they seize morsel by morsel with cane nippers and place them on a clean palm spathe. With their hands, they remove the red seeds from the pith, put them into a dish of water and squeeze them out. The water turns red and oily. This sauce is then spread over the rest of the food. Many people consider it a special treat to suck the remaining sauce off the kernels. It is not an unusual sight to see four or five children lined up on the fringe of the hamlet, each with a banana leaf heaped with kernels, sucking and spitting them out.

Another variation is to add coconut milk.[1] The women break the husked fruit in half *(siyan taba)*, and save the water in a bowl. They scrape the dry white meat of the ripe coconut *(siyan bla)* and collect the scrapings in a bowl. If necessary, they add some water. Then they knead the scrapings with their hands and squeeze the liquid from the grated flesh through a strainer. This coconut milk is then put into the vegetable water or the soup. After it has been added, the heat should be reduced because coconut milk curdles. Vegetable stews and soups with coconut cream have a distinct flavour and, of course, are more nutritious than those cooked without this ingredient. Today, women sometimes replace coconut cream with purchased dripping.

Apart from or in addition to coconut cream, other special ingredients sometimes enrich vegetable stews and soups, namely grubs, fish or meat. In day-to-day life, the northern Kwanga have an almost exclusively vegetarian diet (see Chapter 8.1.). Animal food marks special occasions. If a family has smoked, for instance, a lizard in preparation for a feast, they cook the soup as described above and then tear the meat into small pieces, mix them with coconut scrapings and selected greens, and add these condiments to the soup. Small pieces of tinned fish and the oil in which the fish was preserved are also mixed with coconut scrapings and then either added to a soup or spread over a stew.

Another type of soup is prepared with sago flour *(nakugu)*.[2] The women pour water into a small saucepan, cut up a bundle of green vegetables (preferably the leaves of the *Gnetum gnemon* tree) and put them into the water. They increase the heat and wait until the water boils. In the meantime, they scrape a ripe coconut, peel a pitpit, crumble it between their fingers and mix the scrapings and fragments with some leafy greens. They add some water and salt to the condiment and put it aside. After the vegetable water has boiled for several minutes, they cautiously crumble the sago flour with their right hand, put it into the boiling water and stir the soup with their left hand until it begins to thicken. When it has the right consistency, they add the condiments and mix them with the soup.

Flour made of the seeds of the *Pometia pinnata* fruit *(hamsiki)* is also used to make soup. When these fruit are in season, people eat them and collect the seeds in bags or leaf

1 The addition of coconut scrapings or coconut cream to vegetable soups and other meals is widespread in Papua New Guinea and also documented for other Sepik yam cultures, for instance the Kwoma (Kaufmann 1982c), the Mountain Arapesh (Mead 1938:297) and the Abelam (Kaberry 1940/41:353, Lea 1964:123, Ross 1984:68-73 and Huber-Greub 1988:125, footnote 15).

2 The cooking of similar sago soups has also been mentioned by Mead (1938:299) for the Mountain Arapesh and by Kaberry (1940/41:353), Ross (1984:68) and Huber-Greub (1988:125, footnote 15) for the Abelam.

bundles. Once enough seeds have been collected, people peel off the seeds' skin and then immerse the seeds in water to ferment. After about a week, they wash the seeds and bring them to the village. Wrapped in leaves or palm spathes, the seeds are left to dry above the fireplace. After a few weeks, people pound the seeds to flour with a stone. For the soup, they fetch pitpit and a bunch of a certain banana species *(lobmiri)* from their gardens. Then they harvest the leaves of certain trees which they cultivate on the fringe of the hamlet *(apsaka, wasarkia* and/or *menglegisa)*. They peel the pitpit and banana, pick and cut up the greens, put them into a saucepan and boil them in hot water. When the food is done they mash it to a pap, put it back into the vegetable water and carefully crumble the flour of the *Pometia pinnata* seeds into the soup, stirring it until it thickens.

Certain soups contain ingredients because they have a special meaning. Such soups play a role in garden and hunting magic. One man described his recipe for a soup which he prepares after planting ceremonial yams (see Chapter 5.1.). First he chips off several pieces of bark, namely from the breadfruit tree, the *Gnetum gnemon* tree, the coconut palm and the pandanus palm. He then collects coconut palm flowers. After he has pounded all these items with stones, he wraps them into a coconut bast strainer. For this man, each of the collected items has a special meaning. The fruit of the breadfruit tree, from which he collected a bit of bark, does not fall down until it is ripe; the same should happen with the leaves of the yam vine; they should stick to the vine until the food is mature. The *Gnetum gnemon* tree grows many fruit; likewise, the seed yams should grow into eight or nine tubers in each hole. The coconut is small, he explains, until the sap goes into it, and it grows a long stem; in the same manner, the yams should grow long, too. Similarly, the pandanus is short, but in no time it grows long; the yams should grow in the same way. The meaning of each of these examples is constructed by analogies. The growing seed yams in the ground should develop characteristics similar to or analogous with those the planter sees in the selected plants. After he has collected and wrapped his ingredients, he prepares potassium salt in the traditional way (see Chapter 5.6.). When the head of the yam *(baksingri)* grows downwards and tastes the salt, he explains, it will grow deep into the ground. In other words, he attributes human-like behaviour to yam tubers. We have already seen that the northern Kwanga believe that yams are animated beings (see Chapter 5.1.). Red ants are the next ingredient. He digs them up and roasts them in the fire. The analogy here is that red ants eat plant material. If he adds them to his soup, he says, they will eat up all the bad food that is left in his body. They clean his digestive organs, so to speak. When all this is accomplished, he pares four yam tubers, places the coconut bast bundle with all the ingredients in a saucepan, heaps the food on top and adds water. He puts the saucepan on the fire, and when the water boils, he stirs it so that the washed-out substances of the tree barks and the coconut palm flower mix with the yams. He then seasons them with the potassium salt. When the tubers are done, he takes them out of the saucepan, puts the big pieces *(baksingri)* and the bast bundle aside and pounds the rest *(bakserembo)* to a pap. He puts the pap back into the saucepan and stirs it into the water. In a separate bowl he mixes the red ants with coconut scrapings and adds them to the soup. After he has stirred and reheated it, he deals it out on two plates, one for himself, the other one for his wife. His children are not allowed to eat this soup. If some is left, he cannot feed it to the pigs or dogs; instead, he has to preserve it until the next day and eat it himself. It is interesting that this yam magic is not applied directly to the tubers but to the body of the planter – and his wife. Note that they eat the

soup after he has planted the seed yams. By mixing the special ingredients with yams and by ingesting this soup, they hope to influence the growth of the tubers in their garden. In a certain sense, the eating of this special soup can be interpreted as a ritual union between the planter, his wife and their yams.[1]

At the end of the seclusion after menarche and childbirth, women also prepare a special soup.[2] The main ingredient is the pith of a wild banana *(klebi nglo)* which is believed to stop the blood flow. The women search for it in the forest and bring it back to the village. There, they first prepare a stew consisting of yams and this pith. When these foods are done, they mash them with half a coconut shell. Then they scrape dry coconuts, mix them with the pap, put it back into the saucepan and add bits of smoked meat, fish or grubs. They increase the heat and stir the soup until it becomes thick and smooth. All the women but none of the men can eat this soup.

Immediately after birth, the other women prepare a soup for the new mother. The main ingredient of this soup is the leaves of *Neoalsomitra trifoliolata (kwasmabu)*. It is believed to increase the flow of milk. With these leaves, yams and the leaves of *Abelmoschus manihot (waingusa)*, they prepare a vegetable stew. When the ingredients are cooked, they mash them with half a coconut shell and put the pap back into the vegetable water. They increase the heat and stir it until it becomes a thick, smooth soup. Only lactating women can drink this soup. The northern Kwanga also prepare such soups to increase the milk production of hunting dogs and pigs.

The cooking method for all these soups and stews is basically the same; as we said, the northern Kwanga use the verb *u* for it. For the preparation of a certain sago meal[3] the northern Kwanga use another verb: *tau*. They fill a saucepan with water and add certain leaves *(kimbia gugwa)* or barks *(bukiagisa)* to make the sago "strong" *(kwambu)*. They let the water boil for a while. In the meantime they pick some greens (e.g. *wahapgisa)*, peel and crumble pitpit, put them into a small saucepan and add some water and salt. They cook these vegetables on a second fire. Then they scoop several ladles of water into a bowl. They add some sago flour and vigorously stir it until it thickens into a pudding; they pour some more water over it and carefully stir the pudding until it gelatinizes. Now they seize two thin sticks, dip them into the gelatine, seize a small piece of paste, lift it and quickly twist the sticks around one another, forming a dumpling. Each dumpling is carefully drawn off the sticks and placed on a plate or a palm spathe. The women make about fifteen such dumplings per person. Afterwards, they scrape a dry coconut, take the vegetables from the

1 At the initiations into certain stages of the male cults among the Ilahita Arapesh (Tuzin 1980:58) and the Abelam (Huber-Greub 1988:248) the novices eat a "magical soup"; the "hot" substance of this soup is believed to lodge permanently in their stomachs and to cause them to become sick if they should ever break a taboo. An Abelam yams cultivator explained that yams magic is in the stomach of the planter (Huber-Greub 1988:169, footnote 86). According to Huber-Greub (1988:248) the Abelam call these "hot" substances *yaankepma*. *Yaankepma* substances are also given to ceremonial yams to make them grow big; these substances often contain roots, barks and leaves of certain trees (Huber-Greub 1988:168-171). Whether the northern Kwanga novices were also fed "magical substances" is not known to me. Today, some northern Kwanga men apparently eat such substances together with their wives, a practice which is strikingly different from those reported from the Ilahita Arapesh and the Abelam!

2 The Abelam also prepare a special meal at the first menstruation ritual. The main ingredient of their meal is ceremonial yams which the women cut up into many pieces (see Hauser-Schäublin 1987:97).

3 This sago meal is known in many parts of Papua New Guinea and is usually called tanim saksak in Tok Pisin. Among the Sepik yam cultures it has been documented for the Kwoma (Kaufmann 1982c:11), the Mountain Arapesh (Mead 1938:299) and the Abelam of central Wosera (Ross 1984:68).

fires, and spread the coconuts and the vegetables over the sago dumplings. The northern Kwanga prepare sago flour only in the form of soup and dumplings although they know that other Sepik groups bake sago cakes.[1] The northern Kwanga said they did not like the taste and the consistency of these cakes.

A third cooking method of the northern Kwanga is to bake or steam-cook food in plant wrappings or cane tubes directly on hot embers *(insi* or *fasi)*, as the following account from my field notes of December 21, 1984 illustrates.

> Sombenuku happens to kill a piglet while he is in the forest to cut palms for timber. He picks it up and carries it to his brothers and sons, who also work in the forest, and they decide to cook and eat it right there. Some of them go to search for a certain tree *(mande)* and cut a rectangular piece of about 1 x 0.5 metres out of its bark; others harvest tree leaves *(wargugwa, wasarkia, menglegisa)*; a third group cuts several arm's lengths of thin liana and collect more firewood, and several young boys cut and clean the animal. They get back together, line the bark with big leaves, put the animal on top, roll the bark and stuff each end with green leaves. They then tie the rolled bark with thin liana and place it directly on hot embers. After about an hour, they open it to see whether the meat is done but have to put it back on the fire for another half hour. Finally, it is done and they eat the meat with some of the green leaves.

The northern Kwanga say this is a common method of cooking food when a saucepan is not available; however, the same method is used in the village, where pots are available. Sometimes women prepare grated tapioca tubers or sago flour mixed with crumbled pitpit in leaf wrappings which they either place directly on hot embers or in a saucepan without adding any water. The latter method is referred to as *insi tuambu awuk*. It is actually a combination of two methods, namely "baking in plant wrappings" and "baking in a saucepan". The latter method plays a special role during the ritual seclusion after menarche, as we shall see below. The women let the food bake for about an hour, open the leaves and add some scraped coconut. Especially with such ingredients as certain green vegetables (e.g. *yarkike)*, beetles *(malwange)* or mushrooms *(nakgunia)* these meals are considered delicacies.

During the last stage of the *sukusa* ceremonies (see Chapter 7.9.) the northern Kwanga use several variations of this cooking method. Since each man of the giving moiety kills one, two or even three pigs at the same time, a lot of meat has to be cooked on the same day; otherwise it would rot in the tropical climate. Some meat and greens are packed into palm spathes and baked directly on hot embers *(sobo fasi)*. Other pieces of meat, greens and coconut scrapings are wrapped in big leaves and placed on a rectangular piece of bark; stones are heated in a fire and then put on top of the leaf bundles; the bark is rolled and tightly laced *(kaleksu)*. A third variation was already described above, namely to bake food in leaf wrappings placed in a saucepan without water. At the *sukusa*, women prepare fresh pig meat and sago in this way.

Only once during my fieldwork, also during the last stage of the *sukusa*, the northern Kwanga cooked food in a large bark oven *(mande sinsi)*.[2] Several days before the big pig exchange, several members of the "giving" moiety got together. Some of them constructed

1 Among the Sepik yam cultures the baking of sago cakes has been documented for the Kwoma (Kaufmann 1982c:11-12) and the Abelam (Kaberry 1940/41:353, Ross 1984:70 and Huber-Greub 1988:125, footnote 15).

2 Like the Kwoma (Kaufmann 1982c:11) and the Mountain Arapesh (Mead 1938:300), the northern Kwanga do not cook food in earth ovens, which is a common cooking method in many parts of Papua New Guinea and also among the Abelam (Hauser-Schäublin 1983b:351 and Huber-Greub 1988:125, footnote 15).

the oven as described in the last section (see Chapter 6.1.). A second group built a big fire to heat stones. Still others put the sago flour into folded banana leaves and shaped them artistically and laced them neatly with split cane strings. Each form has a name (see Plate 16). Round bundles are called *ma masiki* (man, head), thin and long bundles *afserekunia* (a bird species), flat and long bundles *fuome* (fish) and the most elaborate ones, which are fastened to a frame of cane and wood, *amblambla* (butterfly). The bundles are then baked in a bark oven between greens and hot stones. On the day of the big pig exchange, these sago bundles and other food gifts are lined up in front of the temporary structure which serves as a ceremonial house.

This is an example of a typical feature of the Kwanga culture. Unlike other Sepik yam cultures the Kwanga do not carve, plait, paint or otherwise artistically form and shape objects.[1] Instead, the Kwanga create what could be described as "food art". Only food is formed, painted and arranged as images.[2] In the next chapter, we shall come across several other examples of this feature of the Kwanga culture.

The preparation of a feast always includes cooking and/or smoking meat.[3] The animals are either killed before or during the special occasion. In former times, pigs were killed by stuffing their snouts with leaves; today, they are either shot or clubbed to death. Then the bristles are singed off with burning torches and scraped off with cane sections. Pigs are laid on their back to be butchered. The northern Kwanga do not always use the same butchering technique. At the *sukusa*, the men make two cuts opening the belly from head to bottom and remove the middle part. They split the trachea and thorax with an axe, remove the chest bones, heart and lungs and place them on a palm spathe. With fern leaves, the helpers sponge the blood off. The men then take out the stomach and intestines. These are picked up by the women who put them into carrying baskets and go down to the river to wash them. The men cut off the limbs, the lower jaw and the tongue. The upper jaw and the head are left connected with the back. This is the main difference between butchering methods; at the *sukusa*, the northern Kwanga leave the upper jaw and the ears on the back skin of the animal, whereas on other occasions (e.g. at a death ritual or at house-roofing feasts), the head is severed from the trunk and the skin is cut up into several long sections. The men then cut piece after piece of meat from the trunk and throw them on a palm spathe. When all the flesh has been removed, they place the skin on a smoking grate. At the *sukusa*, the donor of the pig gives the animal's heart *(sihaukri)* directly to his exchange partner. His wife cooks the stomach, the thorax *(meleyi)* and the lower jaw *(fle tagumbi)* in a saucepan, cuts them up and mixes the meat with coconut scrapings. While it is on the fire, she forms sago dumplings and puts them on a palm spathe. She then scatters the meat and the coconut scrapings over the sago dumplings, folds the palm spathe and wraps them with split liana strings. This bundle, together with a saucepan full of soup, several other bundles with steamed meat and the smoked back skin with the upper jaw will later be added to the heap of raw food which she and her husband present to their exchange partner and his wife.

1 There are a few exceptions, for instance the finery worn during certain ceremonies (see Chapter 7.9.).

2 "Ich möchte hervorheben, dass wir hier einem wesentlichen Merkmal der Kwanga-Kultur gegenüberstehen, indem durch Anlage und Zusammenstellung von Nahrung ein Bild geschaffen wird, wir sehen keine Schnitzerein, keine Flechtwerke, die Nahrung allein drückt sich im Bild aus." (Schindlbeck 1981:8)

3 The Mountain Arapesh also boiled meat in large pots (Mead 1938:299). The Abelam, on the other hand, never boil or roast meat; they always cook it in earth ovens (Hauser-Schäublin 1983b:Fig.21).

On the other observed occasions, the thorax and the stomach are cooked and mixed into a soup which only the women are allowed to eat; the skin and the flesh are cut up into small pieces, wrapped in leaves and distributed among the guests.

In all these meat distributions people have to observe the avoidance rules mentioned earlier. The pig owner's family and their descent groups may not eat the flesh of the pig (see Chapter 5.3.). If the meat comes from a wild pig, the wife and children may eat it but the hunter, his clan brothers and all the relatives who call him *yi* or *nira* may not consume even a piece of it (see Chapter 5.5.); this rule applies only if the hunter used magic to kill the wild pig. Another set of rules concerns the cutting of meat.[1] We have already seen that relatives classed as grandparents *(arai)*, fathers *(abui)* and mothers *(umai)* may not eat any meat which was cut by sexually mature grandchildren *(nira)* and children *(yi)*; similarly, non-initiated persons may not eat any meat cut up by initiated men (see Table 5). These rules not only affect the preparation of pig meat but that of every animal including bush rats, possums, and tree kangaroos.

The northern Kwanga use the word *hi* (fire) for the smoking of meat on wooden grates, forks and spits. Whenever large amounts of meat have to be prepared, the men place the big pieces on wooden grates and make a fire underneath. At the *sukusa*, they separate the fat from the meat, spread the fat over a sprouting coconut and lace it with split cane strings *(siya ioho)*. This method has never been observed on other occasions. Small pieces of meat are usually stuck on spits and placed directly over the fire. Lizards and birds are also smoked on spits; bush rats are mounted on wooden forks. Smoked meat, of course, does not have to be consumed on the same day. The northern Kwanga often clean and smoke killed animals several days or even weeks before a planned feast. These animals have to be smoked now and again to keep them from putrefaction.[2] The following account from my field notes of November 28, 1984 illustrates the cooking method called *hi:*

> Manaru kills a bush rat which was tracked down by Hauseng's hunting dog. He brings the animal to Sahamoku, who singes the hairs off and abrades them with a cane section *(minsaba)*. She is not allowed to dress the animal; if she did, the older generations could not eat any meal enriched by this meat. Therefore, Sahamoku sends her children Oie and Mangrima down to the neighbouring hamlet, where her mother-in-law lives. The children return to say that Kakiaor will come later this evening after she has finished cooking the meal for her two unmarried sons and her husband. After their own meal, the members of Sahamoku's household gather on the open space behind their dwellings and chat until Kakiaor arrives. She sits down, Sahamoku hands her the utensils, and she cuts the skin of the animal with a sharp cane splinter, beginning at the throat, following the middle line of the belly and ending between the legs. She then removes the innards and the thorax bones. With the blunt end of the axe blade, she smashes the skull and the pelvis bones. Head and legs remain on the trunk. Sahamoku and Hauseng can now take over. They fasten the spread-out animal body between a split wooden fork and bind the forelegs to the ends of the fork, the hindlegs to the lower part. While Sahamoku then holds the framed animal, Hauseng pierces its body with several cane sticks to keep it stretched. They then place it over a fire to smoke.

The fifth and last cooking method of the northern Kwanga is called *su*. This verb means "to bake food directly on hot embers". Various foods can be prepared this way, for instance taro, yams, bananas, pitpit, corn, breadfruit and its seeds, grubs, fish, mushrooms,

1 The Abelam also observe certain rules regarding the cutting of meat but they are different from those of the northern Kwanga. Only old Abelam men may butcher village pigs because the blood of these animals is regarded as extremely powerful and dangerous (Hauser-Schäublin 1983b:350).

2 This will also be exemplified in the description of food distributions in Chapter 7.

and many other titbits.[1] Men, women and children prepare food this way whenever they feel hungry. All it takes is burning firewood and, of course, any of the above-mentioned foods. Sometimes, when women prepare a meal in a saucepan, they put a few corn-cobs or bananas underneath, directly on the hot embers. They are done in no time, well in advance of the other meal.

The northern Kwanga also eat fresh fruit, of course, for instance passion fruit, mango, wild litchis, cherries and other tree crops (see Chapter 5.2.) and sugar cane. Favourite cold meals are passion fruit mixed with coconut scrapings or bananas soaked in saline water. Often, they drink the water and eat the fresh flesh of unripe coconuts *(siya wayi)*; this refreshing snack is also offered to visiting guests.

Apart from coconut milk and fresh water, the northern Kwanga did not have any drinks. This has changed recently. Following the example of the white people and the urban elite, the northern Kwanga now occasionally buy beer, strong liquor, Nescafé and sugar. During my fieldwork, one store in Tauhundor obtained a licence for selling alcohol in the village.

New foods and recipes have also reached the northern Kwanga villages. Especially rais na tinpis (rice and canned fish) has become a new symbol for festive occasions. Today, the one kilogram plastic bags of rice and the cans of fish form a constitutive element of most food distributions. In everyday life, only the new elite, the teachers, the APO and their families, eat rice meals. This fact further enhances the symbolic value of these new recipes. They stand for a new life style, "urban" income and living conditions. In the village, the rice is always prepared the same way. Women boil it in salt water, add coconut cream, and spread separately cooked greens and canned fish (or smoked meat) over the rice as a relish.

6.3. Meal Patterns

The previous section described the cooking methods and recipes of the northern Kwanga, now we are going to examine their meal patterns.[2] At a first glance, this seems to be an easy task. The northern Kwanga eat cold leftovers for breakfast, a small meal or a snack during the day and the principal family meal in the afternoon or evening.[3] However, such a superficial approach results in simplifications. First, it measures northern Kwanga meal patterns against our own (etic) categories (i.e. "breakfast", "small meal", "snack"). Second, to define the term "meal" is a difficult task, even in our own culture.[4]

We begin with a consideration of a binary pair which seems relevant to the definition of the category "meal", namely that between *sarkamba su* and *sarkamba auk u*. A contrast in terms of equipment and cooking method is already expressed in the literal meaning of these two short phrases: *Sarkamba* means "food", *su* means "to bake on hot embers", *auk u*

1 This cooking method has also been documented for several neighbouring groups, namely the Kwoma (Kaufmann 1982c:11), the Mountain Arapesh (Mead 1938:300) and the Abelam (Huber-Greub 1988:125, footnote 15).

2 In this section we examine local definitions of meal patterns; quantitative data on meal patterns will be presented in Chapter 8.1.

3 Similar meal patterns have been reported from the Abelam (Kaberry 1940/41:347, Lea 1964:138 and Ross 1984:64).

4 This has been convincingly demonstrated by Douglas. In her famous essay "Deciphering a meal" Douglas (1975b) tries to answer the question: What defines the category of a meal in our home? Her approach reveals interesting aspects of the construction of meaning.

means "to boil in a saucepan full of water". This already indicates that cooking method and equipment seem to be important criteria in defining the category of a meal among the northern Kwanga. We find several variations of this theme. *Sarkamba su* implies that raw food is put on the fire as it is; in contrast, *sarkamba auk u* has first to be pared, broken, cut up, peeled, pounded, scraped or otherwise changed in form. The former is prepared with a minimal input of time and energy, the latter is a result of labour- and time-intensive preparations. *Sarkamba su* can be cooked anywhere provided that fire, wood and food are available; in contrast, a soup, the most elaborate type of *sarkamba auk u*, requires several additional items, namely a saucepan, cane nippers, sago palm spathes, coconut shells, and so on. *Sarkamba su* is rather associated with the forest and a mobile way of life, *sarkamba auk u* more with the village and a sedentary way of life. In terms of food types, the contrast appears to be minimal: Taro, yams, banana, corn, pitpit, breadfruit, grubs, fish and several other foods may fall into both categories, depending on the cooking method and certain other criteria which will be explored in the next section. The most obvious difference concerns the coconut. It is either consumed raw, or it is scraped, kneaded, squeezed, strained and added to *sarkamba auk u*; but to the best of my knowledge it is never prepared as *sarkamba su*. The former type of meal implies, we have said, that food is subject to several form-changing processes (e.g. paring, breaking, cutting up, peeling, pounding, scraping, kneading, squeezing, straining, etc.). Earlier in this text it was mentioned that if these form-changing processes are carried out by certain categories of people (i.e. members of the younger generation, initiated men, women during menstruation or after childbirth), the food cannot be consumed by the opposite social categories for fear of *wahapsila* (see Table 5). None of these food proscriptions concern *sarkamba su*. In the next chapter we shall see that during ritual preparations men are obliged to eat *sarkamba su* and during the seclusion after menarche girls may only eat *sarkamba auk tuambu*. In this context, *sarkamba auk u* represents a "secular meal", *sarkamba su* a "ritual meal". In another context, the former means a "good meal", the latter a "poor meal", namely when old men complain they are neglected because they always have to eat *sarkamba su*; similarly, if a wife and mother refuses to prepare *sarkamba auk u* at least once a day, her husband takes it as a sign of protest or extreme laziness on her part. The fact that a "good meal" is equated with a "secular meal" and a "poor meal" with a "ritual meal" is, of course, not a contradiction; it implies that *sarkamba auk u* stands for the joys of secular life, so to speak, whereas *sarkamba su* represents the rigours of ritual life. Several other examples could be quoted to illustrate the contrasting meaning of the two terms, *sarkamba auk u* and *sarkamba su*; some of them will be examined in the next section. At the moment, we have to pause and consider the implications of the above-mentioned examples.

The context of food preparation emerges as a relevant aspect in the definition of the category "meal" among the northern Kwanga. It includes several criteria which combine to create a meaning or rather several meanings. Such criteria are, for instance, the equipment, the cooking method, the handling of raw food, the place of preparation, and the input of time and energy.

In addition, several examples have indicated that the northern Kwanga construct symbolic analogies on the basis of these pragmatic contrasts. *Sarkamba auk u* is associated with water, sedentary village life, joys of secular life, women's duties but also with potential illness and separation between social categories; it contrasts with *sarkamba su* which is

associated with fire, mobile forest life, rigours of ritual life, men's dependency on women. Thus we see that the definition of the category "meal" draws on symbolic structures of religion (e.g. relationships between man and nature, secular and ritual life), the medical system (potential illness) and the social system (division of labour by sex, social categories). Consequently, these relations need to be taken into consideration in the analysis of the "culinary code" (Lévi-Strauss 1965) of the northern Kwanga.

Before we move on to examine the meaning of certain food terms in more detail, it seems useful to consider the concrete, observable contexts of meal preparation. A first description tries to capture the contexts of preparation of *sarkamba auk u*, the second the contexts of *sarkamba su*.

The cooking of the principal family meal is preceded by several long-term and short-term preparations. The first condition is that the woman owns a saucepan. As we have seen earlier, they either obtain clay from women in Tauhimbiet and make their own clay pots, or they trade them from Kombio women for tobacco or betelnuts; nowadays they obtain metal pots sold in town stores. Another, more immediate, task is to harvest food in the gardens. In the late afternoon, the women return loaded with food for the evening meal. They then have to fetch water at one of the artificially enlarged springs or pools situated on the steep slopes surrounding each hamlet. They take the dirty saucepans and plates along and wash them in the first pool. After scrubbing the saucepans and plates with *minga engle* (leaves of a cultivated shrub), they rinse them with clean water and carry them to the second pool where they scoop fresh water into the cleaned saucepans. They take great care not to dirty the fresh water pool; if they or their children soil it by accident, they tell their neighbours not to use this pool. Sometimes, the water is dirty when the women come down to fetch water. They report this back in the hamlet, and often a dispute breaks out among the women who use the same springs. In order to cook in the village, the women have to carry out yet another laborious preparatory task, namely the chopping of firewood. In the last section we have seen that they often take special trips to the forest to replenish their supplies.

We have noted that the principal family meal commonly consists of a vegetable stew or a vegetable soup. If sago is available, the women may cook sago dumplings or a sago soup. In terms of ingredients, however, the evening meal is not much different from other hot meals prepared during the day. Earlier in this text, we have seen an example in which northern Kwanga women cooked a vegetable stew in the gardens (see Chapter 5.1.). Only in a *noome* garden, where the first yams harvest is in the ground, are people forbidden to boil any food in hot water. In another example, they prepared a sago soup, a vegetable stew and a pandanus meal in the sago swamps (see Chapter 5.2.).

It seems that in terms of ingredients, the only difference between these hot meals lies in the use of coconuts. Outside the village, women rarely add coconut scrapings or coconut water to the basic food items. It has already been mentioned that coconut palms are the visible signs of human settlements. It can be inferred that the symbolic association between coconut and village is also expressed in meal patterns.

Out in the garden or the forest, women do not prepare vegetable soups. This type of meal is probably too labour-intensive and requires more than the basic cooking kit, which is, by the way, also true for the preparation of coconut scrapings and coconut water.

Thus we see that the context of the evening meal is quite different from that of the

meals consumed during a rest between two work units. Recently, many northern Kwanga have adopted the Christian Sunday as a holiday. At noon, they return from mass and soon afterwards, women begin to prepare the principal meal of the day. The context of these meals is similar to that of the evening meals on a workday. Frequently, however, women are too tired after a full day's work to prepare a laborious meal, for instance a soup with coconut water. If this happens too often, her husband is likely to scold her for being lazy.

We now come to the second description which tries to capture the context of preparation of *sarkamba su*. The following account from my field notes of March 20, 1985 illustrates a typical morning scene which is characterized by a lack of time and energy.

> Soon after dawn, Sahamoku wakes up in her ground house *(misambi aka)*. With her baby Ugsembeuku in her arms, she rises, bends down, picks up her sleeping mat *(gewaa)* and leans it against the house wall. Ugsembeuku begins to whine. "Ssss, stay calm, sleep, sleep," Sahamoku soothes her, pulls the carrying sling *(kubu)* over the head, lifts Ugsembeuku with her left hand, spreads the cloth with her right and lets the baby slide down until it sits on her hip. She picks up a glowing piece of firewood *(hi nukiaba)* which kept them warm during the night and carries it outside. She knocks it against the house post, gets rid of the charcoal, blows the glowing end and puts it down. From the stack of dry firewood, she chooses a long branch, breaks it into smaller pieces by hitting it on the ground and carefully arranges the pieces on the ground, so that their ends meet the glowing part of the *hi nukiaba*.
>
> Back in the house, she takes two taro tubers and four bananas out of her *sobo* basket which leans against the house wall. She carries them to the fire, places them on the firewood and blows the fire. Then she sits down next to the fireplace using an old *gewaa* as a mat. The baby is sound asleep in her carrying sling.
>
> Wanlau spent the night next door in a house on stilts *(merhenge aka)* with his father and siblings. He jumps the ladder and squats down near the fire to get warm. "Sahamoku, give me some water," he orders his mother, who has disappeared in her house to fetch the cane nippers *(nakria)*. She brings a plastic bottle, Wanlau takes it, walks around the house and washes himself standing on a little mound under a coconut palm. The morning air is rather fresh and chilly and Wanlau yelps at every splash every time he pours cold water over his body. As soon as he has finished, he runs back to the house to change into dry clothes.
>
> Hauseng, Mangrima and Oie have also risen and sit around the fire. "Sahamoku, I want banana and yams," demands the five-year-old Mangrima. "Go and fetch them yourself," replies her mother. The girl enters the house but presently begins to wail. "Where are they? I can't see them." She is not tall enough to reach the shelves on which her mother keeps the dishes. Sahamoku gets up, carefully so as not to disturb Ugsembeuku, who now is awake and sucks her breast. She hands the big enamel bowl with leftovers from the last meal to her daughter. Oie calls out from where he sits. "I also want to eat banana and yams." Sahamoku seizes two coconut shells, walks back to the fireplace, puts them on the ground and scoops yams, banana and green leaves into them. "Here you are." The children squat down on the ground and begin to eat with their fingers. Sahamoku breaks off a piece of yam, offers it to Ugsembeuku, who does not react, and eats it herself.
>
> "Hauseng, Wanlau, what about the food baking on the fire? Have you forgotten it," she asks. "No," Wanlau replies, "we have already turned it twice." He seizes the cane nippers, tries to hold a taro, fails and uses his hand. "Oie, fetch the breadfruit leaves *(wargugwa)* for Wanlau," orders his mother. Oie gets up and slowly disappears around the corner of the house.
>
> Omnaua, a neighbour, approaches them and stretches out a coconut husk. "My fire died during the night," she says. Hauseng hands her a piece of glowing firewood. Omnaua blows the white ash away and carefully strikes the firewood against her hand so that a few sparks fall onto the fibres. She swings the husk back and forth until smoke begins to rise, returns the firewood and walks away towards her house.
>
> "Wanlau, it takes for ever," exclaims his father. "Fan the fire, for goodness sake! It's almost time for school. Look, Klewai and Mahembilmbil are already on their way." Wanlau fetches the *merkuia* leaves, which stick between the shingles of the roof projection, and starts to fan the fire.
>
> Oie returns with three breadfruit leaves which are almost as big as he is. Sahamoku seizes a taro,

deftly using the cane nippers, places it on one of the leaves and presses it with her fingers. "This one is done. Mangrima, take the coconut shells back to the house and bring me a palm spathe *(sobo)* for the waste." She gets up and searches the shingles. "Hauseng, Wanlau, where is the cane scraper *(minsaba)*," she asks. Wanlau finds it for her. She sits down, careful not to wake the baby who has fallen asleep, and begins to scrape the carbonized skin off the taro tuber. Wanlau peels the baked banana and throws the waste on the palm spathe. "Oie, get a thin liana *(kubu)* to wrap the breadfruit leaves," his older brother orders. Oie walks to the fringe of the hamlet and breaks an arm's length off a liana. Sahamoku places the taro and banana on the breadfruit leaf, folds the leaves into a package and laces it up with the liana. Wanlau grabs it and runs after the other children.

Hauseng whistles for his hunting dogs, fetches his bow *(saingiaba)* and arrows *(sayi)* from the shelter behind the house and fills his netbag *(kowe)* with betelnuts, betel pepper, lime, tobacco and newspaper clippings. "We meet in Yilmauwabi. I first stop in Kiaru's garden to plant a few taro before I join you," he says to his first wife and walks over to the house of his second wife. She has already packed a saucepan *(au)*, several eating bowls *(hambiya)*, spoons, the bush knife *(le haba)* and the paring knife *(le fu)* into her *sobo* basket and puts the carrying sling over her forehead; the basket rests on her back. She calls her children, picks up a glowing piece of firewood and makes off towards her gardens. Hauseng is already on his way and the boys hasten to catch up with him. Sahamoku and her children follow soon afterwards.

The northern Kwanga rarely eat "breakfast" before they leave the village but take the cold leftovers from the evening before along to the gardens. Pupils, however, are required to bring some cooked food to school. To boil food in hot water is too time-consuming; therefore, the people resort to their local "fast food": taro and banana baked on hot embers.

The context of preparation is also a relevant aspect in the distinction between "daily meals" and "festive meals". Festive meals are marked off by long preparations. Men go to hunt, women smoke the meat; men cut leaves and liana as wrapping material, women fetch saline water and chop firewood. For some feasts, people fell sago palms and extract their starch; other feasts require other special foods. Meat, however, is always served on special occasions. On the festive day itself, men and women work side by side, although they accomplish different tasks. Instead of preparing one "full meal", they cook several such meals. Furthermore we shall see that not only the context of food preparation but also that of food consumption and distribution is relevant. In fact, food is at the centre of all festive occasions among the northern Kwanga, therefore we shall have to consider them in detail (see Chapter 7).

6.4. Food and Cooking Terminology

Let us not continue to explore the syntagmatic relations of food and cooking terms. When the northern Kwanga discuss the preparation of food, they speak on a very concrete level, as the following anecdote illustrates. When I began to learn the language, I kept asking the women: "*Mbele nilandu?*" (What do you do?) Once I saw a neighbour cooking. I asked this question, and she replied: "*Namu undu*". *Namu* means "I", and therefore, I inferred, *undu* means "to cook". The next time I saw this neighbour preparing the family meal, I walked over and asked: "*Numu undu?*" To my surprise, her answer was: "*Nambes, baken gesendu.*" (No, I pare a yam tuber.) I tried the same question with other women and received such answers as: "*Nambes, sarkamban auk olondu.*" (No, I am putting the food into the saucepan.) Or "*Nambes, hinsin glondu.*" (No, I am peeling pitpit.) Thus I learnt that

northern Kwanga women describe exactly what they do at the moment; not once did I succeed in eliciting a general term for "to cook".

The most general food term in the northern Kwanga language is *sarkamba*. This word is often used in spontaneous speech, as the following short sentences illustrate: "*Namu sarkamban andu*." (I, food, eat.) "*Fle glak sarkamban indua*." (Pig, in forest, food, goes; "the pig goes to search for food in the forest".) "*Nir sarkamban flehi amwu*?" (You, food, of pig, cooked?)

The term *sarkamba* includes green vegetables *(isakaba)*, yams *(bake, naini)*, taro *(nansi)*, banana *(lobo)*, sago *(naku)*, pigs *(fle)*, grubs *(owe)* and all the other plants and animals which the northern Kwanga consider as food.[1] Apparently, the term *sarkamba* has the highest rank in the hierarchy of food terms.

The term *ome* is often used for "meat". Like many other words in this language, it has several connotations. First, *ome* refers to the "inside" of things, for instance in such phrases as *aka-ome* (house, inside), *au-ome* (saucepan, inside), *misik-ome* (eye, inside; "eyeball"), *taba-ome* (hand, inside; "palm"). Second, the term designates the (edible) product of growth in plants and animals. The northern Kwanga say, for instance, *bak omendiau* (yams, makes or becomes food) when they speak of yams growing in the ground. Extracted sago flour is called *nak-ome*, the edible part of the banana *lob-ome*, of the yam *bak-ome*, of the taro *nans-ome* and of the breadfruit *war-ome*. At a feast, the northern Kwanga often ask: "*Ossombel ome o*?" (What kind of meat is this?) Possible answers are: *Fle-ome* (pig meat), *mbansi-ome* (bush rat meat), *ap-ome* (bird meat), and so on. The word *korme* means "spear", *om-korme* is the word for a spit used to smoke small animals (see Chapter 6.1.). The word for garden is *nouwe*, that for a new garden where the first yams are growing in the ground is *no-ome*. Third, *ome* appears in *masik-ome* (head, inside?) which could be translated as "dream soul" and "spiritual double" (see Chapter 4.5.). The words for one aspect of the cult spirits Kware and Amba also contain the term *ome*, namely Kwarome and Ambaome (see Chapter 4.3.). These connotations of the term *ome* imply a deeper level of meaning which is hidden behind the pragmatic attitude towards food and nutrition (see Chapter 4.5.).

The word *isakaba* covers all "green vegetables". It will be recalled that the northern Kwanga also have specific names for many cultivated and wild-growing vegetables (see Appendix A). The combined term *isakaba hakla* refers to one of the standard menus of the northern Kwanga cuisine, namely the vegetable stew. The main ingredients of these stews are, as we know, green vegetables, banana, taro and yams. Literally translated, the term *isakaba hakla* means "green vegetables, dry". In this context, the term *hakla* refers to the starchy staples, or rather to their moisture content and fibrous texture. The word *hakla* appears in many other contexts as well. The northern Kwanga say, for instance, "the ground is completely dry" *(misambi hakla ba)*, and they call the dead brown banana leaves, in which they roll the local tobacco to make cigars, *lobgugwa hakla* (banana leaf, dry).

The antonym of *hakla* is *ugu*. Used as a noun, *ugu* means "water". The long cane species, from which the northern Kwanga cut long sections of the stem for water containers and short sections to steam-cook food, are also called *ugu*. In composites with another noun, it can be translated as "watery", "wet", or "fluid". In the following phrases, *hakla*

1 Kaberry (1940/41:353) mentions a different categorization of food for the Abelam: carbohydrates such as yams, taros, bananas and sago are classed as *kandumu*, greens of all descriptions as *kidendjo*, and meat as *kwa:mi*.

contrasts with *ugu: siri hakla* (sago palm thatch, dry) and *siri ugu amba* (sago palm thatch, watery, completely), *siya hakla* (coconut, dry) and *siya ugu* (coconut water), *misambi hakla* (ground, dry) and *misambi ugu* (ground, wet). Many more examples could be quoted.

Most interesting in our context is the contrast between *isakaba hakla* (stew) and *ugmaha* (soup). The first is classed as "dry" because the food is steam-cooked, the second as "watery, fluid" because the food is pounded and mixed with water. This becomes even clearer in the terms used for specific soups. We have seen that, depending on which of the core foods dominates, the northern Kwanga speak of *bakugu* (yam, water), *lobnibugu* (banana, ripe, water), *nansugu* (taro, water) and *nakugu* (sago, water).

The relation between "dry" and "wet" is central to the northern Kwanga classification of food and cooking. This is also expressed in their terms for cooking methods. We have seen that the local people do not have a general word for "to cook"[1], but they have six verbs for different cooking methods: *u*, *tau*, *tuambu*, *insi*, *su*, and *hi*. Each of these cooking methods has been described in an earlier section (see Chapter 6.2.). Here, we focus on the concepts expressed in the terminology. The verb stem *u* means "to stew peeled and pared food in a saucepan full of water". It is distinguished from *tau* "to mix sago flour into hot water and to twist sago jelly dumplings", and from *tuambu* "to bake unpeeled, unpared and/or wrapped food in a saucepan". In the former method, food is also put directly into hot water; in the latter, no water is added; the food is baked only by the heat of the fire. Furthermore, in the *tuambu* method the food is protected first by a peel or a skin, second by a leaf wrapping and third by a saucepan. Similarly, the verb stem *insi* signifies "to steam-cook peeled or pared food in a plant wrapping or a cane tube on hot embers or by enclosing heated and wrapped stones". This method is distinguished from *su* "to bake unpeeled or unpared food directly on hot embers". The noun *hi* for "fire" can also be used as a verb stem and then means "to roast or smoke meat". Now we begin to understand that the fundamental distinction expressed by the terms *u* and *tau* versus *tuambu*, *insi* and *su* is that between raw food cooked by water and fire and between raw food cooked by air and fire. The antagonistic effect of two basic, natural elements, namely water and air, on food is an important concept in the northern Kwanga food beliefs.

Thus we see that the northern Kwanga food and cooking terms represent an order. They can be arranged along a continuum stretching from a "dry pole" *(hakla, hi)* to a "watery pole" *(ugu)*. Near the dry pole are all those foods which have been transformed by air and fire *(hi, su)*, near the watery pole all those which have been cooked by water and fire *(u, tau)*. Even the verb stem *u* seems to allude to water *(ugu)*. The other methods *(tuambu, insi)* are in between the two poles; in both methods, the food is protected against direct contact with air and fire yet no water is added.

When the northern Kwanga discuss food qualities, they further use the binary pair *hangu* (soft) and *kwambu* (hard). A few food and meal types are classified either as *hangu* (viz. sugarcane, pitpit, passion fruit, fish, soup and vegetable stew), others as *kwambu* (viz. pig meat). This classification already indicates that *hangu* can be associated with *ugu* because all the foods mentioned above either have a high water content or they have been

1 A dictionary definition of the English verb "to cook" conveys the following meanings: to do to a turn; bake, scallop; roast, spit; broil, grill, griddle, devil, curry; sauté, fry; scramble, poach; boil, parboil; coddle, seethe, simmer, steam; casserole, stew; baste, lard; mince, dice; stuff, dress, garnish; sauce, flavour, spice.

in close contact with water. *Kwambu* is linked with the concept of *hakla* because, among other reasons which we shall mention later, pig meat is usually cooked by smoking or roasting. The majority of other foods are said to be either *hangu* or *kwambu* depending on their stage of maturity or the method of their preparation. Sago *(naku)* is considered *hangu* (soft) in the form of washed-out starch, sago dumplings or sago soup; dry sago flour is classed as *kwambu*. Fresh yam *(bake)* is said to have a higher water content, to be softer and best suited for soups; it is classed as *hangu*. Old yam is described as dry and only suited for *isakaba hakla*. Some banana varieties are only used for soups; they are classed as *hangu*. Other varieties taste particularly sweet when they are baked on the fire; they are classed as *kwambu*. In a few cases, one part of a fruit is referred to as *hangu* (coconut milk, breadfruit pulp), the other as *kwambu* (coconut flesh, breadfruit seed).

From all these examples it can be inferred that the terms *hangu/ugu* signify that foods are "soft", "plastic" and "mouldable", whereas *kwambu/hakla* implies that foods are "hard", "firm" and "not mouldable". In the transformation of raw food to cooked food, water changes the consistency of food and makes it soft, plastic and mouldable; air and fire also change the consistency but have the opposite effect.

According to the nutritional anthropologist Messer (1984:218) psychobiological research on food has shown that at a basic biological level "food selection is governed by a number of sensory characteristics such as taste/smell, texture, colour (and other visual characteristics), even sound (as in crunchiness), and physiologically perceived characteristics like 'fillingness' or 'burn', which result in (a) selection or rejection, and (b) preferred rankings and combinations among 'edible' items".

Anthropological research has further demonstrated that many cultures select binary pairs of sensory attributes (e.g. "hot-cold", "wet-dry", "strong-weak") and construct symbolic categories of diet from sensory data and other information. The relations between such binary pairs are used to form analogies between the relations of men to women, certain plants to other plants, health to illness, ritual to secular, and so on.[1] In other words, food is only one domain which can be classed according to binary pairs of sensory attributes.

Messer suggests that such classifications which are constructed from sensory data have to be carefully examined. Often, "...(they) interrelate a number of different domains, such as flora, fauna, medicine, health, ritual, and social relations, depending on the culture" (Messer 1984:222). These classification systems view health as a balance of opposing or complementary (e.g. hot-cold) qualities and illness as an imbalance or alteration in one quality. Such classification systems may be constructed of simple dimensions (only hot-cold) or compound (hot-cold, wet-dry) qualities; they may regard these categories as distinct qualities and quantities or combine them analogically rather than organically with other symbolic dimensions (e.g. male-female, bitter-sweet, strong-weak). Furthermore, careful analyses of such classifications have shown intra-cultural variations depending on

1 Such classifications are often called "humoral classifications" after the Classic Greek theory of the four "humours" blood (hot, moist), phlegm (cold, moist), black bile (cold, dry) and yellow bile (hot, dry) (see Foster and Anderson 1978:56-57). In the Classic Greek theory, the four elements (earth, water, air, fire) were integrated with four qualities (hot, cold, dry, moist) and thus produced the four humours. Other Great Traditions of Medicine are also based on such "humoral classifications" (see Leslie 1976:4)). In fact, such classifications are found around the world, especially in Asia and South America, and there exists a controversy among the experts whether they have all been derived from the Great Traditions of Medicine or whether some of them represent autochthonous belief systems (see Messer 1981).

the cultural context as well as individual inclination to "follow the rules" (see Messer 1984:222).

The classification system of the northern Kwanga seems to be constructed of compound (hot-cold, wet-dry) qualities; moreover, it takes these categories as relative; they are combined analogically rather than organically with other symbolic dimensions (e.g. male-female, strong-weak).[1] The northern Kwanga attribute intrinsic qualities of "dryness" and "heat" or "fluidity" or "coolness" only to a few food types; the majority of foods can be either "hot" and "dry" or "cold" and "fluid", depending on their extrinsic consistence.

We now begin to understand that among the northern Kwanga the food avoidance rules regulating relations of older generation to younger generation, of men to men and of non-initiates to initiates are based on assumptions of this classification (see Table 5): In all three types of avoidance relationships the peeling of tubers, the cutting of meat and the scraping of coconuts are regarded as potentially dangerous. All three ways of handling food reduce its "firmness" in a real and a figurative sense. The inside of the tubers and animals (*ome*), like the vital organs of the human body, is protected by their skin. To peel or cut this skin means that the vulnerable part is exposed. The scraping of coconut also means that a solid, hard substance is reduced to small pieces. Especially if a person who is thought to be "loaded with reproductive power" (see Chapter 3.5.) which is also paraphrased as being "hot" *(hiu)* handles food this way, the food may become a carrier of this dangerous power or heat. The person who then ingests this food also ingests the power and, if he or she belongs to the opposite social category, consequently falls ill.

In ordinary, daily life, people eat a main family meal consisting of a stew or a soup (i.e. food cooked in hot water). People in liminal stages have to eat *hakla* food (i.e. food cooked by air and fire). They have to avoid drinking water and cannot wash because their blood is "hot". A girl during her seclusion after menarche may not eat soup, scraped coconut and any greens used in the preparation of soups. Other women prepare a special meal for her: they "break" yam tubers in halves, clamp a piece of coconut in between, tie this up with the leaves of a wild sugarcane and boil it in a saucepan. This meal is called *bak tuambua siya hakla ngan* (yam, boiled in skin, coconut, dry, with). This is the only type of food she may eat during seclusion. If she eats soup, the sanction is *sabi ragau* (skin, become soft and loose).[2] In fact, the girl cannot wash in ordinary water. Other young girls collect the root of a plant called *mehe* (wild ginger?), scrape it, put the scrapings on a *sisawi* leaf and place it on a palm spathe. They pour water over the scrapings and knead them until the water turns orange. The girl in seclusion then washes with this orange water. Women say *mehe* makes the girl "fat" and "strong" *(sa hau)*. During her seclusion, the girl carefully collects all leftovers of her meals on a breadfruit leaf. At the end of her seclusion, the girl's father or brother comes to fetch this leaf and deposits it in a safe place. If a sorcerer (see Chapter 4.5.) found the leftovers, the northern Kwanga explain, the girl would lose all her strength, *aba*

1 Concepts drawing on hot-cold classifications have also been reported from neighbouring groups, for instance from the Kwoma (Bowden 1983:101, 105, 1987:189, Kaufmann 1982b:18, 1987:189-190), the Ilahita Arapesh (Tuzin 1978:84, 1980:220, footnote 19) and the Abelam (Kaberry 1940/41:245, Hauser-Schäublin 1983a:190, 198, Huber-Greub 1988:105, 170). It would be an interesting but formidable task to explore in each of these groups which other aspects of culture are pervaded by hot-cold classifications and whether hot-cold is the only dimension of analysis.

2 The syllable *sa* appears in several contexts, e.g. *sa hau* (?, to give), *sabi ragau* (?, take away) and *masambi* (man, ?: "skin"). This illustrates the fact that, in common with many other ethnic groups in Melanesia (see Frankel 1986:56), the northern Kwanga often refer to the skin to express various states of health and illness.

si ak wamboo insok kaba heiegu (afterwards, she, eat, is not able, tomorrow, bad, will look). Thus we see that the northern Kwanga form an analogy between the relation of "hot and dry" foods to "cold and fluid" foods and the relation of "special physical states" and "normal physical states".

Northern Kwanga rules for infant feeding patterns are also directed by assumptions of this classification. Small children should only eat "soft" *(hangu)* foods.[1] The northern Kwanga say: *Sarkamba kwambu yin hawa hala. Or kwelek tolonda. Sarkamba hangu yin ha.* (Don't give strong food to your child. It will block his throat. Give soft food to him.) There is more to it than this pragmatic explanation. A small child is described as having a soft skin *(masambi hangu)* and soft bones *(haba hangu)*. It has been created by the blood essence of its parents (see Chapter 3.5.) and is still more "fluid" than "solid". Northern Kwanga women say the best food for a baby is breastmilk *(mugfeugu* or *mugu)*. They even exaggerate and say that the body of the mother transforms all the food she eats into breastmilk *(Sarkamba na aua am, yi mugun aha, an mende:* Food, I ate, child breastmilk eats, I have not). Women's spittle is a "cold" fluid, and premastication reduces the firmness of food; therefore, premasticated food is considered particularly good for the small child. In Chapter 8.4. we shall examine how the northern Kwanga rules for infant feeding fit into the nutritional education of the MCH nurses.

Certain beliefs about gardening also have to be considered in this context. The northern Kwanga say that the ground has to be "hot" for the food to grow well. They "heat" the ground by burning the chopped undergrowth and branches; garden magic is also said to make the ground "hot". Therefore, it is forbidden to bring green coconuts into a new garden; they are classed as *hangu/ugu* food. In a new garden, as we have already mentioned, people may not boil food in water "lest the yam rots in the ground".

In conclusion, we suggest that the northern Kwanga use the binary pairs "air/fire-water", "hot-cold" and "dry-fluid" to make analogies between several interrelated domains of their culture, namely between food and cooking, certain social categories, ritual life, gardening, medicine, and probably several others. However, it would be a gross simplification to reduce their food concepts to such symbolic analogies. Earlier in this text other symbolic links have already been explored (see Chapter 4.5.) and a discussion of others will follow.

6.5. The Northern Kwanga Cuisine

The term "cuisine" is used to describe the culturally elaborated and transmitted body of cooking and eating practices of any given culture. In this sense, cuisine can be regarded as a cultural system.[2]

1 Jenkins, Orr-Ewing and Heywood (1985:38-39) who investigated child feeding among the Amele (Madang Province) found a similar classification of foods prescribing soft, watery and preferably warm foods to infants.

2 "All cuisines, like other cultural systems, are sets of rules or prescriptions about how to organize our knowledge or beliefs of human behaviour. Cooking, like language or architecture or hair style, depends for its outcome on a socially determined, communally accepted set of rules. These rules determine the elements of the system and structure their arrangement, both spatially and temporally. Thus, before any action is initiated ('I think I'll bake a cake.'), its outcome is in some sense determined or prefigured by an underlying structure that shapes the sequence or character of events and the relationship of the elements to one another." (Rozin 1982:201-202)

The description of the cuisine of a given culture commonly includes the following aspects (see Rozin 1982 and Messer 1984:228): 1) The set of foods selected as basic (staple and secondary) foods; 2) the characteristic set of frequently used flavourings; 3) the typical food preparation methods; and 4) the rules regulating cooking and eating practices and their underlying beliefs. We will now reconsider each of these aspects of the northern Kwanga cuisine.

We have seen that the northern Kwanga select yams, taro, banana and sago as the staple foods and complement them with green vegetables, coconut milk, pitpit, pandanus, pumpkin, sweet potatoes or mushrooms as secondary foods. Fresh or canned fish and meat mark festive meals. In the terminology of Mintz (1987:35), the starchy foods (i.e. yams, taro, banana) form the "core", vegetables, meat and fish the "fringe"; without the "fringe", the "core" is less palatable. Mintz points out that most sedentary, agricultural societies subsist on a few carbohydrate-rich "core" foods which they complement with an aromatic and often oily "fringe". These terms are well chosen, in my opinion, because the term "core" implies that these foods are of central concern to these societies, biologically and culturally, whereas the "fringe" is a necessary supplement enriching the "core".

In his popular book on the culinary arts of Papua New Guinea, May (1984:109) remarks that "(t)raditional cooks specialize in what might be called plain cooking". From a European point of view, this also applies to the northern Kwanga cuisine. For stews and soups, tubers are usually cooked in salt water. The green vegetables add some flavour, and so does the coconut milk, but flavouring with spices is unknown; ginger is only used for ritual purposes. However, we should bear in mind that growing up in a particular culture affects how taste qualities are conceived and labelled and how preferences for flavours are formed.[1] The northern Kwanga do not like spicy European foods and, although they enjoy the taste of sweets, often adding several spoonfuls of sugar to coffee, they say that chocolate and candies hurt their teeth.[2] What to us is insipid, has a taste for the northern Kwanga; they assert that they sense specific tastes of various kinds of yam, banana, taro and green vegetables.

The various northern Kwanga ways of food preparation have already been described in detail (see Chapter 6.2.). Their cooking methods comply with those of the "Papua New Guinean macro cuisine". May (1984) reports that throughout Papua New Guinea, food is normally cooked in one of five ways, namely boiled or steamed in pots, steamed in a bamboo section, baked and steamed in earth ovens and baked or grilled, directly or in leaf or palm spathe wrappings, on an open fire. As previously stated the northern Kwanga do not dig any earth ovens; instead, they construct big bark ovens but only on special occasions.

Preparation methods follow certain rules as the following anecdotes illustrate: Northern Kwanga women always scolded me for my method of paring tubers. We are used to holding the tuber in one hand, and to pull the knife towards our body, as we pare a potato or an apple. They set the tubers on end, and move the knife up and down as they chip off

1 Rozin (1982:195) claims that "there seems to be a fairly widespread tendency for groups of people to season their foods in unique and characteristic ways, such that the same flavoring agents or combination of agents is used over and over again within any given cuisine." She calls these unique flavoring combinations "flavor principles" and regards them as critical elements in the structure of cuisine.

2 The dietary preference for sweet things in humans has been the subject of many studies. Mintz (1987:41-46) provides a summary of the contemporary debate.

the skin. Also, they did not agree with my method of cutting tubers into slices. They hold them in one hand, hack them with a knife and break the tubers into big pieces. A final proof of my incompetence was that I cut the "head of the yam" *(baksingri)* into small pieces instead of splitting it lengthwise into two equal halves.

Eating behaviour is also patterned: From time to time, they joined me during dinner because they had observed that white people sit down together during a meal. According to their custom, each person eats by himself or herself, whenever a meal is ready and the person feels hungry. If several people eat at the same time, they often turn their backs to one another.

The northern Kwanga, as we know, observe many rules regarding foods, and food, for them, is an important carrier of meaning. This topic will be explored later in this thesis (see Chapter 7.14 and 7.15). Here, only a few examples will be called to attention: It was mentioned that the northern Kwanga use food as a symbol for regional differences. They look down on the Kombio in the north because "they only eat taro" and on the southern Kwanga because "they often eat sago and do not cook soups". If a woman marries a man from the Kombio or the southern Kwanga area, the other people tease her about the poor food she will eat there. Similarly, the northern Kwanga know that the Sepik River people eat crocodile meat and baked sago and pity them for their lack of "good food".

Festival foods will be examined in the next chapter. Only one aspect will be mentioned here, namely a point made by the anthropologist Goody. He explored why some cultures have "high" and "low" cuisines while others do not have differentiated cuisines. The hypothesis of Goody (1982:215) is that "(c)ooking is closely related to production on the one hand and to class on the other. In a system of differentiated access to resources we tend to find a differentiated cuisine, often expressed and elaborated in a culinary literature."

Compared with Asian, Arabic and European cuisines, the northern Kwanga certainly do not have a differentiated cuisine, and they do not have differentiated access to resources. On the contrary, we have seen that the social organization of the northern Kwanga emphasizes equal access to local resources, in production, consumption and distribution. Within a limited range of choices, which are open to all, every northern Kwanga family eats the same food. It was mentioned that the principal family meal consists of a single but filling dish; there are no starters, no side-dishes, no desserts. This dish is basically the same, day after day, year in year out, namely vegetable stew or soup. We will see that a feast often is a time of plenty rather than a day of difference (with the exception of meat and rice meals); feasting is more of the same. We could say that the northern Kwanga cuisine encodes a message about a minimal degree of social hierarchy. Only the members of the higher grades of the men's cult seem to enjoy certain privileges. We will return to this point in the next chapter.

In recent years, the northern Kwanga have become integrated into the state of Papua New Guinea. The growth of this nation has led to the emergence of a new elite involved in administrative, professional, political and military activities. This urban elite has created a new life style which also affects their patterns of food preparation and consumption. In the domestic sphere, imported household equipment is now regarded as a necessity. It ranges from piped water or water tanks, to electric or kerosene lamps and stoves, to tables, chairs, cutlery and china. Members of the new elite are perfectly adept in eating according to the Western pattern, for example during formal occasions in restaurants and hotels. At home,

they may prefer to cook the local foods of their home region but rice and canned meat or fish has become a new standard menu.

Goody (1982) describes, in much more detail, similar developments in Ghana and comes to the conclusion that the emergence of a new elite has led to a differentiation of styles of life and of cuisine. Although most of these changes mainly affect urban areas, they spread to rural areas.

From the range of imported goods available in the town stores, the northern Kwanga have selected those objects which they can afford and which fit into their life style (see Chapter 6.1.). Representatives of the new elite in their area (viz. the teachers, the APO and their families) usually have a more expensive equipment at their disposal (e.g. water tanks, generators, kerosene lamps, tables, chairs, cutlery, and so on). Their new standard menu, rice and canned meat or fish, has become integrated into the northern Kwanga cuisine. In fact, beer, rice and canned fish have become a symbol of a new life style, of "urban" income and living conditions. We could say, therefore, that the new social hierarchy is also encoded in the contemporary northern Kwanga cuisine.

Chapter 7
Food Distribution

This chapter is the last of three describing those aspects of the nutritional system which have been subsumed under the heading "food pattern" in the approach outlined at the outset of this thesis (see Chapter 1.3.). It is concerned with informal food gifts in everyday life and formal food gifts on festive occasions. We begin with a description of the former and then move on to formal food gifts presented at house-roofing, life-cycle ceremonies (i.e. at first menstruation, after childbirth, marriage and death), reconciliation rituals, men's cult rituals (viz. *auanalo* and *sukusa)* and new types of festivities (viz. welcome and farewell dinners and a pati). In order to assess the frequency of feast attendance, we shall then examine the festive calendar of an extended family. At the end of the chapter we analyze "festive meals" in contrast to "everyday meals", food as an expression of social relations and the role of food in rites and rituals.

7.1. Informal Food Gifts

Even the smallest distribution unit, namely the household unit, operates on the principle of delayed reciprocity in an exchange of goods (especially food) and services. It was stated earlier that women and men say they depend on one another because the cultural definition of sex roles assigns different tasks to them (see Chapter 3.5.). Men say they need their wives, mothers and/or sisters because they cook their daily meals; women say they rely on their husbands, fathers and/or brothers because they plant and hunt food for them. If a relative becomes attached to a nuclear or an extended family, he or she has to fulfil the obligations created by these sex roles and kinship (see Chapter 3.3.). A widowed or divorced sister regularly cooks meals for her brother in exchange for his services (e.g. garden work, house construction, etc.). Unmarried or widowed brothers render such services and receive regular meals in exchange.

Informal food gifts in exchange for services also occur across household boundaries. If another woman acts as a child minder, the mother rewards her with a food gift. A grandmother who may not eat a meal cooked by an adult member of the younger generation receives raw food, a member of one's own generation raw food or a cooked meal. Instead of rewarding her with a food gift, the child's mother may do her a favour (e.g. chop firewood for her, give her seeds, look after her children, etc.). Male relatives often assist each other in laborious work (e.g. digging latrines, hewing house posts, etc.). They are "paid" with raw food or a meal, depending on the genealogical relationship between the giver and receiver.

Close relatives often make food gifts to one another, not only in direct exchange for services but also in fulfilment of kinship obligations: If a woman has obtained a special food

(e.g. sago flour) or prepared a special meal (e.g. a pandanus or cassava meal), she distributes small portions among her relatives. This is expected of her; the northern Kwanga say only "bad" people *(ma kaba, nokope kaba)* keep good things to themselves. During menstruation, after childbirth, in illness and mourning, as we have seen, a woman does not cook for her family. Her personal kindred come to her help. However, all acts of help are governed by the principle of delayed reciprocity. A person who never offers help is likely to be left alone in times of need.

7.2. House-Roofing Festivities

In this section we shall see how economic units (as defined in Chapter 3.3.) crystallize from the networks of kinship ties when a special task has to be accomplished. House roofing is such a special task, and it becomes a social event because it is marked by a food distribution. During my fieldwork, six house-roofing festivities took place, all of them following the same pattern. To illustrate this pattern, we will select one case and follow it from beginning to end. This case has already been mentioned twice, namely in the analysis of domestic life in a sample hamlet (see Chapter 3.3.) and in the description of collaboration in sago production (see Chapter 5.2.).

By October 1984, the two brothers Nandebe and Kubai have finished the frames of their new dwellings. They now ask some of their patrilineal, matrilateral and affinal relatives to help them cut, bundle and transport the sago palm leaves for the thatch. After the work is accomplished, Akahung and Taptihieng, the wives of Nandebe and Kubai, offer soup to their helpers.

On December 1, these and other relatives gather in Alguelko to make the thatch tiles for the new houses. The women tear off the midrib of the sago palm leaves, the men fold them over a cane section and weave a flexible cane section through the leaves. Taptihieng and Akahung do not participate in thatch making; they cook sago dumplings, garnish them with coconut scrapings and greens, and serve them to the helpers. Almost 300 thatch tiles have been produced on this day, enough to cover the roof of one dwelling. Another group of relatives gathers on December 13 to plait about just as many tiles for the second dwelling.

During the first half of January, 1985, several men from the upper part of the village begin to hunt systematically (see Chapter 5.5.). Nandebe is one of the shotgun holders of Tauhundor village; on January 14, 1985, he succeeds in killing the first pig for the planned feast. A group of young men including Nandebe's sons butcher the pig. The meat is distributed among the household units of the upper village half. Each unit cooks and eats a share of the bones and intestines and preserves the other pieces by smoking. Two days later, the men organize a battue: The young men noisily comb through an old garden where they found the tracks of wild pigs; the elder men wait on the other side armed with spears and shotguns. The hunt is not successful, and they repeat it in another garden the next day, again without any result. In the meantime, individual hunting continues: Manaru kills a bush rat on January 23, and Sahamoku preserves it by smoking (see Chapter 6.2.). Other men spend a night in the bush watching out for wild pigs; some of them catch marsupials, but it is again Nandebe who kills the second wild pig, this time a boar. He and his helpers carry it to the village, butcher and distribute it among the household units of the upper village half. Now they have enough meat for the planned house-roofing feast. In the evening of the same day, men representing every hamlet of the upper village half assemble to discuss the last preparations. They agree to fell two sago palms and to continue their hunting efforts. The next evening, the men pool money to buy store foods. They do not purchase them in the village stores because the prices are considered too high (see Chapter 5.7.). Instead, one man organizes a free ride to Wewak and returns with two 10 kilogram bags of rice, 6 cans of fish, 1 kilogram of sugar and 3 cartons of beer. While he was away, two groups of women extracted the starch of two sago palms (see Chapter 5.2.). They distributed portions of the

starch among their kin and affinal relatives and kept some for themselves. On these evenings, many families eat a sago meal.

Women and children from the upper half of the village now begin to collect firewood, to cut cane for water containers and to gather big leaves and palm spathes as wrapping material (see Chapter 6.1.). The men fetch long liana for the fastening of the thatch tiles and short liana for lacing the food bundles. Some women walk to the sodium salt springs to fetch saline water (see Chapter 5.6.). All the families harvest fresh food in their gardens. On the eve of the big day, Abkomba shoots a third wild pig.

On February 7, 1985, everything is ready. The upper village half waits for the men from the lower village half to come and mount the thatch on the new dwellings of Nandebe and Kubai. A few months earlier, the roles of the two village halves were reversed: the men from the upper village half then mounted the thatch on two new dwellings in the lower village half.

The women of the feast-giving group begin to cook in the morning. Each of them works in her own compound with one or two assistants. In the course of the day, they prepare three main meals: sago dumplings, soup and rice.

The men from the lower village half arrive. Each of them carries a few yams, taro, bananas and/or coconuts. They give them to the hosts and settle down to smoke, chat and chew betelnuts. Some men of the upper village half pool the raw food brought by the guests and hosts and then distribute it in eight heaps. Two food heaps are marked for the hamlet Wansapussi, one for Warmemu, one for Turnturu, two for Wangerenge, one for Kwalnkwala and a special heap for the big man Bungaioho in Kwalnkwala. The men clearly enjoy this task and discuss every move in detail. Once they have finished, they call out for their wives to come and fetch the raw food for the preparation of the second meal, the soup.

Another group of men from the upper village half splits liana into long strings. The men from the lower village half begin to organize themselves. They climb the house frame and form a long line along the unfinished house wall. The men from the upper village half hand the thatch tiles to them, and they skilfully fasten them on the wooden frame with liana bindings. While they work, a group of young boys butcher the third pig under the supervision of some old men. The latter distribute the meat and roast the bigger portions on smoking shelves; women cook the smaller portions, the head and the feet in separate saucepans.

In all the compounds of the upper village half, men now begin to apportion the sago dumplings. For this purpose, they line palm spathes with fresh green leaves and carefully place one dumpling after the other on these leaves, garnish them with coconut scrapings, greens, meat or tinned fish and wrap the leaves into a bundle using strips of liana as cords.

At noon, the men from the lower village half finish the thatching. They sit around smoking, chewing betelnuts and chatting. They have worked hard to demonstrate their prowess; even now as they rest, the atmosphere is charged with competitive boasting and joking.

In their compounds, the women add pieces of smoked meat to the vegetable soups. Then they put these saucepans aside and start with the last meal, the rice and canned fish. While they wait for it to be done, they deal out sago dumplings and soup to their families and eat a few bites themselves.

Around five in the afternoon everything is ready; Nandebe beats the slit drum to announce it throughout the village. The women from the lower village half begin to move towards Kadihengi and Alguelko. From every compound of the upper village half groups of people emerge carrying saucepans and bundles of food. They all gather in Kadihengi, where the men arrange the cooked food in a neat row on the ground, dividing it into eight equal portions. Soon afterwards, the guests arrive; they collect their shares and withdraw to their homes to indulge in feasting.

Later in the evening, the men and some women gather again. The headmaster of the St. John's Community School brings his tape recorder. People sit in groups around the open space in the hamlet Himdenge, drink beer and tell stories. The hosts and the guests contribute drinks, each group trying to outdo the other, both in the number of bottles offered and in the ability to stand alcohol. They say they "fight each other with beer". A few young men begin to fight with their fists, but the elders separate them before any harm is done. Early the next morning, the last bottles pass round, and at about 11 o'clock, guests and visitors disappear one by one.

The northern Kwanga claim that these house-roofing festivities are a new custom; it has reportedly been imported by Namboho, a man in his sixties who saw it among the

neighbouring Urat.[1] It is associated with a new thatching technique: formerly and to a lesser extent up to this day, the northern Kwanga thatch their oval ground houses not with woven tiles but simply by folding the sago leaves and sticking them over the rafters. The new technique is more labour-intensive and therefore, the people say, more helpers have to be recruited.

Although the custom associated with this technique may be new, it certainly operates on the same principle as other food distributions: the delayed reciprocity in an exchange of goods (especially food) and services. The formal food distribution occurs between two competitive groups. Here, the upper village half and the lower village half act as two opposed social units cross-cutting the descent group organization and the moieties. In earlier chapters we have seen that the southern half of the village Tauhundor calls the northern village half "Wane yi" (Urat, children) referring to their recent immigration from the Urat area (see Chapters 2.2. and 3.2.). The northern half of the village refers to the southern half as "Yaitela" ("mother and children" in the Urat language). Some people say that the same division appears in the feasts held at the inauguration of a new slit drum and after the death of a person. Information on these points remains controversial because other people attested that these food distributions follow the men's cult divisions. No matter which social units are involved, it is a typical feature of such food distributions that the guests reciprocate a small portion of the food gift on the spot. In this case, they contribute some of the food which will be used in meal preparation. The principle of delayed exchange manifests itself in the fact that over the months and years, the two opposed social categories exchange their roles as food givers and tilers.

The first food distributions, however, do not occur between two opposed social categories. During the preparations of the festivity, the helpers (i.e. relatives) receive food (i.e. a soup and a sago meal) in exchange for their services (i.e. fetching sago palm leaves and sewing tiles). It was not mentioned above that successful hunters are also rewarded with a meal.

This description illustrates another important point which has already been mentioned (see Chapter 6.3.), namely that the context of preparation is a relevant aspect in the distinction between "daily meals" and "festive meals". The meals served at the house-roofing feast are marked by long preparations. Men begin to hunt systematically; women preserve the meat by smoking. Men fell and pound sago; women wash it. Men and women collect the necessary equipment in the forest, including cane, leaves, palm spathes and liana. Men organize shopping trips to town, and women fetch water from the sodium salt spring and transport garden produce. On this occasion, men and women also collaborate in meal preparation: Women cook; men supervise the butchering of a pig and roast some of its meat on special shelves. The main function of the men, however, is the pooling and distribution of food.

We have seen that each woman of the upper village half works by herself. They all prepare the same meals, namely sago dumplings, soup and rice. Soup (and to a certain extent also sago dumplings) is an everyday meal; by the addition of fish or meat, it turns

1 Allen (1976, 1980, 1983, n.d.), a specialist on the Urat culture, does not mention a similar festivity. Lea (1964:143-144) reports that house roofing among the Abelam also operates on a reciprocal basis in which food and services are exchanged. A formal distribution of food (i.e. a lining up of various feast foods) apparently only occurs when the construction of a new men's house has been completed (see also Tuzin 1980:163-166 for the Ilahita Arapesh).

into a festive meal. Rice and canned fish, we have noted, form a new standard meal which the northern Kwanga can only afford on special occasions. Special foods characterize festive meals but, more importantly, a festive meal differs from everyday meals in that it consists not of a single dish but of several courses. On such occasions, the northern Kwanga always emphasize that there is plenty of food, not a great diversity of food.

The central idea expressed in this festivity is the giving of food, not the sharing of food. We have seen that each household consumes a small portion of the festive meals in the compound. The main event, however, is the display of the food gift, namely the lining up of saucepans and leaf bundles. It is typical that each group receives equal amounts and types of food. In the above-mentioned case, only the big man Bungaioho was honoured with a separate heap (i.e. more but the same type of food). After the distribution of the displayed food, hosts and guests do not sit down to share a meal. On the contrary, the wives of the guests come and collect their share, which is then consumed in their compound.

The competition between the social categories which exchange food (and nowadays drinks) and services manifests itself most clearly later in the evening, during the drinking contest. People actually say, as we have seen, that they "fight each other with beer". Although the means of contest (i.e. beer and liquor) are new, such contests belong to the local pattern of behaviour between opposed social categories. In later sections, we shall come across several other examples.

7.3. First Menstruation Ritual

The northern Kwanga celebrate a girl's menarche with a rite of transition, or as Arnold van Gennep (1909) called it, a "rite de passage".[1] It begins with a seclusion and ends with a festivity: As soon as the first menstruation starts, the girl has to go into seclusion. Everybody in the village is informed that the girl is now staying in the small house *(mas akak wau)*, a phrase used for "menstruation". During her seclusion, the girl washes only with *mehe* (wild ginger?) water and eats only foods classed as *hakla* (dry). She carefully collects all leftovers lest a sorcerer finds them. For about two weeks, she stays in or near the small house. Her relatives set out to prepare food gifts for the "coming out" ceremony. A boy of eight years, for instance, urges his father to take him to the bush so that he can kill a bush rat *(bansi)* for his cross-cousin *(maagri)*. Another boy has discovered a tree full of grubs and goes to collect them for his cross-cousin. The younger brother of the husband returns with a large lizard *(waknggayi)*, which they smoke together with the bush rat. The ceremony which ends her seclusion, the *nainahugwa*, lasts for a day and a night. During my fieldwork in 1984/85, three *nainahugwa* were performed in Tauhundor.[2] The following account is based on these observations.

Patrilineal, affinal and matrilateral relatives gather at the house of the girl's father. They all bring food gifts (e.g. yams, coconuts, meat, rice and tinned fish) and basic cooking equipment. The men

1 Most of the neighbouring groups celebrate(d) the menarche of young girls (see Mead 1940:419-420 for the Mountain Arapesh, Tuzin 1980:19 for the Ilahita Arapesh, Kaberry 1940/41:361 and Hauser-Schäublin 1983a:198 for the Abelam).

2 The age of girls at menarche ranges from about fourteen to seventeen years. These are estimates; no birth registers exist for the 1960s and 1970s.

pool the food and redistribute it into several heaps: one heap for the father, another for the *klebi* soup, a third for yam soup, a fourth for a rice meal and a fifth with tubers for baking on hot embers. All the women help in food preparation. Women of the older generation cook separately from those of the younger generation because of the food avoidance rules. Members of the oldest generation scrape coconuts for all the meals. Other women make a fire and begin to bake a few yams on the hot embers. A group of women (classificatory grandmothers) cook the *klebi* soup (see Chapter 6.2.) so that all the women may eat it. Other women cook yam soups and enrich them with grubs or meat, still others boil rice and place a can of fish on top.

While most women are busy cooking, the young girls *(nokop niongo)* take care of the fêted girl. An older woman supervises them. They first prepare a paint from *mehe*. They scrape the roots and put them on *sisawi* leaves, wrap them in *aua* leaves and take the bundles down to a water pool. There, they make a fire with dry coconut husks and place the leaf bundle on top. The young girls then walk to the water pool, and those classed as *maagri* (mother's brother's children) wash the body of the fêted girl.[1] After the ritual washing[2], the girls open the leaf bundle and paint the face of the girl and their own faces with the orange colour.

Back in the village, the young girls dress and adorn the girl with shell necklaces *(kiasiki)*, shell wrist ornaments *(tamberugu)*, a new T-shirt and a new skirt. Underneath these garments, they fasten a skirt made of *wasdenge* leaves, *gengubu* twine, and a yellow cordyline called *momblo*.[3] When the girl is thus adorned, her assistants tell the other participants that they are ready.

In the meantime, the women of the older generations have painted their foreheads with lime and put on skirts made of banana leaves. The participants gather around the open space of the hamlet. The young girls now pack banana, taro and firewood into a *sobo* basket, heave it up and put the string over the girl's forehead. The female *maagri* of the girl carry baskets full of coconuts and yams which they later present to their *ruai*. A mother's brother *(mango)* takes the girl by the hand, the cross-cousins also hold hands and stand in line. He then leads the girl to the centre of the open space, where several items are on display, either on the ground or on a decorated shelf. These items are: a piece of firewood, soup bowls, stewed yam, baked taro, coconuts, sugarcane, and greens for making soup. He hands one item after the other to the girl who has to perform certain ritual acts: She breaks the sugarcane across her head and knees, takes a bite of the stewed yams and the baked taro, holds the greens in her hand and points them to the right and left, and finally breaks the firewood by hitting it on the ground.[4]

The women of the older generations now step forward and dance around the group. Some of them hold a stick of wild sugarcane *(agri kombe*: new, stick), others carry firewood on a headstring, and they all chant lamentations: "Oh, oh, we can no longer ask her to scrape coconuts for us; oh, oh, we can no longer enter her house, that is over now; oh, oh, we can no longer eat her meals."[5]

After this ritual, everybody settles down to eat. Only adult women are allowed to eat the *klebi* soup. The others share in the yam soup and the rice meal. When night falls, the women get ready for the chanting of the *naina* songs *(nainahugwa)*.[6] A group of women gather, turn their backs on the other participants, face the moon and begin to chant. The women take turns singing and resting until the day breaks. Their voices can be heard from far away. People in other hamlets comment: "Can you hear it? Now they are singing the *nainahugwa* for So-and-So".

1 In former times, the girl's skin on the breast, the shoulders and the upper arms was cut with scarification marks at this stage of the ceremony. Many older women still bear such scars. Today, this practice has completely vanished. Scarification was also a common practice among the Mountain Arapesh (Mead 1940:419-420) and still is among the Abelam (Hauser-Schäublin 1983a:198).

2 During a ritual period, people are in a physically "hot" and "dry" stage; their return to a "normal" physical state is marked by ritual washing (i.e. contact with water). Afterwards, they can resume eating foods which are classed as "cold" and "wet" (see Chapter 6.4.).

3 Northern Kwanga women claim not to know the significance of these adornments.

4 All of these acts characterize the culturally defined role of women in the northern Kwanga society (see Chapter 3.5.).

5 This part of the ritual signifies that the avoidance rules between the girl and her relatives now begin to operate (see Figure 5).

6 It has already been mentioned that most of these songs are in the Urat language (see Chapter 2.2.). I have recorded and replayed these songs stanza by stanza but even the older women claimed to be unable to translate the words into the Kwanga language or Tok Pisin.

The *nainahugwa* is a big event in the life of every woman. Talking about the past, they often use it as a time reference. They say, for instance, "my father died before my *nainahugwa*" or "my *nainahugwa* had already been held when the last group of men was initiated".

In contrast to the house-roofing distribution, the first menstruation ritual and other life-cycle ceremonies are a "family" celebration. It will be recalled (see Chapter 3.3.) that, on these occasions, the kindred congregate around a person. Certain relatives play a special role, namely the cross-cousins *(ruai* and *maagri)* and the mother's brother(s) *(mango)*. The former are not only the preferential marriage partners; like the latter, they are also expected to be generous and supportive whenever they are needed.

In contrast to the house-roofing festivity, the central idea expressed in the first menstruation ritual is commensality, at least among the women. Male relatives are excluded from eating the *klebi* soup; the division of the society into male and female categories is clearly expressed in this eating pattern. Still, people cook and eat side by side, demonstrating close and relaxed relations between relatives.

7.4. Childbirth Feast

Childbirth is also celebrated with a transition ritual, beginning with a seclusion and ending with a feast.[1] Right after birth, female relatives prepare a special soup for the mother which is believed to increase her flow of milk (see Chapter 6.2.). For about two weeks after birth, the new mother never ventures far from her small house *(mas aka)*, where she gave birth and lives during seclusion. During this period, she is not allowed to cook for her family. Close female relatives take care of the household, while the mother concentrates on the newborn. The newborn child sleeps most of the time; when it wakes up and cries, the mother feeds and washes it.

About two weeks after birth, the personal kindred gather at the house of the new mother. All of them bring food gifts which are pooled, redistributed, cooked and eaten by the participants. As at the feast held as part of the first menstruation ritual, the *klebi* soup is at the centre of attention. The northern Kwanga say: *Klebi nambuhu, aha, ohmu aka kwambuhu, noomek igua.* (Wild banana squeezed, eaten, her house hardened, garden to will go.) In other words, the eating of *klebi* is believed to make the uterus *kwambu* (hard, firm) and hence, to stop the blood flow. We know that the binary pairs *hangu-kwambu* (soft-hard) and *ugu-hakla* (wet-dry) express fundamental concepts of the northern Kwanga classification system which links various domains of life. Thus, we can interpret the beliefs about *klebi* to be interrelated with beliefs about conception and gardening (see Chapter 3.5.). While the blood of the parents was forming the baby, the uterus was *hangu/ugu* (soft, fluid); at birth, the baby and the superfluous blood have left the mother's body. Since female bodily fluids are dangerous to the growing yams, the uterus has to be *kwambuhu* (hardened) before the new mother can resume her garden work.

1 At the time of Kaberry's fieldwork among the Abelam, the father and mother of a new-born child ate a soup with magical herbs "...to give strength and immunity from sickness" (Kaberry 1940/41:246). Whether this practice is continued up to this date is unclear. Mead (1940:415) recorded a series of post-natal observances among the Mountain Arapesh including a meal which is also prepared for girls at their menarche.

Again we find that a life-cycle ceremony is marked as a social event by a feast. The men are excluded from eating *klebi* soup, but all the participants share the other meals, namely the soup (enriched by meat or grubs) and the rice with canned fish. This feast, we can conclude, again expresses the division between the sexes, but at the same time, it emphasizes the close and relaxed relations between a person and her kindred.

7.5. Marriage Prestations

We said that, among the northern Kwanga, cross-cousins are the preferential marriage partners (see Chapter 3.6.). Other arrangements involve a sister exchange or a delayed exchange of male or female members in the next generation. In other words, the descent group which gives one of its female members away in marriage will later claim a child or a grandchild for adoption. If none of these arrangements seems feasible, the groom's kin make a prestation to the wife's kin. In the old days, the bridewealth consisted of *fleya* (pig, shell valuables), that is of shell rings, strung on a vine and tied to a spear *(jungwambirmbiri)* and of a village pig, bound and fastened to a pole. Big yam tubers and sprouting coconuts rounded off the "payment".[1] Mambor's father married his wife from Tauhimbiet by paying *fleya*; this was around 1900. Today, bridewealth consists of cash payments in the order of K 1000 or more! No young man could afford to marry unless his kinsmen sponsored him. The negotiations between the bride's and the groom's kin are usually drawn out over months and even years. It is interesting that none of my informants ever mentioned a marriage feast.

During my fieldwork, several "trial marriages" were in process. Girls from Tauhundor and other villages moved in with a young man of their choice, often without first informing their parents. Fathers and brothers commonly hurried to fetch them back, but if the young man and his kin agreed, they usually let them stay. After this first meeting, the parents waited to see how things developed. Some of these "trial marriages" seemed to work out, others broke apart after a few weeks or months.

An interesting event occurred after the widow of a man from Tauhundor left the village with all her children and married a man in a neighbouring village. The lineage brothers of her first husband approached her second husband and demanded a refunding of the original bridewealth. After several unsuccessful visits, they finally returned with a pig, K 20 and a promise of another K 130. The pig was then slaughtered, cooked and distributed at a "widow's feast". At this feast, two groups of relatives were present: the agnates of the first husband and their fathers' sisters' children *(ruai)*. The agnates killed, butchered and cooked the pig. Together with a soup and a rice meal, they prestated the meat to their *ruai*. Some people said they did so to repay the contribution of the *ruai* to the original bridewealth. Others said, and the speeches confirmed this additional explanation, that the *maagri* (mothers' brothers' children) used this opportunity to display their generosity. It was previously stated (see Chapter 3.6.) that, ideally, the relations between cross-cousins and between mother's brother and sister's child are characterized by generosity and frequent

1 Among the Ilahita Arapesh (Tuzin 1976:100-104) sister exchange or a delayed exchange of male and female members in the next generation are also the common marriage arrangements, whereas the Abelam (see Huber-Greub 1988:53-57) and the Kwoma (see Bowden 1983:36-40) stress the giving of bridewealth.

gifts. The mother's brother's child not only is a preferential marriage partner, he or she is also expected to be generous and supportive. In real life, people often live up to these expectations. This was also the case in the first menstruation ritual discussed above (see Chapter 7.3.). At the widow's feast, the *ruai* reciprocated these gifts; they did not have a pig but they offered a soup, rice and canned fish to their *maagri*.

7.6. Death Ritual

Schindlbeck (1982) describes variations of death ritual observed in several Kwanga villages and discusses the local people's search for the cause of death and their beliefs about ancestral spirits *(makamba)* (see also Chapter 4). Here, we focus on food distributions held for or by the bereaved in Tauhundor village.

When a person dies, members of every descent group visit the compound of the bereaved family to lament and grieve. They sit and talk, discuss possible causes of death, keep a night watch and finally fix a day for the *mangraha* feast. This feast is held on the day after death, when the body is buried, or several days later. Often, different groups or relatives hold a feast on different days.

On the fixed day, groups of relatives pool food, redistribute and finally cook it. The agnates of the bereaved family provide some of the special food (especially rice and canned fish) but also yams and other daily foods, while the guests contribute mainly the common core and fringe foods. The distribution follows the sub-divisions of the moieties and/or the hamlet and village. As usual, women of the *arai* generation cook separately from those of the *umai* generation. The closest female relatives of the deceased person do not participate in cooking. They just sit there and, from time to time, they begin to lament. These lamentations always follow the same melody but each woman improvises the texts.[1] When Sahamoku lost her little son, Tasinole, she continued to chant lamentations for over a month. Her husband translated a passage:

> "Tasinole, he could not yet stand and walk. He got up and sat down again. I carried him in my sling, in the morning I carried him to the garden. He sat in the sling, I carried the *sobo* basket on my back. He sat on my back while I worked in the garden. I put him down on the ground at my side. In the evening I carried him and the full *sobo* back to the village. He sat at my side when I cooked. Now he has gone forever, never again will I see his face. He has gone and will never return."

At the *mangraha*, the relatives cook and eat side by side. The women prepare everyday meals (i.e. a yam soup or a vegetable stew, perhaps with pandanus). The atmosphere is warm and relaxed, although an occasional quarrel may break out in the discussions about the cause of the death.

A second, bigger, food distribution *(hi nunguhu:* fire; smoke) is held several weeks or months afterwards. During my fieldwork, only one *hi nunguhu* occurred.

> The preparations begin several weeks in advance. Men hunt systematically, fell sago palms, fetch liana, collect money for store foods and negotiate about the purchase of a cow. Women extract sago starch, collect firewood, green leaves and palm spathes, cut cane tubes and fetch water from the sodium salt spring.

1 In an earlier section we have seen that women also chant lamentations when the men come to bind their pigs (see Chapter 5.3.).

When they have procured enough food, the close relatives set up a display of the great deeds of the deceased. Since this *hi nunguhu* is held for a man, the men build a high scaffold with cane and other bush material.[1] On this scaffold *(mafari)*, the following symbols are displayed: a strip of coconut husk for each wild pig, a cassowary feather mounted on an empty cartridge for each enemy, a small cane ring for each prestated village pig, a woven band *(fisa)* for the biggest prestated yam tubers and a big cane ring *(bakwange)* for the largest yam prestated at the *sukusa*.[2]

When the scaffold is fully decorated, the time for the feast has arrived. The guests come from Tauhundor and the neighbouring villages. While the men pool and redistribute the food of the hosts and guests, their wives are already busy cooking sago dumplings. Some men supervise the butchering of the cow and then roast the meat on the wooden grill. The usual meals are prepared: sago dumplings, yam soup and rice with cow meat and canned fish as a relish.

While the others are cooking, a few old men assemble around the slit drum *(mi)* and begin to beat it. They first announce the dead man's clan membership *(samba)* and then his deeds, one by one. Since he was a big man, the drumming lasts for several hours.

In the late afternoon, the cooked food is lined up in a row. The guests collect their share and withdraw to redistribute and eat it. They then hold a night watch, and at daybreak, the men "shake the scaffold", "blow a seashell" *(fi)* and "watch the slit drum".[3]

After the big feast, when the guests have left, the kindred who helped with the preparations and the cooking receive a meal as a "payment" for their services.

Thus we see that death is marked by several food distributions. At the *mangraha*, the kindred of the bereaved assemble. Male relatives pool and distribute the raw food, the female mourners, except for the closest female relatives of the deceased person, prepare several meals. They all cook and eat side by side.

The big food distribution held several weeks or months after the person died is of a different kind. The preparations are much more laborious and follow the same pattern as those for the house-roofing feast. The distribution is also more formal: The hosts line up the food gifts (cooked meals) for the guests who then redistribute and eat them. Many of these food gifts are regarded as a settlement of open debts or a fulfilment of an obligation.[4] The redistribution not only includes those relatives who are present: When a *hi nunguhu* was held in Kubriwat, for instance, even genealogically remote fathers' sisters' children *(ruai)* in Tauhundor received leaf bundles of pig meat from the formal distribution.

The scaffold, the drumming of the slit drum and the blowing of the seashell, all this indicates yet another dimension of this occasion. Schindlbeck (1982) reports that a bundle of raw food including sugarcane, pitpit, green vegetables and taro (but no yams) is placed at the bottom of the scaffold. This food, he interprets, establishes communication with the dead man's spirit *(makamba)*. Most probably, the bereaved persons and their kindred seek to placate the *makamba*. As previously explained (see Chapter 4.3.) the relationship between the living and the dead is ambivalent among the Kwanga. The Kwanga believe that the *makamba* may help their close relatives (e.g. in gardening and hunting) but they may also play tricks on them and even harm them.

1 If a woman died, the women decorate her dwelling. Unfortunately I did not record a detailed description of a decorated dwelling.

2 Thus we see that the Kwanga honour a man for his prowess as a warrior, as a hunter, as a gardener and as an exchange partner.

3 The men were very secretive about these ritual acts which establish communion with the Invisible World (see Chapter 4.3.).

4 At the death of a man, most food gifts go from the agnates of the deceased to the deceased's sister's sons and to his maternal kinsmen to fulfil obligations created by marriage. Similar patterns have been recorded among the Ilahita Arapesh (Tuzin 1976:154-155) and the Abelam (Huber-Greub 1988:57-60).

7.7. Reconciliation Feast

It has now been mentioned several times that commensality among the northern Kwanga, and in fact among many other cultures, signifies close and relaxed relations between relatives. The northern Kwanga actually say that, as long as a conflict is not settled, people may not share a meal. A special ritual *(sekler yilmuli feri)* is performed to settle a conflict between close relatives.[1] The party which seeks reconciliation kills a wild or a village pig. After the pig has been singed, they collect some carbonized bristles and skin in a coconut shell. They add water, bits of *yilmuli* (a ginger) and *sekler* (a grass). The mixture is sprinkled around the house and on the fringe of the hamlet. The men then butcher a pig and hold a feast with the conflicting party.

Yilmuli is a story all to itself. In many areas of Papua New Guinea, ginger is used in rituals. The northern Kwanga also use it in a special garden ritual: The living members of a descent group act as trustees to the landed property which is passed through the male line from one generation to the next (see Chapter 3.6.). If the holder of a named tract of land allows another man to cultivate it, a special ritual has to be performed before the harvest of the *aku* (a yam cultivar). The "father of the ground" blows over a *yilmuli* and tells his ancestors: "You must not damage the ground he cultivates. I gave him the permission to grow food on our ground." Each man uses different words but the meaning remains the same. The tenant then takes the *yilmuli*, goes to the garden, fetches some water and sprinkles it over the leaves of his food crops. After this ritual, he can harvest the *aku*.

It was during a conversation about land rights that Hauseng mentioned the *sekler yilmuli feri*. Soon after this conversation, a conflict broke out in a neighbouring hamlet and the ritual was actually performed.

> The stepmother of Fisia refused to smoke the meat of a pig he had killed for the *sukusa* in Tauhimbiet. His wife smoked it three times and then left it to rot. One evening, Fisia vented his anger and hurled abuse at his stepmother. They quarrelled at the top of their voices, and a large crowd gathered. His father intervened, and the two men began to altercate; a bout of fisticuffs almost broke out between father and son. Soon after this incident, Fisia left the village for Madang. He joined a relative who had spent his Christmas holidays in Tauhundor.
>
> When his temper had cooled down, he sent word to his wife and to his mother's descent group to settle the conflict. Soon afterwards, a *sange* (on the mother's side) killed a wild pig. The next day, several members of Fisia's mother's descent group arrived at the hamlet of Fisia's father. They brought the pig and other food (i.e. yams, coconuts, greens, taro, bananas, rice and canned fish). The men then butchered the pig and performed the *sekler yilmuli feri* rite as described above.[2] The wives of the *sange* began cooking. A few hours later, the meal (a yam soup with pig meat as first course, rice and canned fish as second course) was ready. Several speeches were held, and then everybody settled down to eat the meal. Fisia was still in Madang when, about a week later, the second feast was held. This time, his father had killed a pig, and together with his agnates he offered a soup with pig meat and rice with canned fish to his affines (the descent group of Fisia's mother). In the evening, Fisia's father and Fisia's wife "shook hands".

1 Scaglion (1976:93-95) describes a reconciliation between members of the same lineage or clan among the Abelam. There, a big man acts as mediator and performs a ceremony: After he has received a shell ring from each disputant, he holds these rings, chants a special conciliatory song and gives each disputant the other's shell ring. Each disputant then smears lime on his counterpart's chest.

2 Although Hauseng did not explicitly say so, we presume that during this ritual the ancestors are also invoked.

Food, we see, plays an important role in the reconciliation ritual. First, the singed pig bristles and skin together with the other ingredients probably are bespelled to establish communication with the ancestors. Second, food serves as the principal medium for reconciliation between the conflicting parties. In this case, one party consisted of Fisia (who was absent), his wife and the members of his mother's descent group. The latter, we know, are expected to support their fathers' sisters' children in times of need. As "advocates" of their *ruai*, they visited the hamlet of Fisia's father, cooked a pig, soup and rice and shared the meal with his descent group. About a week later, the agnates of Fisia reciprocated. Since the female members of both descent groups (i.e. the descent group of Fisia's mother and the descent group of Fisia's father) have married into other descent groups, such a reconciliation feast becomes a social event for the whole village.

7.8. *Auanalo*

In earlier chapters we have seen that food gifts are also exchanged between the members of the moieties (see Chapters 3.7., 5.3. and 5.6.). We shall first consider the small-scale gifts called *auanalo* and then, in the next section, the large-scale gifts called *sukusa*.

Small-scale food gifts between individual exchange partners *(auanalo)* and agnatic groups *(tonglo)* of different moieties are frequent. During my fieldwork, eight such events occurred. Even children know the pattern of these events:

> On a late afternoon in February 1985, a group of children has gathered in a hamlet. Their leaders carry several small lizards strung on a cane strip. They begin to run towards another hamlet, and the nearer they get, the louder they scream. When they reach the hamlet of their "exchange partners", they throw the lizards at them and retreat. A few days later, the children of the second hamlet are ready for their counter-(mock-)attack: They have caught two large lizards. Their leaders carry the animals and charge towards the hamlet of their challengers. As they draw near, they hurl abuse at them, they scream and shout and clearly enjoy the excitement. When they reach their opponents, they throw the two lizards at their feet and withdraw.

This example illustrates important elements of *auanalo* food gifts. The givers challenge their exchange partners with a surprise mock-attack using food as a means of contest; the receivers are expected to accept the challenge and to try to win the contest by returning a gift of the same kind, but of a bigger size. Among grown-ups, the culturally defined exchange items are pigs, coconuts, yams, taro and banana (see Plates 13-15), and the return of the gift is usually delayed for weeks, months or even years. Later in the text (see Chapter 7.14. and 7.15) we shall try to interpret these competitive food exchanges in the light of comparative data from neighbouring groups.[1] The following account is based on the eight observed events. They all followed the same pattern.

> A man, who plans an *auanalo*, visits his *tonglo* associates and other members of his moiety. They meet at night in great secrecy, discuss the matter, and if they agree to support him, devise a plan. On a fixed date, they leave the house as usual and go to their gardens. There, the men select the largest yam tubers and nice species of taro and banana and hide them. Only their wives know where to collect the food early the next morning. At dusk, the men assemble to bind the pig they have marked

1 Among the neighbouring groups only the Kwoma (Bowden 1983:3) do not competitively exchange yams (and other food), but they also perform yam ceremonies.

for this occasion. The shrieks of the pig can be heard in every hamlet, and people inquire of each other who is planning an *auanalo*. The men now send word to the exchange partner in question and order him to stay home the next day. Formerly, they sent a red cordyline leaf to announce a pig to be given as a credit and a green leaf to announce a pig to be returned to balance a debt.[1]

Early the next morning, the wives, sisters and mothers of the men who plan the *auanalo*, fetch the garden produce and assemble in the hamlet where the bound pig has been kept overnight. The atmosphere is charged with anticipation. When the leaders are ready, the men heave up the *sobo* baskets, and the women pull the headstring over their foreheads. The pig carriers leave first, followed by the men and then the women, all in a single line numbering as many as thirty people. As they approach the hamlet of the exchange partner, the pig carriers fall into a run, and the men begin to yell and hurl offensive words at their opponents. They storm towards the house of the *auanalo* and put the loads down with a lot of noise. The *auanalo* pretends to be unconcerned; he rolls a cigarette and chats with his associates.

The food givers now unpack the *sobo* baskets, and most of their female helpers leave to attend to other tasks. The men sort out the food they brought. They will make two heaps: one is called *flerimba* and "goes with the pig", the other *baksombe* and "goes directly to the exchange partners". The men explain that the *flerimba* does not have to be paid back. It contains the food that will be distributed and cooked with the pig meat. For the *flerimba* they place ripe coconuts *(siya hakla)* in the centre, arrange taro (the *nansi* species called *mongole*, *wuorwuote*, *nakwaa*, *tuhie*, and *yumbon)* around it and top them with banana *(lobjende*, *lobambasi*, *saitene*, and *lobugwasi)*. If available, they add a pitpit called *hindarmbe*. The *baksombe* consists exclusively of yams. Only certain species qualify for exchange, namely *aku*, *bakfaii*, *wanembake*, *bakwaa* and *naini*; *bakhakla* and *asse* cannot be given to the exchange partner (see Figure 6). Each man who contributes to this yams heap marks his own tubers, usually by writing his initials on the tubers.[2] When all the tubers have been marked, the men carefully arrange them in concentric circles. Each layer is smaller in diameter than the former so that the heap takes a conic shape.

During and after the building of these two food heaps, men hold speeches. The audience sits in the shade, leaning against house walls and tree trunks. The speakers walk up and down on the open space in between, holding a yam tuber, rushing towards the pig and circling the food heaps. The atmosphere is charged with tension. The speakers of both moieties raise their voices and use an aggressive tone, while the audience murmurs and nods assent or interrupts and heckles. The speeches are held in the local language and elaborate on such questions as: "What have I done to you that you give me a pig?" The answers recount what harm has been done by the exchange partner and his family. "You called me lazy; you claim I cannot grow big yam tubers; your wife tells everyone that we gave our pig to somebody else; your mother keeps nagging about the pig you gave us when So-and-So was still alive." These few examples illustrate the general undertone of these speeches.

After the speeches, the receivers carry the yams into the shade and sort them out, each man picking the tubers of his individual exchange partner. During my fieldwork, it happened once that a man did not accept the tubers marked for him; he passed them on instead of keeping them. For weeks and months, he was the butt of derision. A man who does not accept the challenge is regarded as unable to meet it.

The givers now withdraw from the scene, except for a few men who kill and slaughter the pig. The receivers then wrap small portions of meat into leaf bundles and, together with banana, taro, coconut and yam tubers, they distribute it among all the members of their moiety. Each household gets its share, and the women prepare a meal from it. The givers, and the other members of their moiety, may not eat any meal prepared from this food.

Usually only a few days afterwards, the receivers of the food gift return a few bundles of bananas and yams. The bulk of the gift is returned much later. In one instance, a food gift of August 17, 1980, was returned four years later, namely on November 2, 1984!

1 As we have seen earlier, *auanalo* literally means "red cordyline" (*aua:* cordyline, *nalo:* red). This use of the plant is a possible explanation for the term for "exchange partner" and for this type of exchange. There may be other explanations not known to me. The northern Kwanga are fond of metaphors and, as we have seen, many words have several connotations.

2 Lime mixed with water serves as "ink".

In a certain sense, the formal exchange of food gifts between exchange partners is modelled on the formal and informal gifts between relatives. The food is also pooled and then redistributed. However, there are a number of differences which will be analyzed in a later section. Here we can note that, in contrast to the exchange of food gifts between relatives, which commonly take place in a warm and relaxed atmosphere, the exchange of food gifts between members of the opposed moieties happens in a tense, competitive atmosphere.

7.9. *Sukusa*

Sukusa is the name of a feast cycle and, at the same time, the name of a certain sequence of this feast cycle, namely a large-scale yam exchange. Schindlbeck (1981) reports about similar events called *sukutja* in the southern Kwanga area. In his report on the neighbouring Urat, Allen (1976:42) also mentions yam exchanges which "occurred annually following the main harvest around September". He does not go into details mainly, I assume, because at the time of his fieldwork, they had almost stopped. Only in the 1980s, a resurgence of these activities could be observed in the Dreikikir area (see Schindlbeck 1990). In recent years, the northern Kwanga held several *sukusa* in three villages, namely in Tauhundor in 1978, in Tauhimbiet in 1980, in Tauhundor in 1982, in Tauhimbiet in 1984/85 and in Kubriwat also in 1984/85.

The *sukusa*, like the other, much smaller food gifts described in the previous sections, operates on the principle of delayed exchange. In a sense, the *sukusa* can be understood as an elaborate *auanalo* in which all the members of Moiety A coordinate their activities to make food gifts to their exchange partners in Moiety B, expecting that, a few years later, this gift will be returned. However, there are several important factors which distinguish the *sukusa* from all other food gifts. First, ritual instruments are played, which indicates a religious dimension. Second, each *sukusa* has a name which refers to a men's cult spirit (see Chapter 4.3. and 4.4.). Formerly, some older men explained, each initiation was followed by a *sukusa*, the Kware initiations by a Kwarsumbu and the Amba initiations by an Ambasumbu. Today, the initiations are no longer performed, at least not the "real ones" (see Chapters 3.7. and 4.4.) but *sukusa* still are. The northern Kwanga refer to the *sukusa* of Tauhimbiet in 1980 and the *sukusa* of Kubriwat in 1984/85 as Ambasumbu, to those in Tauhundor in 1978 and 1982 and that of Tauhimbiet in 1984/85 as Kwarsumbu. More precisely, some say the Tauhundor staged a *sukusa* in 1978 and 1982 to balance an open debt left by the grandfathers of one moiety, who did not return Kwarkle to the opposite moiety (i.e. they did not perform a Kwarkle initiation for the opposite moiety).

Schindlbeck (1981:6), who studied the men's cult in the southern Kwanga area, characterizes the difference between the *sukutja* feast series and the *kwaramba* cult by saying that the first elaborates the conceptual links of hunting, consumption of wild pig meat and crop cultivation in the public, the second in the secret domain, to which only a restricted number of men have access.

The northern Kwanga apparently agreed to continue public food exchange feasts *(sukusa)* but to abandon the secret *kwaramba* cult. However, the two domains, the public and the secret, are closely interrelated. The resurgence of *sukusa* activities without "real"

initiations causes some problems of interpretation among the local people. Their information is often contradictory and confusing mainly because they try to accommodate their past and their tradition with the present and new ways of life.

The following accounts are based on oral reports and on my own observations of the *sukusa* held in Tauhimbiet in 1984/1985. Several men, especially Hauseng, Nandebe and Bungaioho, spontaneously offered detailed accounts of *sukusa* activities. According to them, a new *sukusa* cycle ideally begins with a *mikubu* and a *mihugwa*:

> "Whatever feast we like to make, after the initiation, before the *sukusa*, who ever cared for me during the initiation, the other half, what will I do for them? I will cut a slit drum.
>
> We keep it secret. They go to cut *kwila*. They ask, we say it is a slit drum for fighting rain. We pull the slit drum, we put food, the big men tell stories, the children do not understand. The big men say: "This slit drum is for this feast." The big men talk until day breaks. They cover the slit drum. One man goes hunting. He goes secretly, the men of the other half must not hear it. When he has found a pig, they carry it close to the village. They cut flutes, they go to sleep. Towards midnight, they beat the slit drum. The men of the other half come now, they sing and dance; we begin the mambu singsing *(sukusa)*. Now they know, it has been brought into the open. At daybreak, they distribute the meat. A big feast. The Kubriwat also come to pull the slit drum *(kwilnkwolo)*. We call this feast *mikubu*. This singsing we call *mihugwa*."

On another occasion, they continued. Here, an abbreviated and free translation of their account is rendered.

> "When the fathers have decided that our half has to make a food gift, they tell us, the children, about it. They tell us to mark the bush, a good piece of ground, where they usually plant food, and where the food grows well. Thus we go to clear the bush, we cut down the trees, we 'cook' them all, we 'cook' the garden. The fathers perform their planting magic for yams. When they have finished, we plant yams and other food.
>
> Some time later, when we eat taro and banana, the elders ask: 'Who owns a dog?' The man who owns a dog gives magic to the dog, the shotgun holder takes his shotgun, they begin to stalk the forest. When a man kills a wild pig, he informs all the other men of his moiety. They begin to beat the slit drum, marking the names of all men, all the brothers, cross-cousins, fathers' sisters, mothers' brothers and parents who have died, all the men who made food gifts before, we beat the slit drum in their name and think of them. The next morning, we go to fetch this pig. We carry the pig and cut flutes on the way. We arrive in the village, they have beaten the drums and marked the name of the man who shot the pig. Now we play the flutes. They beat the hand drum, play the bamboo flutes, chant songs and make it public now. All the men in Tauhimbiet, in Kubriwat, in Mosendai, Moseng, Apos, Tumam, all will hear it and say: 'The Tauhundor now begin a *sukusa*.' Whenever a man kills a wild pig, we celebrate it in this way.
>
> We go to the garden, fetch banana, taro and pitpit. Each man has his own *sobo* baskets. Then we arrange them in a row. I have a row, another man has a row, a third man has a row. Then we make a big heap.
>
> The women butcher the pig and scrape coconuts. Some women boil the meat, cut it into small pieces and mix it with coconut scrapings. The skin and the big bones are smoked on a shelf. The wife of the man who marked the pig for his exchange partner fetches the belly and the head of the animal and cooks them. This meat goes directly to the exchange partner.
>
> Then we beat the signal drum and our exchange partner comes to break the food heap. He comes and deals the food among the members of his moiety. First, he makes little heaps of taro and banana, one for each married man. Next, he lays out a row of breadfruit leaves. The meat and coconut scrapings are distributed among these breadfruit leaves. The men fold and wrap the leaves into food parcels and add them to the little heaps of taro and banana. Now they beat the signal drum and summon their wives. Each wife comes with her basket and collects the food apportioned to her family. Back in their compounds, the wives and children begin their feast. The men, however, are not allowed to eat a single piece of this pig meat."

These food gifts of wild pigs, banana, taro, pitpit and coconut scrapings had already been completed by the time of my arrival in October, 1984. Ideally, the killing of each wild pig is celebrated by a *fletarhugwa (fle:* pig, *tar(ambe):* wild, *hugwa:* singsing). The men beat the slit drum to establish communication with their ancestors, they play flutes and beat the hand drums, sing and dance. Although male members of one moiety prestate the food gifts to their exchange partners of the other moiety, the wives and children, not the men, eat the food. We now also understand why the Tau make a heap called *flerimba* at the small-scale food gifts *(auanalo)*; it is a replica of the above-mentioned sequence of the *sukusa* cycle.

After the yams have been harvested, the northern Kwanga carry them to storehouses which have been built in the village for this purpose. When the elders decide it is time to bring the yams outside, the men go to cut short sticks and long cane for the *bakwange*, the round containers in which the yams will be displayed before the yam exchange.

From October 29 to November 2, 1984, the Tauhimbiet staged such a yam exchange. The following description is based on my own observations and additional information offered by various people:

> On the first day, each man and his helpers set up the cane rings in his storehouse. From now on, these men have to avoid water. They are not allowed to drink water, to eat food cooked with water and to use water for washing. The men sleep in their storehouses "to watch over their yams". Sexual intercourse with women is strictly forbidden, and the men have to cook their own food.
>
> In the late afternoon of the second day, we hear the signal drums. When we reach the first hamlet of Tauhimbiet, we see groups of men coming out of their storehouses carrying tied-up cane rings, leaves and stones wrapped in leaves. Their wives and female helpers follow, each bearing short sticks on a headsling. When the men reach the road, they put the cane rings down side by side, open the knots and spread out the rings. Two men run along the row of rings and beat them with bundles of red leaves. People say that each person who holds a grudge has to voice it over a leaf and then give this leaf to one of these two men. When they beat the cane rings with these leaves, individual grudges will no longer endanger the success of the group.
>
> After this brief ritual, each man lifts his ring until it stands up vertically and, with the other hand, reaches for the ring of his neighbour. At a signal, the long row of men starts to move, they begin to run, faster and faster, screaming louder and louder until they reach the ceremonial ground. They circle it and then lay the rings down. A bustle of activity commences. Each man and his helpers hammer the wooden sticks into the ground using the stones as hammers.
>
> The ceremonial ground *(sukusako)* is located on the open space in the middle of a hamlet. A small house has been constructed. In front of the house, several posts measuring about two metres in length have been erected (see Plate 21). Each of them is covered with suspended coconuts *(siya hakla)*. This image, the northern Kwanga explain, symbolizes the men's cult spirit Kware.
>
> In the meantime, the other moiety has assembled not far away. They also form a single line and carry their cane rings vertically as they charge toward the ceremonial ground. They pass the area where the first group is working and settle down on the other side of the circumscribed area.
>
> After the first sticks have been hammered into the ground, the men stretch the cane ring, lift it about 30 centimetres above the ground and add more sticks until the cane is almost completely fenced in. The fence is secured by weaving sections of split cane between and around the sticks. Big tree leaves *(mbasi, afasi)* are used to line the containers. Each man places a stone in the centre of his container and arranges several yams around it. Each moiety then sets up a fence of coconut fronds around their half of the ceremonial ground. The men guard these enclosures and sing all night long. Women are not allowed to approach the ceremonial ground during the night.
>
> Early the next day, we hear the signal drum, and when we arrive, the women are already busy carrying *sobo* baskets full of yams from the storehouses to the ceremonial ground. The "giving" half of the moiety has twenty yam containers, the other moiety fifteen. From morning till afternoon, long lines of women carry yams, while men either decorate the largest tubers in their storehouses or carefully put the smaller and middle-sized tubers into the containers on the ceremonial ground. Most

men and women from Tauhundor help members of their moiety in Tauhimbiet. They receive cooked meals from their hosts, a stew during the day and a soup in the evening. The actively involved men eat only "dry" food.

On the morning of the fourth day, the area of the "giving" half in this exchange is fully decorated (see Plates 18-19). The big tubers are painted in red, white and yellow colours; some paintings represent faces or human-like figures, others geometrical designs. Each tuber is additionally adorned with a hibiscus flower, a piece of moss, small orange fruit, chicken feathers (symbolizing the future prestation of a male pig) or a large, white cockatoo feather (symbolizing the future prestation of a female pig). At each yam container, a tree has been erected from which a few yam tubers have been suspended. The trees also stand as signs for the future pig prestation. The other half has painted their largest tubers, but these are their only decorations.

At about 8.30 a.m., the fathers beat the slit drum. The members of the "giving" half rub ashes on their faces, arms and chests, while some elders hold speeches. The men then stand in line, each of them holding a yam wrapped in leaves, and, all of a sudden, they charge toward the fence, screaming loudly as they break it, circle once around the yam containers of the other moiety and retreat to their side of the fence. Soon afterwards, the other moiety returns the mock-attack. After their withdrawal, both groups tear down the fences around their half of the *sukusako*, and the exchange begins.

Each man, accompanied by two or three helpers, approaches his exchange partner carrying two or three tubers and receives two or three equal tubers in return. Soon, there is a busy coming and going between the two moieties. The men put the received tubers on the ground, their wives and other female helpers pick them up and carry them to their storehouses.

When the first yam container is empty, all the men scream and rush to the fringe of the *sukusako*. There, they take a sip of water and spit it out. They "break water". Those who have kept the avoidance rules can now drink, wash and eat food cooked in water. Some of them quench their thirst with green coconuts. One after the other they leave the ceremonial ground; they go to wash, eat and rest. About two hours later, they come back and resume the exchange.

Several times, a small group of men assembles, each with a painted yam in his hand; all of a sudden, they launch a mock-attack on one of their exchange partners or another man of the opposite moiety and hit him with the yam. They say: "We fight with yams."

Finally, it is announced that the "giving" side has "won". People begin to return to their own or their hosts' homesteads, where women serve sago dumplings and soups.

On the fifth day, many people from Tauhundor go back to Tauhimbiet to help the members of their moiety to carry the yams back to the storehouses.

The second sequence of the *sukusa* culminates in the yams exchange. Like the *auanalo*, this event is characterized by mock-attacks and a tense, competitive atmosphere; the men say they "fight with yams". Although the northern Kwanga speak of a "giving" and a "receiving" half, both moieties actually give and receive yams. The contest is ritualized. The givers distinguish themselves from the receivers by a greater quantity of yam tubers and by more elaborate adornments.

The exchanged yams will later be planted. Each man plants the yams he has received from his exchange partner. This practice may be based on a botanical fact which the yam cultivators have learnt from experience, namely that the mixing and redistribution of seed yams is necessary to ensure good returns over several years because yam cultivation follows the principle of cloning (see Kaufmann 1987:205). The northern Kwanga recognize a relationship between yam exchanges and crop fertility, but their interpretation of this relationship is entirely different from that of our botanists: During the night following the construction of the yam containers women are not allowed to approach the ceremonial area. We can assume that the initiated men then perform some of the ritual acts which they believe will increase the fertility of the yams and other garden crops. The stones, which are placed at the centre of the yam containers, seem to play a special role; stones are also used as part of the planting magic and are a topos of the Kwanga religion (see Chapter 4.2.).

It has been mentioned earlier (see Chapter 6.2.) that the Kwanga create what could be called "food art". They do not carve, plait or paint or otherwise artistically form and shape wood and other durable material. Instead, they form, paint and arrange food as images. At the yam exchange, the northern Kwanga not only decorate the big yam tubers, they also represent the men's cult spirit in a "food image", namely the coconut posts in front of the ceremonial house (Plates 20-21; see Chapter 7.15.).

Again we find that, within the framework of a big event, the helpers are rewarded by informal food gifts. The women who help to carry the yam tubers from the storehouses to the ceremonial ground and back again, and the men who help preparing the exchange receive vegetable stew and soup on the third day and sago dumplings and soup on the fourth day. In fact, many women have smoked meat for this occasion and actively assist in food preparation.

During the next months, the Tauhimbiet were busy preparing the third sequence of the *sukusa*. The men began to hunt systematically, the women smoked the killed game; men felled sago palms and pounded the pith, women extracted the sago starch; men cooked the sago flour in special bark ovens (see Chapter 6.1., 6.2. and Plates 16, 17); women fetched firewood, saline water and leaves; men cut lianas; together they harvested garden produce. It was interesting to observe that the inhabitants of Tauhundor were actively involved in many of these preparations although the *sukusa* was held in the neighbouring village Tauhimbiet.

When everything was ready, the men roamed the villages for pigs. According to some men, people were formerly not allowed to search for pigs outside their own village. Each household used to raise enough pigs for the exchange. Today, they said, pig raising has become a business (see Chapters 5.3. and 5.6.).

The following account from my field notes of December 22 to 24, 1984, describe the prestation of the final food gift in this *sukusa* cycle.

> Early in the morning, Hauseng and his wives fill several *sobo* baskets with yams, ripe coconuts and bananas. The women carry the baskets, the men several sprouting coconuts. We arrive in the compound of a relative in the hamlet Wasko of Tauhimbiet. Kiaru, Hauseng's second wife, stays there to help them with the preparation of sago dumplings and other tasks. We move on to the ceremonial ground. In front of the ceremonial house, we see two rows of banana leaves with yams, sprouting coconuts and parcels of the baked sago on top. We cross the ceremonial ground and settle down in the compound of other relatives (viz. the descent group of Hauseng's father's mother). Hauseng's mother stays here and helps these relatives to scrape coconuts and to prepare meals for the other helpers.
>
> At about 10 a.m., some men begin to beat the slit drums. This is the signal for the members of the "giving" moiety to bring their pigs. They form a single file along the vehicle track carrying the pigs on poles or wooden stretchers (see Plate 22). All at once, they scream and storm towards the ceremonial ground, pass the ceremonial house and head towards a fence which has been constructed on the fringe of the hamlet. There, they lean the poles and wooden stretchers against the fence (see Plate 23). Twenty-five pigs have been lined-up. Forty-five empty sticks symbolize pigs which have already been exchanged or are to be exchanged in the near future. Some people give the pigs "something to take along on the way to the other world", a spear for boars and a netbag for sows.
>
> The slit drum is beaten once more to summon the members of the "receiving" side. They form a single file and slowly walk along the lined-up pigs commenting on their size and number.
>
> During the next hours, the members of the "giving" moiety and their helpers are busy killing, butchering and cooking the pigs. Hauseng and Sahamoku assist their relatives. Various methods are employed to prepare these large amounts of fresh meat (see Chapter 6.2.). Many smoking shelves have been constructed on the fringe of the ceremonial ground.

At about 5 p.m., everybody is ready. The men place the smoked skin with the upper jaw on the food heaps in front of the ceremonial house. They then fetch *sobo* bundles full of sago dumplings and/or steamed meat and a saucepan full of soup and arrange them next to the food heaps. Each of these thirty food piles is assigned to an individual exchange partner. The sound of the slit drum summons them. They arrive with their female relatives and collect the food gifts. Back in their compounds, they distribute the meals among their families and guests. The members of the "giving" moiety and their helpers also settle down to eat sago dumplings and yam soup with smoked meat of bush rats and other game, but not of pigs, as a relish.

On the next day, many people return to the ceremonial ground. The members of the "receiving" moiety now distribute the pig meat to members of the same moiety in other villages. In Tauhundor, many households receive such meat in leaf parcels.

Ideally, the "receiving" moiety returns at least some of the pigs and/or other types of food within the next weeks. This was not the case in Tauhimbiet. Also, for several weeks after the gift of village pigs, people excitedly talked about the forthcoming *warehugwa*, a singsing associated with the Kware men's cult spirit and this particular *sukusa*. At the 1978 and the 1982 *sukusa* in Tauhundor and, as it turned out, the 1984/85 *sukusa* in Kubriwat, the singsing was cancelled. Some people explained that members of the SSEM had revealed men's cult secrets during a public confession (see Chapter 4.1.). The resulting conflicts caused confusion and impeded the proper ending of the *sukusa* cycle.

The most important complaint about the cult, in the view of the local people, concerned the inequality of food distribution (see Chapter 4.4.). During the *sukusa* in Tauhimbiet, the initiates held several "secret" feasts among themselves (see Chapter 7.12.). The non-initiates knew and complained about this inequality. Some said these feasts were the "secrets" that had been revealed during the public confessions mentioned above. This inequality was strongly felt and several people voiced their disapproval vociferously.

These factors combine to cause conflicts and to impede the "proper" conduct of the *sukusa*. Hence, my description of the *sukusa* cycle will end with an oral report offered by Hauseng. First, however, a few remarks about the village pig prestation are required.

Before the northern Kwanga kill the village pigs, they give them "something to take along on the way to the other world", as if they had an immortal soul. They give the boars a male attribute, a spear, and the sows a female attribute, a netbag.[1] This is the only evidence I have that the northern Kwanga believe village pigs to have an immortal soul. We shall later return to this point (see Chapter 7.15.).

The food gifts are laid out in front of the ceremonial house, near the posts symbolizing the Kware men's cult spirit, before the exchange partners of the other moiety come to collect them. We can assume that, by placing the food gifts there, a communication is established with the men's cult spirit. Perhaps Kware is thus publicly invited to share in the food gift and the feast in return for granted and future favours.

Especially in this sequence of the *sukusa* cycle, a great number of persons are involved, not only the members of the moieties in this village, but also members of the moieties from other villages, as well as women and children. Their involvement finds an expression in the giving and taking of food. On the "giving side", many people contribute food items, help with food preparation and receive cooked meals in return. On the "receiving" side, the exchange partners distribute the food among many of their relatives in their own village and

1 It is an interesting detail that they choose a netbag instead of a *sobo* basket, which is the most important female attribute among the northern Kwanga (see Chapter 6.1.).

in the other villages. We could thus say that the northern Kwanga use food as a medium to integrate the members of their society and, at the same time, to confirm social boundaries at such a ceremony.

The singsing called *warehugwa*, as we have seen, traditionally ends this *sukusa*. Hauseng describes this singsing as follows:

> "The fathers decide when the *warehugwa* is to be held. We go to cut cane, the cane we use here, in house construction. We cut it and leave it in the sun to dry. When it is dry and loses weight, we go to fetch flowers and ornamental plants. One type of wild taro symbolizes wild pigs, another village pigs. Some shrubs are used as signs for bush rats. We fasten them to the cane. The men have to abstain from water, they cannot drink or wash for a week. They prepare the finery now, the finery they will wear when they come outside.
>
> On the day of the singsing, many people gather and form a circle. There are several groups who 'break the place': a group from Tauhundor runs around the ground, next a group from Tauhimbiet, then a group from Kubriwat, and so on. Groups from all the villages present at the singsing run around in a circle. When they have finished, the hand drum *(waku)* 'fires'. They beat the midrib of the coconut leaves. They break one and throw it away. Now they see the decorated men, the adornment goes up and down, up and down. The adorned men form a line, they all come outside. They hold the finery now, they shake it, they dance, they go around and dance. When they have finished dancing, they put it down. Toward midnight, we who wear shirts and trousers, hold it and dance.
>
> When the day breaks, they get ready to give it to us. They give the finery, the saucepans, the cane water containers, all the little things they used in this *sukusa*, they give them to us in the morning. I stand up and hold the ornaments of my exchange partner because he bound a pig and gave it to me. He gives his finery to me. My wife receives a saucepan from the wife of my exchange partner. I carry the finery, the cane water container decorated with leaves, whatever they give to us. They pretend to withhold, they turn back, they pretend, but finally they give it to us. We just stand there and wait. When they come with the finery, we take it. We also pretend now. We move back and forth, then we throw it away. We go back and beat the midrib inside. Now the feast is finished; it is finished now."

Schindlbeck (1981) offers a similar account although the northern Kwanga claim the southern Kwanga do not know this singsing. In Schindlbeck's account, the men and women of the moiety which "holds the cane tubes" adorn themselves. Some men blow into the cane tubes, some accompany them with loud screams. In the middle of this group is a man who beats the hand drum and blows into a cane tube. Also in the middle walks a man who recites a secret song. The women walk on the fringe of the group. They carry long cane tubes which they use to fetch water. They have decorated them with the leaves of a species of ginger. Other women carry men's baskets used for storing garden produce. Most women and men have painted themselves yellow, widows have painted themselves white. They hold mandibles of pigs and carry clay pots, which have been broken at the bottom; stalks of ornamental shrubs stick through the holes. The women swing the items up and down and dance back and forth. Men of the other moiety sit on the ground and face the dancers. All of a sudden, they get up, race toward the dancers, snatch the cane tubes and the pots from them and a scuffle begins. Afterwards potsherds lie on the ground. The "attackers" carry the cane tubes away. From now on this moiety "holds the cane tubes".

The northern Kwanga consider the finery of the *warehugwa* as nothing special; that of another singsing called *waguhugwa* is, they assured me, much more beautiful.[1]

1 It is called *ape* (bird) and reminded me of the pictures taken by Tuzin (1980, Plates 24 and 25) among the Ilahita Arapesh.

The name *warehugwa* refers to the breadfruit tree *(ware)*. Earlier in this text we have seen (Chapter 3.7.) that the two sub-divisions of each moiety, which "head the ceremonies" of the Kware men's cult spirit, are called Warome (breadfruit) and Wargugwa (breadfruit tree leaf). The symbolic meaning of these associations was not conveyed to me.

After the *auanalo* and the *sukusa*, which establish a link with the local tradition, we shall now briefly consider two types of feasts which tie in with new life styles.

7.10. Welcome and Farewell Dinner

In recent years, as we have seen, mobility has greatly increased (see Chapter 2.3.). Especially men, but sometimes whole families, move from the village to town and return only for holidays. Their arrival and departure is commonly celebrated with a feast. These feasts are modelled on those given at life-cycle rituals. Relatives get together, pool raw food, and then cook and share a meal consisting of several courses (e.g. green coconuts and baked bananas as a starter, a vegetable stew, sago dumplings, a soup and rice with canned fish as main courses). The Tok Pisin phrase "mipela sande long ol" (we mourn for them) is actually used for death feasts, welcome and farewell dinners alike.

7.11. Pati

Another new social event is the pati. It was already mentioned that the term pati has a slightly different meaning from the English term "party" from which it derives: to make a pati is regarded as bisnis (see Chapter 5.3.). The organizers build a fence of coconut fronds and charge an entrance fee. At the time of my fieldwork, the entrance fee was T 20. Inside the fence, they prepare and sell snacks and titbits, for instance a few sago dumplings with meat wrapped in a banana leaf for T 10, rice with canned fish for T 15, boiled tubers or plaua (a kind of bread) for T 10. Games (e.g. Lucky Numbers or darts), dancing and drinking are other attractions. A resis gita (i.e. a contest of local string bands) is the highlight of such a pati. The sale of fresh pig meat, we have seen, is a new custom. It is either organized as a prelude to a pati or as a separate event.

7.12. Feast Calendar of a Northern Kwanga Family

In order to assess the frequency of feast attendance, the feast calendar of a northern Kwanga family has been recorded during a whole year (i.e. from October 1984 to September 1985). We have already presented this family in the analysis of domestic groups in a sample hamlet (see Chapter 3.3.). It is an extended family based on multiple marriage, parent-child and sibling-sibling links and consists of four household units (household units F, G, H and I in Figure 3b). Sometimes, only one member of this extended family attended a feast. On

October 25, 1984, for instance, grandfather Mambor was the only one who participated in the post-setting ritual of the *sukusa* in Kubriwat (see Table 16). Hauseng's second wife, Kiaru, participated in a childbirth feast held on November 14, 1984, for a matrilateral relative in the hamlet Turnturu. His first wife, Sahamoku, and his mother, Kakiaor, shared in the childbirth feasts held on November 11, 1984, in Wansapussi and on November 19, 1984, in Wangerenge. Thus we see that, although meat was served on most of these festive occasions, it would be wrong to calculate meat consumption for the whole family on the basis of this calendar.[1]

Table 16
Feast Calendar of a Northern Kwanga Family

Date	Type of feast	Place
19.10.1984	Death feast *(mangraha)*	Himdenge
20.10.1984	"	"
21.10.1984	"	"
23.10.1984	Death feast *(mangraha)*	Tauhimbiet
25.10.1984	Post setting *(sukusa)*	Kubriwat
26.20.1984	"	"
27.10.1984	"	"
30.10.1984	Yam exchange *(sukusa)*	Tauhimbiet
1.11.1984	"	"
2.11.1984	"	"
3.11.1984	"	"
4.11.1984	"	"
9.11.1984	Death feast *(mangraha)*	Wansapussi
10.11.1984	Childbirth feast	"
14.11.1984	"	Turnturu
19.11.1984	"	Wangerenge
22.11.1984	Food exchange *(auanalo)*	Muindurhi
23.22.1984	"	"
27.11.1984	"	Wangerenge
1.12.1984	House-roofing feast	Alguelko
4.12.1984	Childbirth feast	Turnturu
6.12.1984	Yam exchange *(sukusa)*	Kubriwat
8.12.1984	Death feast *(mangraha)*	Tauhimbiet
10.12.1984	Food exchange *(auanalo)*	Kadihengi
13.12.1984	House-roofing feast	Alguelko
16.12.1984	Childbirth feast	Wansapussi
21.12.1984	Death feast *(mangraha)*	"
22.12.1984	Childbirth feast	"
23.12.1984	Pig prestation *(sukusa)*	Tauhimbiet

1 Systematic information on dietary patterns will be presented in Chapter 8.1.

Date	Type of feast	Place
24.12.1984	Pig prestation *(sukusa)*	Tauhimbiet
7. 1.1985	Childbirth feast	Wansapussi
8. 1.1985	Food exchange *(auanalo)*	Himdenge
12. 1.1985	House-roofing feast	"
14. 1.1985	Wild pig meat distribution	Alguelko
19. 1.1985	House-roofing feast/farewell dinner	Himdenge
25. 1.1985	Childbirth feast	Simbimbi
28. 1.1985	Wild pig meat distribution	Alguelko
7. 2.1985	House-roofing feast	"
9. 2.1985	Cassowary meat distribution	Tauhimbiet
22. 2.1985	Pig prestation *(sukusa)*	Kubriwat
26. 2.1985	Flying fox meat distribution	Wangerenge
28. 2.1985	Childbirth feast	"
4. 3.1985	Pig meat distribution	Kwalnkwala
6. 3.1985	Food exchange *(auanalo)*	Warmesi
7. 3.1985	"	"
8. 3.1985	"	"
1. 4.1985	Widow's feast	Kwalnkwala
14. 4.1985	Food exchange *(auanalo)*	Turnturu
17. 4.1985	Reconciliation feast	Wansapussi
28. 4.1985	"	"
9. 6.1985	Wild pig meat distribution	"
10. 6.1985	Childbirth feast	Wangerenge
27. 6.1985	Sale of pig meat	Ilmau
28. 6.1985	Childbirth feast	"
5. 7.1985	House-roofing feast	Himdenge
16.17.1985	First menstruation ritual	Turnturu
30. 7.1985	Sale of pig meat	Tauhimbiet
2. 8.1985	Pati	Kwalnkwala
6. 8.1985	House-roofing feast	Wansapussi
18. 8.1985	Pati	Moihwak
24. 8.1985	House-roofing feast	Wansapussi
30. 8.1985	First menstruation ritual	"
1. 9.1985	Wild pig meat distribution	"
22. 9.1985	Death feast *(mangraha)*	Wangerenge
26. 9.1985	Farewell dinner	Himdenge
27. 9.1985	"	"

Source: Field notes

The feasts mentioned in this list have been described in the previous sections. Only the category "meat distribution" requires further explanation. Several types of meat distribution have been subsumed under this heading. All of them reached the family although none of its members participated in a feast: On January 14, 1985, Nandebe killed

a wild pig in preparation for a house-roofing feast. The meat, as we know, was butchered and distributed among all the household units of the upper village half. Each unit cooked and ate the bones and intestines, preserving the other pieces by smoking for the feast held on February 7, 1985. Another type of meat distribution reached only the initiated men. On February 9, March 4, and September 1, 1985, these men received meat parcels, which they were not allowed to share with their wives and children. In a third type of meat distribution, the family received meat from relatives classed as *maagri* or *ruai*, who either received meat from their *auanalo* or shot flying foxes (February 26 and June 9, 1985).

The active male head of this extended family, Hauseng, is an ambitious man and an informal leader, at least in the upper half of the village. He and his family are involved in nearly all the events happening in Tauhundor and the neighbouring villages. This fact may slightly distort the picture because a less active and numerous family may not attend as many feasts as this one.

With regard to seasonality, a peak of festive activities was clearly reached in November and December. Following the harvest of the first yam crop (see Chapter 5.1.), large-scale yam exchanges *(sukusa)* occurred in Tauhimbiet and Kubriwat and small-scale yam exchanges *(auanalo)* in Tauhundor. The last *auanalo* food gift in Tauhundor was held in April.

7.13. Festive Meals

Earlier in this text, several aspects have been mentioned which define the category of a meal among the northern Kwanga (see Chapter 6.3. and 6.5.). Here, we shall examine which aspects distinguish an everyday meal from a festive meal.

The context of preparation, we said, is a relevant aspect in this distinction. Some meals require little preparation (e.g. food baked directly on hot embers), for others, preparations are more laborious (e.g. for soup). The distinction becomes even clearer when we consider the various feasts described in this chapter. Few preparations are needed for the first feast of the death ritual *(mangraha)* and for the welcome and farewell dinners. For the first menstruation feast and the childbirth feast, special ingredients have to be collected *(klebi*, banana, grubs or small game). A pig is required for the reconciliation feast, which means a greater effort (i.e. men have to hunt a pig). For the *auanalo*, men have to obtain a village pig. Their wife or another woman has to work hard to raise a pig until it is big enough to be prestated to an exchange partner. The men further have to grow big yam tubers and other garden produce for their food gift. Another group of festivities (i.e. house roofing, *hi nunguhu* and pati) require even more preparatory work. Sago palms have to be felled, their pith pounded and washed; men have to hunt systematically, to make shopping trips to town; both sexes collect plant material in the forest. By far the greatest preparatory work, however, is demanded by the *sukusa* feast cycle. Bigger gardens have to be cleared and cultivated, many wild pigs hunted, many sago palms felled and processed, many village pigs raised. It takes the coordinated effort of half the village to stage such a feast cycle. Cooking for *sukusa* feasts also requires much work. Neatly wrapped sago parcels have to be baked in special bark ovens and large amounts of meat have to be cooked on the day of the village pig prestation.

Another aspect, as we have seen, concerns the meal itself. In daily life, even the most elaborate meal, namely a soup, consists of a single dish. A festive meal, on the other hand, consists of several courses, each of which is a full meal in daily life. The menu varies, but a standard combination includes baked tubers and banana, a soup with grubs or meat and rice with tinned fish. Certain occasions (e.g. first menstruation and childbirth) require a special course (i.e. *klebi* soup). At more elaborate feasts, sago dumplings with a relish consisting of coconut scrapings, meat or fish form an additional course. A festive meal, we said, is more of the same; a feast is a time of plenty rather than diversity. The only difference in terms of ingredients, which marks all festive meals, is the addition of animal food (e.g. grubs, fresh or canned fish and meat). Of these, pig meat is clearly most valued. Rice meals, a symbol of a new life style, also mark festive occasions. It is interesting that rice meals are not served during the *sukusa* feasts, which emphasize the locally grown tradition, but are a constitutive element at new social events (e.g. welcome and farewell dinners and pati).

The context of food consumption and distribution has also been mentioned as relevant aspects in the definition of a "meal". Earlier (see Chapter 3.3.), we identified the "household unit" as a consumption unit in everyday life. At life-cycle ceremonies, the kindred pool and redistribute food, and then cook and share several courses of the festive meal. They form extended consumption units, although the avoidance rules still separate the generations and, in the case of the *klebi* soup, the sexes. Other festivities are characterized by the fact that one group of people cooks for another group of people (e.g the house-roofing feast, the *hi nunguhu* and the first and third sequence of the *sukusa* cycle). On still other occasions, namely the *auanalo* and *sukusa* yam exchanges, one group gives raw food to the other group. All of these food gifts imply, as we have seen, that they will be returned in kind. In the smallest social unit (i.e. the family) as well as in the largest social unit (i.e. the village as a "cell" of the local men's cult), food gifts are regarded as a sort of "payment" for services rendered. In the former, the woman rewards the man for his gardening, hunting and other activities; in the latter, one moiety rewards the other (i.e. the initiators) for their effort in terms of food and labour.

The *sukusa*, we said, can be regarded as a large-scale *auanalo;* more correctly, we should say the *auanalo* is a small-scale *sukusa*. At the *sukusa*, the exchange items of the first sequence comprise wild pigs, coconut, taro, banana and pitpit, those of the second sequence yams, and those of the third sequence village pigs and sago. At the *auanalo*, these exchange items occur at the same time, namely in the *flerimba* heap (consisting of coconut, taro and banana), the *baksombe* heap (i.e. yams), and the village pig. In other words, for the northern Kwanga, there clearly exists a patterning which identifies the two events as belonging to the same kind.

7.14. Food as an Expression of Social Relations

Contemporary anthropologists often look at food as a code, for instance Douglas (1975b:249): "A code affords a general set of possibilities for sending particular messages. If food is treated as a code, the messages it encodes will be found in the pattern of social relations being expressed. The message is about different degrees of hierarchy, inclusion and exclusion, boundaries and transactions across the boundaries." In my opinion, the precoded

messages will not only "be found in the pattern of social relations being expressed", as Douglas puts it, but also in the pattern of man-nature relations being expressed. This point will be resumed in the next section. Here, we shall follow her argument and see which messages about social relations food carries among the northern Kwanga.

Let us begin with "different degrees of social hierarchy". In an earlier section (Chapter 6.5.), we said that the northern Kwanga cuisine encodes a message about a minimal degree of social hierarchy. Within a limited range of choices, every northern Kwanga family eats the same food. Even at feasts, the emphasis is on equality. There is one exception, which confirms this rule, namely the members of the local men's cult and their privileges (see Schindlbeck 1990:237-238). The men's cult provides a means to power. Schindlbeck mentions some of the younger, not (yet) initiated men in the Bongos area who said their fathers oppressed them.

Apparently, the differences in power and authority are mainly expressed in terms of food. We have already mentioned that, today, the most important complaint about the cult is the inequality of food distribution (see Chapters 4.4. and 7.9.). First, an inequality of food distribution exists between the members and non-members of the cult. Everybody knows that the cult members hold secret feasts among themselves. Second, Schindlbeck points out a barrier of food distribution dividing higher-grade initiates from lower-grade initiates. Third, Schindlbeck reports that many offences against the men's cult rules are expiated by the offering of domesticated pigs to the group of initiated men concerned!

Transactions between other social categories mark exclusion or inclusion, but not degrees of social hierarchy. Here we refer to the feasts at which only women are allowed to eat the *klebi* soup. Women justify their privilege of eating *klebi* soup with "medical" reasons; the eating of *klebi* is believed to strengthen the uterus and to stop the blood flow (see Chapter 7.3. and 7.4.). At these feasts, women also prepare other meals which they share with all the participants. The only restrictions concerning these meals are the avoidance rules which are always observed, in daily life and during feasts. The avoidance rules also mark boundaries between social categories, namely between older and younger generations, between men and women and between members and non-members of the local men's cult (see Chapter 3.4.). Avoidance rules between these social categories not only concern eating arrangements but also other forms of physical contact (e.g. housing arrangements).

We know that among the northern Kwanga, the smallest food production, distribution and consumption unit is the household unit. Feasts held at life-cycle rituals can be interpreted as transactions across the boundaries of household units. Relatives not only pool and then redistribute food, they may also share it. The sharing of meals seems to be a prerogative of close relatives. As we have seen in the case of the reconciliation feast (see Chapter 7.7.), even close relatives may share food only if they are not in conflict with one another. The sharing of food, within the family or among relatives, we can infer, symbolizes harmony and closeness.

If one social category prestates food to another social category or other social categories, the meanings are quite different. Often, and on all levels of the social organization, as we have seen, such prestations are regarded as a reward for services rendered. They may also form part of a standing obligation among relatives, for instance, the obligation of a mother's brother and his children towards his sister's children (see Chapter 7.5.).

Under certain circumstances, however, such prestations imply yet another meaning, namely that of competition, a theme which is elaborated in many Sepik yam cultures[1]. The Kwanga say that the two opposed groups or individuals "fight with food (or drink)". At the house-roofing feast, the men say they "fight with each other with beer", at the *sukusa* yam exchange, they say they "fight with yams". The same idea is acted out in the mock-attacks during the *auanalo* and various sequences of the *sukusa*. The one who gives food is considered to be more than a match for the receiver. For this reason, the man who refused to accept an *auanalo* was the butt of derision for weeks and months.

Although the Kwanga dramatize ritual competition, the principle of reciprocity in the exchange of goods dominates.[2] The northern Kwanga paraphrase this principle as *lemesumbu tolo*, especially when they refer to the *sukusa* exchanges. During the *sukusa* yam exchange, as we have seen, the "giving" moiety had twenty yam containers, the "receiving" moiety fifteen. Both moieties actually give and receive yams.

In the final analysis, food transactions across social boundaries can be interpreted "...as a very strong unifying and classifying instrument in a society with an inclination towards fission" (Schindlbeck 1990:236). Schindlbeck refers to the men's cult *(kwaramba)* system. In my view, this statement can be extended to include various ceremonies and festivities discussed in the previous sections. In all of them, food is used as a symbolic expression and as a means of maintaining the social structure, which is a network of social relations.

7.15. The Role of Food in Rites and Rituals

In the last section we quoted Douglas as saying that messages encoded in food will be found in the pattern of social relations being expressed and added that, in our opinion, they will also be found in the pattern of man-nature relations being expressed. In other words, food can also be interpreted as a code for messages about culturally patterned man-nature relations which are rooted, of course, in the world view (see Chapter 4). This becomes particularly evident in the *sukusa* cycle but also in other rituals and rites.

The preceding sections have shown that food plays an important role in northern Kwanga ritual, in religious ritual and in other stylized, repetitive patterns of behaviour. Selected occasions are marked either by sharing or distributing food among defined groups of people. Such special occasions include house roofing, stages in the life cycle, reconciliation among kinsmen, homecoming and leave-taking of relatives, and musical contests

1 Hauser-Schäublin (1987:90) recently analyzed ritual competition with food crops in the Sepik and comes to the following conclusions: "Trotz der Unterschiede aber bestehen eine Reihe von Gemeinsamkeiten und Aehnlichkeiten zwischen den meisten Kulturen. So findet die Verteilung des Zeremonialyamses oft in Wettbewerbssituationen statt; immer steht der Gedanke dahinter, dass derjenige, der gibt, dem Beschenkten, der die Gabe annehmen muss, überlegen ist. Prestige erreicht nicht derjenige, der grosse Reichtümer anzuhäufen und zu bewahren versteht, sondern der sie weggibt – selbstverständlich immer mit der Verpflichtung des Empfängers zu einer späteren Gegengabe."

2 This has also been noticed by Schindlbeck (1981:9): "Obgleich der Yamstausch von einheimischer Seite als ein Wettstreit bezeichnet wurde, überwiegt im Tauschvorgang der Aspekt des Ausgleichens. Der Tausch wird geprägt von Gabe und unmittelbarer Gegengabe. ... Das Ausgleichen von Gaben und nicht die Herausforderung steht im Vordergrund."

(*pati*). On other special occasions, the food gift itself is at the centre of attention, namely at the *auanalo* and *sukusa* food gifts.

The *auanalo* and the *sukusa* operate within the framework of the ritual men's cult organization. The exchange partners belong, with a few exceptions, to the same cult community.[1] It has been demonstrated (see Chapter 7.13.) that there exists a patterning which identifies the *auanalo* and the *sukusa* as food gifts of the same type but of a different scale. The *sukusa* cycle clearly has a religious dimension because it forms part of the initiation cycle of the local men's cult. We have seen that while the *kwaramba* cult is a secret domain to which only a restricted number of men have access, the *sukusa* cycle elaborates certain central ideas of the *kwaramba* in public. Although, under the pressure of Christian missions and the new administration, the initiation cycle of the local men's cult has been disrupted, the secret and the public (i.e. the *kwaramba* and the *sukusa)* remain closely interrelated.

At a *sukusa*, food is used to form an image which symbolizes the men's cult spirit. Among the southern Kwanga, Schindlbeck (1981:7) saw a food image consisting of yams which was said to represent a sago palm. This food image was associated with the cult spirit Nakunalo *(naku:* sago, *nalo:* red). It was set up by those men who had been initiated in the *naku* sequence of the men's cult. At the *sukusa* held in Tauhimbiet in 1980 and in Kubriwat in 1984/85, the spirit Amba was represented with a single post measuring about nine metres in height which was completely covered with coconuts (see Plate 20). It will be recalled that during the *sukusa* held in Tauhimbiet in 1984/85, the food image representing the spirit Kware consisted of several short, vertical posts which were also covered with coconuts (see Plate 21).

I did not investigate the symbolism of these food images because I deliberately steered clear of the men's cult secrets. Authors working among neighbouring groups suggest that coconuts are feminine in symbolism because their shape is reminiscent of the vulva and breast[2] or that coconuts are often used as a "bait" for the ancestors[3]. Similar interpretations may be valid in the context of the Kwanga culture: In the mythical story of the coconut palm, sago turns into a woman and from the head of this woman grows the first coconut palm (see Chapter 4.2.). The use of coconuts as a "bait" for bush spirits has been described in one of the healing rituals (see Chapter 4.5.).

With these food images the Kwanga create a link between the mythological past and the present, between the Invisible World and the Visible World. Other examples can be quoted, for instance that of a house full of food which is a recurrent theme in the Kwanga mythology.[4] At the end of the last stage of the *sukusa* in a southern Kwanga village, the elder men of the receiving moiety were led into a house which the giving moiety had filled with food (Schindlbeck 1981:9-10). The northern Kwanga also made covert remarks about such an event occurring at the end of a *sukusa*.

1 While the Ilahita Arapesh (Tuzin 1972) and the Abelam (see e.g. Scaglion 1976:88, Huber-Greub 1988:179) stress competition between villages, the Kwanga and Urat (Allen 1976:39-46) hold competitive food exchanges mainly within their own community. As Hauser-Schäublin (1987:90) correctly points out, the latter type of food exchange contributes mainly to the subsistence of the local community.

2 See Tuzin (1980:84, footnote 6) on the Ilahita Arapesh.

3 See Huber-Greub (1988:154) on the Abelam.

4 We have already come across this theme in the story of Jaimo (see Chapter 4.5.).

In this context it is interesting that the word *sumbu* appears, for instance, in *aksumbu (aka:* house, *aksumbu:* garden magic), Ambasumbu (the *sukusa* following the Amba initiations) and Kwarsumbu (the *sukusa* following the Kware initiations). We have already mentioned that gardening magic focuses on the planter's effort "to stop the yams from running away" and "to make them grow big and plentiful" (see Chapter 5.1.). Gardening rites, as well as hunting rites, are partly learnt during the initiations into the men's cult. Also, it was noted that formerly the old cultivation cycle and associated rituals were controlled by men of the higher initiation grades (see Chapter 5.1.). The men's cult, gardening and hunting have been, and to a certain extent still are, closely interrelated. The conceptual links between them draw on the local world view and culturally defined man-nature relations.

In several rites the Kwanga use food as a medium to establish communication with the Invisible World: During the last death ritual *(hi nunguhu)*, a bundle of raw food is placed at the bottom of the scaffold displaying the deeds of the deceased man, and we quoted Schindlbeck as saying that this food is thought to establish a communication with the dead man's spirit *(makamba)*. Before the men kill the village pigs bound for prestation during the *sukusa* cycle, they give them "something to take along on the way to the other world"; these pigs are, in a sense, intermediaries between the Visible World and the Invisible World.[1] Similarly, the food gifts laid out in front of the ceremonial house after the large-scale pig prestation, can be interpreted as an offering to the men's cult spirit. Earlier in this text we have seen that men invite a bush spirit to share their meal during a healing rite (see Chapter 4.5.).

This brief discussion indicates that in order to fully understand the role of food in rites and rituals, one has to examine various layers of meaning. Kaufmann (1987:223) correctly emphasizes that, in these cultures, symbols are polyvalent. Depending on the situation, in which for instance yams or sago serve as symbols, they have a specific meaning which may allude to other specific meanings in other contexts. A detailed analysis of food symbolism among the northern Kwanga is beyond the scope of this thesis because it is a formidable task and requires a profound knowledge of the male cult secrets.

1 Hauser-Schäublin (1983b) explored the meaning of pigs among the Abelam. Among many other meanings she found that pigs are regarded as intermediaries between This World and the Other World.

Chapter 8
Diet and Nutritional Needs

We now approach the core of the nutritional system visualized in Figure 1. The chapter begins with a discussion of the diet in which we mix biomedical concepts (e.g. a classification of foods based on their main nutrients) with local concepts (e.g. menu categories). This approach is not unproblematical, but it allows us to link dietary data with data on other aspects of the nutritional system. Biomedical interpretations of northern Kwanga dietary and growth patterns will be presented in the next section. We then move on to look at local interpretations of these patterns. The last section examines the attitude of Tau women towards the MCH service.

8.1. Diet

Systematic data on the diet of Tau[1] mothers and their small children were collected during a semi-longitudinal survey from April to September 1985.[2] We selected a cohort of 42 mothers in Tauhundor and Tauhimbiet who, at the time of the survey, had a child under two years of age.[3] The interview dates were scheduled for the two days preceding the MCH clinic; the nurses visited the villages at intervals of about 6 weeks. This procedure enabled us to correlate the results of the food intake survey with the results of the child growth survey (see Chapter 8.2.). The interviews were conducted by four young women, two from Tauhundor and two from Tauhimbiet. Each of them was able to read and write in Tok Pisin,[4] and I trained them to conduct interviews with the help of a simple questionnaire (see Appendix B). They interviewed the mothers individually in their homes, usually in the evening. From time to time, I dropped in at their interviews. The conversation was held in the Kwanga language. The questions referring to the mother's diet were: What and how much did you eat in the morning *(nurumbu)?* What and how much have you eaten during the day *(tandi)?* What and how much did you eat in the late afternoon *(hon'iu)* or in the evening *(niri)?* The same questions were then repeated for the children. My assistants translated the answers into Tok Pisin and wrote them down. The loose frame of the questionnaire did not press the answers into moulds, left room for spontaneous information

1 Since only mothers and children attending the MCH Clinic Tau have been included in the food intake and growth pattern surveys, I use the name "Tau" to refer to them. Mothers and children from the village Kubriwat, which is served by the SSEM from Yakrumbok (see Chapter 2.3), have not been surveyed.

2 Comparable data on neighbouring groups are not available, with the exception of those on the southern Abelam collected by a nutritionist (Ross 1984). For this reason we include information on the Anguganak area (West Sepik Province) in our considerations, although the Au speakers do not belong to the yam culture complex (see Chapter 1.2.): Their main staple is sago and their subsistence is based on hunting and gathering (Thomason et al. 1983:2).

3 As stated at the outset of this thesis, Dr. P. Heywood supervised the design of this survey. Any errors in the interpretation of my data are my own responsibility.

4 Three of my assistants had completed Grade 6, one of them Grade 8.

on the part of the assistants and still enabled me to systematize the answers. Since the northern Kwanga often discuss their diet among themselves, they found nothing unusual about these questions. Most of the surveyed mothers were very cooperative. After each survey period I reviewed the answers with my assistants and carefully avoided voicing any opinions.

Let us first examine the diet of the surveyed mothers and then move on to the diet of their small children. As I have just said, my assistants visited 42 mothers on two days every six weeks for a period of six months. One mother left the village in the first month to join her husband, who was working in Wewak, and other women occasionally slept in a garden house or visited relatives in neighbouring villages. Thus we have food intake data for a total of 394 days. These data have been analysed according to four criteria: 1) the number of meals consumed per day, 2) the nutritional composition of the daily diet, 3) the types of local menus and snacks consumed, and 4) the nutritional composition of these menus and snacks.

To determine the number of meals consumed per day, each of the recorded standard menus or snacks was counted as a "meal"[1]. The results show that Tau women eat an average of 2.6 meals per day (range 0 to 5 meals per day). This corresponds with my observation of women's meal patterns. An astonishing result is that on 6% of the days surveyed, Tau women ate only one meal per day. One woman ate nothing at all because she was ill. We shall return to this point when we discuss the composition of their daily diet. On almost 10% of the days surveyed Tau women ate more than three meals per day. It can be assumed that special events occurred on at least some of these days; festive meals usually consist of several courses, and each course actually is a standard menu or snack.

Let us now move on to the analysis of the second criterion, the nutritional composition of the daily diet. Nutritionists often employ a method called "weighed food intake survey" to assess the quality and quantity of the daily diet. Ideally, a team of researchers follows a random sample of villagers and weighs their individual food intake of the most important food categories (e.g. yams, greens, meat) over a certain period of time. Individual food intakes are then grouped into age categories and compared with age- (and sex-) specific food composition tables.[2]

For several reasons it was not feasible for me to conduct a weighed food intake survey of my target groups. First, sampling randomly, in time or in space, is extremely laborious under fieldwork conditions. In my case, the number of mothers with under-two-year-old children was limited; they lived far apart in different hamlets of Tauhundor and Tauhimbiet and spent most of their days out of the village. Second, a team of trained assistants was not available, and a single researcher is only able to cover a small sample. Third, the analysis of food intake data poses several problems, even for nutritionists (see Ross 1984). Published food composition tables do not exist for this area, and a chemical analysis of food samples is costly. Difficulties in interpretation of the data are no less considerable. The estimation of energy and nutrient requirements depends on many variables and, in fact, official

1 It will be recalled that the definition of the term "meal" is not an easy task (see Chapters 6.3. and 7.13.).

2 Ross (1984) recently conducted a weighed food intake survey of 32 individuals in 9 households on two 3-day periods among the southern Abelam. His results reveal that energy intakes of individuals are lower than the predicted requirements; individual protein intakes are 82% (in April) and 104% (in July) of the "safe level" of intake defined by the FAO/WHO in 1973.

recommendations change periodically. For all these reasons, we decided against a weighed food intake survey.

Our approach is less sophisticated and more suited to this particular fieldwork situation. In order to assess the nutritional composition of the daily diet of Tau mothers, the recorded foods have been roughly grouped into three categories which are relevant in the biomedical sub-context: 1) starchy food (including tubers, banana and sago), 2) protein food (including meat, fish, green vegetables, rice and sugarcane),[1] and 3) fatty food (including coconut and pandanus). The food types consumed per day were then weighted: If a mother ate, for instance, cold yam (i.e. starchy food) in the morning, baked yam and a coconut (i.e. starchy and fatty food) during the day and a banana soup with greens and coconut (i.e. starchy, protein and fatty food) in the evening, her daily diet was rated as "starchy, protein and fatty food".

The results regarding the nutritional composition of the daily diet are summarized in Table 17.

Table 17
Distribution of Food Types in the Daily Diet of Tau Mothers

Food types	Days	
	No.	%
No food	1	0.3
Starchy food	30	7.6
Starchy and protein food	71	18.0
Starchy and fatty food	9	2.3
Starchy, protein and fatty food	283	71.8
Total meals	394	100.0

Source: Field notes

On most days (71.8%), the women surveyed consumed all three food types. Days on which only starchy and protein food was consumed rank second (18.0%). A remarkable proportion of days (about 10%) remains on which the surveyed mothers ate either only starchy food (7.6%), starchy and fatty food (2.3%) or no food at all (0.3%). As previously mentioned, one woman did not eat for a whole day because she was ill. Other reasons for these days with a poor diet remain unclear; the usual comment was: "I did not go to the garden, and therefore I did not have any greens." We have seen that northern Kwanga women also cultivate trees with edible leaves on the fringe of the hamlets (see Chapter 5.2.). Why they did not collect these greens is a question that cannot be answered.

Let us now turn to the analysis of the third criterion, the types of local menus and snacks consumed. The answers recorded in the food intake questionnaire refer to local

1 The northern Kwanga have a mostly vegetarian diet; animal protein was consumed in only 6% of the meals. For this reason, plants with more than 3g protein per 100g edible raw portion (according to the food composition tables in Powell 1976) have been classified as "protein food". Plants supplying protein but also more than 30g fat per 100g edible raw portion (e.g. coconut and pandanus) have been counted as "fatty food".

categories which we described earlier (see Chapter 6.2.). These are the meaningful categories in the cultural context of the Kwanga. As an anthropologist, I was interested in assessing their place in the diet. Appendix C demonstrates that vegetable stews *(isakaba hakla)* made up for 35.4% of all menus and snacks consumed, soups *(ugmaha)* for 22.8%, various foods baked on hot embers *(sarkamba su)* for 18.3%, sago jelly *(nak tau)* for 13.3%, fruit (e.g. raw coconut) for 4.5% and rice dishes for 3.0%. Pandanus stews *(glan u)*, boiled breadfruit seeds *(warsiki tuambu)*, fried sago and bread account for less then 3% of the menus and snacks consumed.

The fourth criterion is the nutritional composition of these menus and snacks. The results indicate that most meals consist of starchy, protein and fatty food (43%) or starchy food (39.3%). Starchy and protein food account for 14.3%, other food for 3% and fatty food for 1.3% of this diet. This pattern mirrors the fact that many people eat cold staples in the morning and bake a few tubers on hot embers during the day. In the late afternoon, they prepare the main family meal, usually a rich soup or stew consisting of staples, greens and coconut or a simple soup or stew with greens but without coconut (see Chapter 6.3.).

Earlier in this text we saw that the northern Kwanga practise an agroforestry system (see Chapter 5). Their diet reflects, of course, their ways of food procurement and gives us a lead in estimating the relative importance of the food-getting activities. Gardening clearly is the most important food-getting activity in terms of quantity of nutritional returns. Most ingredients of the stews and soups, most of the food baked on hot embers and many fruits (e.g. papaya and sugarcane) are garden produce. Forestry is the second most important food-getting activity in terms of the quantity of nutritional returns. Sago jelly menus make up 13% of all menus consumed, and smaller quantities of sago are used for soups and cakes. Other forestry products (i.e. pandanus, breadfruit and coconuts) are consumed in more than 15% of all the menus. However, in an agroforestry system it is impossible to separate garden food menus neatly from forest food menus because many menus consist of both types of foods (e.g. yams and banana from the gardens with greens and coconuts from the forest).

This survey further shows that most food consumed by Tau women has been locally produced; even so, 21.1% of all the menus included store-bought foods (i.e. rice and tinned fish, or flour). The contribution of store foods (see Chapter 5.7.) would be slightly higher if we included salt and dripping. It will be recalled that today northern Kwanga women sometimes replace coconut cream with dripping. Women rarely drink beer, quite in contrast to men, who consume large amounts of beer on special occasions, for instance at house-roofing festivities (see Chapter 7.2.), at welcome and farewell dinners (see Chapter 7.10.) or at a pati (see Chapter 7.11.).

Several food-getting activities supply meat to the northern Kwanga diet, namely animal husbandry (see Chapter 5.3.), hunting and collecting (see Chapter 5.5.) and trade (see Chapter 5.6.). The food intake data are not precise enough to estimate the relative contribution of each of these food-getting activities to the diet. What they illustrate is that only 3% of all menus recorded in this survey contain meat obtained by any of these three activities. Collected animal food was never mentioned by the surveyed women, although my assistants were instructed to ask about this type of food specifically .

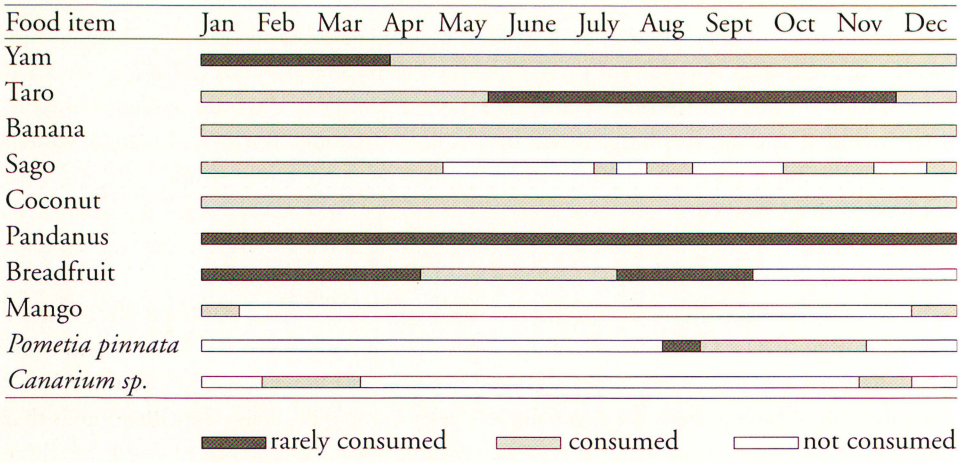
The consumption of meat procured by local means (i.e. by animal husbandry, hunting and trade) equals the consumption of canned fish: 3% of all the menus consumed by the

women surveyed contain canned fish. None of these women stated that they had ever eaten fresh fish; as in the case of collected animal food, my assistants were instructed to specifically inquire about fresh fish.

These data thus confirm a point made earlier (see Chapter 6.2.), namely, that the northern Kwanga have a mostly vegetarian diet. Only 6% of all the recorded meals contain some animal food although several feasts occurred during the survey period (see Table 16). Not all the women surveyed attended those feasts but we can assume that they attended others not listed in this table. Since a peak of festive activities was reached in November and December, the consumption of animal food may have been slightly higher during those months.

The results of the dietary survey can further be interpreted in terms of seasonal variation in food consumption.[1] The survey was conducted from April to September, that is during the "dry" season (see Chapter 2.1.). This period is of particular interest because it used to be a taim hangre (a period of hunger) in the old cultivation cycle (see Chapter 5.1.). It will be recalled that in the old cultivation cycle, only one yam crop was cultivated per year. This resulted in a seasonal consumption of yams from about September to March. From April to October, sago replaced yams as a staple food. We have seen that, only a generation ago, the northern Kwanga began to cultivate two yam crops per year (see Chapter 2.2.). The introduction of a second yam crop means that yams now are available all year round, also during the "dry" season from April to October, as the food intake data illustrate (see Appendix C). However, bottle-necks in yam supplies still occur, at least in some families. As previously noted (see Chapter 5.2.), the first yam crop in October/November 1984 had been poor and the "wet" season of 1984/85 unusually heavy and long. For this reason, many families resorted to increased sago production for home consumption from December to May 1985.

Figure 7 Seasonal Variation in Food Consumption



1 Among the southern Abelam (Wosera) Ross (1984:84) found marked seasonal changes in the frequency of consumption of major foods and in intakes of protein, fat and dietary fibre. Unlike the northern Kwanga, the southern Abelam grow only one yam crop per year.

Figure 7 illustrates the consumption of several food crops throughout the year. It is based on the dietary survey from April to September and on my casual observations of food consumption from October to March. The staples (i.e. yams, taro, banana and sago) as well as some forest products (i.e. coconut, pandanus and breadfruit) are eaten (nearly) all year round, whereas others (i.e. mango, *Canarium sp.* and *Pometia pinnata*) are only occasionally consumed. Whether the consumption of these food crops is equally distributed over the households and months would have to be systematically assessed by a second food intake survey covering the other half of the year (i.e. October to March).

Let us now turn our attention to the diet of Tau children. In common with many other groups in Papua New Guinea, the Kwanga practise prolonged breast-feeding and late sevrage.

Table 18
Distribution of Breast-Fed and Weaned Children (by Age Group)

Age group (months)	No. of children (N=508)	% of children	
		Breast-fed	Weaned
1– 6	54	100	–
7–12	83	100	–
13–18	52	100	–
19–24	68	6	24
25–30	33	61	39
31–36	42	21	79
37–42	42	17	83
43–48	33	–	100
49–54	57	–	100
55–60	44	–	100

Source: Field notes

All the women breast-feed their children;[1] wet-nursing, common in other areas of the country, is not known among the northern Kwanga, and bottle-feeding is almost unheard of. The low family income (see Chapter 5.7.) does not allow parents to buy commercial substitutes and a national law makes bottles unavailable except on medical prescription.[2] Initiation of breast-feeding is usually delayed for a few hours until the breast produces "good milk"; the first part of colostrum (*mehe om heieu*, *mehe*: yellow, *om heieu*: it looks bad) is commonly discarded because of its colour. During the first months, mothers offer their

1 Only two mothers recently experienced failure in breast-feeding. Both mothers suffered from breast infections and did not respond to treatment. In the first case, the infant died of hunger within the first few weeks; in the second case, the child weighed only 4.9 kg and measured 62.0 cm at the age of 21 months!

2 Alarming figures about the detrimental effects of artificial feeding among infants in Port Moresby prompted the Government to take action (see Biddulph 1983): a mass education campaign to promote breast-feeding was mounted, commercial advertising of breastmilk substitutes was banned and the sale of feeding bottles was restricted. In 1977 the Baby Feed Supplies (Control) Act became law in Papua New Guinea, four years before the WHO passed the International Code of Marketing Breast-milk Substitutes in 1981.

breasts many times a day but only for short intervals; older infants reach for the breast and push the nipple into their mouth (see Chapter 8.3.). Since mothers and their child minders carry small children wherever they go, the breast is always available; at night, young children sleep with their mother, older ones with the father or the siblings.

In order to assess the duration of breast-feeding and the age at weaning, a survey of 127 children under 5 years of age was carried out from March to June 1985. At every MCH clinic, I interviewed the mothers individually and asked them whether they still breast-fed their children. The results are presented in Table 18.[1] All the surveyed children of the first three age groups (i.e. from 1 to 18 months) are still breast-fed. Between 19 to 24 months after birth, the picture begins to change; but even in the age group of 25 to 30 months more than half the children are still breast-fed. All the surveyed children of the last three age groups (43 to 60 months) are completely weaned. The median duration of breast-feeding (i.e. the cut-off point when 50% of the children have stopped breast-feeding) among the northern Kwanga is between 31 and 36 months.

In a child feeding pattern with prolonged breast-feeding and late sevrage, the drawn-out introduction of supplementary foods deserves particular attention. For this reason children under two years of age (and their mothers) were selected for the semi-longitudinal food intake survey. As previously noted, we have food intake data on 42 mother-child pairs for a total of 394 days. The children's data were grouped according to age groups and then examined in terms of the same criteria as those of their mothers, namely 1) the number of meals consumed, 2) the composition of the daily diet, and 3) the types of local menus and snacks consumed.

The mean number of children's meals per day is listed in Table 19.

Table 19
Distribution of Meals per Day Eaten by Tau Children (by Age Group)

Age group (months)	Days (N=386)	Meals (N=677)	Meals per day
4– 6	44	32	0.6
7– 9	96	162	1.7
10–12	72	120	1.7
13–15	84	170	2.1
16–18	62	139	2.2
19–21	28	72	2.7
22–24	8	30	3.8

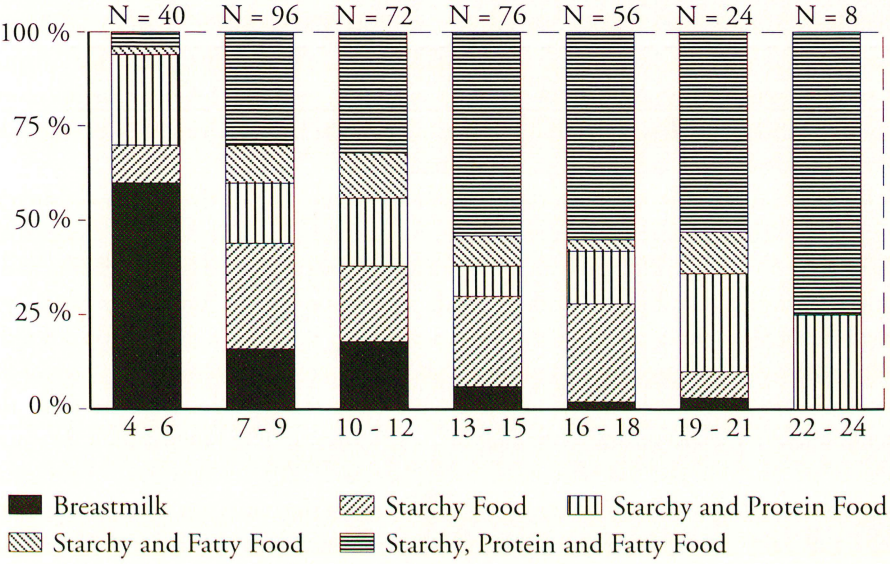
Source: Field notes

Here we refer only to those meals which include some supplementary food. Although the MCH nurses recommend the mothers to feed their children three meals per day, many 4- to 6-month-old children do not eat a meal per day. The picture changes slightly in the

1 Since each mother was asked every month we have a total of 508 answers.

next two age groups: the children eat an average of 1.7 meals per day until they are 1 year old. From then on, the number of meals per day steadily increases and reaches the average of adult people (2.6 meals per day) when the children are 19 to 21 months old. As we have seen above, the first children leave the breast at this age but most of them continue to breast-feed for several months.

Figure 8 Percentage Distribution of Food Types in the Daily Diet of Tau Children (by Age Group)



In order to assess the nutritional composition of the daily diet (see Figure 8), the food intake data for each age group have been classified in the same way as those of their mothers. Despite the recommendations of the MCH nurses to begin supplementary feeding at 4 months, children aged 4 to 6 months ate no supplementary food on almost two thirds of the surveyed days; on 11% of the surveyed days they ate some starchy food, on 23% starchy and protein food, on 2% starchy and fatty food and on 5% starchy, protein and fatty food. In the next age group (7 to 9 months) the proportion of "only breastmilk days" falls to 17% and also remains on this level (18%) in the next age group (10 to 12 months). The percentage of days on which each of the other categories of food is consumed increases and again remains on the same level until the end of the first year. In the second year, the proportion of "only breastmilk days" falls below 10%. From 19 to 21 months, the percentage of "only breastmilk days" remains almost the same; the proportion of days with breastmilk and starchy food decrease markedly. At 22 months, finally, the children receive some supplementary food on all days surveyed.

The answers of the mothers regarding child feeding also refer to the local menus and snacks (see Appendix D). The relative contribution of each menu and snack differs, of

course, from age group to age group; but, generally speaking, the dietary pattern of small children is similar to that of their mothers: Stews, soups and baked food provide the bulk of the diet (70.5 to 86.9%). Store foods (i.e. rice, fish and flour) contribute only 5 to 12% to the children's diet in comparison with 21% in the mothers' diet. The proportion of meals containing meat or fish ranges from 1.3 to 10%, which is similar to the mothers' intake (6%).

A closer analysis reveals that greens, meat and fish, for instance as components of stews and soups, only become important in the second year of life. In other words, the younger children drink the watery parts of the soup and eat small portions of plain staples which have low energy and protein concentration.

The MCH nurses advise the local women to mix boiled staples with coconut cream. The results of my survey indicate that women sometimes follow their advice but not as frequently as recommended. Only 40 out of 701 meals were prepared in this way. This is also true of milk powder. If children's weights fall below 60% weight-for-age (see Chapter 8.2.), the nurses hand out cans of milk powder to the mothers. They tell them to mix it into the soups or the paps. However, although several mothers had received milk powder, the children reportedly only ate it in 3 out of 701 meals!

This food intake survey allowed us to analyze changes in the diet of Tau children as they grow older, and to compare the daily diet of these children with the daily diet of their mothers. The diet of Tau children can be characterized by prolonged breast-feeding and a drawn-out introduction of supplementary foods. The proportion of "only breastmilk days" is more than 60% at the age of 4 to 6 months, then almost 20% at the age of 7 to 12 months and almost 10% at the age of 16 to 21 months. The percentage of days on which each of the other food categories is consumed increases gradually. At the age of 22 months, the children's dietary pattern is similar to that of their mothers: The bulk of their diet now consists of stews, soups and food baked on hot embers, and they eat an average of 2.6 meals per day. In terms of nutrient intakes, roughly two-thirds of the meals now comprise starchy, protein and fatty food. Both mothers and children eat mostly vegetarian food; the proportion of meals containing meat or fish account for 6% of the mothers' diet, and for 1.3 to 10% of the children's diet. Tau women rarely prepare "special children's menus" (e.g. mashed staples with coconut cream). The majority of children's meals consist of cut, premasticated, mashed or watery portions of the mother's diet.

However, we ought to bear in mind that this grouping of data by age groups mirrors the biomedical reality, not the Kwanga reality. We shall return to this point later (see Chapter 8.3.) but let me already anticipate that northern Kwanga women take the demand and the physical maturation of the individual child, not an age-standard, as a guide in their food introduction schedule. Also, food introduction does not proceed in spurts as the diagrams suggest.

8.2. Biomedical Views of Nutritional Needs of Tau Children

At the beginning of this thesis we claimed that the biomedical definition of nutritional needs can only be understood within the framework of 20th century science (see Chapter 1.3.). Let us reconsider, therefore, some of the basic biomedical concepts, methods and techniques before we apply them to the data on northern Kwanga children.

One of the criteria used to assess the nutritional status of populations is progress in physical growth.[1] The nutrition surveys conducted in various parts of Papua New Guinea including my own investigation use anthropometric methods to assess the nutritional status of local communities. Many countries (and some international organizations) have devised standards for growth from cross-sectional studies in which large numbers of healthy, normal children at various ages have been measured and their mean heights and weights have been calculated. Other norms are based on measurements of children as they grow (longitudinal study); these data are ranked in percentiles, the number in the percentile indicating the position that the measurement would hold in a series of one hundred. Data from these studies have been presented in tables, charts, and graphs. In the assessment of the nutritional status of a particular community, cross-sectional and longitudinal studies can be conducted. The growth is measured, the data analyzed and then compared with one of these standards. If growth in the measured pattern progresses at a slower rate or loses against the standard, nutritionists speak of "growth retardation", "growth failure" or "malnutrition".

Anthropometric methods are further employed to monitor the growth of individuals. In Papua New Guinea, as in many other developing countries, growth monitoring on the community level is often conducted by the "Under-Five Clinics" (or MCH clinics). At these clinics, growth monitoring is coupled with intervention if the individual child's growth falls under a defined limit (i.e. becomes "malnourished"). The commonly used anthropometric index for child growth monitoring on the community level is weight as compared to age-specific standards (e.g. the Harvard Standard) yielding percent weight-for-age (W/A). If the weight of an individual child falls under 80% W/A of the Harvard Standard, he or she is regarded as "malnourished", if the weight falls below 60%, he or she is regarded as "severely malnourished". More importantly, growth monitoring enables the MCH staff to judge whether, from one clinic to the next, a child gains or loses weight compared to the age-specific standard .

The rationale for studying child growth patterns is at least three-fold.[2] First, low food intakes and/or infection result in decreased nutrient availability at the cellular level which then gives rise to growth retardation. If food intakes are severely deficient, growth ceases altogether, and it becomes necessary to use subcutaneous fat and other reserves as an energy and nutrient source to maintain the function of vital organs. We can thus say that "...children who grow poorly are more likely to be severely ill when infected and more likely to die than children who grow well" and that "good growth means good health" (Martorell 1989:18). In other words, growth retardation is a good indicator for future health problems. Second, growth is particularly rapid during the first two years of life. If adverse factors influence growth at this time, this has a significant and lasting effect. Growth development during childhood determines stature and body size in adulthood. Changes in the growth patterns of children will therefore have an effect on changes in stature and body size of the adults in the future. Furthermore, since young children are particularly susceptible to adverse factors during this period and since growth patterns are indicators for such health risks, child growth patterns are regarded as indicators for health problems of the commu-

1 For general information on growth, nutrition and development in infancy see, for instance, Falkner and Tanner (1986).

2 For a brief but concise discussion of the functional significance of growth patterns see, for instance, Martorell (1989).

nity. Third, slow growth patterns may also be a marker for poor psychological test performance.

Some critical questions arise from this rationale: How do we define healthy and unhealthy growth patterns? Has small size become a synonym for "malnutrition", as Beaton (1989) argues and, if so, what are the implications? Which growth indices and standards are appropriate? The example of Papua New Guinea demonstrates some of the difficulties involved in the application of nutritional theory.

A few years ago Heywood (1982, 1983) reviewed the state of research on growth and nutrition in Papua New Guinea. It has already been noted earlier that nutritionists have carried out a great number of investigations in various parts of the country (see Chapter 1.1.). Heywood (1982:14) reports that "... there is abundant evidence that many children in Papua New Guinea do not grow at the same rate as those in high income countries", and he continues: "The implications of the above growth data, particularly in relation to the nutritional status of Papua New Guinean children, are unclear for a number of reasons." In Heywood's view four major problems make it difficult to interpret the local growth patterns: 1) the problem of choosing appropriate growth standards, 2) the problem of choosing appropriate anthropometric indices, 3) the problem of distinguishing between a successful adaptation and a pathological response and 4) the problem of interpreting growth patterns in retrospective or in prospective. He reports that various areas of the country show remarkable differences in growth rates, adult stature and body dimensions. The extent to which genetic and/or environmental factors influence these regional differences remains unclear. If all populations in the country had the same growth potential, an international standard would be of some value, from his point of view, as long as it was regarded as a yardstick against which various groups could be compared and not as a growth target or goal. However, he argues, the above-mentioned uncertainty regarding the genetic and/or environmental influences on growth patterns make the applicability of a single growth standard questionable. In addition to the general issue of the applicability of a single growth standard and the specific issue of regional variation in growth and body morphology, there is also the problem of which particular indices of nutritional status are most appropriate. Although the health significance of these different growth patterns is not yet clear, it may mean that "... we may eventually need different definitions of malnutrition for different regions of the country or to look for another way of assessing nutritional status" (Heywood 1983:137).

In Papua New Guinea, we said, the nutritional status is usually assessed by measuring weight and then comparing these data with age-specific standards (usually the Harvard Standard) yielding percent weight-for-age (W/A). The W/A index is also used to define the malnutrition rate of the country, which was 38% in 1978 (Heywood 1982:14). Although W/A is still internationally the most widely used method of assessing nutritional status, Heywood (1983:135) mentions that reservations have been expressed about its use and interpretation. The W/A of a child may be low because it is tall and thin, short and of normal proportions, or because it is both short and thin. Heywood follows Waterlow (1976) who suggests using two additional indices, namely height-for-age (H/A) and weight-for-height (W/H), and using the relation between these indices in the definition of malnutrition (i.e. the "Waterlow classification").

According to Heywood (1983:140) it has been argued that small body size may represent an adaptation to environmental stress rather than a pathological response and that the slower growth rates and lower adult height for highland groups in Papua New Guinea might be an adaptation to a poorer nutritional environment. In the opinion of Heywood, it is difficult to interpret whether we observe a successful adaptation to environmental stress or a pathological response, if the growth data are used as a general index of health status which is basically retrospective in nature. For this reason, he and his colleagues designed a study to estimate the prospective risk of death in relation to nutritional status in a highland population (Southern Highlands Province). In this population the low W/A observed in children under 5 years is primarily due to a deficit in H/A and not to a deficit in W/H. In other words most children are low in W/A because they are short. The question thus is: Is there a health disadvantage in being short? The results show that, with each of these indices, there is a sharp increase in the risk of death in the ensuing 18 months as departure from the Harvard Standard increases. The sharp increase is earlier in H/A (i.e. 100 deaths per 1000 when it falls below 85% of the standard) and W/H (i.e. 200 deaths per 1000 when it falls below 80% of the standard) than in W/A (i.e. more than 100 deaths per 1000 when it falls below 60% of the standard). Height does seem to matter. The results of this study indicate that in this population, the growth pattern does not represent a successful adaptation to environmental stress. To be short means to be at a greater risk of dying. The health significance of growth patterns in other parts of the country are not yet clear, but "(t)he data presented here on the relationship between nutritional status and mortality rates indicates that there are limits to the success of any adaptation which may be occurring" (Heywood 1983:140).

This hypothesis is supported by evidence from investigations on child growth among the Simbu over a period of 25 years. A comparison of their results indicates that the mean percentage W/A of children 6–30 months of age has shifted from 80.2% in 1956 to 88.4% in 1981. Five-year-old children were 2 kg heavier in 1981 than in 1956. It is difficult to estimate the health significance of this shift in growth. Heywood and his colleagues have chosen the following approach. They used the relationship between W/A and prospective risk of death measured in the Southern Highland population and estimated the effect of a shift in the distribution of nutritional status on the predicted number of deaths. Their results indicate that the effect of a similar shift (i.e. an increase in the mean W/A from 80% to 88.4% in the 6–30 month age group) in the Southern Highlands would be to reduce the mortality rate by approximately 40%. In other words, an increase in growth may be a relevant factor in the reduction of prospective mortality rates.[1]

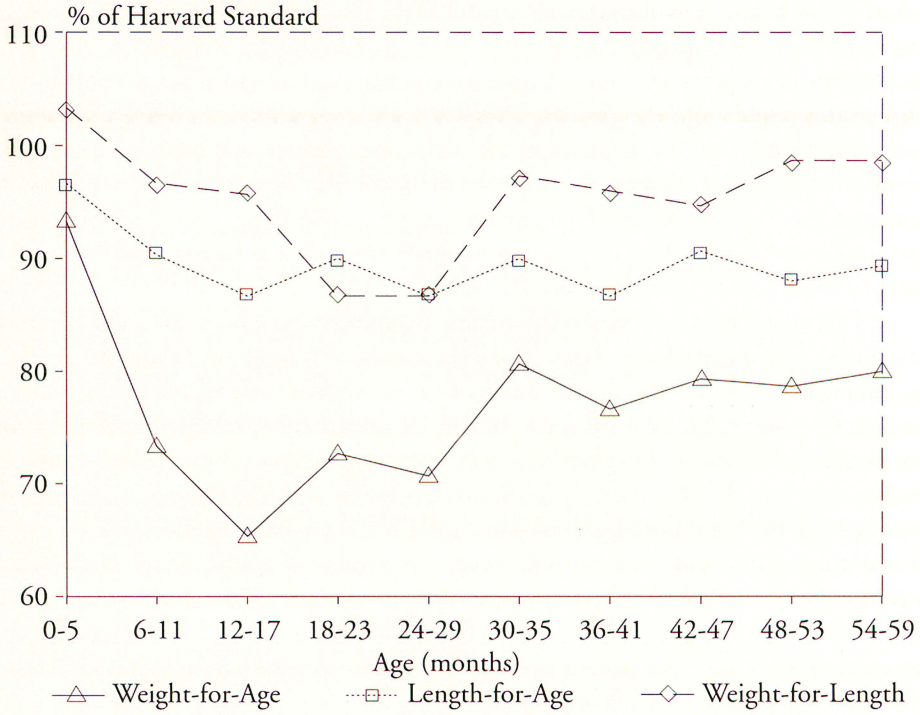
This summary of Heywood's review of growth and nutrition in Papua New Guinea has demonstrated that we have to be very careful in our interpretation of growth patterns. All the problems addressed in his review, of course, also apply to my investigation. Let us now examine Tau growth patterns and the various factors which may influence the nutritional status of Tau children.

1 Earlier in this text (see Chapter 5.8.) we already mentioned that one of the factors contributing to this increase in growth among the Simbu is likely to have been dietary change, namely an increase of imported store foods bought with cash from coffee sales.

In order to assess the nutritional status, we conducted a cross-sectional anthropometric survey of 134 Tau children under five years of age attending the MCH Clinic Tau.[1] Most of these children came from the villages Tauhundor and Tauhimbiet, some from Warmenakor (see Map 3). The children were weighed on Salter spring balances to the nearest 100g and their supine length was measured on a measuring board to the nearest 0.5 cm.[2] The age of the children was determined on the basis of the MCH records. In all cases the month of birth was known and in most cases the day as well.

For the analysis of the growth data, the children were grouped by six-month intervals. Weight and length were compared with the appropriate age- and length-specific Harvard Standard (Jelliffe 1966) yielding values for W/A, L/A[3] and W/L for each child. The results are expressed as the mean values for each age group (see Figure 9 and Appendix E).

Figure 9 Pattern of Mean Weight-for-Age, Length-for-Age and Weight-for-Length by Age



The W/A of Tau children departs soon after birth from the standard and falls rapidly below the 80% level and reaches the lowest point of about 65% at the age of 14 months. It then increases again, approaches the 80% line of the standard and, at the age of about 3

1 The size of our sample is small. In the Wosera a similar survey included 531 children under 5 years (Ross 1984), in Tari (Southern Highlands Province) 1721 children under 5 years (Heywood 1982), in Yagaum (Madang Province) 792 children under 3 years (Jenkins, Orr-Ewing and Heywood 1985) and in Anguganak (West Sepik Province) 423 children under 5 years (Thomason et al. 1983), to mention only a few studies.

2 Dr. P. Heywood measured the children. Any errors in the interpretation of the growth data are my own responsibility.

3 Length (L) is measured if the children are lying down, height (H) if they are standing.

years, levels out just below the 80% line. The L/A departs rapidly from the standard during the first year of life and then remains at a fairly stable level just below 90% of the standard. The W/L also falls during the first year of life until it reaches less than 90% of the standard around two years and then increases again.

Generally speaking, these growth patterns are similar to those found in other parts of Papua New Guinea. All three growth indices do not rise but fall during the first year of life! W/A and W/L continue to fall during the second year and subsequently recover somewhat. This pattern is similar to that seen in both the highlands and the lowlands (see Heywood 1983).

However, there are also important differences. The levels of growth are lower than those seen in most of the other studies except for a study of Anguganak children in the West Sepik Province (Thomason et al. 1983) and that of Wosera children in the East Sepik Province (Ross 1984). The growth patterns of Wosera children have been measured against another standard. To facilitate comparison of the mean weights and lengths the results from all three studies are presented in Appendix F. Ross measured height, rather than length, beyond 30 months of age; thus comparison is only valid up to this age. Weights can be compared across the full age range. In general it seems that for both length and weight there is little difference between Tau, Wosera and Anguganak children. If anything, Tau children are lighter in the second year of life but begin to catch up later on. Similarly, Tau children, if anything, are shorter than those in Wosera and Anguganak. Overall, though, the level and pattern of growth in the three areas appear to be similar.

If we compare the mean W/A, L/A and W/L of Tau and Anguganak children, we find that the W/A pattern of the two groups is similar and stands at approximately the same level (see Thomason et al. 1983). L/A and W/L show differences. The L/A falls in both groups below the 90% line, but in Anguganak L/A increases again. In both groups, the level of L/A is similar to that seen in highland children whilst the level of W/L is similar to that of lowland children. As a result the mean W/A during the second year falls as low as 73% in Anguganak and 65% in Tau. This contrasts with the general level in the highlands where mean W/A seldom falls below 80%. Thus, the low W/A is largely a result of the low L/A. In other words, Tau children are low in W/A because they are short.

This is confirmed when we look at this pattern in more detail using the Waterlow classification (Waterlow 1976). In Anguganak the Waterlow classification by 6-month age categories shows that approximately 15% of children under 2 years old are below 80% W/L; the proportion of children below 90% L/A rises to between 40% and 50% by 2 years of age and remains within that range through to 5 years. Since our sample was smaller than that of the Anguganak study, we grouped the children in 12-month-intervals (see Table 20): in the first year, 9% of the children are below 80% W/L, in the second year about 21% and in the third year again 9%; the proportion of children below 90% L/A begins at about 36% in the first year and rises to about 58% in the second year and 77% in the third year. About a third of the children in the first, about half of the children in the second and more than two-thirds of the children in the third year are above 80% W/L and below 90% L/A, the cut-off point chosen by Waterlow to delineate "stunting",[1] a form of PEM.

1 "Stunted" children are short but not thin and make up a significant proportion of the population in many Third World countries (see e.g. Martorell 1989).

Table 20

Percentage Distribution of Children Below and Above 80% W/L and 90% L/A of Harvard Standard by Age Group (Waterlow Classification)

Age group (months)	Weight-for-Length (% Harvard Standard)	Length-for-Age (% Harvard Standard)		Total
		<90	>90	
0–11	<80	6%	3%	9%
	>80	30%	61%	91%
	Total	36%	64%	
12–23	<80	9%	12%	21%
	>80	49%	30%	79%
	Total	58%	42%	
24–36	<80	9%	0	9%
	>80	68%	23%	91%
	Total	77%	23%	

Source: Field notes

Most experts on child health seem to agree on the "multifactorial nature of growth retardation" (Underwood and Hofvander 1982) but disagreement exists regarding the relative contribution of various factors. The problem is further complicated by the fact that several factors common in other developing countries do not seem to be responsible for slow growth patterns in the northern Kwanga area and in other parts of Papua New Guinea (see Jenkins, Orr-Ewing and Heywood 1985:30).

A serious decline in the duration of breast-feeding, often identified as an important factor influencing slow growth (WHO/UNICEF 1981), does not seem to have occurred in the study area: the median duration of breast-feeding is between 30 and 36 months.[1] There seems to be a positive association between average duration of breast-feeding and average birth interval (WHO/UNICEF 1981). Short birth intervals can mean a depletion of the mother's physical resources and early, abrupt weaning of the child. Among the northern Kwanga, birth intervals are long; they average almost 37 months (N=72, range 21 to 58 months) if the preceding child survived, and a little more than 23 months (N=10, range 12 to 44 months) if the preceding child died. Only two out of 109 mothers brought three children under five years to the MCH clinics. Long birth intervals and small families thus are not only an ideal (see Chapter 3.3.) but reality. There is good evidence that diarrhoeal disease does not occur on the same scale as in some other countries (Jenkins, Orr-Ewing and Heywood 1985:30), where it is recognized as a serious threat to children's lives, especially during the weaning period (see e.g. Martorell 1989).

Other common factors have not been investigated, namely the nutritional status of Tau mothers[2] and the quality and quantity of breastmilk consumed. The nurses of the MCH service provide ante-natal care including iron injections, malaria prophylaxis,

1 In Anguganak 50% of children aged 30.0-35.9 months were still being breast-fed (Thomason et al. 1983:7); in Wosera the median age of complete weaning is about 27 months (Ross 1984:97).

2 Ross (1984:91) found that Wosera mothers of children under five years of age have lower %W/H than that previously reported for any other population in Papua New Guinea.

tetanus vaccination[1] as well as growth monitoring. However, many pregnant women do not visit the clinic until a few weeks before delivery. Data on birth weight are difficult to obtain since northern Kwanga women usually bear their children in the village, not in the health centre. The low weight of newborn children recorded at their first visit to the MCH clinic indicates that birth weight is low. The nutritional status of mothers is likely to have an effect on birth weight and breastmilk quality and quantity which, in turn, may influence child growth. This clearly is an important area for further research.

Table 21
Childhood Mortality by Parity

Parity	Number of live births	Number of deaths (age in months) 0–1[a]	1–12[b]	23–24	25–36	>36	Deaths in % of live births
1	76	4	21	2	4	2	43.4
2	77	6	5	0	3	0	18.2
3	55	2	7	1	2	1	23.6
4	44	1	6	0	0	1	18.2
5	34	0	4	0	0	0	11.8
6	16	0	3	0	0	0	18.8
7	6	0	1	0	0	0	16.7
	310	13	47	3	9	4	

[a] Stillbirths were not included.
[b] Children born in 1984 were not included.

Source: Field notes

Infection is another important factor associated with growth patterns, especially in young children. Accurate data on mortality rates are not available for the northern Kwanga area, mainly because the number of children seen at the MCH Clinic Tau is too small and accurate records cover only 5 years. According to the clinic records, 9 out of 33 children born from September 1984 to August 1986 (24 months) died. In order to obtain a rough estimate of a longer period, the reproductive histories of 117 Tau women were analyzed. Stages in child development were used to define the approximate age at death if it occurred before 1979; after 1979, the MCH records were used (see Table 21). The infant mortality in this small sample is 193.5.[2] The figures indicate high mortality in the first month and the first year of life and also in children born to primaparae (43.4%). In all societies, infant mortality is higher in first-borns, but especially so in malaria-infested areas because in the first pregnancy the immunity of the mother seems to be lower, and this may have various effects on the foetus (J. Biddulph, personal communication). Malaria during pregnancy has also

1 Neonatal tetanus is endemic in this region (see Schofield, Tucker and Westbrook 1961).
2 Dr. P. Heywood and Dr. P. Garner helped me to analyze these data. In 1968, Sturt (1972) found an infant mortality rate of 117/1000 in the Anguganak area (Thomason et al. 1983:2).

been shown to decrease birth weight (Jelliffe 1968, in Jenkins, Orr-Ewing and Heywood 1985:34) which, as we have seen, is an important factor influencing postnatal growth.

Common causes of child death are pneumonia, cerebral malaria/meningitis and sepsis in smaller infants.[1] Neonatal sepsis could be caused, for instance, by neglect of cord care after childbirth. Children often die within a few hours after birth, and these deaths are difficult to distinguish from stillbirths by retrospective questioning. The possible role of malaria could not be directly ascertained. Since children are said to develop immunity to malaria at 6 to 36 months of age, they seem to be at the highest risk of dying from it during this time. (P. Garner, personal communication)

As causes of death, malaria and lower respiratory infections are also the major contributors to morbidity. Malaria is hyperendemic in the northern Kwanga area, and most infants have been infected at least once by 12 months of age (T. Burkot, personal communication).[2] During the food intake survey, my assistants copied all entries of the APO from the children's Health Booklet. The results indicate that more than half of the children of all age groups have been ill at least once during the two-week period preceding the MCH clinic; in the first age group (4 to 6 months) the proportion of children who had been ill reached 95%. Of the 162 reported diagnoses "fever" accounted for 67%, "cough" for 21%, "diarrhoea" for 9% and "mouth infection" for 3%. Although this sample is not statistically relevant, it illustrates frequent incidences of infection in young children. The APO's diagnoses are vague but they roughly correspond with the above-mentioned morbidity patterns.

Dietary intake is another important factor influencing child growth. The diet and growth of Tau children have already been described. Here we shall analyze whether the feeding pattern of young children whose W/A is above the median W/A of their age group differs from the feeding pattern of those whose W/A is below the median W/A of their age group.[3] The food intake data have again been analyzed in terms of 1) meal patterns and 2) the composition of the children's daily diet (see also Chapter 8.1.).

Figure 10 compares the mean number of meals eaten by children whose W/A is above the median and that of those children whose W/A is below the median of their age group. The results indicate that between 4 and 6 months and again between 13 and 15 months children who are below the median W/A eat more meals than the heavier age peers. In all the other age groups, the proportion is reversed: heavier children consume more meals than their lighter age peers. The differences between the meal patterns of heavier and lighter children are small but they increase with age. Why the proportion is reversed between 4 and 6 months and between 13 and 15 months remains unclear.

1 Dr. P. Garner visited the northern Kwanga to look at the cause behind the high neonatal and infant mortality. Using the clinic records we identified 26 recent deaths and discussed them with the respective parents and the APO. Again, the data of Sturt (1972) serve as comparison. He found that 24% of infant deaths were due to malaria and 12.5% to acute lower respiratory tract infections.

2 In 1984/85, a team of the Malaria Research Program at the IMR and of the Malaria Control at the East Sepik Provincial Health Department carried out a malaria survey of under-5-year-old children in Tauhundor and Tauhimbiet.

3 Growth was recorded during this semi-longitudinal survey. At each clinic, I copied the weight measured by the MCH nurses and measured the supine length myself. Since not all the children could be weighed and measured, we have combined data on diet and growth for a total of 368 days.

Figure 10 Distribution of Meals per Day Eaten by Tau Children Above and Below Median Weight-for-Age (by Age Group)

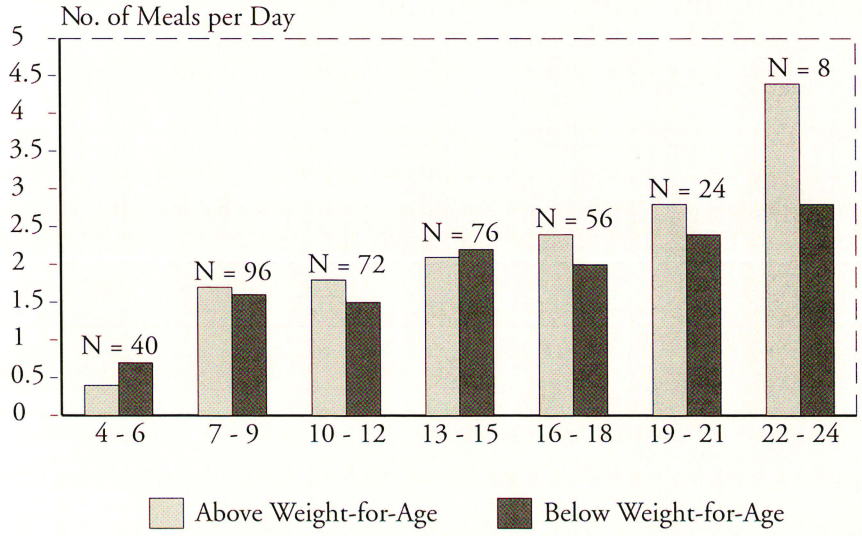
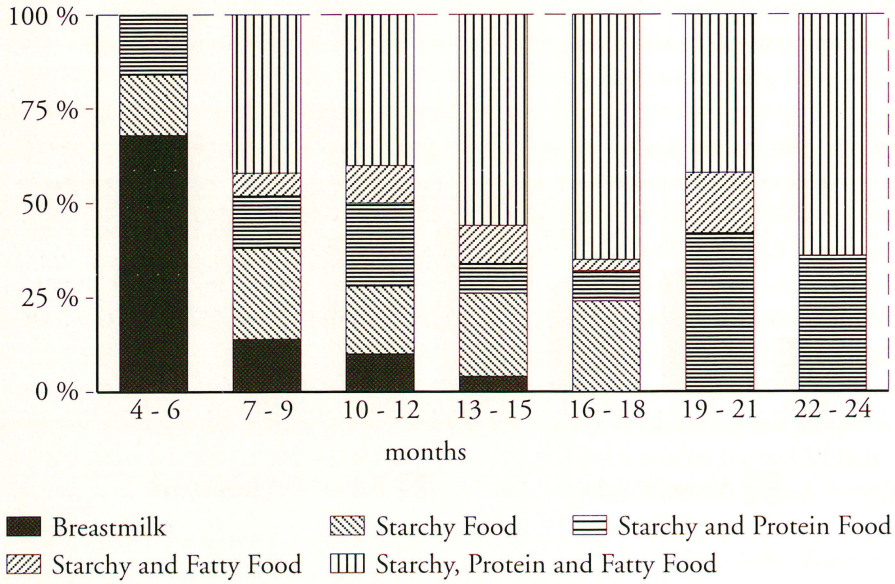


Figure 11 compares the composition of the daily diet of heavier and lighter children of the same age group. We see that between 4 and 6 months heavier children have more "only breastmilk days" than their lighter age peers. The picture changes in the next age group. With the exception of the 13- to 15- months age group, heavier children eat some supplementary food on a higher percentage of days than lighter children. In the last two age groups the children above and below the median W/A eat some supplementary foods on all of the surveyed days. Furthermore we see that, except for the first age group, lighter children consume only starchy food on a higher percentage of days than their heavier age peers. The proportion of days with more nutritious food is reversed: heavier children ate richer food on a higher percentage of days than their lighter age peers.

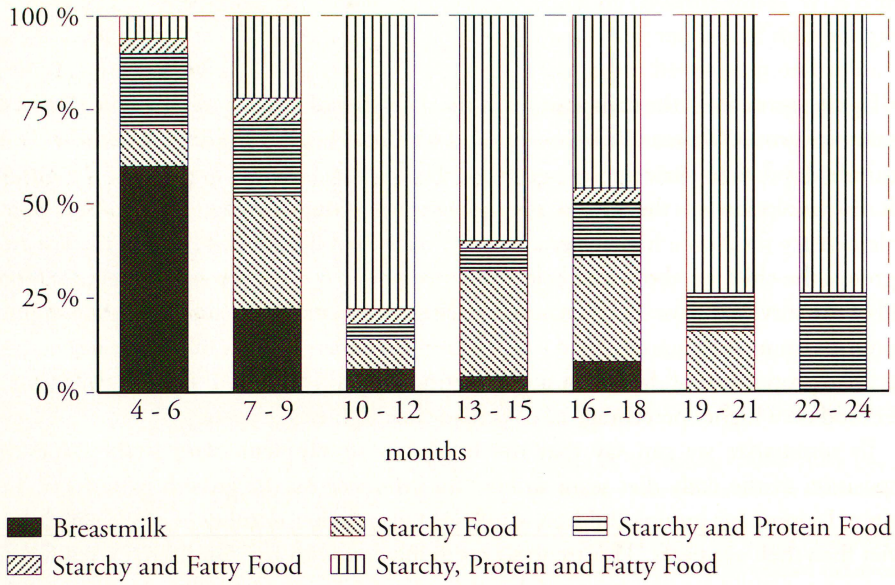
To summarize we can say that the frequency of supplementary feeding and the composition of the daily diet seem to have an influence on the growth patterns of Tau children. In most age groups children who consume a higher number of meals per day are heavier than their age peers. This trend seems to increase with age. Similarly, except for the first age group, children who have a richer daily diet are heavier than their age peers.

Figure 11 Distribution of Food Types in the Daily Diet of Tau Children Above and Below Median-for-Age (by Age Group)

a) Above Median Weight-for-Age



b) Below Median Weight-for-Age



In conclusion we can say that the growth pattern of all three groups (i.e. Anguganak, Tau and Wosera) is similar to that of many other groups in Papua New Guinea. However, the levels of growth are lower than seen in most other studies: 65% of the under-five-year-old Tau children are below the criterion for malnutrition adopted by Papua New Guinea![1] This led Ross (1984) to say that the southern foothills of the Torricelli and Prince Alexander Mountains were one of the most disadvantaged regions in terms of child nutritional status in lowlands Papua New Guinea. Thomason and her colleagues (1983) are more cautious and write that future research is necessary to assess the health significance of these growth patterns. My investigation is further evidence of the need for a longitudinal study investigating the health significance of growth patterns in the Lumi-Dreikikir-Maprik region. It certainly is important to study whether these growth patterns increase the prospective risk of death and which index is most sensitive.

I agree with Heywood (1982:14) when he says that if the cut-off points are too high, the actual estimates of the malnutrition rate may be so great that health workers find it difficult to respond to the problem at "grass-root" level. In my view, the nurses working in the Tau area and the village women have been put under considerable stress by the current definition of "malnutrition". We have seen that according to this definition 65% of the under-five-year-old Tau children are malnourished! The nurses are frustrated because most of the village women do not follow their advice regarding child feeding. "They only come to have their children vaccinated and treated" is a comment often heard. Many northern Kwanga women, on the other hand, do not see an improvement in the health of heavier children and do not understand the nurses' preoccupation with feeding.

It was already mentioned (see Chapter 2.3.) that in this area PHC services are optimal in comparison with those in other parts of Papua New Guinea. As far as they possibly can, the nurses as well as the APO working in Tau offer intervention to children who "fail to thrive". The nurses always refer to these children as being "malnourished" rather than being "small" or "slow growing", although we have seen that dietary intake is only one of several interrelated factors influencing the growth of young children. The problem is, of course, more complex than that. In the next sections we shall examine it in more detail and claim that the differences in the perceptions of "smallness" or "slow growth" have important implications for the interaction of MCH nurses and village women.

8.3. Northern Kwanga Views of Nutritional Needs of Children

In contrast to the vast literature on biomedical recommendations regarding the satisfaction of nutritional needs of young children, northern Kwanga rules regarding child feeding and child care are not explicitly formulated. This does not mean, of course, that they do not have firm opinions about appropriate ways of meeting the demands of their children. On the contrary, the local women feel they are competent and caring mothers, yet to elicit their views is not an easy task. Since most of them share the same "experience

1 According to this definition, the malnutrition rate in the Tau area is about as high as that in the Wosera area. According to Ross (1984:38, footnote 2) 67% of children 1-5 years old are below 80% of the Harvard Standard weight-for-age. These rates are among the highest reported by MCH clinics of the East Sepik Province.

space" (see Chapter 2.3.), they also share a set of implicit meanings and, therefore, explanations are not needed among themselves.

In my exploration of northern Kwanga interpretations a simple question seemed to be a good vantage point: Why do mothers not follow the advice of the MCH nurses to feed the child three times a day beginning at the age of 4 months? The usual answer was: "We offer food, but the child does not eat it." This answer served me as a cue, and I included the following question in the food intake questionnaire (see Appendix B): Why does the child not eat? The answers fall into four categories: 1) the child does not like to eat, vomits and spits, 2) the child is ill, 3) the mother has not cooked for the child, and 4) the child is too small. Let us now consider each of these answers.

Most answers (42%) gave "dislike" *(durau:* does not like) as a reason for food rejection. According to the local perceptions dislike is expressed, for instance, by spitting and vomiting *(leu)*, as the following examples illustrate (age of child in parenthesis): "When he wants to eat, he eats, when he does not want to eat, he spits" (5). "The mother puts food in his mouth, but the child does not like it and vomits" (10). "The child usually eats well; but when she is full, she does not want any food and vomits" (11). "You give him food, he does not like it and vomits" (14). In summary, Kwanga mothers interpret the following responses as food rejection: the child turns the head away, expels the food, pushes the food away with the hand or begins to suckle the breast. If, on the other hand, the child tries to grasp the food or looks at the food and laughs or shrieks, the mother interprets this response as a demand for this food. This pattern continues once the child is older. Many times women have been observed to make a special effort to obtain a fruit, a certain leafy vegetable or other food because a child persisted in asking for it. Children often throw a tantrum if they do not receive the food they crave for, and the mothers usually comply. The northern Kwanga mothers' logic is that children feel whether and what they want to eat, and that they make their wishes known, either by sign language or, once they are older, by asking for food. These findings correspond with those of other researchers working in Papua New Guinea.[1]

In 25% of the answers women gave illness as a reason for the child's refusal to eat. Any or a combination of the following symptoms are regarded as indicators for an illness: hot skin, weakness, crying or whining, being miserable, withdrawn, irritable or apathetic and refusal of the breast (see below). The mothers say that sick children (and adults) lose their appetite.

Another 25% of the answers said that "the mother did not cook food for the child". In a few cases this meant that the mother had returned late and was still cooking when the assistants visited them. In most of these cases the women had cooked the main family meal but not a special child menu. Their answers indicate that they are aware of the nurses' advice to cook children's menus (see Chapter 8.1.). It does not explain, though, why they do not follow the advice.

The last 8% of the answers seem to reverse the biomedical argument which says "the child is small, he or she should eat more food". The northern Kwanga say: "The child is small, therefore he or she does not eat more food." This line of argument was often used by

1 Similar patterns have been reported, for instance, by Malcolm (1974), Carrier (1985:197) and Jenkins, Orr-Ewing and Heywood (1985:41).

women in the day-to-day context. It implies that the northern Kwanga may have a body image differing from ours.

To summarize we can say that the results of this survey draw attention to the following contexts of child feeding: mother-child interactions; mothers' interpretation of children's responses; local definitions of food quality and food intake adequacy; concepts of health and illness; and body images.

In order to study mother-child interactions I conducted a time-sample survey. Here, we shall consider only two cases. The first account describes a typical feeding situation in the late afternoon, when the main family meal is prepared. The younger of the two observed infants, Temau, is eleven days old, the older one, Christel, ten months and three days.

5.45 p.m. Mangrigwa puts the sun-dried coffee beans into a bag. Her daughter Tautilai is sitting next to her. Warmohoi, her sister-in-law and neighbour, prepares the evening meal.[1] Waihir (younger sister of Warmohoi) holds Christel[2] (daughter of Warmohoi) on her knees. The new-born son of Mangrigwa sleeps in a netbag which hangs on a house post. Tautilai (daughter of Mangrigwa) tells her mother that the baby has started to cry.

5.47 p.m. Mangrigwa walks up to the netbag, carefully looks inside and sits down nearby. Christel begins to cry; Waihir gets up, places Christel on her hip and carries her to the fringe of the hamlet to distract her with some flowers and butterflies. The little one cheers up, and they return to Warmohoi, who has just finished paring and cutting the vegetables and puts the pot over the fire. She then picks up her daughter.

5.49 p.m. Mangrigwa gets up and carries the parings to the fringe of the hamlet. Tautilai plays with a bush knife, and her mother scolds her. "*Hal a!*"[3] she commands, but Tautilai does not obey. Warmohoi uses her finger to clean the eye of her daughter and then offers her breast. She carries her on her hip and stands chatting with Mangrigwa. Waihir begins to husk a dry coconut.

5.50 p.m. Christel stops drinking after 30 seconds. Warmohoi teases and plays with her. The child holds the mother's breast with the left hand and smiles at her. Mangrigwa returns to the netbag, looks inside, takes it down and carefully unwraps the head of her son.

5.51 p.m. Mangrigwa does not sit down. She holds him so that his head rests on her left elbow. She cleans his nose and mouth with her finger and puts him to her breast. Waihir calls out to Christel: "Look, a car is coming." Her mother waves at the car and Christel imitates her. Temau continues to drink.

5.54 p.m. Warmohoi stands with Christel on her hip and offers her breast. Christel drinks. The little daughter Tautilai walks up and down holding on to the bush knife, nibbles on the handle and then joins her mother and grasps her skirt. Mangrigwa settles into a squatting position careful not to disturb her suckling son. Christel drops the breast, chats away in her baby talk and reaches again for the breast. Her mother settles down next to Mangrigwa and gently pushes Christel away from her breast. Holding her, she makes her stand up. Christel chats and laughs. Waihir is still busy husking and opening the coconut. Tautilai walks up to Christel. Warmohoi teasingly tells her to carry Christel.

5.58 p.m. Mangrigwa now offers her left breast without changing Temau's position. Christel sits down on her mother's lap, tries to stand up and sits down again. When she begins to cry, her mother does not offer the breast but encourages her to stand and sit down. She is not able to stand without support.

6.00 p.m. Mangrigwa stops breast-feeding. Her son sleeps in her arms. Mangrigwa and Warmohoi laugh at Waihir because she is still trying to open the coconut. Christel begins to cry, and her mother distracts her with a twig. Warmohoi then sets Christel down on the ground and lets her play with her twig and clumps of earth. The smoke of the fire has changed its direction and begins

1 Mangrigwa is not allowed to pare and cut food because she gave birth only recently (see Chapter 3.4.).

2 Most children and many adults have a Christian name as well as a Kwanga name. In daily life, people commonly use the local names. This mother is an exception; her motivation for preferring the Christian name remained unclear.

3 "*Hal a!*" means "let it go!" or "don't touch it!".

to bother Mangrigwa. She gets up and moves away from the smoke. Temau is still sleeping in her arms.

6.07 p.m. Mangrigwa pulls the netbag over the head of Temau and carries him suspended from her head. She walks over to her house and fetches a bowl for the coconut scrapings. Christel is still sitting on the ground next to her mother playing with dirt and twigs. Tautilai stands and watches her. Mangrigwa returns from her house without the netbag. Warmohoi sets Christel on a *sobo* and begins to scrape the coconut.

6.10 p.m. Christel points at the coconut scrapings, and her mother feeds her a few.

6.12 p.m. Mangrigwa has disappeared in her house to wash her little son. Tautilai and Christel sit on the *sobo* and Warmohoi feeds them coconut scrapings from time to time. The children play with pieces of cloth and twigs. Mangrigwa returns and holds her son wrapped in a towel on her arms. She stands and watches the little girls. (...) Warmohoi gets up, walks to the fireplace, lifts the lid and uses a fork to see whether the food is done. Mangrigwa fetches a clean *sobo* from her house for the pounding of the cooked food. Christel has moved off the *sobo*, and her mother goes to settle her back on. Christel begins to cry as Warmohoi leaves her, and does not understand her explanation that she now has to pound the soup.

6.19 p.m. Mangrigwa puts Temau back at her breast. She slowly walks to the fringe of the hamlet, picks a few flowers and brings them to Christel to distract her. (...) Temau drops the nipple and Mangrigwa pushes it back into his mouth. She settles down next to Christel and plays with her. Warmohoi pounds the food.

6.24 p.m. Warmohoi puts the food back into the saucepan and cleans the *sobo*. Temau is still at the breast. It is difficult to say whether he is suckling or asleep. (...)

6.28 p.m. Tautilai and Christel still play with the flowers. Christel puts them in her mouth, and Mangrigwa quickly interferes. Temau loses the breast. Mangrigwa gets up, walks over to Warmohoi who is preparing coconut cream and carries the *sobo* back into her house. She returns with a bowl full of water. Warmohoi pours the water and the coconut cream into the saucepan and stirs up the fire. Another girl has joined Christel and Tautilai and plays with them.

6.33 p.m. Mangrigwa disappears in the house and returns with a long cloth. She wraps Temau in this cloth and sits down next to the playing children.

6.37 p.m. Warmohoi walks over to Christel, lifts her up, sets her on her left hip and offers the breast. Christel holds the breast with both hands. (...) Warmohoi checks the food and stirs the soup. Christel is still suckling. Mangrigwa fetches some eating bowls from her house. The other members of the household begin to arrive.

6.41 p.m. Christel stops breast-feeding. Warmohoi sits down next to the saucepan and, with Christel on her lap, begins to scoop the soup into the eating bowls.

6.42 p.m. Christel grabs for the breast and begins to suckle. She drops the breast and looks at the soup. Warmohoi pretends to eat and Christel imitates her and laughs.

6.44 p.m. Christel begins to suckle once more. Warmohoi gets up and settles Christel on a *sobo*. She returns with a cooked yam and begins to eat. Christel looks at the yam and calls out. Warmohoi breaks off a small piece and puts it in her mouth. They all eat. (...)

6.46 p.m. Christel crawls back on Warmohoi's lap, grabs her breast and suckles. Warmohoi says "*hal a!*" and pushes her off.

6.50 p.m. Mangrigwa puts Temau back on her breast. Christel jumps up and down, supported by her mother, and then begins to cry. Warmohoi pulls her on her lap and offers her breast.

6.51 p.m. Temau is still suckling; Christel loses the nipple.

6.53 p.m. Christel grabs the breast and suckles.

6.55 p.m. Christel loses the breast and cries. Warmohoi feeds her a spoonful of soup. Christel grabs for the breast and suckles. She drops the breast again and chats away. Warmohoi offers another spoonful of soup. Christel eats it and returns to the breast. This pattern repeats itself until Christel has eaten twelve spoonfuls of soup. She then refuses to eat any more.

This example illustrates differences between mother-child interactions at different ages (eleven days and ten months). For about two weeks after childbirth, the new mother stays at home and focuses her attention on the demands of the small infant. During this period, she establishes the breast-feeding routine. The mother of the older child performs

household chores. Her younger sister and the new mother act as child minders. Whenever the mother rests, she breast-feeds the child for short intervals. Breast-feeding is initiated either by the mother or by the child; a few times, the mother half-heartedly discourages the child to breast-feed because the meal is (almost) ready. When the child points at the coconut, she feeds her. During the meal, the child drinks breastmilk and soup by turns.

The first account documents the feeding of healthy children. Since northern Kwanga children often fall ill, not only by our criteria but also according to local perceptions, it is important to study the differences between the feeding patterns of healthy and sick children. Generally speaking, mothers are not perturbed if sick children reject supplementary food; but they do get alarmed if sick children refuse the breast. Especially when the child continues to cry and almost stops breast-feeding for two or three days, mothers focus most of their attention on the child. Their behaviour is similar to that of new mothers during their seclusion following childbirth. The second account illustrates this behaviour:

> Ugsembeuku was four months and eighteen days old when she developed an eye problem. At that time, many people in the village suffered from this disease. The white of their eyes had turned a bright red. Ugsembeuku fell ill on a Wednesday. Sahamoku (her mother) had to attend a course at the C.M. Tau and passed the aid-post on her way. According to her, the APO was not up in the morning, and when she returned, there was a long line of patients waiting to be treated. On Thursday, Friday and Saturday, Sahamoku went to work in her garden. Her daughter cried more often than usual and, on Sunday, she developed a fever and almost stopped breast-feeding. Sahamoku stayed up all night and tried to comfort her. In the morning, she took Ugsembeuku to the aid-post. The APO gave her an injection, and Sahamoku brought her home. The baby fell asleep in the carrying sling. Sahamoku swept the floor, sat down to rest and dozed for a while. Later that afternoon, she carefully lifted the carrying sling with the sleeping baby over her head and hung it on a house post. She then fetched her axe and went to chop firewood in the nearby forest. About ten minutes later, Ugsembeuku began to cry. Sahamoku could not hear her from where she was working. Her neighbour called her, and she came running back. Right away, she put the child to her breast and did not leave her again. On Tuesday, Sahamoku returned to the aid-post to continue the treatment and stayed home all day. The next day, she had to attend her course at the C.M. and stopped at the aid-post on her way. The APO measured the child's temperature and told her that the fever had gone. It was about two o'clock when Sahamoku returned home and during the next hour, I observed her as part of my time-sample survey.
>
> 2.15 p.m. Sahamoku sits in front of her house with her daughter on her lap.
>
> 2.20 p.m. The child grasps her mother's breast and begins to drink for about 30 seconds. Flewai, a young girl, comes up to them and touches the child. Ugsembeuku begins to cry and her mother offers the breast.
>
> 2.21 p.m. The child continues to drink. Two other children join Sahamoku. She gets up, and they sit down on the slit drum in the middle of the hamlet plaza. Sahamoku would like to go and chop firewood, but first she tries to put the child to sleep.
>
> 2.22 p.m. The child loses the breast and starts to cry. Sahamoku looks at her and pushes the breast back into position while she keeps talking to the other children. Ugsembeuku does not drink well, she keeps losing the nipple. Sahamoku patiently tries to help her. The child suckles for 30 seconds and stops again. Ugsembeuku looks around, moves back and forth, and begins to cry. Sahamoku gently strokes her back. Again she tries to make her drink.
>
> 2.23 p.m. The little one drinks but loses the nipple 15 seconds later. Sahamoku puts it back into her mouth and keeps stroking her. The breast is dropped and put back once more, and now the child holds the breast. She drinks for 45 seconds and stops again, looks around and finds the breast herself.
>
> 2.25 p.m. After 35 seconds, she interrupts again, moves up and down, begins to whine, and the mother offers the other breast.
>
> 2.27 p.m. Ugsembeuku is still drinking. She watches the children.
>
> 2.28 p.m. She loses the nipple, cries and Sahamoku pushes it back into her mouth.
>
> 2.29 p.m. Sahamoku is very tired and closes her eyes. Her daughter continues to drink holding onto the breast.

2.31 p.m. The child again starts to cry. Sahamoku automatically pushes the nipple in her mouth. She drinks, drops it after 5 seconds, finds it again and drinks for 10 seconds.

2.33 p.m. Sahamoku hears a sound and walks to her house, the child still on the breast, and returns. The child continues to drink.

2.37 p.m. Sahamoku disappears in the house.

2.42 p.m. They stay in the house. The child is now quiet. Sahamoku eats breadfruit seeds.

2.49 p.m. Sahamoku comes outside. The child is asleep.

2.51 p.m. Sahamoku fetches the axe and her *sobo*. She walks towards the forest; Ugsembeuku sleeps in her carrying sling sitting on Sahamoku's hip.

2.53 p.m. She stops at the house of Akamun for a chat.

2.58 p.m. She begins to chop firewood; the child sleeps.

3.02 p.m. The child wakes up and cries. Sahamoku continues to work.

3.05 p.m. Sahamoku interrupts her work and offers her breast. The child drinks for 20 seconds and starts to cry again. Sahamoku resumes her work.

3.08 p.m. Ugsembeuku has nearly lost her voice but continues to cry. Sahamoku interrupts her work and offers the breast.

3.09 p.m. The child drops it again and starts crying. Sahamoku resumes her work, mumbling to herself.

3.10 p.m. Again she tries to comfort the child, offers the breast and strokes her back. Ugsembeuku drinks.

3.11 p.m. Sahamoku resumes her work, and the child is quiet. She has fallen asleep with the nipple in her mouth.

3.15 p.m. Ugsembeuku drops the breast and continues to sleep. Sahamoku keeps chopping firewood.

This example shows that, especially in illness, the breast is more than a source of milk; it is also a pacifier. In common with many other groups in Papua New Guinea, northern Kwanga women feel that a small child should never cry. A healthy child wakes to suckle the breast, plays for a while and goes back to sleep. The intervals between waking and sleeping become longer as the child grows older. If the child wakes up, sucks the breast, drops it or turns the head away, cries, and does not go back to sleep, the mother or a child minder tries to distract the child. In such situations, mothers usually offer supplementary food, regardless of the child's age. If the child does not respond to the distractions or the food and continues to cry, the mother suspects illness as the cause of crying, even if she does not see another symptom.

Another pattern is revealed by this account. The mother was clearly distressed and worn out; the other women commented upon it and felt sorry for her, yet none of them helped. Some neighbours visited her and discussed the possible causes of illness. One of them suggested that the "skin (of the child) ached all over" *(masambi amba siu)*. Another one felt that the child had a belly ache *(seng siu)*. The mother had a chat with them; but she was convinced that the eye problem was the main cause of the illness. This is an example of a behavioural pattern which has already been described (see Chapter 3.2.): Northern Kwanga women are just as "aggressively egalitarian" as their male counterparts. For this reason, each of them keeps her own counsel and rejects advice from others. Some of the difficulties in the interaction of MCH nurses and village women arise from this pattern (see Chapter 8.4.). Among the Kwanga, women only receive and accept substantial help and advice regarding child rearing in well-defined situations, for instance, during their first pregnancy, childbirth and motherhood. Women who have one or several children are expected to cope alone. Younger sisters of the husband and the older children sometimes act as child minders, but the mother never ventures far off until the child is almost weaned.

The bonding between mothers and their small children is very strong; as a result, it is usually only the mother who can comfort a fretful child.

We have seen that one part of the pattern of mother-child interactions is a particularly important context of child feeding and care, namely the mother's interpretation of the child's responses. For this reason, it is of special interest to study child development in order to see whether there is a link between developmental stages and feeding patterns.[1] A survey of 138 children of known ages revealed that the northern Kwanga use several phrases to describe sequences of neuromotor and physical maturation. The following description demonstrates which developmental stage was reached by half the children of each age group[2] and characterizes the feeding pattern associated with this age group (see Figure 8 and Chapter 8.1.). New-born infants are called *o'owe kanda*; they sleep most of the time cross-wise in a netbag or in the carrying sling *(kowek wandu, kubuk wandu)*, their skin is "red" *(masam nalo)* and soft *(masambi hangu)*, their throat is not strong *(kwelefu borna om)* and their eyes cannot focus *(misiki sihi tas nau)*. Between 3 and 5 months they learn to sit in the carrying sling *(osmu kubuk lindu)*. Their skin and throat grow strong *(masambi/kwelefu am bornau)*; they learn to focus their eyes on the face of another person and smile *(am sir heiehe ma haiu)*. Their feeding pattern is characterized by a high proportion of days (60%) on which they drink only breastmilk and a low proportion of days (40%) with some supplementary food. From 7 to 12 months they begin to jump up and down and follow a moving person with their eyes *(sangla sanglaha man heihe iu)*. They can reach for and grasp an object *(am sir tolokwa sir)* – and put it into their mouth – even when they sit without support *(am sir daka lihi)*. The first teeth erupt at approximately 8 months. A marked change in the feeding pattern occurs at about 7 months and lasts until about 12 months: children now receive some supplementary foods on 80% of the days. Between 13 and 18 months they learn to crawl on their bottom *(lehe ngruhu i)* and to stand up and sit down again *(ormu usaha ligu)* with support. The feeding pattern has again changed. In this age group, days without supplementary foods have decreased to less than 10%. From 19 to 24 months they walk unsteadily *(am or esesse tokoiu)* and feed themselves. They now eat supplementary foods on all surveyed days. After 24 months they walk "with strength" *(am or essehe bornaha i)* and manage to eat with a spoon. They now regularly eat the adult diet; still, half of the children continue to drink breastmilk. Every northern Kwanga mother focuses, of course, on her individual child, observes the gradual progress of various skills and adjusts her behaviour to it; but a certain shared pattern has emerged from this rough statistical survey, and several spontaneous statements now appear in a different light. "My child has no teeth, hence he does not eat well." Or: "The child who walks well leaves the breast." Such statements apparently express shared rather than idiosyncratic beliefs. In other words, we can say that northern Kwanga mothers take the individual development of their children as parameters for changing food needs. The individual development rather than age is important as a frame-of-reference. It is true that, although the women can rarely read the calendar, they know the order in which the children of different women were born and compare progress in the physical development of these children. Still, it is the individual

1 Jenkins, Orr-Ewing and Heywood (1985) found that among the Amele, emic growth categories provide a frame for scheduling food introduction.

2 Since the sample was statistically small, no tests have been administered.

child rather than an abstract frame-of-reference which guides the mother in her feeding practices.

The results of this rough statistical survey indicate that the development of northern Kwanga children proceeds at a slower rate than that of their age mates in Europe or in the USA. However, we ought to bear in mind that Tau infants grow up in a dangerous environment. As long as their "thinking is not clear" *(wab ambasi)*, as Tau mothers put it, the infants are safer on or near the caretaker's body at all times, day and night, than if they stumble along on their own.

Let us now move on to another important context of child feeding, namely to local perceptions of food quality and food intake adequacy. As previously stated (see Chapter 4.5.) the Kwanga are aware of the fact that food has a biological component; based on this biological fact, they have constructed sets of rules concerning food, namely 1) avoidance rules (see Chapter 3.4.), 2) rules drawing on the Kwanga variant of a "humoral" classification (see Chapter 6.4.) and 3) idiosyncratic food proscriptions and prescriptions.

The first set of rules regulate behaviour between men and women, between older and younger generations and between members and non-members of the local men's cult. Although young children are not explicitly mentioned, a breach of some of these rules may be regarded as the cause of illness either in the mother or the child, as we shall reconsider below.

The second set does have a direct effect on children's diet. It will be recalled that northern Kwanga women consider breastmilk as the best food for the infant. A special soup to increase the flow of breastmilk after childbirth (see Chapter 6.2.) culturally emphasizes the importance of breastmilk. Women further think that the food they eat is transformed into breastmilk and, therefore, the infant does not need to eat much supplementary food himself.

Their belief in the special quality of breastmilk is supported by concrete evidence: The local women know from experience that failure in breast-feeding is likely to lead to outright starvation. Although northern Kwanga women rarely face breast-feeding problems, we need to have a closer look at such problems because they provide clues to the local interpretation of the syndrome which biomedicine calls "malnutrition".

In the two observed cases of failure in breast-feeding, as has already been mentioned, one child died soon after birth and the second child weighed only 4.9 kg and measured 62.0 cm at the age of 21 months. Furthermore, they remember many cases of breast-fed children who died of starvation after their mother died. Usually another woman takes care of the child, but if she does not succeed in establishing lactation and tries to raise the child on local supplementary foods alone, the child usually fails to thrive.

Similarly, women know from experience that twins have small chance of survival. It is not uncommon for mothers to stop breast-feeding one of the twins and to wait until he or she dies. Five women told me that they had decided to raise only one of the twins they had borne and to let the other one die. Their usual comments were: "Who helps me to carry two infants? Surely, both of them would go hungry and eventually die." Only one woman in Tauhundor and Tauhimbiet is known to have successfully raised twins. She is a remarkable woman. In the mid-sixties, she walked all the way to Maprik in order to get help for her twins at the hospital. She stayed there for a long time, then she moved on to the Dreikikir Health Centre until both twins were able to walk. Only then did she return to the village. A woman

in Tauhimbiet is at present trying to raise twins. She has two adolescent daughters to assist her in child care. At one year of age, both twins are below 60% W/A (i.e. the cut-off point for "severe malnutrition"). Under these circumstances it is a wise decision to increase the chance of survival of one of the twins by letting the other one die.

It also happens that a child refuses the breast. In one observed case, the mother had enough breastmilk and tried very hard to establish breast-feeding, but the new-born refused to suckle. He accepted mashed banana. At the age of one month, the mother was still trying to make him drink but rarely succeeded. The other women commented that this child would surely die of starvation because he refused breastmilk, and they were right.

Since, as we have just seen, small children who receive local supplementary foods instead of breastmilk fail to grow well or even die, mothers regard supplementary food as physiologically less important than breastmilk, at least during the first year of life. We shall see below that insufficient breastmilk intake is regarded as one of the causes of the illness described as *habamba*.

First I should like to return to the discussion of feeding rules. According to the "humoral" classification we have seen, small children should only eat *hangu*/*ugu* foods. In the food intake survey (see Chapter 8.1.) only one of the mentioned menus of the first age group (i.e. at 4 to 6 months) falls into this category, namely the soups. Baked and boiled tubers and banana are usually classified as *kwambu*/*hakla*. However, since the mothers cut, premasticate, mash (using their finger or a spoon) and sometimes mix these "strong" foods with broth or coconut cream, even the tubers which are baked on hot embers turn into *hangu* food. This is another example of the fact that the northern Kwanga classification does not so much refer to intrinsic qualities of certain foods as to their extrinsic consistency. For the same reason, mothers feed small pieces of mature papaya and unripe (i.e. soft) coconut to small children, especially as long as their "skin is soft". From 7 to 12 months, unprepared (i.e. non-premasticated and unmashed) *kwambu* food like boiled breadfruit seeds, small portions of stewed or baked tubers and banana or sago jelly is introduced to the children. When the first teeth erupt (i.e. at about eight months), the children chew and nibble this food. The mothers say that the children now learn to "cut the food into small pieces with their teeth". From 13 to 18 months, as we have just seen, children increase their physical activities; they now learn to crawl, to stand up and sit down. Also more teeth have erupted. For these reasons, mothers think, children should eat a greater variety and quantity of the adult diet which from then on steadily increases. We thus see that food classification and perceived sequences of physical maturation interlock. However, it seems important to note that the northern Kwanga introduce most of their standard foods right from the beginning; it is not the food types but rather the consistency of the food that changes during the drawn-out weaning process. There are a few exceptions such as greens, meat and fish. Mothers say that most children only gradually get used to the taste of these food types.

Let us now briefly consider the third set of rules, namely the idiosyncratic food proscriptions and prescriptions. Until recently, northern Kwanga women reportedly shared certain food proscriptions during lactation for the first male child. Today, some women avoid certain foods during pregnancy and lactation but these beliefs are not widely shared. Such beliefs commonly refer to the texture, colour or other perceived characteristics of a food type; women fear that their consumption of these foods may produce analogical characteristics in the breast-fed child. Some women believe, for instance, that the consump-

tion of fish or "hairy" leaves by the mother produces scabies in the foetus or the breast-fed child.

Another crucial question is whether the northern Kwanga recognize certain growth patterns as an illness and if so, by what criteria. A child is considered to be ill if he or she is *habamba* (*haba:* bones, *amba:* a lot of), "a lot of bones" (see Plate 24). This term is not only used for small children but also for adolescents or grown-ups, especially for sick and old people. A person who is *habamba* is too thin. The opposite of thinness is not plumpness but a sturdy musculature. In other words, a healthy person does not have a plump body but a strong body.[1] In young children, too, it is lack of physical strength rather than fat which serves as a criterion for the definition of healthy and unhealthy growth patterns. *Habamba* children differ from healthy children who were born at about the same time in that their physical strength is reduced and hence their maturation delayed. They learn to sit, stand and walk much later than their healthy age mates because they lack physical strength. In order to "make the skin nice and strong" women often rub the bodies of their children and their own breasts with pieces of banana leaves which they have heated over the fire. Fire, we have seen, is always associated with strength (see Chapter 6.4.).

As we have seen above, insufficient breastmilk intake due to death of the mother, sore breasts or the child's refusal of the breast is recognized as a cause of failure to thrive. In such cases people seek an explanation for the underlying causes. Why did this mother die? Why does her breast not heal? Why does the child refuse to drink breastmilk? Their explanations and their treatments draw on the local medical knowledge as well as available biomedical care (see Chapter 4.5.). At the same time, the mother, and if she died, the stepmother, tries to raise the child with supplementary food.

How do they explain and treat failure to thrive in children who frequently drink breastmilk and occasionally eat supplementary food? As in any other illness women, relatives and healers may choose an explanation from a number of alternatives, namely a transgression of an avoidance rule or an attack by non-human beings or by men with special powers (see Chapter 4.5.). In one case, we have seen, growth failure was explained and treated as an infliction by a men's cult spirit because the child had transgressed an avoidance rule (see Case 4 in Chapter 4.5.). The mother first sought and received biomedical care for her child at the Health Centre in Dreikikir but since, as soon as she returned to the village, the child reportedly failed to thrive the villagers diagnosed *koyanga hi belebele*, an "illness of the village", as the root cause.

Other women mentioned a breach of the postpartum taboo as the cause of the lack of physical strength in their *habamba* child. It will be recalled that northern Kwanga parents should not resume sexual intercourse until the youngest child can walk and talk. This is a strong avoidance rule between husband and wife. The long birth intervals of Tau women may indicate that most parents follow the rule.[2] If necessary, women try to enforce it on their husbands, as the following examples illustrate:

> Tautilai, the daughter of Mangrigwa, was 26 months old and had just learnt to walk without support. One night, her mother Mangrigwa rejected her husband and ran away to her sister's house.

1 Montague (1985:92-93) reports similar cultural expectations about proper body configurations from the Trobriands (Milne Bay Province).

2 Long birth intervals associated with prolonged breast-feeding may also result from lactational amenorrhoea (Schubarth, personal communication).

He followed her, pulled her outside and hit her across the face with a piece of burning firewood. During the next few days, Mangrigwa stayed with her mother and nursed her wound. Her brother filed a complaint against the husband at the court in Dreikikir, and the father was fined for hitting his wife. Mangrigwa returned to her husband and obviously resumed sexual relations because 11 months later, she gave birth to her third child, Temau. At this birth, the placenta was retained, and the mother was in considerable danger of dying. Most people held the husband and his behaviour of over a year before responsible for these complications. He walked all the way to Dreikikir to get help. Father Mitterbauer came to pick her up in his jeep and took her to the Health Centre where she received the necessary treatment.

In the second case, the youngest child was 14 months old when the husband approached his wife. She got hold of a big knife and threatened to hurt him. Two years earlier she had actually wounded him in a similar situation. This time, he left the house, and she threw all his belongings after him.

In earlier chapters it was stated that the control of regenerative powers is a recurrent theme of the Kwanga culture. It is expressed, for instance, in a set of avoidance rules between men and women and between older and younger generations; a transgression of these rules causes illness (see Chapter 3.4.). This illness, *wahapsila*, is characterized by short breath, loss of vitality or premature aging. Not only adults but also small children suffer from *wahapsila*; in small children it is usually caused by the mother's transgression of an avoidance rule during pregnancy or lactation.

The manipulation of the umbilical cord is another local explanation for becoming *habamba*. After delivery, the placenta and the umbilical cord are put in a coconut shell. The mother digs a hole in the ground of the menstrual hut and places the coconut shell in the hole. Sometimes the husband carries the placenta and the umbilical cord to the bush and hides them in a safe place. If a *singa* sorcerer finds the placenta and the umbilical cord, he can cause serious illness, probably by tightening the *masikome* of his victims (see Chapter 4.5.). The infant and the mother are in danger of becoming *habamba*.

According to northern Kwanga mothers, healthy children are small but strong (see Plates 25, 26). Some women who had seen young Australian children remarked that they were awfully big and fat. It was not clear whether they considered them to be ugly. What they said was that fortunately their mothers did not have to carry them for long periods and distances. The Kwanga lead a mobile life in a difficult terrain (see Chapter 3.2.). The forest rather than the hamlet is their actual living area. Women are expected to carry heavy loads of food and their small children from one garden to the other and from the forest to the village. The husbands sometimes help with the children, especially with the older ones who can walk but do not manage long distances and steep paths. Women pity mothers who have heavy children, and these mothers frequently complain. In such an environment it is not desirable to have heavy children.

Furthermore, according to the experience of the local women, big and fat children of all ages fall ill and die as suddenly as children who have a normal body stature (according to local standards). Linda (Case 6), Tasinole (Case 7), Woniai (Case 10) and Nawi (Case 13) serve as illustrations (see Chapter 4.5.). Linda and Tasinole were clearly on the fat side, Woniai and Nawi on the sturdy side. On the other hand, some *habamba* children – like one child who did not have the strength to stand up and sit down with support at the age of 21 months – survive in spite of the risk. The evidence gained from such experiences supports the local women's view that being big and fat does not have a health advantage.

Earlier in this text (see Chapter 1.3.) we saw that according to Cassidy many cultures ignore diet in the explanation of growth failure and focus instead on child-sibling,

child-parent and family-society relationships. This is only partially true for the northern Kwanga. They clearly recognize a relationship between insufficient breastmilk intake and failure to thrive. In their view, breastmilk is physiologically more important than supplementary food until the children are able to feed themselves. The introduction of supplementary foods is guided by the local food classification; during the drawn-out process of weaning the food types do not change much whereas the consistency of the foods offered to the child does. In the local child feeding pattern, food classification and perceived sequences of physical maturation interlock. Mothers take the demands and the physical development of each individual child as parameters for changing nutritional needs. By comparing physical maturation of children who were born at about the same time women identify healthy and unhealthy growth patterns in children who eat a normal diet (by local standards). In their view a healthy child is small but strong and vivacious. If physical strength and vitality are chronically reduced and hence maturation delayed the women cast this experience into the illness category *habamba*. This illness is diagnosed in children as well as adults. For the explanation and treatment of this illness women have recourse to the local medical system and to biomedical care. Some but not all of the local explanations refer to transgressions of social norms (i.e. avoidance rules) as the root cause of failure to thrive. Others refer to malevolent agents (i.e. sorcerers). The most obvious and serious cause is insufficient breastmilk intake due to death of the mother, sore breasts or the child's refusal of the breast.

8.4. Attitudes of Tau Women Towards the MCH Service

In her analysis of PEM as a culture-bound syndrome Cassidy (1982) argues that differences between biomedical and non-biomedical perceptions of and responses to failure to thrive are a root cause of intervention failure (see Chapter 1.3.). We shall now examine how Tau women are confronted with the biomedical view and how they respond to it.

On the village level northern Kwanga women are confronted with the biomedical view in four institutions: the school, the aid-post, the MCH clinics and occasional patrols by various health teams. The patrols have little importance for the present discussion; when health experts visit, their interaction with village women is very limited. The St. John's Community School at the C.M. Tau also has little impact on the adult women (see Chapter 2.3.); only few adult northern Kwanga women have had a substantial school education; furthermore, it has already briefly been mentioned that the education offered by the Agriculture and Nutritional Sub-Project of the East Sepik Rural Development Project did not reach the village women although theirs was one of the first pilot schools selected. Most interactions between biomedically trained health experts and village women occur at the aid-post and at the MCH clinics. Women frequently bring their children to the aid-post for treatment (see Chapter 8.2.). The resident APO speaks their language and shares many of their views.[1] According to my experience, however, the APO regards nutrition in young

1 Although I did not study this subject, I gained the impression that APOs tend to mix biomedical and non-biomedical realities. In this sense they create a new reality probably shared by many formally trained Papua New Guineans which could be labelled the "folk sector of the health care system" (Kleinman 1980).

children as the realm of the MCH staff. For this reason the MCH clinics deserve our particular attention.

It will be recalled that an Australian nursing sister and a local nurse-aid operate the MCH service in most Kwanga, Urim, Urat, Kombio and Wam villages (see Chapter 2.3.). Their base is the C.M. Dreikikir. Travelling by vehicle or on foot they patrol the area and hold mobile clinics about once a month in selected locations within walking distance of several villages.

At these monthly clinics, the routine and the interactions between the MCH staff and northern Kwanga women (see Plates 27–30) follow patterns similar to those observed in the Madang Province (see Reid 1983). The children are weighed by the nurse-aid, examined by the Australian nursing sister (who also plots the weight on the weight-for-age graph in the children's Health Booklets, writes comments in the clinic register and prescribes medications) and treated and immunized by the nurse-aid as soon as she has finished weighing. Antenatal examination and treatment is left until the end of the clinic and performed in the privacy of a house. Individual consultations are rarely longer than five minutes. In Tau, the MCH team arrives around 10 a.m., weighs, examines and treats the under-five-year-old children and the pregnant women, and leaves around 3 p.m. for the base in Dreikikir. There, the nurse and nurse-aid usually have a late lunch and then attend to additional clinical and administrative tasks (e.g. to unpack, clean, sterilize and refurbish the equipment, to keep various records and statistics, etc.). The next day, they return to conduct the clinic for the second village.

Thus we see that within about five hours, the team unpacks the equipment, sets it up, sees seventy to eighty children and a few pregnant women, and packs up again to perform additional tasks in Dreikikir. This routine stresses weighing, paper work and curative care but leaves little time for health and nutrition education. Moreover, the mother-nurse interactions can best be described as a stylized, repetitive pattern of speech and behaviour. The nurse asks questions and gives advice in a straightforward, formula-like manner (e.g. "Has the child been ill?" – "What types of food does the child eat?" – "You should feed the child three times a day."). Village women respond with equally standardized answers (e.g. "The child was ill." – "The child eats ripe banana, papaya and mashed yams mixed with coconut cream." – "I offer food but the child vomits."). An empathic discussion of individual nutritional problems has not been observed.

Reid (1983:26) came to the conclusion that "(h)ealth education seems at present to be a task nurses do not enjoy, do not do very well, and do not give high priority to". She suggests that this is a result of the way in which the Community Health Nursing Service is structured and its MCH clinics run, and of the attitudes and motivation of nurses. My observations at the Tau clinic confirm her conclusions and support her suggestions. Moreover, I gained the impression that this stylized, repetitive pattern of speech and behaviour helps the MCH staff and the Tau mothers to bridge the gulf between their respective cultural realities.

However, formal contacts also have disadvantages. One of them is that interactions remain impersonal, individuals are lost to view. Tau women, who are used to face-to-face relations and have a limited experience space (see Chapter 2.3.), feel uncomfortable in such formal, impersonal contacts. Furthermore, these formal contacts do not create a confidential atmosphere in which different points of view can be discussed.

Let us now turn to the second question and examine how Tau women respond to the programmes offered by the MCH service. The results presented in this chapter have shown that Tau women still primarily follow the explanatory and behavioural models which they have learnt from their mothers and grandmothers. They accept only those aspects of the MCH service which can be integrated with their own models or which result in a perceptible alleviation of suffering.

If the MCH staff worries about children whom Tau women also regard as ill, they do not object to treatment and advice because they think these children might suffer from an illness caused by "germs". They have only a vague concept of "germs", but it fits into one of the etiological categories of the northern Kwanga, namely "inflictions of malevolent agents" (see Chapter 4.5.). They are convinced of the power of medication in the form of tablets but even more so in the form of injections because ever and again patients have been cured of fever, pain and other easily recognizable symptoms after receiving this kind of medication. Tau mothers also bring children to the monthly MCH clinic whom they regard as healthy because they know that healthy children often receive "medication" (i.e. vaccinations) as well. The weighing of children and the plotting of their weights on the weight-for-age graphs, however, is regarded as samting bilong ol nurse, (something of the nurse, i.e. a job the nurse has to do); Tau women cannot see what use weighing has in relation to the health of their children. Still, clinic attendance of Tau mothers is remarkably high: over a period of 24 months from 1983 to 1985 it ranged from 84 to 100% according to the clinic registers.

When the MCH team points out that a child does not grow well, Tau women only agree if they consider this child to be *habamba*. From a biomedical point of view, these children usually suffer from severe malnutrition (i.e. W/A below 60% of the Harvard Standard). A survey of 130 children attending the MCH clinic in April 1985 showed that since their birth, 25 of them (19%) had at least once reached the 60% W/A line. Most children, however, suffer from mild/moderate malnutrition (i.e. W/A between 60 and 80% of the Harvard Standard). If the nurse finds that a child of this group has not gained or has even lost weight since the last clinic and tells the mother that her child is not growing well, the mother commonly reacts with open or suppressed anger. From the Tau women's point of view, these children are normal in growth.

The only nutritional problem that Tau mothers acknowledge, as we saw, is insufficient breastmilk intake due to death of the mother, sore breasts or the child's refusal of the breast. Such breast-feeding problems are rare but they are likely to lead to outright starvation. If the MCH staff says that the mother's diet is deficient, Tau women often reply: "I should also like to eat rice and canned fish every day and to stop working in the garden."

Tau women consider the child feeding pattern they have learnt from their mothers and grandmothers as appropriate. They feed their infants with breastmilk and/or small portions of their own diet on demand. The food introduction schedule is governed by the local food classification and perceived sequences of physical maturation. Yet it is this feeding pattern which – according to the MCH staff – is mainly responsible for the slow growth of Tau children. The latter should begin to eat three meals per day at 4 to 6 months of age, not at 19 to 21 months of age.

The types of food recommended by the nurses correspond fairly well with the Tau view of appropriate infant food (i.e. food classified as *hangu/ugu)*, but few women prepare

special children's meals (e.g. soup or mashed staples mixed with coconut cream). The majority of children's meals consist, as we have seen, of cut, premasticated, mashed or watery portions of the mother's diet. Mothers who receive milk powder from the nurse rarely give it to the children. Tau women acknowledge that children's strength increases after treatment with enriched food (e.g. paps with coconut cream or milk powder) and medication at the Health Centre; but they attribute this to the medication with tablets and injections not to milk powder and meals prepared from local food.

To sum up we can say that the Tau women's view about the relationships between breastmilk, supplementary food and child growth follows a logic which can only be understood in its cultural context. Their attitude towards the MCH clinic becomes intelligible, too, if one knows this logic. Tau women do not reject biomedical care in general, as their high rate of clinic attendance shows. However, they choose those aspects of the MCH clinic which can be integrated with their own explanatory and behavioural models or which result in a perceptible alleviation of suffering. Since they do not consider the majority of their children as "ill because malnourished", they do not change their feeding pattern as suggested by the MCH team. This implies that, under the given circumstances, Tau women will only be prepared to change their feeding patterns if they can be convinced (verbally or by experience) that children who eat at an earlier age, more frequently and receive a better quality of supplementary food are healthier.

Chapter 9
Summary and Conclusions

This investigation has analysed social and cultural contexts of child feeding in a small lowland group of Papua New Guinea, namely the northern Kwanga in the East Sepik Province. My first visit to these villages ten years ago confronted me with the problem of malnutrition. The nurses of the Maternal and Child Health Service informed me that many northern Kwanga children suffered from protein-energy malnutrition. To me as a lay person, northern Kwanga children looked small but healthy unless, of course, they suffered a bout of illness. Encounters with nurses and village women made me aware of a sharp contrast between biomedical and local interpretations and evaluations of "appropriate" child care. With this problem in mind I applied to the Papua New Guinea Institute of Medical Research for affiliation with their current Nutrition Research Program. They kindly accepted me as a research associate. Between 1984 and 1986 I spent a total of 16 months conducting fieldwork in this area, combining the methods of ethnography and nutrition. My goals were: 1) to explore the relationships between child growth and other aspects of the social and cultural world of the Kwanga, 2) to examine northern Kwanga child feeding and growth patterns in the context of the biomedical sub-culture, and 3) to analyze the differences between local and biomedical concepts of child feeding, health and illness.

My theoretical orientation combines an approach developed in Nutritional Anthropology with certain concepts of contemporary Medical Anthropology. Jerome, Kandel and Pelto (1980) suggested an ecological approach to the study of nutritional systems which I modified to suit my particular research interest. This approach enabled me to demonstrate that individual northern Kwanga mothers whose life centres around alimentation and child care draw on organized sets of thought and behaviour, a "food pattern", which interlocks with various components of their physical and social environment, social organization, religion and world view. In other words, the individual northern Kwanga mother forms an open system with several, often interrelated, aspects of the social and cultural reality shared by this group. Based on a detailed discussion of these aspects and links, a generalized picture of the northern Kwanga food system can be drawn.

Up to this date, the northern Kwanga primarily subsist on local food resources and their ability to use them. They live on the southern foothills of the Torricelli Mountains which separate the vast Sepik Plain from the coastal areas in the north. Only a few degrees south of the equator the climate is tropical and humid. Lowland hill forest with an irregular canopy covers the ground relief and smooths the short, steep slopes of the terrain so that the general impression is that of a vast, green, wavy sea. The primary hill forest has been extensively replaced by secondary forest as a result of the forest fallowing system practised by the local gardeners. Since the area is scarcely populated and supply of land not a problem, the short cultivation periods of about 18 months alternate with fallow periods which are long enough for the tree cover to re-establish itself. The system offers a means of continually

exploiting forested hill country to meet almost all food, shelter and firewood needs of the people who use it.

The villages consist of several semi-isolated hamlets which are lined up along the crests. Steep slopes of the order of 80 to 140 metres surround the hamlets. Narrow bush paths follow precipitous routes down to water-holes and creeks. Each hamlet consists of a cluster of houses topped by coconut palms, the visible signs of house rights, and by huge food-bearing trees. Intra-village mobility is remarkable; the flexibility of the social system and the relatively simple technology of house construction allow the northern Kwanga to adjust their domestic arrangements to changes in their life history, personal choice and strategy. Sometimes, people set up temporary camps near garden sites or in the sago swamps. As in many other societies that subsist on what they procure, the production, preparation and consumption of food provides a primary focus in the daily activities of the northern Kwanga. Their life style is highly mobile, and they spend most of their days in the forest, not in the village. To secure enough food for themselves and their children forms the core of their existence. Every man and every woman is involved in food procurement as long as they are physically capable. No division of labour exists except for that between the sexes. In food production, as in human reproduction, men and women contribute their share. United in mostly monogamous families, they are responsible for the physical survival of their dependent relatives. Small, nuclear families are the core units; few mothers raise more than six children. Based on parent-child or sibling-sibling links or, in a few cases, on multiple marriage, relatives become attached to these core units which then operate as extended families.

Northern Kwanga families are not isolated units. Depending on which aspect of domestic life we look at (e.g. cooking, residence or work) we see different groups (e.g. household units, residential units or economic units) emerge from the networks formed by kinship and other ties. Special and close bonds exist between a person and his or her kindred; the kindred always mobilizes around a person in support, celebration and mourning. Avoidance rules cut across northern Kwanga families, creating social boundaries between men and women, the older and younger generation, and members and non-members of the local men's cult. Some of these rules concern housing, others cooking and the giving and eating of meals. The local people believe that a transgression of these rules causes illness; the fear of illness is the main reason for adherence to these rules. These rules serve as culturally defined mechanisms to control regenerative powers, for instance those of women and those of (initiated) men. The northern Kwanga emphasize the male and female powers by stressing their dangers. Certain beliefs regarding gardening and hunting draw on these ideas, as the following examples illustrate: in their sexuality but especially during menstruation and childbed, women are not only dangerous to men but also to (growing) yams and wild pigs; men formerly regarded penis bleeding as an important preparatory act for hunting and yam planting. These and other examples mentioned in the text indicate that the local people draw analogies between female reproductive powers and male powers to grow yams and hunt pigs.

Village, agricultural and forest land is divided among descent groups and sub-divided among families; the eldest active male member of the family controls access. He usually invites some matrilateral and/or affinal relatives to join his agnatic group in the settlement or the forest. This system ensures that each descent group and family has relatively equal

access to land resources. Inheritance is ideally regulated by the rule of patrifiliation but adoption by matrilateral or affinal relatives is common. A dual organization cuts across the descent system and forms the local cell of the men's cult network. Today, it manifests itself mainly in small- and large-scale food exchanges which formerly were part of the initiation cycle. The inheritance of a position within the dual organization is as important to the northern Kwanga as the inheritance of garden and village land. It is also regulated by patrifiliation or adoption by matrilateral or affinal relatives. Together with the descent system the moiety system ensures that each descent group and family has relatively equal access to food resources, in production and distribution.

The northern Kwanga depend on nature for plant and animal food, and this dependence is conceptually elaborated in their religion and world view. A recurrent theme in their mythology is the origin of man, plants and animals and plant and animal food. It is often perceived not as the result of a single creation but as that of mythological metamorphoses. A concept of repeated cyclings in humans, plants and animals is implicit in many beliefs and practices. In accordance with this thinking, metamorphoses not only occurred during the mythological past but certain beings still possess the ability to change their physical appearance, for instance from human beings to plants and/or animals (e.g. bush and water spirits, one type of sorcerer, and to a certain extent also the initiates); certain plants (especially yams) possess the ability to act as human-like beings who walk, sleep, talk and eat. The local people conceive of two aspects of nature: the Visible World (i.e. what they see with their eyes) and the Invisible World (i.e. what they see in dreams or in special states). The physical appearance of human beings, plants, animals and other manifestations of nature can be seen "with the eyes". Men's cult spirits, bush and water spirits and the dead cannot be seen unless they slip into a visible cover (e.g. a human or animal skin) or the onlooker dreams or possesses special powers (e.g. sorcerers or members of the male cult). This world view manifests itself in several spheres of northern Kwanga life, for instance in gardening and hunting rites and perhaps most clearly in local explanations and treatment of illness. They distinguish between illness and death that are "natural" and those caused by a breach of social norms and/or by malevolent agents. In prolonged and/or serious illness or death of young and middle-aged people the northern Kwanga choose an explanation from a number of alternatives, namely a transgression of avoidance rules or an attack by non-human beings (men's cult spirits, bush and water spirits and the dead) or by men with special powers (i.e. sorcerers). Many of these beliefs and practices are known to the public; but the members of the men's cult claim that the most important ones are secret, especially those which concern the repeated cycling of human, plant and animal generations. This is also expressed in the official goal of the men's cult: to guarantee abundant food resources.

Northern Kwanga subsistence is based upon an agroforestry system; gardening, forestry, animal husbandry, fishing, hunting and collecting form integral parts of this system. Garden crops (e.g. yams, taro, banana, greens, sugarcane, etc.) are cultivated in forest clearings. The first yam crop is harvested about six months after planting, and a second yam crop is planted in the holes left by removal of the first. Banana, taro and other cultivars are ready for harvest while the second yam crop matures. After the second yams harvest, women stop weeding the garden, and the fallow stage begins. The regrowth is not cleared until "good trees" have developed. Each family clears a new garden as soon as they have harvested the first yam crop in a given plot. This means that, at any given time, two

plots are under cultivation and two other sites in different fallow stages. The present yam cultivation cycle has reportedly been copied from the Urat only a generation ago. Yams now are available almost all year round. Formerly, the northern Kwanga made larger gardens and grew only one yam crop per year. This resulted in a seasonal availability of yams; sago dominated the other season. The old cycle was controlled by the men of the higher initiation grades of the local men's cult. Today, gardening is still linked with the men's cult. The northern Kwanga grow ceremonial yams in mixed gardens, not in separate gardens like some neighbouring groups, and their rites focus on short, not long yams.

In an agroforestry system such as that of the northern Kwanga, the food crops of trees and other woody perennials are almost as important as the garden crops. On their way to and from the gardens, the northern Kwanga often point out whether a tree has been cultivated or whether it has grown spontaneously. Especially the cultivated trees are tended by the men; they regularly visit plantations and cut back the undergrowth around young plants. In the sago, pandanus and banana groves, they clear out some of the young plants to give room and light to the others. With regard to the quantity of returns, the sago palm is the most important tree crop. Not all the economic units felled and processed a sago palm during a twelve-month survey period: 39% felled none, 37% one, 15% two and only 9% three or more sago palms. This variation can be partly attributed to success or failure in yam growing, partly to participation or non-participation in feast preparation. Since most of the economic units which did not fell a sago palm received some sago as informal gifts from relatives or formal gifts at a feast, variations in sago production do not necessarily affect the diet. With regard to quality of returns, the coconut is probably most important. They are commonly planted in the settlement, not in the forest. Every family owns several coconut palms and this fruit is available all year round. Coconut cream is often added to the daily diet of vegetable stews and soups. Other important tree crops are the breadfruit and the pandanus. Women plant a number of trees and shrubs with edible leaves on the fringe of the hamlets. In addition to the wild form of cultivated trees and shrubs, the women also systematically gather the leafy parts of other wild trees, ferns, creepers and herbs. Cultivated trees are individually owned, whereas wild forms belong to the landowners of the ground on which they grow.

Animal husbandry of the northern Kwanga focuses on pig raising. It forms an integral part of the agroforestry system. Feral boars mate with semi-domesticated sows. The latter are free-ranging; during the day they roam the hamlet, the forest and old gardens for food. In the evenings, women prepare a special meal for them. The sows litter in the forest and later return to the village. A few weeks after birth, women separate the piglets from the sow. There are several parallels between pig raising and child rearing: women carry infants and piglets in netbags, they premasticate food for them or handfeed them; they fondle and wash them; if they die, their "mothers" chant lamentations in verse form. Pigs are not raised for home consumption. In fact, the members of a patrilineage may not eat any meat of a pig raised by a female member or the wife of a male member. Not every woman raises pigs; the northern Kwanga explain the variation in the number of pigs raised by women of about the same age with differences in personal skill, preference or experience. Most village pigs (74%) go into the exchange system, either into inter-village trade (40%) or into intra-village exchange between the moieties (34%). Women keep a strip of coconut husk for every pig they have raised.

Although the territory of the northern Kwanga is dissected by many rivers and creeks, fishing plays only a minor part in the overall food-getting pattern. Only twelve out of eighty men regularly reported fishing activities, and all twelve were under forty years of age. Women apparently do not fish. Fish poisoning, the traditional technique, is almost out of use. Today, most men shoot fish with store-bought or locally made harpoons.

Hunting and collecting animal food are also integral parts of the agroforestry system. The wild pig and the cassowary are the most prestigious prey. Apart from these, the men hunt a variety of other animals, for instance bush rats, tree and ground wallabies, possum and cuscus species, lizards, birds and flying foxes. The usual hunting weapons are bow and arrow and the spear; the use of nets, common among neighbouring groups, is not known. Like gardening, hunting was, and to a certain extent still is, closely linked with the men's cult. Although most men now skip some of the ritual preparations (i.e. sexual abstinence, penis bleeding, slapping legs and armpits with nettles), they still brew a potion for the hunter and the dog, and if they build sago traps, for the sago. This potion makes them "see" the game. Other accounts indicate that not the hunter but his guardian (i.e. a dead father or mother or the wild man Sumar) actually do the hunting; the hunter carries a substance belonging to the guardian and waits until the latter presents the game to him. If a hunter uses magic, he and his brothers may not eat any meat of the animal he kills; relatives of the two older generations also have to avoid eating this meat. His wife and children are the only close relatives who may eat the meat of any animals he kills. The men count the number and type of animals killed; wild pigs are remembered by strips of coconut husks or lower mandibles. We found a great variation in hunting success: some men are very keen and successful pig hunters, while others either concentrate on other animals or do not hunt at all. The collecting of animal food is more difficult to investigate because people rarely mention it and do not keep records. They observe their environment and know where to look for food. A few weeks after sago making, for instance, mothers send their daughters to check whether sago mushrooms have grown on the discarded pith. Similarly, fathers tell their sons about a tree full of grubs they have noticed in the forest. Young boys sometimes catch and eat frogs, turtles or small lizards. Certain other animals (e.g. caterpillars, crickets, grasshoppers and snakes) are not considered as food by the northern Kwanga.

The northern Kwanga villages have been and still are almost autonomous in subsistence production. Nevertheless, they maintain trade relationships with other villages of the Dreikikir area. The major trade items of pre-colonial times were sodium salt (from springs), shell rings and clay. Of these items only pottery was seen to be traded during my fieldwork, namely from the Kombio villages in exchange for tobacco and betelnuts. Village pigs are another important trade item, as we have seen above. In their pig-raising histories, women clearly distinguish whether a pig was prestated to a ritual exchange partner in the village or whether it was obtained by men from another village. A survey demonstrated that most pigs were traded within the limits of the networks established by the men's cult. Most pigs are paid for in kind, although a tendency towards cash payments can be discerned. The local people not only "sell" pigs, they also "buy" them. Trade in pigs can be partly explained by the avoidance rules which forbid a patrilineage to eat any pig raised by a female member or the wife of a male member. In the preparation of death rituals, for instance, the people prefer to buy a pig in a neighbouring village because all the inhabitants of their own village may

then eat the meat. Another reason is that the demand for village pigs sometimes exceeds the local supply (e.g. for large-scale food gifts between the moieties).

It is true that yam cultivation, pig husbandry and hunting are culturally more significant than other food-getting activities (e.g. the cultivation of other crops, the gathering of wild plants, the collecting of animal food, the hunting of other animals and fishing). The men's cult rituals focus on increasing the yam harvest and the number of wild pigs. Yams and pigs are the most highly valued exchange items. In order to achieve high social status, a man has to succeed as a hunter, a gardener, an exchange partner, and in former days a warrior; these are the virtues which are honoured during the final death ritual. Women keep records of raised village pigs which are also displayed during the death ritual. My discussion has demonstrated that despite this cultural emphasis on yams and pigs the agroforestry system provides other options as well. The cultivation cycle is dominated by the growth cycle of yams, but the gardens produce a variety of crops. While the rites focus on short yams and pigs, they must nevertheless be understood as *pars pro toto*. Forestry, fishing, hunting of small animals and collecting play a minor role in terms of labour and energy input but they form an integral part of the total food procurement. Each of these food-getting activities consists of many different tasks which follow culturally defined patterns; nevertheless, these patterns allow for variations: some women do not raise village pigs, some men do not hunt pigs, only small animals or none at all, and only a few men go fishing. This diversity not only allows for flexibility in times of natural or man-made crises, it also provides a means of continually exploiting the various ecological zones of this forested hill country.

Not only food procurement follows culturally defined patterns. The northern Kwanga also have a culturally elaborated and transmitted body of beliefs and practices regarding the cooking and eating of food, a "cuisine". The principal family meal consists of a single but filling dish, usually a stew or a soup made of local core foods (i.e. yams, taro, banana or sago) and green vegetables and coconuts as fringe foods. The everyday diet is almost exclusively vegetarian. Festive meals differ from everyday meals mainly in quantity (several courses are served) but also in quality (some fish, meat or other animal food). Flavouring with spices is unknown. Different ways of food preparation and eating habits have been shown to follow certain rules. Several rules regarding food consumption including the above-mentioned avoidance rules draw on a "humoral" classification. The "humoral" system of the northern Kwanga seems to be constructed of compound (hot-cold, wet-dry) qualities which are combined analogically rather than organically with other symbolic dimensions (e.g. male-female, strong-weak). Furthermore, the local cuisine encodes a message about a minimal degree of social hierarchy. Within a limited range of choices which are open to all, every northern Kwanga family eats the same food; even at feasts the emphasis is on equality. Only the members of the higher grades of the men's cult seem to enjoy certain privileges.

Food distribution among the northern Kwanga is usually a social and/or ritual affair. Each type of food distribution observed in the field has been described in detail. The smallest food production, distribution and consumption unit is the household. Feasts held at life-cycle rituals can be interpreted as transactions across the boundaries of household units. Relatives not only pool and then redistribute but also share food which symbolizes harmony and closeness. As long as a conflict between relatives has not been settled, they may not share food. Transactions between social categories can also mark exclusion or

inclusion (e.g. the women's eating of a special soup at the feast held after childbirth). If one social category prestates food to another social category or other social categories, the meanings are quite different. Often and on all levels of the social organization such prestations are regarded as a reward for services rendered. They may further form part of a standing obligation between relatives (e.g. mother's brother and sister's children). Under certain circumstances, such prestations imply yet another meaning, namely that of competition (e.g. house-roofing feasts or food gifts between members of the social organization). Although the Kwanga dramatize ritual competition, the principle of reciprocity in the exchange of food dominates. In the final analysis, food transactions across social boundaries can be interpreted as an instrument to unify and classify in a society which is inclined towards fission.

Food also encodes messages about culturally patterned man-nature relations. In several rites food is used as a medium to establish communication with the Invisible World: during a large-scale food gift between the moieties food is used to form an image which symbolizes the men's cult spirit; at the last death ritual food is placed at the bottom of the scaffold displaying the deeds of the deceased man to establish communication with the dead man's spirit; a coconut is used as a "bait" for bush and water spirits during a healing ritual; and before the men kill the village pigs during a certain prestation they give them "something to take along on the way to the other world".

The northern Kwanga child-feeding pattern also forms an organized set of beliefs and practices and is closely interrelated with the general food pattern. The mothers carry their small children wherever they go and feed them on demand. According to local perceptions of food quality, breastmilk is regarded as the best food for the small child. A special soup to increase the flow of breastmilk emphasizes the significance of breastmilk. Since the women believe that the food they eat is transformed into breastmilk, they think that the infant does not need to eat much food himself. The significance of breastmilk is further supported by their experience that children who do not receive breastmilk (e.g. due to death of the mother, breast problems, etc.) fail to thrive even if they eat supplementary food. The mothers first offer food which they classify as "soft and fluid", two important categories of their "humoral" classification. These terms refer to extrinsic consistency rather than to intrinsic qualities and include broth, papaya, unripe coconut or any food type rendered soft and fluid by cutting, premasticating or mashing. When they teethe, the children gradually learn to eat small (unprepared) portions of the mother's diet. In this child feeding pattern food classification and perceived sequences of physical maturation interlock. Mothers believe that breastmilk is more important than supplementary food until children are able to feed themselves and become physically active. Small but strong and vivacious children are regarded as healthy, small but weak and apathic children are regarded as ill. Explanations of this illness will be summarized below but let me anticipate by saying that they draw on the general medical system of the local people.

This generalized picture has demonstrated that northern Kwanga food beliefs and behaviour form a coherent pattern. The marginal notes presented in the thesis further point to the fact that this food system belongs to the Sepik yam culture complex. Considered against this background, the northern Kwanga food system emerges as a distinct configuration of elements; similar elements are arranged in varying food patterns among the neighbouring groups. Whether we regard the northern Kwanga food system separately or

in the context of the other Sepik yam cultures, it meets almost all food needs from the point of view of the people who use it.

However, an important aspect discussed in the text has not yet been mentioned, namely the profound effects of the cosmopolitan nutritional system. Today, the northern Kwanga food system consists of locally grown and imported components. By "locally grown components" I refer to those aspects which fit into the general pattern of this yam culture complex. With "imported components", on the other hand, I mean various elements of our cosmopolitan nutritional system that have found their way into the northern Kwanga food system over the sixty years which have passed since the first Australian patrol officer visited the area.

One of the most fundamental changes of the last sixty years has been the "expansion of the experience space" (Allen 1976) of the local people from 10 kilometres to 50, 100, 1000 and more. Especially the men who worked "on station" came into touch with other ways of food production, preparation and distribution, they ate new foods and learnt to use new tools. On their return to the village, they not only brought new material wealth but also a rich store of experience. In the 1983 census, 22% of the northern Kwanga population of 2117 persons figured as temporary or permanent absentees. A number of adolescents live in boarding schools, several educated men and women from Tauhundor have found permanent employment in town, and others have signed up for temporary jobs. Towns like Madang (Madang Province), Lae (Morobe Province) and Rabaul (East New Britain Province) are favourite destinations for northern Kwanga migrants. Most men who now live and work in the village have spent some time in town or "on station". Women travel much less frequently. In a survey of 106 women only 13 had ever seen the provincial capital Wewak.

Even people who have never been to town know that the urban elite has a new life style which also affects their patterns of food procurement, preparation and consumption. They have heard many stories about how they work for money and then buy food in stores, how their houses are equipped with piped water or water tanks, electric or kerosene lamps and stoves, how they eat sitting around tables set with cutlery, glasses and china. Beer, rice and canned fish have become a symbol of a new life style, of "urban" income and living conditions, of a new social hierarchy. In the rural areas, not only white people (e.g. missionaries and anthropologists) but also representatives of the new Papua New Guinean elite (e.g. teachers, catechists and aid-post orderlies) follow these new food habits. From the point of view of the local people, they are rich: They have expensive equipment at their disposal and they "eat money" (i.e. they work for money and then buy their food in stores) in contrast to the Kwanga who "eat ground" (i.e. they cultivate their own food).

Like most other rural villages in Papua New Guinea, the northern Kwanga villages have become incorporated into the market economy; they produce for and purchase from the national and international market. Their most important contribution to the market is *Robusta* coffee. Experiments with cattle and fowl have met with little success; even in the village economy they play only a minor role. The sale of coffee to a marketing cooperative and the occasional sale of village pigs to buyers from other villages are the major sources of income. It has been estimated that the mean annual family income in this area was less than A$ 100 in the early 1980s. With this money the family has to cover many expenses including school and transportation fees, clothing and other consumer goods such as tools, kitchen

equipment and food. Many of these tools and utensils have their advantages, from the local point of view, but except for steel tools (e.g. machetes, spades, shovels and axes) these advantages are not overwhelming and do not necessarily justify a complete replacement of the locally produced objects. The digging stick for instance is still widely used. Several men in the village own a shotgun (and a licence), yet most men carry a spear and/or a bow and arrows when they leave the village. Apart from poison the local people do not seem to have produced any special fishing equipment; today, store-bought fishing gear is fashionable among the young men. Most northern Kwanga households own some metalware (e.g. spoons, forks, knives, pots, plates, bowls, cups, wire and tins) and plastic containers, but the forest still supplies them with most raw materials for their cooking and eating equipment. Limiting factors in obtaining industrially produced consumer goods are three interrelated factors, namely costs, availability and transport. The village trade stores sell only a small range of commodities, namely washing powder, soaps, cartridges and a few food products (e.g. Sais dripping, Wopa biscuits, Nescafé, sugar, salt, rice and tinned fish). Since transportation is difficult and expensive, retail prices become so inflated that shopkeepers can hardly sell their products in the village and much less make any profit. Villagers often prefer to organize their own shopping trips, for instance to buy a kerosene lamp, but afterwards it is difficult to keep a steady supply of fuel. By trial and error the northern Kwanga have learnt to economize: They buy only certain goods. Some of these goods have assumed a symbolic meaning, for instance the standard menu of the urban elite, rice and canned meat or fish. This menu has been integrated into the northern Kwanga cuisine, but up to the present only as feast food. The one kilogram plastic bags of rice and the fish cans form a constitutive element of most food distributions. In addition to their symbolic meaning these two food types also have a nutritional value. My food intake survey revealed that slightly more than 20% of the recorded menus contained store-bought foods, 3% of these canned fish. The consumption of meat procured by local means (i.e. by animal husbandry, hunting and trade) equalled the consumption of canned fish. Fresh fish was not mentioned in the survey. Not only has store-bought food become a constitutive element of most festive occasions, new types of festivities have also been imported, for instance welcome and farewell dinners and a kind of party.

All these elements combine to form a new food style which has been integrated into the contemporary northern Kwanga food system. Thus we see that during the 60 years since first contact, new needs have been created - needs for new tools, new food types and money to buy them.

Another set of influences has been found to have more subtle effects, namely changes in the interpretations of nature, man and the supernatural world. Several Christian missions are active in the northern Kwanga area, namely the Catholic Mission, the South Seas Evangelical Mission and the Seventh Day Adventists. All of them preach, although in varying degrees, against the local men's cult which draws on the major themes of the mythology and the cosmic order and tries to explain and control the mysteries of fertility and growth of humans, plants and animals. Since religion and food procurement are closely interrelated in their thinking, this preaching puts northern Kwanga men in a dilemma. They see "two roads": one road leads to the locally grown way of life (centring around their own religion and subsistence), the other to the imported way of life derived from Europeans

(centring around Christian belief and market economy). At present they try to follow both ways, sometimes alternately, sometimes simultaneously.

Northern Kwanga women face a similar dilemma. With the integration into the colonial and later national administration, new institutions of the missions and the state have progressively intruded into the core of the female realm, namely the practical aspects of human procreation (i.e. contraception, menstruation, childbirth and child care). The medical system of the Kwanga is closely interrelated with religion; therefore, it was probably not surprising for the local people that the missions were the first to provide the new kind of medical care in their area. The founder of the Catholic Mission Tau operated a dispensary and the Maternal and Child Health Service including three northern Kwanga villages was initiated and is still run by a nursing sister. The South Seas Evangelical Mission based in Yakrumbok provides the Maternal and Child Health Service for the fourth northern Kwanga village. The close relation of religion and health is further confirmed by the practice of praying for the sick. Like the men, women see two "roads": one road leads to locally grown ways of child rearing and subsistence, the other to imported ways of child rearing and market economy. Like the men, women experiment with both roads: they feed and care for their children in the way they learnt from their ancestors, grandmothers and mothers, but they also regularly attend the Maternal and Child Health clinics. From the nurse's point of view they do not follow her advice to change local feeding patterns, but they acknowledge her expertise in curing their children by medication. Their resistance to changes in feeding patterns leads to frequent quarrels at the monthly clinics. Frustration and anger have accumulated on both sides, on the side of the village women and on the side of the nurse.

This situation attracted my attention, and reports of colleagues from other parts of the country convinced me that it was necessary to analyse it. This part of my discussion has used concepts of contemporary Medical Anthropology, especially those of Cassidy (1982), who draws on Kleinman (1980). I have argued that one of the root causes of the problems between village women and nurses is the difference in their interpretations of and responses to children's nutritional needs.

The nurses draw on a pool of knowledge and techniques developed in 20th century science, and they are based in an outpost of 20th century cosmopolitan culture and society (usually a mission station). Viewed against this background, local food systems such as that of the northern Kwanga are a poor nutritional environment for small children. Infections, unhealthy sanitary conditions, a low socio-economic standard, ignorant mothers and a deficient diet combine to affect the health of children. Since progress in growth is taken as the most important indicator for health problems, the slow growth of local children is cast into an illness category: protein-energy malnutrition. Seen through this lens, 65% of the under-five-year-old northern Kwanga children are below the criterion for malnutrition in Papua New Guinea (i.e. below 80% of weight-for-age using the Harvard Standard).

Similar growth patterns have been documented for the Lumi (Wark and Malcolm 1969) and Anguganak (see e.g. Thomason et al. 1983) area to the west of the Kwanga and for the Maprik area (Ross 1984) to the east of the Kwanga. The general growth pattern is not much different from growth patterns found in other parts of Papua New Guinea but the levels of growth are lower than seen in most other studies. The health significance of these low-level growth patterns is unclear.

The illness category "protein-energy malnutrition" is culture bound, as Cassidy (1982) has convincingly demonstrated. Its diagnosis relies upon acceptance of nutrient and energy deficiency as a relevant cause of malfunction and upon acceptance of technology and statistics as relevant methods to assess malfunction. Moreover, diagnosis and treatment of this illness are linked to core meanings and behavioural norms of biomedicine such as future orientation, activism, a belief in the value of science - and, we could add, an ethical obligation to help and a belief in the authority of professionals.

The interpretation of the local people is also culture-bound. As stated above, the northern Kwanga regard small but strong and vivacious children as healthy and small but weak and apathetic children as ill. The local term *habamba* is used to refer to both children and adults (usually sick and/or old people) who are described as having "a lot of bones". A person who is *habamba* is too thin; but the opposite of thinness is not plumpness but a sturdy musculature. In young children, too, it is the lack of physical strength rather than fat which serves as a criterion for the definition of healthy and unhealthy growth patterns. *Habamba* children differ from healthy children who were born at about the same time in that their physical strength is reduced and hence their maturation delayed. They learn to sit, stand and walk much later than their healthy age mates because they lack physical strength. The northern Kwanga offer several alternative explanations for the cause of becoming *habamba:* Insufficient breastmilk intake is regarded as a possible cause, for instance if the mother has died, if the mother does not breast-feed the child (infanticide after twin births), if the mother's breast is sore or if the child refuses the breast. Except for the deliberate starvation of a child which is culturally only acceptable after a twin birth, women try to raise their children on supplementary food and treat the root cause of the other problem (i.e. the death of the mother, the breast sore or the child's refusal of the breast). If a child frequently receives breastmilk and still fails to thrive, this may be attributed to a transgression of an avoidance rule or to an attack by non-human beings or by men with special powers. Divination reveals which of these alternatives is the real cause. A breach of the postpartum taboo by the child's parents or a theft of the placenta and umbilical cord by a sorcerer are the most common explanations. Offences of other avoidance rules (e.g. rules operating between older and younger generations or between members and non-members of the men's cult) by a pregnant or lactating mother are alternative explanations. These explanations are given exclusively for *habamba* children but they clearly draw on the general medical knowledge of the northern Kwanga. In other words, the northern Kwanga diagnosis of unhealthy growth patterns in their children is based on the acceptance of breastmilk as the best food for small children until they are physically active and able to feed themselves and on the acceptance of divination as a method of assessing the root cause. The etiology and treatment of unhealthy growth in children are linked to core values of the northern Kwanga society and culture, such as thinking in cycles, fatalism, a belief in the coexistence of the Visible and Invisible World and the danger of regenerative powers, self-responsibility of the mother and an acceptance of the authority of members of the men's cult.

These results confirm Cassidy's claim that differences in etiology and treatment are a root cause in intervention failure. Like her I have suggested that we should consider yet another aspect: the local evaluation of biomedical treatment. Northern Kwanga women do not reject biomedical care in general, although they certainly do not share the etiology of

most illnesses. What they accept are those therapies which result in a perceptible alleviation of suffering. They are convinced of the power of medication in the form of tablets but even more so in the form of injections because ever and again patients have been cured of fever, pain and other easily recognizable symptoms after receiving this kind of medication. In other words, curative care, not preventive measures, is the "felt need" of the local people. Several women reported that their children gained weight when the nurse took them to the Health Centre, but they attributed this to the medication with tablets and injections, not to the milk powder and the meals prepared from local food. Some women remarked that breast-fed children do not need any milk powder. Canned fish and rice, though, appear to be regarded as "power food", perhaps because they symbolize urban life style. Furthermore, patients receive tablets and injections for free whenever the aid-post orderly considers such treatment to be necessary. Women receive milk powder from the nurse when the weight-for-age parameter falls below 60% of the standard but usually only for a limited period of time. The nurse then orders the women to buy good food for the child at the trade stores. The women's reaction is not surprising; many of them say: "If they think that our food is not good enough, they can give us rice and canned fish."

In my opinion, such statements are the first signals of a dangerous development. What will happen if the northern Kwanga begin to adopt the biomedical view, regard themselves as malnourished, their food as deficient and their environment as poor or constrained? In the text we have presented an evaluation of the interplay between environment and agroforestry systems in the study area. Allen (1980, n.d.) came to the conclusion that these agroforestry systems are very effective in their protective service functions as long as the fallows remain adequate. In his assessment these systems are most vulnerable to increases in socio-economic demands and/or population. If the northern Kwanga need more cash to buy more store food, their socio-economic demand will increase. To satisfy these demands, they will probably have to increase their cash cropping which will, in the long run, shorten the fallows, and destroy their agroforestry system. The short-term and long-term effects of such developments among the Simbu in the highlands of Papua New Guinea have been briefly discussed.

For these reasons I have argued that rural people like the northern Kwanga should not be discouraged in their tremendous effort to subsist on what they procure. If they begin to lose faith in their locally grown food system, they are likely to become increasingly dependent on help from outside and to build up expectations that cannot be fulfilled within the near future.

I agree with Cassidy (1982), who claims that open-mindedness and tolerance of alternative perspectives are crucial if cross-cultural care and prevention are to succeed. My case study of the northern Kwanga food system is an attempt to contribute to a better understanding of local perspectives on child feeding. Constrained as their ecological and economic environment may be, the northern Kwanga have developed their own food system, a variant of the Sepik yam cultures, and they deserve to be proud of it. Over the past sixty years, since first contact, they have continued to experiment and to improve various aspects of it. We ought to acknowledge their efforts, train our perception of their needs and offer options instead of imposing our views. Although local interpretations may often be incorrect by biomedical standards, they are meaningful and relevant to the village women. To respect this fact does not mean to give up one's own standards.

This has important implications for health and nutrition education. The staff of the Maternal and Child Health service, for instance, can be convinced of the correctness of biomedical diagnosis and treatment and at the same time accept that village women have a different view. Such an attitude creates an atmosphere where empathic discussions of the relationships between diet, growth and illness, which ought to accompany the monthly weighing of the under-five-year-old children, are possible. Unfortunately, the observed clinic routine stresses weighing, paper work and curative care but neither leaves time nor creates an atmosphere for such talks.

Ideally, health and nutrition education should be provided by women who are familiar with the village women and the Maternal and Child Health approach. In order to become familiar with the village women, one has to live in regular contact with them. The wives of teachers and aid-post orderlies sometimes fulfil this requirement; but often they have a different life style and do not get involved with the villagers. It has already been mentioned that they are representatives of the emerging Papua New Guinean elite. Another possibility is to recruit and train village women as voluntary health workers. Young women who have completed a few years of high school may qualify for such a task. However, they may be too young to be accepted as teachers by the other women, especially if they are not married and have no children. Once they have two or more children, they have to work hard to provide food for their families and probably lack the time and energy for additional tasks. Among the northern Kwanga grandmothers seem to be the best candidates for the position of health workers. In the traditional context they offer help and advice during first pregnancy, childbirth and motherhood and usually have a high social status. If their youngest child is an adolescent, their workload is reduced and therefore they have more spare time. Although these women can rarely read and write, they are intelligent and capable of learning the basics of the Maternal Child Health approach, if such a course was offered. Not all of these women are fluent in Tok Pisin, but some of them are, and, what is even more important, many of them remember the hardships of the old days and recognize the benefits of recent improvements. Although we are used to invest in the young generation, not the old, it still seems a wise suggestion to train grandmothers as health workers. Old women may die soon after their training, but as long as they can work, they can be expected to be reliable, whereas young women are more likely to lose interest and drop out.

In this text I have tried to act as a mediator between the village women and the staff conducting the MCH clinics. I hope that my thesis will contribute to a deepening and widening of the understanding between the staff of the health services and village people, not only in the Dreikikir area but also in other parts of Papua New Guinea.

Appendices

Appendix A: Food Crops

English name	Botanical name[1]	Kwanga name	(Sub-) varieties
Yam	Dioscorea esculenta	bake	26
"	Dioscorea alata	naini	19
Taro	Colocasia spp.	nansi	33
Banana	Musa spp.	lobo	42
Pitpit	Saccharum edule	hinsi	10
Sugarcane	Saccharum officinarum	ayi	7
Taun	Pometia pinnata	hame	3
Sago	Metroxylon sp.	naku	4
Coconut	Cocos nucifera	siya	6
Breadfruit	Artocarpus altilis	ware	2
Pandanus	Pandanus conoideus	gla	9
Wild cherry	?	warkamba	?
Mango	Mangifera indica	kimbia	1
Soursop	Morinda citrifolia	mblasi	1
?	Canarium sp.	yili	1
"	"	kumolo	1
Tulip	Gnetum gnemon	ugia	2
?	Ficus wassa	wasarkia	1
?	Ficus copiosa	mengle	1
?	Ficus hispidioides	kware	1
?	Abelmoschus manihot	waingusa	1
?	Cyathea sp.	apsaka	1
?	"	sahabklamba	1
?	Stenochlaena palustris	wariangu	1
?	Polyporandra scandens	wainsalambau	1
?	Callipteris prolifera	aiai	1
?	Polyporandra scandens	wainsalambau	1
?	Callipteris prolifera	aiai	1
?	Pneumatopteris sorgerensis	paiafarme	1
?	Limnophila rugosa	bermbo	1
?	Neoalsomitra trifoliolata	kwasmabu	1
?	Diplocyclos palmatus	yarkike	1
?	Trichosanthes ovigera	mosarngle	1
?	Ptychococcus lepidotus	korhapmba	1
?	Nasturtium backeri	hoholi	1

1 The plants have been identified by J. R. Croft and J. Wiakabu from the Department of Forests, Division of Botany, in Lae (Papua New Guinea).

?	Deeringia amaranthoides	warekimbia	1
?	Amaranthus hybridus	wainsumbarkasuu	2
?	Amaranthus tricolor	barka	2
Winged bean	Psophocarpus tetragonolobus	maga	1
Bean	Vigna unguiculata	wauhab	1
?	Graptophyllum pictum	assamani	1
Corn	Zea mays		
Onion	Allium odorum		
Cabbage	Brassica chinensis		
Water melon	Citrullus vulgaris		
Cucumber	Cucumis sativus		
Pumpkin	Cucurbita moschata		
Sweet potato	Ipomea batatas		
Pineapple	Ananas comosus		
Papaya	Carica papaya		

Appendix B:
Questionnaire of Infant Feeding and Care Survey

Nem bilong mama Nem bilong pikinini

Date: Age:

1) Last taim mi kam lukim yu inap long nau,
   yu bin stap long haus nongut? yes nogat
2) Yu save putim kaikai long maus bilong pikinini? yes nogat
3) Pikinini yet i holim kaikai long han na kaikai? yes nogat
4) Pikinini i sindaun long mal tasol? yes nogat
5) Pikinini i sindaun long graun? yes nogat
6) Pikinini i wokabaout long as? yes nogat
7) Pikinini i holim pos, sanap na sindaun? yes nogat
8) Pikinini i sindaun na kirap? yes nogat
9) Pikinini i holim han bilong mama na wokabaut? yes nogat
10) Pikinini yet i wokabaut liklik? yes nogat
11) Pikinini i gat hamas tit? 0 1 2 3 4 5 6 7 8
12) Pikinini i drink susu yet? yes nogat
13) Long tupela wik i go pinis, pikinini i kisim wanem kain sik na doktaboi i bin raitim long skel? Lukim date na raitim nem bilong sik olsem: April 14 cough na fever

Day 1

14) Mama i kaikai wanem na hamas?
    a) nau long morning *(nurumbu)*
    b) nau long san *(tandi)*
    c) nau long apinun *(hon'iu)* na long tudak *(niri)*
15) Pikinini i kaikai wanem na hamas?
    a) nau long morning *(nurumbu)*
    b) nau long san *(tandi)*
    c) nau long apinun *(hon'iu)* na long tudak *(niri)*
16) Mama i tok: "Pikinini i no kaikai." Yu bai askim em: "Bilong wanem pikinini i no kaikai?"

Day 2

17) Mama i kaikai wanem na hamas?
    a) nau long morning *(nurumbu)*
    b) nau long san *(tandi)*
    c) nau long apinun *(hon'iu)* na long tudak *(niri)*
18) Pikinini i kaikai wanem na hamas?
    a) nau long morning *(nurumbu)*
    b) nau long san *(tandi)*
    c) nau long apinun *(hon'iu)* na long nai *(niri)*
19) Mama i tok: "Pikinini i no kaikai." Yu bai askim em: "Bilong wanem pikinini i no kaikai?"

Appendix C:
Menus and Snacks of Mothers

Menus	Code	April	May	June	Aug.	Sept.	Total No.	%
Stews							358	35.4
Plain yam	A	9	12	26	15	11		
Plain taro	A	7	11	5	4	7		
Plain sweet potato	A	1						
Plain banana	A	7	8	11	8	9		
Plain pumpkin	E	1						
Yam, greens	C	3	4	5	5	9		
Taro, greens	C	5	8	1	6	2		
Sweet potato, greens	C	1						
Banana, greens	C	6	1	3	3	1		
Yam, greens, coconut	D	1	9	3	5	4		
Taro, greens,coconut	D		4	5	5	1		
Banana, greens, coconut	D		1		1			
Mixed staples	A	5	5	9	9	2		
Mixed stew, greens	C	4	8	13	3	3		
Mixed stew, greens, coconut	D	4	8	6	10	6		
Mixed stew, greens, fish	D		3		2			
Mixed stew, greens, meat	D	2			1	1		
Soups							230	22.8
Yam soup	D	29	40	35	24	34		
Sago soup	D	6	4	2	7	8		
Sweet potato soup	D	9	3	1				
Banana soup	D	5	3	2	1	1		
Taro soup	D	3	3					
Pumpkin soup	D			1				
Yam soup, fish	D				1			
Yam soup, meat	D	1		1	4			
Yam soup, mushroom	D					1		
Sweet potato soup, fish	D	1				1		
Food baked on hot embers							185	18.3
Banana	A	22	28	28	25	25		
Yam	A	1				2		
Breadfruit seeds, fruit	A	2	7	8	2			
Taro	A	5	5	7	4	1		
Banana, taro	A	1	3	1	2			
Breadfruit, banana	A		3	1				
Taro, yam	A			1				
Corn	A							
Sweet potato	A			1				

Menus	Code	April	May	June	Aug.	Sept.	Total No.	%
Sago jelly							135	13.3
Sago jelly	A	12	7	3	8	9		
Sago jelly, greens	C	10	7	2	8	6		
Sago jelly, greens, coconut	D	3	8		22	9		
Sago jelly, fish	D		2		3			
Sago jelly, meat	D		2	2	8	3		
Fruit							45	4.5
Ripe coconut	B		2	5	2	2		
Unripe coconut	E	2	7	1	4	4		
Papaya	E	2	3	1		4		
Cucumber	E			1		1		
Papaya, coconut	B		1			1		
Sugarcane	C		2					
Rice							30	3.0
Plain rice	C	5	3	5	1			
Rice, greens	C		1	1				
Rice, greens, fish	D	1	2	2	5	4		
Pandanus						1	15	1.5
Pandanus, yam, banana, greens	D	1	8	4				
Bread	A		2	3			5	0.5
Boiled breadfruit, seeds	B		2	2			4	0.4
Sago cakes	A		1		2		3	0.3
Total menus							1010	100.0

Code

A Starchy Food
B Fatty Food
C Starchy and Protein Food
D Starchy, Protein and Fatty Food
E Other Food

Appendix D: Menus and Snacks of Children

Menus	Code	Age groups (months)													
		4–6		7–9		10–12		13–15		16–18		19–21		22–24	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stews			28.6		36.1		37.1		46.0		42.2		37.3		46.7
Plain staples	A	5		42		31		59		37		11		7	
Staples, coconut	B	1		12		8		9		5		5			
Mixed stews, coconut	D			3		3		11		12		8		7	
Mixed stews, coconut	D					1		1		3		1			
Soups			28.6		20.9		25.9		24.8		19.3		17.9		13.3
Vegetable soup	D	6		32		28		40		26		12		4	
Soup, milk powder	D					1		2							
Soup, meat/fish	D			1		1		1							
Tubers/banana baked	A	7	33.3	39	24.7	24	20.7	28	16.1	25	18.5	15	22.4	6	20.0
Sago jelly					8.2		8.6		5.7		9.6		11.9		3.3
Sago jelly	A			5		7		3		8					
Sago jelly, greens, coconut	D			8		3		4		3		4		1	
Sago jelly, greens, coconut, meat/fish	D							3		2		3			

Menus	Code	Age groups (months)													
		4–6		7–9		10–12		13–15		16–18		19–21		22–24	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Rice					4.4		1.7		4.0		6.7		1.5		10.0
Rice	C			6		1		5		3					
Rice, greens, fish	D			1		1		2		6		1		3	
Fruit			9.5		5.1		2.6		1.1		0.7		6.0		6.7
Coconut	B	1		1		1				1		1		1	
Papaya	E	1		6		2		2				3		1	
Pitpit	E		1												
Pandanus	B							1	0.6						
Bread	A					2	1 7			2	1.5				
Boiled breadfruit	A			1	0.6	2	1.7	3	1.7	2	1.5	2	3.0		
Seeds															
Total		21	100.0	158	100.0	116	100.0	174	100.0	135	100.0	67	100.0	30	100.0

Code

A Starchy Food
B Fatty Food
C Starchy and Protein Food
D Starchy, Protein and Fatty Food
E Other Food

Appendix E:
Mean Weight, Length, Weight-for-Age, Length-for-Age and Weight-for-Length as Percentage of Harvard Standard (by Age)

Age (months)	n	Weight (kg)	Length (cm)	Weight-for-Age	Length-for-Age	Weight-for-Length
0–5	15	4.9	56.0	93.5	96.0	102.5
6–11	18	6.3	63.2	73.1	90.4	95.3
12–17	15	6.8	67.0	65.2	86.3	94.7
18–23	18	8.5	75.1	72.4	89.4	86.1
24–29	9	9.0	77.0	70.3	86.3	86.7
30–35	13	11.2	83.3	80.4	89.0	96.6
36–41	8	11.4	85.1	76.6	87.3	95.3
42–47	11	12.6	90.9	78.9	89.8	93.8
48–53	12	13.3	91.8	78.5	87.6	97.4
54–59	12	14.2	95.7	79.4	88.6	97.6

Appendix F:
Mean Weights and Lengths of Children in Tau, Anguganak and Wosera

Anguganak[1]				Wosera[2]					Tau[3]			
Age Group (months)	N	Weight (kg)	Length (cm)	Age Group (months)	N	Weight (kg)	N	Length (cm)	Age Group (months)	N	Weight (kg)	Length (cm)
0-2.9	25	4.1	53.4	0-3.0	154	3.7	150	52.4	0-2.9	3	3.8	51.6
3.0-5.9	28	5.6	59.3	3.1-6.0	176	5.1	169	59.5	3.0-5.9	12	5.2	57.0
6.0-8.9	19	6.4	63.1	6.1-9.0	170	6.0	165	64.1	6.0-8.9	10	6.1	62.1
9.0-11.9	21	7.1	68.0	9.1-12.0	132	6.9	131	68.5	9.0-11.9	8	6.5	64.4
12.0-17.9	44	8.0	71.8	12.1-18.0	269	7.6	264	72.2	12.0-17.9	15	6.8	67.0
18.0-23.9	47	8.8	75.8	18.1-24.0	332	8.8	323	77.4	18.0-23.9	18	8.5	75.1
24.0-29.9	45	9.6	79.8	24.1-30.0	343	9.8	180	81.9	24.0-29.9	9	9.0	77.0
30.0-35.9	37	11.4		30.1-36.0	357	10.7			30.0-35.9	13	11.2	
36.0-41.9	54	11.8		36.1-42.0	279	12.0			36.0-41.9	8	11.4	
42.0-47.9	34	13.0		42.1-48.0	289	12.9			42.0-47.9	11	12.6	
48.0-53.9	36	13.4		48.1-54.0	230	13.8			48.0-53.9	12	13.3	
54.0-59.9	25	13.8		54.1-60.0	262	14.4			54.0-59.9	12	14.2	

1) Source: Thomason et al. 1983
2) Source: Ross 1984
3) Source: Field notes

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Plates

Frontispiece:
Mangrima, almost five years old, eats a piece of yam with pandanus sauce.

1
The typical dwelling of the northern Kwanga is the *merhenge aka* (ground house). Hamlets along the main crest are broken up by the unsurfaced side road which leads from the northern Kwanga villages to the Sepik Highway.

2
The hamlet Warmesi hides on a side ridge.

3
Sahamoku has fetched cuttings from an old garden. Since women may not break the soil with a digging stick, her husband Hauseng will plant the taro and banana cuttings in the new garden.

4
Hauseng stakes yam vines. In the foreground we see a yam vine tied around a liana; the upper end of the liana is fastened to a pollarded tree, the lower end to a tree stump on the ground.

5
The garden plot to the right has been cleared for burning; it is now in the *taussubu* stage. The plot to the left is called *noome* because the first yam crop is in the ground. The northern Kwanga practise a technique of mixed cropping: banana, taro and other crops are grown on the same plot.

6
In the foreground we see the dry yam vines of an *ungwamu* (i. e. a garden in which the second yam crop is in the ground). The garden plot in the background has been cleaned after burning; the steep slope has been secured with soil retainers (i.e. horizontal wooden planks fastened with pegs); it is now ready for planting.

7
Kakiawor fetches food in her *ungwamu*. She has already packed the food into her *sobo* basket and will now carry it back to the village.

8
Girls learn to carry *sobo* baskets at an early age. At five years, Mangrima has just received her first middle-sized *sobo*.

9-12
Sahamoku prepares a soup for a house-roofing feast: Her food is already simmering on the fire, and she joins several other women who are busy peeling yams. When her food is done, she arranges it on two palm spathes, separating the big yam pieces from the rest. Then she pounds the vegetables with the rounded part of half a coconut shell into a smooth, fluid pap. Finally, she fills the pap into the saucepan, stirs it, mixes special ingredients (i.e. meat, coconut scrapings and greens) and adds them to the soup.

13-15
Small-scale ritual food gifts *(auanalo)* consist of three categories: the *flerimba*, *baksombe* and the *fle*. The first term refers to a heap of coconuts, taro and banana, the second to a heap of yams and the third to a bound village pig.

16
In preparation for a *sukusa* feast, the men put sago flour into folded banana leaves, shape them artistically and lace them neatly with split cane strings. Each form has a name. Round bundles are called *ma masiki* (man, head), thin and long bundles *afserekunia* (a bird species), flat and long bundles *fuome* (fish) and the most elaborate ones, which are fastened to a frame of cane and wood, *amblambla* (butterfly).

17
The sago bundles are then baked in a bark oven between greens and hot stones.

18-19
At the *sukusa* feast cycle, the exchange items of the second sequence are yams. In the morning of the fourth day in this sequence, the area of the giving half of this exchange is fully decorated.

20
At the *sukusa* held in Kubriwat in 1984/85, the spirit Amba was represented by a single post measuring about nine metres in height, which was completely covered with coconuts.

21
At the *sukusa* held in Tauhimbiet in 1984/85, the food image respresenting the Kware spirit consisted of several short posts covered with coconuts.

22-23
The climax of the *sukusa* is the prestation of village pigs. Men form a single line along the vehicle track; they carry pigs on poles and wooden stretchers. They then storm towards the ceremonial ground, pass the ceremonial house and head towards a fence on the fringe of the hamlet. There, they lean the poles and wooden stretchers against the fence.

24
Nukiapisa (age 20 months) is regarded as a *habamba* child.

25
Inahei (age 12 months) is considered as small but strong.

26
Diwitube (age 5 years and 7 months) carries her little sister Warmesumbai (age 26 months).

27-30
The Maternal and Child Health clinic always follows the same routine: The nurse-aid first weighs the children. The nursing sister then examines them, plots their weights on the weight-for-age graph in the children's health books, writes comments in the clinic register and prescribes medications. The nurse-aid then treats and immunizes the children.

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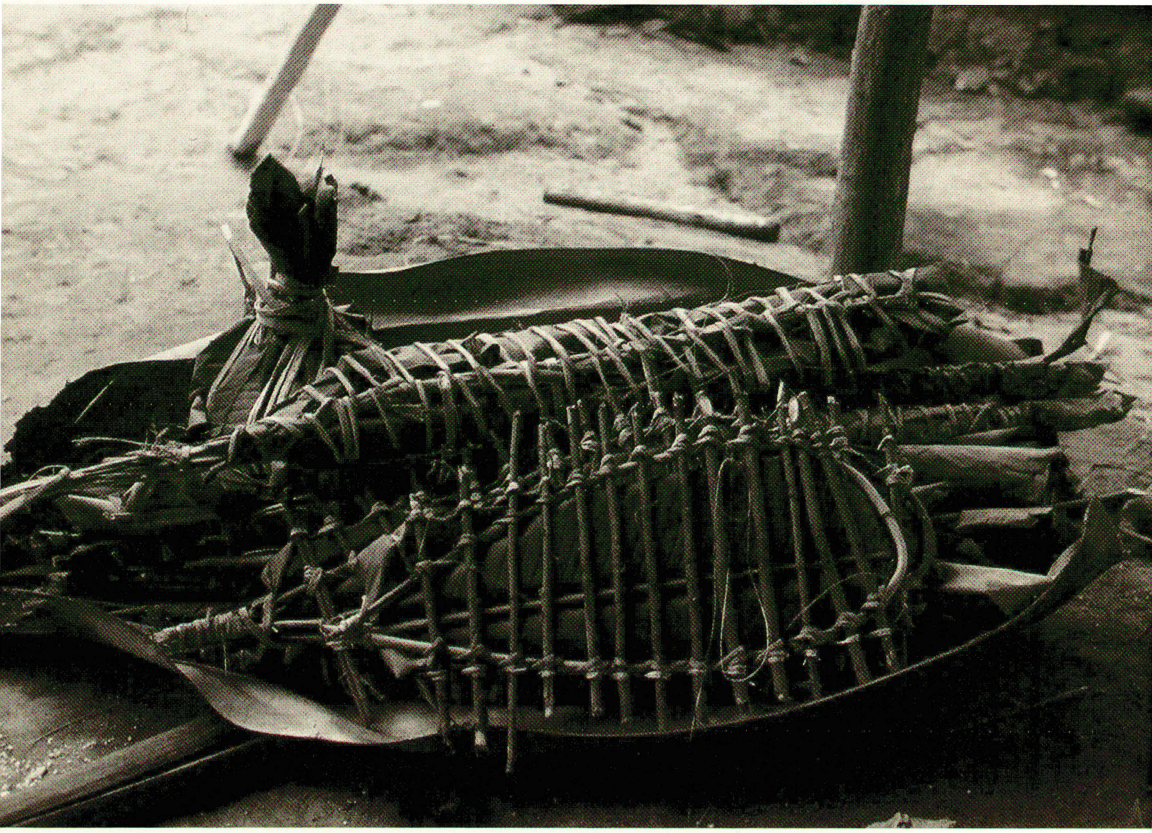

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