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**Coffee, development, and inequality in the Papua New Guinea
highlands**

Finch, John David, Ph.D.

City University of New York, 1991

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COFFEE, DEVELOPMENT, AND INEQUALITY
IN THE PAPUA NEW GUINEA HIGHLANDS

by

JOHN FINCH

A dissertation submitted to the Graduate Faculty in
Anthropology in partial fulfillment of the
requirements for the degree of Doctor of Philosophy,
The City University of New York.

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JOHN FINCH

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Date

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Date

M. J. Meggitt
Chair of Examining Committee

Jane C. Schmitt
Executive Officer

Mervyn J. Meggitt

Shirley Lindenbaum

Glenn Petersen

Terence E. Hays

Supervisory Committee

The City University of New York

Abstract

COFFEE, DEVELOPMENT, AND INEQUALITY
IN THE PAPUA NEW GUINEA HIGHLANDS

by

JOHN FINCH

Advisor: Professor Mervyn J. Meggitt

This dissertation, based on long-term fieldwork in the Eastern Highlands Province of Papua New Guinea, examines the social consequences of agricultural development. Specifically it focusses on changing social relationships in rural villages, and the impact of the expansion of agricultural commodity production on these traditionally kin based communities. Agricultural development based on commercial production of coffee began in this region after World War II, and includes both smallholdings and plantations.

The economic circumstances of the people of the Papua New Guinea Highlands closely resemble those of people who have been called "peasants" in other Third World contexts, especially in Africa. They own the land and tools, which are the means of producing much of their own sustenance (use-values), as well as commodities (exchange-values). Like these "peasants" they also engage in part time wage labor, producing, in this case the same commodity on plantations that they grow as smallholders. Local control over the means and organization of production emerges as the

most important feature of the contemporary Papua New Guinea Highlands, allowing people to preserve a commitment to an agrarian way of life and a host of other values grounded in local traditions. In spite of persistent pressures of powerful economic, political and ideological forces, this study contends that local values remain an important force in producing a complex social formation which combines both local and global features.

—

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CHAPTER I. INTRODUCTION: COMMODITY PRODUCTION AND SOCIAL CHANGE

A. Introduction

The issue of how to insure equity in the context of economic growth has been much debated by social scientists, and is a central concern of governments and development planners throughout the Third World (Chambers 1983; Seers 1972). This study examines the social consequences of agricultural development in an area of the Eastern Highlands Province of Papua New Guinea, focussing on the changing social relationships in rural villages, and the impact of the expansion of agricultural commodity production on these traditionally kin based communities.

The Papua New Guinea government's concern with equity in development was expressed in the "Eight Aims," adopted by the House of Assembly in 1973, just prior to the country's political independence, and intended to "serve as a framework for all future government policies" (Somare 1975:108). The "Eight Aims" (see Appendix A) specified the development goals of the independent state. The second aim is: "More equal distribution of economic benefits, including movement toward equalization of incomes among people and toward equalization of services among different areas of the country." In spite of the government's questionable ardor in pursuing this aim, there can be no doubt of the ideological importance of equity to the new

state. The country's first Prime Minister, Michael Somare, wrote "Equality has always been important in Papua New Guinea societies. We have had our big men and even chiefs in some societies. But we have never had the great contrast between rich and poor that you see in so-called modern societies" (Somare 1975:110).

Economic development in the highland provinces of Papua New Guinea has been based almost entirely on the production of coffee as an export commodity. Coffee is also important for the country as a whole. Coffee exports of about 50,000 metric tons (McConaghy 1987: 5) provided more than sixty percent of Papua New Guinea's export earnings from agriculture in 1986 (The World Bank 1988: 1:121). Papua New Guinea's coffee industry is a recent phenomenon. Commercial coffee production began in the Papua New Guinea Highlands after World War II, and has expanded steadily. Coffee production is divided between plantations and smallholdings with about seventy percent of the total crop grown on smallholdings (McConaghy 1987: 6).

Coffee can be easily grown and processed on a small scale, without elaborate technologies, and small scale coffee growers exist in many parts of the world (Maitha 1974; Roseberry 1983; Raikes 1978; Wolf 1956). Papua New Guinea Highlanders began to grow small amounts of coffee soon after they were brought under Australian Administration control. They needed cash, not only to pay taxes and buy

manufactured goods, but also because money began to replace traditional valuables in the customary payments marking birth, marriage and death (Gregory 1982; A. J. Strathern 1984). Growing coffee on their own land offered far better returns to labor than did working on plantations, or in any other unskilled or semiskilled job open to Papua New Guineans, and Eastern Highlanders adopted coffee growing with enthusiasm and considerable success (Finney 1973). By selling coffee, "natives who previously had felt lucky to earn a few dollars found themselves able to earn a few hundred dollars" (Sorenson 1976:230). Although the income of villagers in the Eastern Highlands Province has increased through their participation in coffee production, per capita income remains low, and the issue of how to distribute the benefits of agricultural development has become controversial (Good 1979; Good and Donaldson 1979; Duwabane 1987).

While no great difference has yet emerged between the consumption patterns of the richest and the poorest households in villages of the Eastern Highlands (Grossman 1984: 238); there has been an increasing differentiation in the control of productive resources, including land and coffee trees. The extent of this control was such that some observers considered the dominance of a class of rich peasants to be "painfully obvious" (Good 1979:114) at the end of the 1960s. Some highlanders have recently become

wealthy, but a class of landless poor has yet to come into being. Access to land for subsistence purposes still remains open to all, as does access to land for small scale commercial production of cash crops; however, access to important external resources, such as bank credit needed to start large scale enterprises, is much more restricted.

Coffee plantations began as foreign owned ventures during the colonial period, with Highlanders relegated to the position of providers of unskilled labor. After independence in 1975, the government oversaw the acquisition of foreign owned plantations by Papua New Guineans, and, more recently, the government has sponsored further development by financing small plantations owned by local entrepreneurs. Participation in wage labor has increased locally because of the new plantations. Smallholder production of coffee has also increased in recent years. Increased production of commodities has reduced commitment to subsistence gardening, and increased the labor requirements of subsistence by forcing the use of less productive land further away from settlements (see Chapter 4). The increased workload is born mostly by women (cf. Sexton 1986:50).

Although I dispute Good's contention that "a rich peasant class" is widespread in the highlands, I agree with his assessment that the state is controlled by "a bureaucratic bourgeoisie" (1986:86) whose interests are at

odds with those of the rural masses. Corruption and mismanagement are obvious problems in Papua New Guinea, and affect the delivery of services to people in the rural areas. This "educated petty bourgeoisie" is a recent creation, however, and its members have non-elite backgrounds. They were recruited to fill positions vacated by the departing Australians in the 1970s. The post independence elite has adopted aspects of the colonial class system (including, for example, a two tiered system of primary education), but their social ties give them a first hand knowledge of conditions in the countryside which the Australians lacked.

The economic circumstances of the people of the New Guinea Highlands closely resemble those of people who have been called "peasants" in other Third World contexts (see Meggitt 1971; A. J. Strathern 1982), especially in Africa (cf. Bernstein 1979; Raikes 1978). They own the land and tools, which are the means of producing much of their own sustenance (use-values), as well as commodities (exchange-values). Like these "peasants" they also engage in part time wage labor; in the case of the New Guinea Highlands, it is most often to produce the same commodity that they grow themselves but under circumstances where they do not own the means of production. As a social type, "peasants" differ from capitalist farmers, in that they run households, not business concerns (Wolf 1966:2). Peasants have a cultural

commitment to an agrarian way of life, and decisions taken within peasant households aim to reproduce both the family and its connection to the land (cf. Roseberry 1983: 200).

Roseberry characterizes peasants as "direct producers within a variety of modes of production" (1983: 195). New Guinea Highlanders combine a commitment to an agrarian way of life with a diversity of production arrangements. In their production of food crops they produce primarily for their own households, but also for local (non-capitalist) exchange. In their production of pigs they produce primarily for local (non-capitalist) exchange. In smallholder production of coffee, they produce for the world market, but with full control over the means of production. While villagers control their production of commodities, they cannot set the prices. Declining prices cause hardship to villagers who have no other sources of cash to meet household needs. Coffee prices received by villagers have dropped substantially since 1987. When villagers produce coffee on plantations they sell their labor for wages. Plantation wages are also vulnerable to declining coffee prices.

In his discussion of social differentiation in rural Africa, Raikes defines two processes which are "separate and partially contradictory." First, "the 'classic' process whereby the peasantry becomes internally differentiated with the emergence of rich peasants or kulaks, gradually

transforming themselves into capitalist farmers, accompanied by the extrusion at the lower end of landless labourers from the ranks of the poor peasantry." And second, "the processes by which African commodity production has been increasingly subordinated to the requirements of international capital" (1978: 286). A village study such as this, necessarily foregrounds, the former process, although I would argue (contra Good 1979, 1986) that the strength of local political values has inhibited the emergence of capitalist farmers in Eastern Highlands villages.

There have been a number of important studies addressing issues of social change in the Eastern Highlands. Lindenbaum (1979) has described the response of the South Fore people to a medical catastrophe that coincided with the early years of Australian Administration. Sexton examines a social movement developed by women in the Daulo region as their economic status was eroded by "colonial economic policies and integration into the market economy" (1986:36). Finney (1973, 1987) has studied entrepreneurs in the Goroka District, focussing on a rather narrow elite who have taken over the role of the colonial commercial bourgeoisie. While the first generation of Gorokan entrepreneurs was recruited from rural villages, Finney is more concerned with their involvement with commercial institutions than their relationship to the peasantry.

In a study more directly comparable to my own, Grossman

studied cattle raising in a Tairora speaking village in Kainantu District. Grossman concludes that state policy rather than local manipulation of traditional leadership positions played "the fundamental role" (1984: 240) in creating a local elite of cattle bosses. But, in spite of government sponsorship, cattle projects have not been successful, and cattle bosses have diminished in importance. A decade after Grossman's study, I found the state repeating its efforts to create a local elite by the establishment of small coffee plantations owned by local men.

This study examines a Papua New Guinea Highland Community both as an entity with its own unique culture and history, and as an example of a social process which affects many such entities. Thus it fills two gaps in the anthropological literature: the community where this study was conducted is culturally distinct and has not been studied previously, therefore needs ethnographic documentation; and there has not been any study dealing with the impact of coffee growing on the smallholders who produce most of Papua New Guinea's crop. Although no recent study of the Papua New Guinea Highlands has neglected to mention that the smallholder coffee growing has radically transformed the region, no study has focussed on typical smallholders.

B. Field setting: Ontena village

The Eastern Highlands Province is one of nineteen

provinces in Papua New Guinea. The province has a population of 274,608 (World Bank 1988: 107), with the provincial capital at the town of Goroka. The province is divided into six administrative districts. The Kainantu District is located in its northeastern corner, at the edge of the Highlands. The town of Kainantu was established by the Australian colonial government as a patrol post in 1932, and became a significant commercial and administrative center during the colonial period. It now is overshadowed by Goroka as a center for government and commerce, but is still the second most important town in the province. Kainantu town now has a population of about 4,000, and provides its district with basic services. It is well served by communications and transportation networks, and contains a small shopping center, two banks, a high school, a hospital, a post office, and other government facilities. Kainantu with its position as the "gateway to the highlands" was among the first parts of the highlands to be contacted by outsiders, and has been a focus of social change in the region. The Highlands Highway, recently renamed the Okuk Highway after a Highlands politician, connects Kainantu to the port town of Lae and to other Highlands towns. A network of unpaved roads extending from the Okuk Highway reaches most of the villages in the Province.

The 70,000 people of Kainantu District (Kershaw 1986:3) are divided among several ethno-linguistic groups. Each of

these comprises many named local groups or tribes¹ with populations ranging from 50 to 700 (R. M. Berndt 1971: 382). The ethno-linguistic groups had no political unity in pre-contact times, and tribes were the largest indigenous political units. The members of a tribe live in small villages within the tribal territory. Tribes are not linked to each other through any stable system of alliances, but since marriages frequently cross tribal borders, each individual has a network of kin that extends beyond his own tribe. In the past these personal connections formed the basis for political alliances made between groups. Tribes are subdivided into land-owning patri-clans called "ropes" or "vines" in various local languages (e.g. nofi - Kamano; nanti - Ontena; anta - Tairora). Within the traditional village, men lived in a large central men's house, and women and children lived separately in smaller houses. In the villages near town, men's houses have not been built for several decades, and people now live in households based on the nuclear family unit.

Ontena, where I conducted fieldwork, is about twenty kilometers south west of Kainantu by road. The Ontena tribe had a population of 396 people in 1962 (Pataki-Schweizer 1980:64). They occupy a territory of 30.6 square kilometers, giving them a population density of 13 people per square kilometer. Since that time, the population has been growing at a rate of about 2% per year. My 1987 census

recorded 688 people living in Ontena's main settlements.² Ontena is divided among several land-owning exogamous patri-clans (nanti). In the past, villages were usually composed of adult men from only one or two clans, but now most settlements contain members of several clans.

About three quarters of Ontena's population lives in a series of hamlets along a ridge overlooking Ontena creek. The ridge is divided into two parts by the government run Ontenu Community School, located at the point where a vehicular road meets the ridge. To the north of the school are a series of dispersed hamlets dominated by the Ionanti and Waisionanti clans (Sayafapa, Imuntopa, Iomagufa, Yafanapipa, Amunta, Karufapa, Takaurepa). To the south of the school is the largest hamlet, usually called "the village" (hauslain). This is the most densely settled part of Ontena, and has been continuously occupied since the early 1950s (see Kelly 1952). Several additional hamlets adjoin "the village" (Fifipapa, Inafipa, Bareks). Enaonanti and Sibinpekena are the most important clans south of the school. North of the school, on the "Amunta side", small groups of houses are dispersed through coffee gardens. The Amunta village of the early 1950s has been nearly abandoned, but the old village site is marked by large coffee trees still growing there. The new hamlets are only a few hundred meters away, but by dispersing in different directions, people have created much less crowded living conditions.

Along the road leading to the ridge are the hamlets of Yantuna, Bayakote, and Koreimpa, settled because of easy access to transportation. The small hamlets of Sintamariopa, Bebina and Bananinta (Omunapa) are located across Ontena creek, away from the road.

In the three most outlying hamlets, Iyuyapa, Agatafa and Matonafa, Ontena people live with people from other groups. These settlements are several miles away from the main part of Ontena and are not connected to the other settlements by any vehicular road. There is little day to day interaction with people in these three hamlets, and I did not include them in my most recent census figures.

In pre-contact times Ontena people interacted with members of local groups speaking seven different languages: Ontena, Agarabi, Gadsup, Usarufa, Auyana, Tairora, and Kamano. All of these languages are part of the East New Guinea Highlands language stock (Wurm 1964), but the first six are part of the Eastern language family, whereas Kamano (also known as Kafe) is part of the East-Central language family. The language spoken in Ontena is shared with a small cluster of neighboring tribes. In Ontena it is simply called Ontena baya (language) and I shall follow this usage here, although in some of the literature these groups have been called "Oyana" (Wurm 1964, McKaughan 1964, 1973), "Gadsup Outliers" (Watson 1965), "Koga" (R. M. Berndt 1971) or "Onkena" (Robbins 1982). I also follow Ontena usage in

spelling the name "Ontena," although it usually appears on maps and official records as "Ontenu", reflecting the Kamano pronunciation.

Ontena is bordered to the north and west by Kamano speaking groups and to the east by Tairora speaking groups. Only on its southern border are there tribes which share Ontena's language. In pre-contact times the people of Ontena were involved in intermittent wars against all of their neighbors regardless of linguistic or cultural affiliations. Their main enemies were found among the tribes that directly bordered Ontena territory. These groups also provided marriage partners, and served as Ontena's most important allies. Groups located further away had less important roles in marriage, trade, and warfare.

The people of Ontena claim some degree of inter-intelligibility between their dialect and the Gadsup language spoken by groups living to the east of the Tairora.³ They also claim a relationship with the Usarufa language spoken in an enclave about ten kilometers to the west of Ontena, and preserve a tradition about how the two groups separated because of an argument over the pronunciation of the name of a tree. Ontena baya appears to be a link in a dialect chain connecting the Gadsup and Auyana languages.⁴ The linguistic relationships are in line with their present geographical positions; Ontena is located midway between Gadsup and Usarufa, suggesting that these

languages developed in much the same locations that they now occupy, although Gadsup and Usarufa no longer border the area where Ontena baya is spoken. The Auyana language, spoken by groups living ten to twenty-five kilometers south of Ontena, is not mutually intelligible with Ontena baya. In the pre-contact period Auyana groups provided an important refuge for Ontena people fleeing military defeat. At present several Auyana families have moved to Ontena to take advantage of the better social services which Ontena has by virtue of being closer to the town of Kainantu.

Tairora is only distantly related to Ontena baya. McKaughan suggests that the Tairora language developed outside the Tairora valley, and that groups speaking Tairora expanded their territory and "pushed into the area" (1973:707) thereby separating Ontena from the Gadsup groups. The Kamano language is even less closely related to Ontena baya, and, like Tairora, appears to have been expanding its territory during the recent past.⁵ The expansion of Kamano speaking groups has brought them into contact with distantly related ethno-linguistic groups. While some groups may have been displaced or absorbed, both Usarufa and Ontena have survived as distinct enclaves, cut off from their immediate linguistic relatives.

The linguistic diversity of the area reflects some local differences in other aspects of culture, but these are disappearing rapidly, and therefore are difficult to

evaluate. I was able to observe only trivial differences between ethno-linguistic units. Kamano and Tairora groups have different traditional dance styles and used different materials for clothing. But differences in military organization or in agricultural methods may have been important in the past. For example, Ontena traditions attribute the introduction of new, more aggressive military tactics to their Kamano neighbors.

Polylingualism is common throughout the Kainantu region, especially among groups whose own languages have few speakers. Every adult and most children in Ontena are able to speak at least two languages. Women often move into different language areas when they marry. Many social relationships cross linguistic boundaries, so polylingualism is a useful social skill. Because more people speak Kamano, it is also the most common second language in the area. English and "Tok Pisin" are now widely spoken in the region and especially in town, but Kamano continues to hold its own in Kainantu.

Subsistence in Ontena, as in other parts of the New Guinea Highlands, is based on the cultivation of sweet potatoes, and a variety of secondary crops. Pigs and dogs are the only traditional domesticated animals. Techniques of pig husbandry are relatively simple. Some sweet potato is produced for pig fodder, but pigs are fed irregularly and have to forage for much of their food. Food gardens are

fenced and the pigs left free to wander outside. Prior to about 1930, only the tools available to Ontena people were made of wood or stone. Basic tools now include spades and machetes. Subsistence tasks are allocated by sex; women rear children, do most of the routine agricultural work and feed the pigs, while men do the heavy agricultural work, tend special crops, and hunt. In pre-contact times, males were also responsible for defending the village, a role which took precedence over all other activities.

Traditionally, there was no economic specialization in the production of basic food crops, although food was exchanged between communities on a significant scale for social and political reasons. Such items as stone tools, salt, bark cloth, and shell and feather valuables used in personal decoration were traded, but this has entirely ceased. Agricultural land was relatively plentiful in the pre-colonial period, and older informants insist that land disputes were never a cause of warfare. However, border areas were sometimes occupied when defeated enemies had abandoned their territory.

The Kainantu region is characterized by valleys and rolling hills framed by mountain ranges. Several of the peaks figure significantly in local mythology. The highest peaks are over 3,500 meters above sea level, while some of the valley floors go down to 1,075 meters (Pataki-Schweizer 1980: 18). The hills gradually become higher to the west;

and south of Kainantu, the rolling hills are gradually replaced by steep ridges. The Markham escarpment which forms the eastern border of the highlands is about thirty kilometers from Ontena. It is a formidable barrier which permitted virtually no communication across it during the pre-colonial period. The high mountains which form the northern border of the Markham valley are clearly visible from Ontena, and in pre-contact times people believed the Markham valley was the land of the dead, inhabited by ghosts.

Ontena is located south west of Kainantu in the Kratke Ranges. Its climate is made somewhat cooler and damper by its position on a high mountain ridge. The Ramu river flows through Ontena territory and past Kainantu before it empties on the north coast of New Guinea, while the watershed of the southern part of Ontena territory flows into the Purari river and the Gulf of Papua on the south coast. The dry season runs from May to October, and the wet season runs from November to April. Daytime high temperatures reach about 25°C, while nighttime temperatures may drop to 10°C, or even less during the dry season, when the variation between day and nighttime temperatures is more extreme because there is less cloud cover. Rainfall is slightly higher than the annual average of 2117 mm. recorded at the Highlands Experimental Agricultural Station at Aiyura (Grossman 1984: 113).

The natural climax vegetation in this part of New Guinea is oak and beech forest, however, in the vicinity of Kainantu, most of this has been replaced by open grassland as the result of generations of agricultural activity. Patches of forest remain in mountainous areas and scattered through the grassland areas on steep slopes bordering streams and rivers. Cultivation continues to displace forest, and such practices as setting uncontrolled fires in the grassland for hunting inhibit reforestation.

Ontena territory includes rolling grassy hills and forested mountains. Both forest and grassland areas are used for gardening. More fertile soils are found in the forest, but high altitude and cool temperatures restrict the variety of crops that can be grown there. At high altitudes, crops mature more slowly and there is risk of frost damage. The forest provides villagers with important resources. Groves of nut pandanus (imi), a valued luxury crop, are planted there. Wood and vines used to construct houses and fences around gardens are mostly gathered from the forest. In other regions of the Eastern Highlands, cultivated casuarina trees are used for fencing and building materials, but never in Ontena because forest hardwood trees provide more durable wood. The forest also provides villagers with most of their firewood; and with small mammals, birds, mushrooms, and herbal medicines. Since most potential agricultural land is now under grasses, the bulk

of farming in Ontena is done in grassland. Grassland gardens have lower soil fertility, more problems with weeds and insect pests, and fencing materials must be brought in from the forest.

Local variations in climate affect the agricultural potential of land. Ontena territory is relatively safe from drought because it is cooler and wetter than much of the surrounding area. In the 1987 dry season, Ontena people were able to make gifts of food to kinsmen living in nearby areas which were suffering food shortages. On the other hand, much of Ontena territory is at or near the limiting altitude of the crops grown in the highlands. Oyana, on Ontena's southern border, has gardens at altitudes up to 2,300 meters, the highest recorded for the area (Pataki-Schweizer 1980:22). Dry season frosts frequently damage gardens in Oyana and the higher parts of Ontena territory. Frosts are unusual in the grassland portion of Ontena territory, where most of the population lives and cultivates their gardens.

C. Field methods

Most doctoral dissertations in anthropology are based on a period of fieldwork that lasts only one or two years. Because of the short, finite period of research, anthropologists are often accused, of not taking their relationships with their research subjects seriously. This dissertation is the outcome of a relationship that has

already lasted seventeen years, and a commitment to the village where the research was conducted which transcends this project. As I spent more time in Ontena, I ceased being conscious of cultural differences between me and Ontena people. Local values strongly favored my participation in village life. Because the culture had become so un-problematic, I chose to investigate political economy rather than culture for my doctoral research, and only in writing this dissertation has Ontena's distinctive culture come again into focus. My long association with Ontena has other advantages in addition to establishing an equitable relationship between researcher and subject. I have been able to observe social processes unfold through time and to know people at different stages of their careers.

My involvement with Ontena began in 1974 with an undergraduate research project. I have been back to Ontena five times. If an adolescent interest in exotic cultures first attracted me to the New Guinea highlands, Ontena has now lost whatever exoticism it had. When I mentioned to a Frenchman travelling in the Highlands that I was going to Kainantu, he said "There is nothing to see there, just people living in huts." However, its very ordinariness, gives Ontena a different kind of importance as an object of study since it grapples with problems common to many parts of the world as it moves from an independent non-industrial

past to an integrated position within the global economy.

I arrived in Ontena for the first time at about 9:30 at night, and was offered a place to stay in a small round house occupied by several teenaged boys. It was too late to work out any other arrangements. People thought I was a missionary because I was arriving from Ukarumpa, the headquarters of one of the largest Christian missions in the country, and they crowded into the house to hear a sermon. I awkwardly turned them down, and tried to explain my purpose for being there. A young man led an ecstatic prayer thanking God for sending me to them.

I was offered permanent accommodation in the house where I stayed the first night, but it would have made for very uncomfortable living conditions. The next morning I met the village councillor, Aroako. He was also building a large house in Amunta near his new coffee garden. This house was nearly complete when I arrived, and it was internally divided into four rooms. Aroako offered to let me stay in a room in the house, and I agreed to do so. Amunta suited me very well. The main village felt overcrowded and dirty, and Yantuna, where Aroako's old house was located, was too small and far away from other settlements, but in Amunta I felt I could be comfortable and carry out my study.

Joining Aroako's household located me within a specific family and greatly reduced the social distance between me

and other villagers. It also gave me access to Aroako's guidance and his encyclopedic knowledge of his culture. During this visit I recorded myths, and accounts of traditional warfare, and relied on Aroako as both a key informant and a translator.

The land dispute described in Appendix D was the critical event which shaped my dissertation project. In May 1982, I received a letter from Aroako informing me that he had killed a man in a fight over coffee land, his hand had been cut off, he needed an enormous sum of money to pay compensation, and he might be in jail for the rest of his life. I wrote to various people to learn about the incident, and I contributed to the compensation payment. My contribution was much smaller than what had been requested but still a substantial amount. Aroako was convicted of manslaughter and served a one year sentence. His jail term gave him time to compose letters, and access to literate individuals who could write for him, so we corresponded more frequently than before.

The gravity of these events forced me to reconsider my focus on cultural abstractions (my Master's thesis was a structural study of Ontena myth), and to look at more manifest problems of power and conflict. What led up to this incident which was so clearly a disaster for all involved? What led a highly ethical man to kill his neighbor? The changing status of the Ontena coffee

plantation, which had been acquired and expanded by a villager, confirmed my decision to study political economy.

When I returned to Ontena in 1987, I rejoined Aroako's household, but his circumstances were much less prosperous than in 1974. The house where he lived was large, but it was old and crowded since it was shared by two families. The task of building a new house occupied much of the first few months of fieldwork. We finally built a comfortable house which we shared during my fieldwork, and where Aroako now lives. My repeated visits have lessened the social distance between me and Ontena villagers, especially with the older generation, but Papua New Guinea's status as an independent country has increased the social distance between me and Papua New Guineans outside the village.

An incident which occurred during my fieldwork in 1987, underscored my changed status in light of the political changes of the past two decades. I was visiting Goroka and two policemen approached me and asked me to come to their office for questioning. I did not know it, but these two men had just returned from Ontena (a distance of eighty kilometers) where they had been looking for me. By coincidence I was in Goroka on the same day. They asked me what I was doing in Ontena, and said that they suspected I was leading a criminal gang. I had no identification documents with me except for a student identification card, and a U.S. driver's licence. My passport was in Port

Moresby at the Institute of Papua New Guinea Studies because the procedure for obtaining a long term research visa required it to be surrendered to immigration officials for several weeks. I was unable to reach anyone at the Institute who could have confirmed who I was over the phone, so the police decided to retain my documents pending further investigation.

The investigation had apparently not progressed two weeks later when I returned to Goroka. The chief inspector told me that my story "did not check out" and he was awaiting a reply from Interpol. Things were finally straightened out when the research officer for the Eastern Highlands Province reached the police officer by phone and explained that I was conducting an approved project. I never learned the source or the nature of the allegations made against me. I presume that they originated outside Ontena. The incident underscored the change in my status from privileged colonial to suspect foreigner.

When I first arrived in Papua New Guinea, most of the officials with whom I dealt were white Australians, and even without seeking privileged status, I was granted it. On my first "patrol" through the highlands, I was expected to employ carriers, and warned not to overpay them lest I "ruin it for the rest of us." Although political independence has not ended Papua New Guinea's economic dependence on its former colonial master, most officials are now Papua New

Guineans.

Participant observation has been the major part of my research. Most of my information derives from living in the village as a member of Aroako's household. I collected genealogies, and conducted a census of the village to obtain information about kinship, residence, and ownership of significant productive resources, such as, holdings of coffee trees, numbers and types of livestock, and the nature of productive activities undertaken for commercial rather than subsistence needs. I counted the smallholder owned coffee trees to supplement my data on coffee holdings.

I tape recorded interviews with more than fifty people about a wide range of topics (pre-contact history, mythology, local politics, and life histories).⁶ While I have a personal relationship with Ontena, my study necessarily extended beyond the village. I attended meetings and ceremonies in neighboring villages, and interviewed owners of neighboring coffee plantations, as well as officials connected with the National Plantation Management Agency.

In Port Moresby, I conducted research on the early years of colonial rule at the National Archives, and research on land sales and land tenure conversions at the Department of Lands.

D. Overview

Chapters 2, 3 and 4 present the ethnography of Ontena

village. Chapter 2 discusses the social and cultural equipment that the people of Ontena brought to the their encounter with the world. It is divided into three sections, "Idioms of inclusion" which discusses the basic social organization of Ontena, "Traditional rituals and beliefs" which discusses the ideology of pre-contact life and how beliefs were expressed in rituals, and "Leadership and intergroup conflict" which discusses political dynamics. The social processes of the pre-contact period provide the foundation for those of the present.

In Chapter 3 I examine the transformations village society has undergone from colonial period to the present. I consider how the cultural emphasis on violent and assertive behavior influences social formations to the present day, and discuss continuing manifestations of violent conflict. I discuss impact of Christian missions on Ontena and the effect that the adoption of Christian beliefs has on the village. A ceremony held to placate forest spirits provides an example of the survival of pre-contact relations with the supernatural world, and two recent funerals are analyzed to reveal the ideological conflict between traditional practices and introduced beliefs.

In Chapter 4 I examine the subsistence sector of the village economy. In contemporary Ontena, the subsistence sector which produces food for village consumption is distinct from the "commodity" sector which produces coffee

for export. I consider the procedures involved in growing crops and keeping livestock, as well as the cultural meanings of these practices and how they affect the cultivation of cash crops.

Chapter 5 describes the economic framework within which the people of Ontena operate. The international trade in coffee was well established before the people of Ontena saw their first "European." The structure of this existing trade provided the economic environment for the establishment of an exotic industry in the Papua New Guinea highlands. From inception of Papua New Guinea's coffee industry, coffee production has been divided between two sectors, plantations, initially owned by foreigners, and smallholdings, begun by villagers with minimal support from the Administration. This chapter also describes the process by which Papua New Guineans obtained ownership of the plantation sector.

Chapter 6 considers the position of smallholder coffee production in the village economy. First, I focus on an established settlement and look at the pattern of ownership of resources there. The next section examines village entrepreneurs. How does the coffee production of big-men differ from others? I also consider the younger generation of entrepreneurs, although they are only tenuously connected to coffee growing.

In chapter 7, I focus on the plantation sector in

Ontena and its immediate vicinity. The owners of these plantations are men with village backgrounds and they provide employment to the residents of Ontena. I divide these plantation owners into two main categories with an indistinct boundary between them. After discussing the plantation owners, I proceed to examine the circumstances of their workers. Plantation workers also fall into two categories. Local villagers who make little adjustment in order to obtain work, and migrant workers whose lives are more completely dominated by their employment. As with plantation owners, however, I found that many individuals straddled these categories. Willingness to incorporate newcomers which was a prominent feature of pre-contact social organization, also helped to absorb migrant workers into local groups at their new residences.

Notes

1. I shall call these pre-contact local groups "tribes" for want of a better term. Hogbin and Wedgwood (1953) attempted to standardize terminology of Melanesian ethnography and suggested "parish" as the term for local groups, but the word has an ecclesiastical connotation that does not seem appropriate. R. M. Berndt (1962) used "district" to refer to the same unit I am calling a tribe, but I do not want to use it because the central government uses it to refer to a larger administrative unit. "Community" is a problem for the same reason; "area communities" are recent administrative creations that encompass several pre-existing "tribes." For post-colonial social organization I prefer to use the term village, although even here I am not able to eliminate ambiguity from the term. Sometimes "Ontena village" refers to all the settlements in the territory of "Ontena tribe," and at other times "Ontena village" only refers to the largest settlement.
2. My 1987 census only covered Ontena's main settlements, and so is not wholly comparable with earlier ones. Also, in 1987, I included residents who are not members of the Ontena tribe. In- migrants consisted of government employees (schoolteachers and health care workers), laborers on Ontena plantation and their families.
3. Although Wurm's original survey of Highland languages classified Agarabe, Gadsup, and "Oyana," as closely related but distinct languages (1964: 78), McKaughan considers Agarabi, Gadsup and "Oyana" to be dialects of the same language. Of these dialects McKaughan considers Agarabi and "Oyana" to be the most closely related.
4. McKaughan classifies Usarufa as a dialect of Auyana, but notes that it "shows ... affinity to" Gadsup and "Oyana." (1973:708).
5. Kamano, in the East-Central language family, currently occupies a larger land area, and has more speakers than any of the languages in the Eastern language family. The nature of Kamano territory supports the thesis of recent expansion; much of it is dry, high altitude land that would have been difficult to exploit using the crops that were present in the area before sweet potato was introduced, less than 400 years ago. Genetic evidence reported by Sorenson (1976:103) also suggests that the population ancestral to the Kamano expanded rapidly into a sparsely settled environment; and he argues that this expansion is related to the spread of sweet potato agriculture into the area.

6. My interviews became biased toward male informants for several reasons. First, because of the patrilocal marriage system, men had more continuity in their lives, so I was more likely to know about the people and places that men told me about than those mentioned by women. The topics I was investigating also biased my interviews toward men. All plantation owners were men, and men usually controlled the process of assembling large smallholdings. Women in the age group most active as growers of smallholder coffee (40s and 50s) did not have the experience of working in towns and had not learned Tok Pisin. I never became fluent in Ontena baya, so I could not interview them without using a translator. There were several women who controlled large coffee gardens independent from ties to men, but, as they did not speak Tok Pisin, I did not interview them.

My interviews with young women who were fluent in Tok Pisin, were also less successful and interesting than those with young men. Young women were less likely to find jobs in town than young men, and most had lived relatively uneventful lives which were difficult to tell stories about. Many young women who had worked in towns married men they met in town and remained away from the village, and were thus unavailable for interviews.

CHAPTER II. PRE-CONTACT SOCIAL ORGANIZATION

A. Introduction

Endemic warfare affected all aspects of pre-contact social life in the Kainantu area. The region was characterized by "a social pattern conspicuously lacking mediation and orderly peaceful competition between groups" (Mandeville 1979:120). As an ethnographer working among Ontena's neighbors observes:

...long periods of military quiet were few.... There can seldom have been whole seasons ... without interterritorial skirmishes or killings, or larger scale hostilities. A ... community ... probably did not hold its own for long without constant effort. (Watson 1971: 242)

Military considerations were crucial in determining the size and organization of pre-contact social units. A group had to maintain a military force sufficient to insure its security. A small weak group was attractive prey for enemies who had accumulated unavenged grievances. Because of the need to preserve military strength, clans and tribes willingly absorbed new members, particularly if they already had some kin ties. A group that became too large, however, often had trouble containing internal conflicts which could themselves lead to killings.

Chronic warfare resulted in "a fairly high rate of mobility" (R. M. Berndt 1964: 201) as people fleeing their enemies found refuge with groups which received and assimilated them because of their need for additional

fighting men. Watson describes this process of continual integration of refugees into local tribes as "organized flow" (1970). In its pre-contact history, Ontena both absorbed refugees, and lost people as refugees to neighboring groups.

In a classic example of "the male supremacist complex" (Divale and Harris 1976), warfare determined residential arrangements, marriage rules, ritual practices, and the division of labor. Men resided in a communal men's house which served as a military barracks. Brides had to move to their husband's settlement while their kin accepted a brideprice to compensate for their loss. Polygyny was allowed. Polyandry was not. Rituals centered around a male cult, which sought to make boys into warriors. Men specialized in fighting, and left women to take care of most agricultural chores.

B. Idioms of inclusion

It is difficult to describe adequately the structure of traditional social groups in the Eastern Highlands Province because of their open and fluid nature. This difficulty is reflected in the variety of anthropological terms that have been used to label the units of traditional social organization (phratries, sibs, districts, patrilineages, parishes, sections, lines, clans, bounded complexes, local groups, sovereignties and pooling units). One anthropologist expressed frustration and admitted that his

inconsistent use of terms was due, in part, to his not understanding the situation in his field site (Langness 1971: 304). Adding to my difficulties is the fact that the people I studied are a linguistic enclave. Although they resemble their neighbors, I cannot consider them as part of a larger whole, and treat them as an example of a general type. Ontena people are not the same as their Kamano neighbors. They also differ from Tairora, and Gadsup although they share characteristics with all of these groups. It is clear from the literature that there are many common features in social organization throughout the Eastern Highlands, while at the same time it is also apparent that important variations exist among different regions of the province and even within ethnolinguistic units.

1. The tribe

The largest effective political unit in the Kainantu area before the 1930s was the group I am calling the "tribe." Censuses of tribes conducted in the early 1950s indicated that most consisted of populations of between 200 to 600 people (R. M. Berndt 1971: 382). The members of a tribe were expected to support each other against external enemies, and to refrain from warfare among themselves. A tribe controlled a single territory within which its members resided in one or more fortified villages. Tribes interacted in trade and in warfare as enemies and allies.

They were not linked through any stable system of alliances, but individuals had networks of kin that extended beyond their own tribes since marriages were frequently contracted across tribal borders. Kinship relationships that reached across tribal borders played an important part in the negotiating of military alliances.

Ontena was surrounded by tribes similar to it in organization, although most of them spoke different languages. Ontena had a fairly large population among the tribes of the area and controlled a large territory of about twenty-five square kilometers. It had no explicit genealogical foundation, nor is a common ancestor posited for the whole tribe. The absence of any structural link among Ontena's constituent clans suggests that this tribe, like those of the nearby Fore, "was not so much a solidary group as a coalition of factions united by their common need for security and defence" (Glasse and Lindenbaum 1971: 365). In pre-contact times Ontena's population lived in as many as six small villages within the tribal territory. The location and number of these villages changed over time. Such factors as the fertility of nearby garden land and the state of relations with neighboring groups influenced the locations and size of the villages. The position of some of Ontena's clans whose villages were separated from the others by several miles of forest further suggests that Ontena may have reached its present composition by absorbing neighbors

that were not part of the original group.

Although the Ontena tribe was not a unilineal descent group, there were beliefs about shared substance and about an important link between people, land and ancestors. Two very different accounts which I recorded about the origins of Ontena people shed light on local ideas about how a group of people is connected with a specific place.

An account related to me by A'ume, the leader of the Waisiona clan, describes how his ancestor came to Ontena and gives a plausible account of the initial settlement in Ontena:

This place, Ontena had no people. There was no one here, just empty land. Our ancestor, Impujino, came here from Hagunamura, on the side of the Kamano. He built his house on the mountain which he named Anayukapa. He searched for people, but there were none to be found. He began clearing the forest from the hill called Omunapa. It was covered with a dense forest - with huge trees and wild pandanus. Now it is just grassland, but it used to be thickly forested.

When he was clearing this forest, the ancestor of Enaonanti clan came here from Ufampa. He lived at Ufampa and he saw smoke rising where Impujino burned off the scrub. He left Ufampa saying: "What is living there and making this fire? I must follow the smoke and see." So, he came. The ancestor of Enaonanti came and made a fire at Impujino's house while he was away clearing the forest. Impujino saw the smoke, and hurried back home saying: "Hey, I pushed the coals under the ashes. Who came and started this fire?" The ancestor of Enaonanti ran into the forest and hid. The man ran away every time Impujino came back,

Impujino said: "Who comes and makes this fire and runs away whenever I come back? I'll try something. I'll cover the coals of the fire, and go back to clearing the forest, and then I shall leave my axe and take another path and that way I shall see him." He went back to cut down a tree and when he saw the smoke again he crept up behind this man and grabbed him. He held

him and demanded "Where do you come from?"

He answered: "I saw the smoke rising and I said, 'Someone is living there and making this smoke' and I just followed the smoke."

Impujino said: "I was alone here. It is good that you have come. Now there will be two of us to live here. I will not kill you or cause you trouble. We shall live here together." He said: "I am clearing the forest alone and I am very hungry for meat. Stay with me and set traps for wild rats. When you catch something, cook it, and bring it for me to eat. I shall continue clearing the forest."

He said: "Friend, I thought that you would speak like this when I came here." So, he set traps and caught a rat right away. He cooked the rat while Impujino was cutting down trees in the forest. He took a ovulum shell (kumokumo) and put it into the opening of the bamboo cooking tube and he got the leaves of a vegetable which we call punti (a type of edible wild fern). He put this in the bamboo tube and gave it to Impujino.

Impujino took the bamboo tube and was about to break it open when the shell fell out. He picked it up and wore it over his heart. He was extremely happy about the shell. He ate the rat and put his shell away in his string bag.

Impujino had many daughters and after he had eaten the rat and put the shell in his string bag, he wanted to give the man one of his daughters to marry. So, he cut her unmarried girl's skirt and tied on her new married woman's skirt and gave her to this ancestor of Enaonanti. This woman's name was Kuno. Then he gave the man land. He gave him Enamapa, a mountain in the forest, and said: "I give you this mountain, Enamapa. Do not leave it. The other side is still mine. When you want salt, you can prepare it on this mountain. When you are thirsty, you can get water to drink here." He gave him this land, and he gave Kuno to him.

Kuno gave birth to her first child - a son - and he was named Enamano. His father said: "This man gave me this land and he gave me my wife and now I have had my first child. Your name will be Enamano." It was the name of the land and he gave it to his son....

Impujino said: "Stay on this land which I have given you. When you think about the place you have left,

when you see the fires that men make there, or think about your land in Ufampa, come to this mountain Omunapa where there is a karu tree. Stand there and look around, and then go back. Do not go anywhere else. I will be here, clearing the forest. Build your house at Yanainopa (Near the waterfall).

The ancestor of Ofutira'e lived in Imunafa near Inonka in the Kamano region. He saw the smoke from the fires that the ancestor of Enaonanti and Impujino made while they worked at clearing the forest. [He quarreled with the ancestors of the Imunafa people.] One of the ancestors of Imunafa made a fire. He buried the coals in the ashes and went to his garden. The ancestor of Ofutira'e started his own fire with these coals. The other man walked back from the garden and saw that his fire had been disturbed. He said: "Friend, what did you use to start your fire?"

He answered: "Friend, your fire was there, so I used it. When I put the fire out, I'll put your coals back."

He said: "Start your own fire. Put this fire out, and put the coals back where I left them." Then he hit him with a piece of firewood.

The ancestor of Ofutira'e saw the smoke in the distance. He said: "He beat me, so I will leave. I will go to the place where the smoke comes from and see if anyone is living there." He got ready to leave and he uprooted some bamboo shoots and a seedling of a tree, the type we call "ekom." He took the seedling and the bamboo, and he dug up some earth from this place and wrapped it in a leaf. He brought these three things and came here. (This tree lived for a long time. It recently burned down, but the bamboo is still alive.)

Impujino asked him "How did you come here?" And he said: "Ah friend, I always see the smoke from your fire, and I just followed the smoke."

Impujino said: "There are only two of us living here. Now that you have come there will be three of us."

He said: "Hey friend, where can I plant this bamboo and this tree. Mark out a place and I shall plant them right away. I do not want them to dry out."

Impujino said: "Take the bamboo and plant it in Sa'opa." He went and planted it, and the bamboo now

growing all around our land was propagated from this bamboo. It first came here from Kamano. He stayed and was given land on which to build his house. The place where there is now a graveyard. Impujino said: "Make your house there and the three of us will live here."

These three men, the ancestor of Ofutira'e, the ancestor of Enaonanti, and the ancestor of Waisiona, Impujino, lived here and brought everyone here. And now all of Ontena lived here and we say ... "We are Ontena." The creek that flows through our land is called Ontena creek. (July 1974)

The man who told this story was able to trace his descent from Ontena's first settler. Based on his genealogy, I estimate that this settlement occurred about two hundred years ago. The story is a very straightforward account of how several men settled in an area of uninhabited forest which came to be Ontena tribal territory. It is full of personal names and place names which contribute to its authority as a charter for the foundation of the tribe. The places named as the origins of Ontena's first settlers are not far away. Hagunamura, Imunafa, and Inonka are located to the northwest of Ontena, in an area where people now speak Kamano, although these villages were not necessarily Kamano speaking then. Ufampa is about fifteen kilometers north east of Ontena in an area whose inhabitants now speak Gadsup. The topographical features named within Ontena: Anayukapa, Omunapa, Enamapa, Sa'opa, and Yanainopa are all located near the main village.

This story establishes the storyteller's clan, Waisiona, as the original owners of the tribe's territory.

It also implies some form of continuing obligation by the clans who received their land as gifts from Impujino. It is significant that the story does not mention several other important clans, again suggesting that Ontena is a composite of previously separate groups.

The other account of Ontena's origins is a supernatural creation story, which resembles others recorded in the Eastern Highland Province (cf. Swadling 1973: 20; Lindenbaum 1979: 51). According to this myth the various tribes and ethnolinguistic groups arose from bamboo cooking tubes filled with meat. In the version from Ontena:

An old man lived in Ufampa with his grandson. He sent the young man hunting with instructions to kill a specific animal. At first the young man brought back several ordinary animals from the hunt, and each time his grandfather sent him out again. Eventually he killed the right animal, a fantastic creature described as being covered with spines like a wild pandanus tree. The old man instructed his grandson to butcher it and fill lengths of bamboo with the meat. Then he told him to stand on the top of Ufampa mountain and throw the lengths of bamboo in all directions. Each tube produced a different ethnolinguistic group or tribe of a size corresponding to the length of bamboo landing at that location. When the young man looked out the next day he could see smoke rising from cooking fires in all directions. (This myth can be extended as far as is needed, even to account for white men.) Ontena arose from a tube filled with the animal's stomach, afu, and can be referred to as Afuwafa ("stomach place") because of this.

This myth provides no basis for the segmentation of the tribe into sub-units, but it does suggest that members of a tribe have an identity based on an idea of shared substance.

Other discussions of the origins of Ontena or its constituent clans turned up additional information. A

senior member of the Sabinpekena clan traced his genealogy back five generations to a couple (Lampuwayo and Apakarena) who were created by God on the land where the clan now lives. Clan or tribal origin stories are known in detail by only a few elderly individuals. While they are relevant to issues such as land claims, knowledge about recent usage of land is much more important. Christianity is also having an effect on origin stories, especially as younger individuals try to reconcile local traditions with new beliefs.

An important factor that contributed to a tribe's cohesion was the concentration of affinal and cognatic ties within its borders. Clans were strictly exogamous groups, but intra-tribal marriage was common. About half of the marriages made by Ontena men were to Ontena women. Each person was connected by a network of kinship links to nearly every other person living in the tribe. Kinship ties helped to dampen disputes, because people had interests in both sides to any disagreement and would intervene to resolve disputes. Although warfare was not supposed to occur within the tribe, the mechanisms for its prevention were not always effective, and internal warfare occasionally broke out.

2. The clan

The social group of greatest importance within the tribe was the clan. A clan owned land and provided the framework for organizing many activities. The male members of a clan usually lived in a single village on or near their

land. Clans were genealogically structured units, named after a founding ancestor or a conspicuous topographical feature. As noted above they are called "ropes" or "vines" in various local languages (e.g. nofi -Kamano; nanti - Ontena; anta - Tairora). Although clan membership was normally inherited patrilineally, such factors as adoptions and individual choices concerning social relationships made clan membership somewhat flexible. Ontena's villages were not single clan units; common residence did not create clanship as among some other Eastern Highland groups (cf. Langness: 1964). Ontena contained six major clans, and every adult male in the Ontena tribe is able to affiliate himself with one of these clans.

The major clans in Ontena were: Waisiona which had an eponymous ancestor, Waisikano, the son of Impujino who featured in A'ume's account. Waisikano lived five generations before A'ume. Another informant said that Waisikano took his name from a stream running through the clan territory. Enaonanti which had an eponymous ancestor also named in A'ume's account. Sibinpekena which took its name from Sibinpepa, Ontena's highest mountain peak. Sibinpekena's ancestors, Lampuwayo and Apakarena, lived five generations before the clan's current leader. Abukuna which took its name from its ancestor Abukuno, who lived at a village called Abukupa six generations before present day elders. Ofutira'e is mentioned in A'ume's account, but is

now almost extinct. Its territory included most of the site of Ontena's main village. Ka'nanti is also nearly extinct in Ontena, although non-residents connected to Ka'nanti are currently involved in village land disputes. Inoonanti and Ionanti are two clans whose origins I was unable to track down. Anonanti is a group of relatively recent refugees from Kamano-speaking groups partially assimilated into Ionanti. Yayonanti, a group of relatively recent refugees from Kamano-speaking groups partially assimilated into Ionanti.

Land and resources were owned by clans, as one informant explained:

We are Ontena, but there are also smaller groups. If land belonged to Ionanti, they would use it for their own gardens, and Abukuna could not make gardens there. There were boundaries in the forest and in the grassland. They would use their own forest when they made salt, and we could not. It was their property. If we tried to make salt there and they saw us, there would be a fight over it. We could not just go and make salt in another clan's forest. Hunting was the same.

A clan needed to maintain both a core membership and control over a territory in order to function. Temporary separation from its territory did not in itself extinguish a clan, but unless the land was regained or a claim to a new territory was established, the group would eventually cease to exist. A clan with too few members could not continue to engage in exchanges as a clan. Both Ofutira'e and Ka'nanti have ceased to act as clans in spite of having territories

still generally identified with them. The members of these groups have been assimilated into larger clans and no longer try to maintain exclusive rights to their traditional territories.

The patrilineal ideology of the clan was expressed by one informant as follows:

Our law says "Give up the land of your mother. Don't think about your mother's land. Your mother's land doesn't have strength... Your father's land has strength. Take it. Be strong and live on your father's land."

Genealogies were significant for clans, but the cooperative relationships between living people received more emphasis than ties to ancestors. Through persistent questioning, I was able to identify founding ancestors for four of Ontena's clans and to record genealogies stemming from these ancestors for members of three clans. Other clans, particularly those with imperfectly amalgamated segments, appeared to be uninterested in the question of origins. Genealogical knowledge was unevenly distributed and most people could not trace their ancestry back to a putative clan founder, even if his name was known. While patrilineal descent dogmas formed part of Ontena social ideology, their role was not rigidly deterministic. They merely provided a framework onto which social realities were mapped.

In the pre-contact period the men of a clan were concentrated in only one or two settlements, where they

lived together in the men's house. Cooperation in warfare was crucial to the clan's continued survival, so important moral sanctions limited disputes between them. Clansmen considered themselves to be brothers. Disputes among clansmen might impel individuals to leave the tribal territory, but no recognized procedure existed for a clan to divide into two, and I never came across any indication that this had happened.

Sub-divisions of the clan existed, but were not a significant part of the ideological structure. Sito nanti ("small vines") appeared to exist only as evidence of imperfect assimilation. Within sito nanti members could often demonstrate kinship rather than simply asserting it. The groups were not important social units, however, and often had several different names. The names given to sito nanti frequently contain embarrassing hints of foreign origin, and consequently it was easier to learn about sub-clans from outsiders than from clan members. Periods spent away from the tribe's territory as refugees created some ambiguity in a group's claims. One Abukuna man explained away a name attributed to his sito nanti as follows: "Our fathers and our grandfathers often went to Auyana, to Pore; so we were called "Pore nanti," but this name does not mean anything. Our real land is here [in Ontena]."

3. Kinship

In addition to his/her clan membership, each individual

in Ontena was the center of a network of kinship ties which defined and structured various social obligations. These networks extended across tribal and ethnolinguistic boundaries, and provided the principal basis for the social and economic integration of the region. Kinship ties were established by marriage and birth, but also extended beyond the limits of genealogical knowledge to include fictive kin. Continued social interaction, rather than traceable biological connections, lead people to consider themselves to be close kin, and thus individual choice played a considerable role in the activation and maintenance of kinship ties (cf. Lindenbaum 1979: 45-46).

Ontena kinship terms include a morpheme for a possessive pronoun (the examples I give here include seti, "my").¹ The people of Ontena used an Iroquois system of kinship terminology, classifying parallel cousins with sibling, and distinguishing cross cousins from parallel cousins. All clan members of the same generation were classed as siblings. Five kinship terms were used to refer to siblings; setibae - my elder brother, setifa - my younger brother, setinano'e - my elder sister, setumi - my younger sister, and setiyofi - a term used by both males and females which means "my sibling of the opposite sex." Siblings were expected to be emotionally close and cooperative, but serious rivalries often existed between brothers. Conflict between brothers was the most common theme in folktales.

Opposite sex siblings were expected to have close friendly relationships.

Marriage was formalized by a brideprice, which was substantial, but less than that paid in most other parts of the highlands. The groom's kin assembled the payment which was shared widely among the bride's kin, with the greatest part going to the elder brothers who had sponsored her initiation. Sister-exchange marriages were positively regarded because they created an equal relationship between affines, but they still had to be accompanied by the payment of (equal) brideprices. Pre-contact marital exchanges involved pigs, shells, feathers, stone axes, salt bars and other goods, but money has now replaced all traditional valuables except for pigs.² The payment of brideprice was the first of a continuing series of prestations from the groom's kin to the bride's kin. During the marriage the husband made prestations to his affines, and he had to prepare a substantial feast for his wife's brothers following the birth of each child.

Clans were strictly exogamous, but about half of Ontena's marriages were made within the tribe. Intra-tribal marriages were encouraged by the familiarity which exists between the two sets of kin. The woman did not have to leave the tribe and, because her clan does not lose her so completely, it accepted a smaller brideprice. There was no organized courtship system, and sometimes, when marriages

occur between members of different tribes, the bride and groom do not know each other before marriage.

Relationships between spouses were tense. Husbands and wives lived apart. Men lived together in a large communal men's house, and their wives and children lived in separate smaller houses. Intimacy beyond what was required for procreation was discouraged. Spouses avoided addressing each other by name, and referred to each other by kinship terms: setibafu, "my husband;" or setina'e, "my wife." Following the birth of a child, spouses used teknonyms to address or refer to each other. Distrust between spouses was reinforced by beliefs about the metaphysical danger that they presented to each other. Even a trace of a spouse's sexual fluids contaminating foodstuffs was feared as potentially lethal.

Men were allowed to marry more than one wife, but most men only had one at a time. The rate of polygyny was probably higher in the pre-contact period, before missions began trying to eliminate the practice, but polygyny shows no signs of disappearing. In my 1974 census, of 91 married men living in Ontena, 76 (84%) had only one wife; 13 (14%) had two wives; and 2 (2%) had three wives. Co-wives called each other setigobano. The co-wife relationship was notoriously tense and co-wives were expected to be hostile and jealous and to fight. Men were expected to behave formally toward their wife's kin and were not permitted to

marry their wife's sisters.

Relations between affines were constrained by obligations. Affines were frequently members of neighboring and potentially hostile tribes. Setigo, "my wife's brother/my sister's husband;" and setimasi, "my wife's sister/my sister's husband" were reciprocal terms used between affines. It was a serious insult to say an affine's name, even in private.³ Affines addressed each other by kin terms, and referred to each other by teknonyms. Until new wives bore (or adopted) children, they were addressed as awetna, "the new one." Other affinal kin terms were setintami, "my wife's parents"/"my daughter's husband;" and setinafui, "my husband's parents"/"my son's wife."

Cross cousins were also important mediators. The cross cousin relationship contained neither the implicit rivalry of siblings, nor the latent hostility of affines. Cross cousins were in separate clans, and often in separate tribes, but they were expected to safeguard each other's interests, and to warn each other about planned sorcery or raids. Two terms were used interchangeably in Ontena to refer to cross cousins, setikako, and setifo.⁴

Relatives of the parental generation were classified as setino'e - my mother, setau - my mother's brother, setifo'e - my father, or setimamu - my father's sister. One's own children and the children of siblings of the same sex were called setanimi, "my son"; or setilaumi, "my daughter."

Girls and young children of both sexes lived with their mother in her house. At the age of about twelve, boys were initiated and brought into the men's house where they lived with their fathers and other clansmen (see below). Nowadays children reside in nuclear family units.

In addition to their biological parents, many Ontena children acquired an additional set of parents through adoption. The reasons for adoption were varied, and were not limited to childlessness on the part of the adopting couple. Adoptive parents frequently were close biological kin. They took custody of the child at a young age and raised it as their own. Efforts were made to hide the child's true parentage, and it was considered bad form for the biological parents to interact too closely with the child.⁵ Nevertheless, children became aware of the identity of their true parents, and could decide to return to them. As among the neighboring Kamano, "adoption is a process of moving a child from one group to another, without entirely severing its ties with the first group." (Mandeville 1981:231) Thus adoption really gave a child two sets of parents. The practice of adoption was not discussed openly, and it had the effect of obscuring and confusing genealogies.

Girls were adopted more frequently than boys were. One reason for this was that because biological parents could not receive any part of a girl's brideprice, it was seen as

more equitable if an adoptive family raised the girl and could be repaid for its labor with part of the brideprice. Adoptive parents also benefited from the labor of young girls. Girls as young as seven or eight helped care for younger children and also worked in gardens. Women often had an adoptive daughter to help them care for their first biological children. If a boy was adopted outside his natal clan, that clan retained a residual right to him and could regain full rights by making a payment to his adoptive parents when he reached adulthood.

The relationship between mother's brother, setau, and sister's child (setinauta) was an important one involving reciprocal gift giving. The economic dimension of this relationship was established shortly after birth, when the baby's father prepared a feast for the child's mother's brother, and maintained until after the death of the nephew or niece, when the mother's brothers received gifts at the mortuary feast.⁶ Because a person was provided with his/her body by his/her mother, his/her clan remained indebted to his/her mother's clan throughout his/her life.

In the grandparental generation, grandfathers are setina'u and grandmothers are setika'o. These terms are frequently extended as polite forms of address to any old person.

Grandchildren are called setina, "my grandchild."

C. Traditional rituals and beliefs

Any attempt to isolate a body of beliefs and practices to designate as the "religion" of pre-contact Ontena is artificial. Indigenous religion was not codified, nor did it have specialist practitioners. Many practices that a Western observer might wish to label as involving the supernatural, such as sorcery or garden magic, were not seen as being in any way transcendental, but were simply extensions of the more directly observable technologies of warfare and agriculture. I discuss such practices with their empirical counterparts. In this section I focus on communal rituals and on those aspects of belief which were associated with ritual activity.

The preoccupation of traditional societies of the New Guinea Highlands with the construction and perpetuation of gender ideologies has earned them an important place in the anthropology of gender relations (see especially Faithorn 1975, 1976; Langness 1967; Lindenbaum 1976; Meggitt 1964, 1976; Meigs 1984; Read 1952; M. Strathern 1972, 1988). The domains of women and men were sharply divided, subsistence tasks being allocated on the basis of sex, and the sexes kept residually segregated. Men maintained an ethos of aggressive superiority and kept secret ritual paraphernalia, which women were prevented from seeing under threat of death. Furthermore, male cult rituals absorbed large amounts of community resources and were an important focus of social groups.

Masculine ideology was inculcated in boys during violent initiation rituals (see Read 1952, R. M. Berndt 1965, Hays and Hays 1982, and Newman and Boyd 1982 for descriptions of these rituals among neighboring peoples). The brutal treatment of the initiates considered necessary to transform them into men and to prepare them for the male role of warrior. Traditional Eastern Highlands initiation rituals seem exceptionally severe when compared to similar rituals from other parts of the world, but they follow the general pattern of rites of passage: the initiate dies a symbolic death in one status, is secluded outside society, and reenters society with a new status.

Men's aggressive stance masked a fundamental ambivalence toward women. On the one hand men presented themselves as the superior sex and devalued women as weak and dirty, but they also envied women for their rapid maturation and control over reproduction. Secret myths explained that men's ritual paraphernalia was stolen from women, and men's purification rituals imitated female body functions by inducing bleeding of the nose and penis. In some communities at least, this was a conscious imitation of menstruation (Newman 1965: 79; Read 1986: 197).

1. Male initiations

In pre-contact times, all Ontena males went through a series of initiation rituals before they achieved the status of adult men. There were two main phases, described in Tok

Pisin as "nose bleeding" (sutim nus) and "becoming a man" (kamap man). These rituals have not been held in Ontena since the early 1950s. They were opposed by the administration because of the violence that they entailed, and they were suppressed by the Christian missions because they seemed to comprise a competing religion. Although the initiation rituals have been discontinued, I obtained accounts from several men who had gone through all or part of the process.

Initiations were held at irregular intervals when the men of the village decided enough young boys were of the right age (approximately eight to twelve years old). At initiation the boys were brought to live in the men's house with their fathers and elder brothers, and the process of turning them into warriors was begun.

The ritual began with the boys being tricked into thinking that they were chasing enemy raiders into the forest. They were directed to a stream where several of their adult kinsmen were lying, apparently killed by enemy arrows, and told to help bring their kinsmen's bodies home for burial. When the boys approached the bodies, they sprang to life and attacked them, severely beating them and whipping them with nettles. Elders then forced bundles of cane grass covered with salt and ginger up the boys noses to draw blood.

Boys put up resistance to the violence being done to

them. "We spat blood back into their eyes but they ignored it." However, because the novices at this stage were very young, their resistance was ineffectual. After their ordeal, the exhausted novices were brought back to the men's house by a procession of jubilant singing men. Women armed with sticks attacked the returning procession of men and boys to protest the theft and "murder" of their children. This ritual of rebellion was one occasion when women could express discontent about their treatment at the hands of men. The nose bleeding ceremony was also an occasion for feasting. Pigs were killed and gifts of food were given to the novices' mothers' brothers. At the feast, the initiates were told to spit out the first mouthful of food as an offering to their ancestors.

After nose bleeding, novices underwent a period of seclusion during which they were forbidden to drink water and their diet was restricted to raw or smoked sweet potato. One man described the seclusion:

"After the nose bleeding, you cannot go to the gardens by yourself, they do not want you to get fresh food or to eat food that has been forbidden. They isolate you completely, and you stay in the [men's] house for more than a month."

The novices were controlled by a series of taboos which emphasized their special status. They were prohibited from accepting any food from women, and were watched to prevent them from stealing forbidden food from gardens. Proscribed foods included rats, possums and anything with a fuzzy

texture. These restrictions were supposed to promote the novices' health and growth. Their behavior was monitored to ensure the separation from women was complete.⁷

Men told women and children that after initiation males did not defecate, but expelled waste through their mouths. Novices were shown a secret toilet located behind the men's house, and were told to keep away from women or small children who might notice if they were flatulent or excused themselves to defecate. Men threatened to repeat the nose bleeding if the boys associated with women or accepted food from them.

Induction into the men's house brought a boy into the world of men, and removed him from his mother's care and the part of society dominated by women. Ritual treatment was also aimed at removing maternal substance from the boy. Blood was his mother's physical contribution to his existence, and informants emphasize the large quantity that was removed at this time.

The nose bleeding ceremony also emphasized the opposition between father's clan and mother's clan. The novice's mother's brother assumed a protective role toward him during the initiation, and did not participate in beating him. Each step of a person's life from birth to death involved recognition of the role of the mother's clan in the production of the individual. The novice's mother's brother received gifts of food when his own clan assumed

control of him at the initiation ceremony.

When novices were first inducted into the men's house they were too young to contribute to the fighting strength of the clan. The main interest at this time was for the boys to grow quickly, and the substances used in initiation were believed to be strengthening and to encourage growth. The ubiquitous ginger and nettles are hot, powerful substances that are still believed to have medicinal properties.

After the nose bleeding ceremony boys moved into the men's house, but they had to undergo additional ordeals in order to "become men" (fumara) a few years later. My information about these next stages of initiation is somewhat more sketchy because I had to rely on a small number of elderly informants who had gone through the entire series of rituals.⁸ The physical ordeals introduced at this time were even more severe than in the initial ceremony. Nose bleeding was again induced, but in addition the youths were seized and long flexible canes were forced down their throats to induce vomiting. This ritual action was necessary to counteract the effects of pollution and remove any menstrual blood that the youths had inadvertently consumed in food supplied by women. Beliefs about sexual pollution neatly mirrored the biology of sexual reproduction. Men feared that accidental ingestion of menstrual blood would cause their stomachs to become

"blocked, heavy and swollen," and lead to their deaths. Men claimed that the menstrual blood was actually visible in the vomit.

Blood letting was also considered to strengthen the youths. In the later ceremonies, larger bundles of cane grass were shoved into their noses, and blood was also drawn from their tongues, fingernails and penes. Old men with greying hair held the youths down and taunted them that women would hear if they cried out as their penes were bled. Bleeding the initiate's penis was deemed to promote accurate archery. An arrow was a metaphor for the penis, and sexual intercourse was often likened to shooting. As the operation would be repeated if the initiate's archery remained inaccurate, it may have frequently achieved its goal.

During their seclusion, youths were rubbed with charcoal and decorated with leaves and vines from the forest. These symbolically hot substances protected them from the effects of their impending marriages and the sexual contact with women which threatened their health and well being. Men were considered to be hot, dry, and hard, while women were cold, moist, and soft. Symbolically hot substances were similarly utilized in the inauguration of a new men's house when the first fire was lit in a ceremony marked by the presence of colored leaves and vines from the forest and other "hot" substances. Sorcery also involved the manipulation of fire and "hot" leaves. A sorcerer

concentrated symbolic masculinity until he became lethally hot to his victim. Women were, of course, not able to do this, but concentration of feminine substances was also dangerous, and could be fatally polluting.

At the end of the period of seclusion, the initiates were given bows and arrows, and brought back to the village for a feast. The initiates' mothers played a small role in the ceremony welcoming them back to the village as fully initiated men. As their sons stood armed with bows and arrows, the women adjusted the arrows for them, thereby acknowledging the transformation of their sons into warriors.

In order to maintain their strength and masculinity, men continued to undergo the painful operations to which they were introduced during these ceremonies. Initiations were a major occasion for these ordeals, but they were also performed individually at other times. Men whipped themselves with nettles, bled their noses and used vomiting canes in order to keep themselves healthy and strong. A man's conquest of pain in ritual demonstrated of his value to the group as a warrior, and because he was "hot" he threatened his enemies in sorcery as well as in actual fighting. The practice of these painful operations of purification was a powerful expression of self control, and the inward redirection of tensions through these ritual practices may also have helped to avert conflicts among clan

members, and provided a cathartic release of pent up tensions that were too dangerous to be expressed in non-ritual settings.

The men's cult utilized a variety of ritual objects, the most important of which were bamboo flutes (sinafu) (cf. Read 1952). The flutes are no longer played in Ontena. I had a pair made for me but, because the village was in mourning, it was considered inappropriate for anyone to play them, and I never heard them played. The flutes commissioned for me were undecorated lengths of dried bamboo with the nodes removed and a hole made in the side, equidistant from the ends. They were 1.2 meters long. Their mundane appearance notwithstanding, bamboo flutes were considered to be of extreme importance and until missionaries forced their abandonment, men played them during all major ceremonies. A myth tells about men's theft of the flute from their original female owner and provides the symbolic charter for male ascendancy:

A young man heard a wonderful sound calling from the top of Sibinpepa, the highest mountain in Ontena territory. A woman lived there and the sound was her playing the flute, which she usually kept hidden in her skirt. The man disguised himself as a woman and went to visit her. He befriended her and she showed him how to play it. When she went to her gardens, he stayed at home and took the opportunity to steal the flute. She heard the flute calling from the other side of the mountain. She returned home and tried to recover the flute, but was unable to catch him. Finally they reached Iyenabobona [a mountain far to the south of Ontena]. Exhausted and out of breath she was transformed into a frog. Her cries can still be heard on the mountain when it rains.⁹

Women were not even supposed to know of the existence of the flutes, but were told that the sounds at the men's ceremonies were produced by forest dwelling ogres or gigantic birds. The myth suggests that it is because men control the flute that they are able to dominate women. The myth of the bamboo flute is, as Murphy and Murphy observe about a similar story from South America, "a parable of phallic dominance, of male superiority symbolized in, and based upon, the possession of the penis." (1974: 95) The significance of the story is not only that it relates the foundation of the social order, but it also suggests that the social order is both illegitimate and precarious. The flute was not given freely or earned fairly - it was stolen - and the belief that women once owned the flute suggests that they could regain it, and once again men would be, not merely dominated, but unnecessary.

Men in Ontena also used bullroarers (awuwufa) in their rituals. These were also secret and hidden from women and young boys. I was unable to learn any myth about their origin. During feasts and initiations, when men paraded through the village whirling bullroarers, women had to hide indoors as the men stopped at different houses to demand food.

Men in the Eastern Highlands were conscious of the constructed character of their ideology of male domination. One man explained: "The bamboo flutes... were secret. We

did not tell our mothers or our sisters or our little brothers about them. Furthermore, when we fought with our enemies, they would kill us or our good friends, but we would never say, 'You play flutes,' and they also would not say anything about us"¹⁰ (cf. Newman and Boyd 1982: 263). I suggest that this awareness arises from two sources: first the men rely so heavily on deception to maintain their domination, and second their own early childhood experiences contradict their ideological assertions.

2. Celebrations of menarche

The sexual partition of society resulted in women being strongly aware of their identity as women. They attached great importance to their linked biological and social roles as reproducers and nurturers. Predictably, in a society so concerned with the biology of reproduction, a girl's menarche was marked by a ritual but, somewhat more unexpectedly, given the society's male supremacist attitudes, the rituals marking the menarche seem to have been very important. The ethnographer of one nearby group comments on the "great emotional intensity and mystical reverence" (Salisbury 1965: 50) characterizing women's ceremonies. Women's rituals have also proved to be durable; they have withstood the onslaught of colonialism and missionaries much better than male rituals. Thus girls still have parties marking their menarche, although male initiations have been abandoned.

The ritual for a young woman's menarche was much simpler than was male initiation. Young women underwent their ordeals individually, as they reached biological maturity, rather than in groups. The ceremonies were sponsored by senior men, usually the young woman's classificatory brothers, who later expected to receive the major portion of the brideprice offered for her. After the girl completed her first menstrual period she was secluded in a dwelling house. Other young women joined her in seclusion. A large fire was built in the house, and the women ate food specially prepared for them. They were fed sweet potato, green leaf vegetables (umoku), and pitpit seasoned with ginger and salt, as well as large quantities of sugar cane. During their seclusion the young women sang songs and performed skits satirizing aspects of male - female relations. Senior men lectured the women about work and sexuality, and dragged the girls outside one at a time to be beaten with sticks and stinging nettles, "cooking their entire bodies," and to have their noses bled. After the end of period of seclusion the young woman's sponsor prepared a feast for the woman's father's sisters and mother's brothers. These relatives were presented with gifts of cooked food and raw foodstuffs.

Women went through another similar ceremony when they were sent off as brides. In these ceremonies young women also gathered at night to drink sugar cane and feast in a

house with a large fire. Elders lectured and beat them and the young women performed skits about the relations between men and women. The most important part of the ceremony involved changing the bride's clothing from an unmarried woman's long skirt, open on the sides, to a married woman's short skirt, which encircled the body. (Neither costume is worn anymore, so this part of the ceremony is no longer performed.) The actual marriage ceremony is simple and private. "They break a sweet potato and the groom takes one half and the bride takes one half, after that they start to live together."

Senior men used these ceremonies to articulate community values, whereas women used them to express their dissatisfaction with the way those values were practiced. Like the women's attacks on processions of men during male initiations, menarche rituals provided a setting for licenced and controlled expression of sexual conflict. Women's ceremonies have proved flexible enough to encompass contemporary issues in the struggle between the sexes, including conflicts caused by male drinking and gambling (see appendix B). They have become especially important as expressions of sexual ideology because few other traditional rituals survive.

3. Mortuary practices

In pre-contact times most deaths not directly due to warfare were attributed to enemy sorcery. When someone

died, his/her death was kept secret until after the immediate family performed divination rituals to identify the sorcerer. Only after this action, was the death made public and mourners began to arrive from other villages. Funerals could be long drawn out affairs, especially if the deceased was an important man. The kin of the deceased were required to hold a mortuary feast and make payments of food to his/her mother's brothers, father's sisters, and cross cousins. They also had an obligation to avenge the death.

Several methods were used to identify the sorcerer responsible for a killing. The most frequently cited was a form of cooking divination. The elders prepared bundles of sweet potato and leaf vegetables, marking each bundle with colored cordyline leaves and assigning it the name of a suspected group. Then all the bundles were cooked in an earth oven. Hair from the dead person was put in the water that was poured on the cooking stones. When the oven was opened, the bundle assigned to the guilty group would still be "raw like it had just come from the garden." Another frequently performed divination involved trying to balance an ovulum shell on a bow. First, the shell was rubbed with the bark of a special tree and with hair from the deceased. Then, the deceased was asked in turn about suspected enemy groups. "Did x kill you?" When the name of the killers was pronounced, the shell would remain balanced on the bow.

The corpse could also identify its killers directly by

its actions as mourners approached. One man explained "If you see the dead man urinate or defecate, you will know that someone from the group that killed him has arrived." Blood coming from the dead person's mouth or a snake emerging from the coffin could also indicate the presence of the killers.

The remains of the dead were usually not buried in the ground but were placed next to cliffs, on tree stumps or in the branches of pandanus trees. The dead were provided with the things they had needed in life, including seeds and cuttings, pork and other food. If the deceased was a man, his kinsmen armed him with a bow and arrow and hung a shield on his back so he could defend himself against enemies. Women were also provided with grave goods.

There were several facets to traditional beliefs about life after death, that an earlier ethnographer working near Ontena described as "vague and not always consistent." (R. M. Berndt 1965: 86). Ghosts were seen as malevolent, but were not normally involved in the affairs of the living except to seek revenge for their own deaths. Folktales sometimes featured ghosts who came back to claim relatives (cf. C. H. Berndt 1966). Although ghosts were said to go to Banamapa ("the land of ghosts"), in the Markham valley. Some aspect of the deceased's spirit was thought to remain in the clan territory and to contribute to a reservoir of clan spirit. This last belief was never expressed to me directly, but seemed implicit in certain actions.

Ethnographers working among other Eastern Highland groups have noted similar concepts. Among the Siane, a person's spirit is eventually "incorporated into the body of ancestral spirits," (Salisbury 1965: 59) which "make the land fertile" (Salisbury 1965: 57). Ontena's western neighbors, the Kamano, believe in "the merging of individual ghosts ... into the category of ancestors" (R. M. Berndt 1965: 86). Among Ontena's eastern neighbors, the Tairora, bones of the dead are valued "for the power that inheres in them" (Watson 1971: 254). Among Ontena's southern neighbors, the Auyana, an individual's soul is reported to merge "back into the collective soul" (Robbins 1982: 41).

Traditional funerals dispatched the dead person's ghost to the land of the dead. Ghosts were told:

"You must be strong and overcome whatever is blocking the path. Cross to where you belong. Go straight there, do not sleep next to a cliff, in a cave, or in a hollow tree. Follow the path until you come to the land of ghosts. The people you used to know are there. Your brothers and your mother went there. You can go and see their faces again."

People believed that in order to reach the land of the dead the spirits of the dead had to cross a wide river. They provided the dead with goods, such as weapons or pork, to be used as payment to the beings who watched the river. The death of a child was considered especially sad because its ghost would not be able to cross the river unaided, so the mourners called on its dead grandfather or other relative to help the ghost to cross.

D. Leadership and Intergroup Conflict

1. Leadership

The traditional societies of the Eastern Highlands were what Godelier calls "great men societies," (1986:162-188) rather than "big men societies" (see Sahlins 1963; A. J. Strathern 1969). Leadership was achieved primarily through success in warfare, and rather than the accumulation and control of wealth as in the Western Highlands or in Enga Province.¹¹ Leadership was not hereditary. A leader, called a "big man" (anom baita) in Ontena, created his own position through bravery, physical strength and military success.

While military advantages accrued to a tribe with a strong leader, his personal authority could become despotic (see Watson 1971). Powerful leaders might enhance their reputations for strength by blatant disregard of the rights of others, and some leaders willingly characterized themselves as "bad men" (cf. Watson 1971:267; Read 1959:435). Read described the ideal of strength that characterized pre-contact leadership throughout the Eastern Highlands:

[T]he 'strong man' is the ideal masculine type. He is a person who is aggressive, a warrior, a man inclined to swagger and boast, who displays a marked awareness of his individuality and is jealous of his self-importance. He should be an orator, able to express himself with force and also knowledgeable in various prescriptive speeches which are required for different occasions. The ability to argue is important (Read 1959:427-428).

To be successful, however, a leader required skills beyond military prowess. Read described how an effective leader needed to balance his own interests with those of his group, and as well as exhibiting 'strength,' must acknowledge the countervailing ideal of 'equivalence.' While a leader "must attempt to dominate others, he must also recognize their right to parity: he should not act in ways which make it impossible for others to achieve 'equivalence'" (Read 1959:433). Even a despotic leader such as Matoto,¹² the pre-contact leader of Ontena's Tairora enemies, needed to be an "astute politician," (Watson 1971:241) and "a manager of consensus" (ibid 251) and to transcend the role "of the 'hot' killer" (ibid 241).

The ideal of strength tended to produce an authoritarian or despotic leader, whereas the ideal that Read called 'equivalence' produced a situation where no one had the right to rule, one of anarchy. Essentially, the right to rule was situational and temporary: when a leader ceased to be effective he ceased to be a leader.

2. Distribution of Power

The relative uniformity or equality of political power among groups was one of the outstanding features of traditional political organization in Papua New Guinea. Variations in strength among tribes tended to be minor and transitory, and competition was between groups of roughly equal strength.¹³ Misfortunes occurred to all groups. In

1900 Tairora was in exile, in 1920 Ontena, and in 1940, but for the arrival of the colonial administration, it would have been another group's turn. As Brown observes:

There were no great differences in forms of political organization between New Guinea communities; none was differently armed, more productive, or stratified so as to achieve domination over another group; there were no states, no slaves, no rulers, no ruled. (Brown 1966: 150-151)

3. Motivations

Wars were not fought for the purpose of acquiring land or plunder, although valuables might be taken during raids, and land abandoned by defeated enemies might be occupied in their absence. Usually wars were begun to avenge past injuries. After each killing the moral imperative of reciprocity led to another round of feuding. As one informant stated:

We want to repay. If they kill one of us, we are angry so we go to kill them. We cannot let them kill us as though we were women, so we go to kill them. We cry, and think about his face, his nose, his eyes, and his walk. If he were alive, we could still see him. We think about this and we use our bows and arrows to shoot them.

There was no concept of fair play. "[R]ules of combat ... which limited fighting to alternate days and particular battle grounds were routinely broken and ... raids, ambushes and firing of village stockades and men's houses were subject to no code of practice" (Mandeville 1979: 120). It was most prestigious to kill the leader of an enemy group because he was the most dangerous threat, but enemy women

and children would also be killed. Aggressive behavior was encouraged, and any killing enhanced a warrior's reputation (cf. Godelier 1986: 105).

Treachery and betrayal were integral elements of traditional warfare. One group would lure another into participating in a joint raid while it was actually in alliance with the supposed victims. Then, during the raid the instigators would turn on their putative allies. Gifts and bribes were used to persuade neutral groups to help one's clan. Although warfare is usually spoken of as conflict between discrete tribes or clans, the situation was rarely so neat. Leaders drew on their kinship networks to increase the size of fighting forces, and men might encounter friends or kinsmen on the other side in battle. Direct combat with kinsmen was supposed to be avoided, but these rules were also routinely broken.

The level of violence was extraordinary, and informants' descriptions of life prior to the establishment of colonial administration invariably center on warfare, killing, and vengeance. The toll taken by warfare can be seen in data collected by R. M. Berndt in 1952 from an Usarufa speaking tribe about fifteen kilometers to the west of Ontena. He reports that of the 199 male deaths and 140 female deaths recorded in his genealogies, 91 (46%) of the males and 27 (19%) of the females died as a direct result of warfare. Furthermore, an additional 76 (38%) male deaths

and 74 (53%) female deaths were attributed to various forms of sorcery (R. M. Berndt 1971: 397-9).

In the fifty years before pacification, warriors from Ontena participated in fighting against every tribe which bordered Ontena and against many groups located further away. They fought against the Kamano-speaking tribes of Anumaga, Asonofi, Karufinavi, and Yababi. They fought against the Tairora-speaking tribes of Tairora (Abiera and Bonta'a), Arokara, Norakori and Taota. And they fought against the Ontena-speaking Oyana. When Ontena people were driven into exile, they participated in their hosts' wars. Acts of war included raids, ambushes, betrayals, and assassinations. Isolated killings were common. Ontena's most implacable enemies were Asonofi, Tairora, and Oyana. Anumaga and Karufinavi usually were allies. The antagonisms and friendships built up through this history of warfare continue to be influential.

4. Military Technology

Pre-contact villages were heavily fortified and were sited so that they could be easily defended. Oyana, on Ontena's southern border, was first visited by a government patrol in 1947 when it still had its traditional defenses in place. At Oyana:

a veritable fortress, approximately 80 yards square, was noted. It was well built and the area inside well cleaned and cared for. A small stream ran through one corner to ensure a water supply and ... the area for some distance around was cleared of all obstructions and undergrowth. (Skinner 1947: 2)

In spite of the preoccupation with warfare, military technology was simple. The main weapons were a bow and arrows. The two meter-long bows were made from black palm wood. The flat bow string was made from a bamboo vine. Arrow shafts were made from a cultivated variety of cane and were unfeathered. Arrowheads were usually made from either black palm wood or bamboo, but other types of wood were occasionally used. Many varieties of arrows existed, some elaborately carved and painted. Rectangular wooden shields were sometimes carried into battle, hung over the warrior's left shoulder. Simple undecorated clubs were sometimes used in fighting, as were knives and axes.

5. Sorcery

Warfare and sorcery were closely linked activities, differentiated by a rational calculation as to whether the tribe's resources were sufficient to attack an enemy openly or not. Sorcery allowed the possibility of maintaining outwardly civil relations, while magically destroying an enemy. Warrior leaders were frequently sorcerers, and also presided over the divination rituals where enemy sorcerers were identified. Sorcery and divination were surrounded by secrecy, creating uncertainty about which groups could be trusted, and to what extent. Only deaths in infancy or in extreme old age were attributed to "natural" causes, and most unexplained deaths were blamed on sorcery.

Only men were considered capable of sorcery. Local forms of sorcery were thought to work through the concentration of symbolic masculinity until it reached a lethal level. Like the substances used in sorcery, men are considered hot, dry, and hard.¹⁴ The forms of sorcery most important in pre-colonial Ontena were uwa'i, which involved the projection of a magical dart made from ritually hot substances, and imusa, which required the sorcerer to seclude himself in the men's house while he heated a sorcery bundle containing exuviae of the intended victim (cf. Westermarck 1981: 92-3). A sorcerer preparing imusa must not drink water while he is in seclusion, and, of course, must have no contact with women. Nowadays, the importance of these two local forms of sorcery has diminished. Uwa'i is believed to have "gone cold," losing its effectiveness; and the seclusion required for imusa is considered too arduous.

6. The Last Battle

Ontena fought a long intermittent war against its Tairora neighbors. Defeat at the hands of Ontena forced the Tairora into exile in about 1900 (Watson 1971: 233-4), and Watson describes how the Tairora leader, Matoto, would order his followers to attack Ontena and kill its leaders (ibid: 254). The final round of hostilities began when an Abukuna woman married to Matoto lured her clan brothers into an ambush. She invited them to a place near the forest to

receive a gift of sweet potato. The Tairora (Bonta'a) used the occasion to ambush the Abukuna men, killing two of them.

The Abukuna buried their dead, and plotted to avenge the killings. They also planned an ambush and invited the Tairora to participate in a raid against Ionanti. The Abukuna led them along the side of Ontena creek toward Komo'opa, the village where the Ionanti lived. When they got near the village they turned on the Tairora. Yauta, a participant in this battle described his role:

First, I shot one man, and he died at Takaurepa. We fought until we came to Amunta. [i.e. The Tairora were retreating as they fled from Komo'opa toward their homes.] I saw a man approaching. I shot him in the torso. He was about to faint. He fell and then got up. I wanted to finish him off, so I chased him. He pulled my arrow out of his flesh. He put it in his bow and drew it. I was still watching him. I had another arrow and I was holding it in the bow with the string drawn back all the way. And then they shot me. They shot me through the arm and I didn't shoot him. My arrow went uselessly over his head.

(Pointing at his arm) They shot me here and its point came out here. The arrow shattered and they cut my arm with a stone knife. Here is the scar where they cut me to take out the arrow. I shot two of them and they were carried away. I chased the Tairora as far as I could toward their village. After the fight they carried me up to Bananinta to see De'ena. I went there for him to look at me and he said, "I warned you not to fight, but you were too stubborn..." He scolded me and I passed out.

This was the last time that Ontena was subject to an attack from one of its neighbors. The Australian administration had already established a patrol post at Kainantu and life was changing forever.

Notes

1. The incorporation of the pronoun into the word also used in words for body parts.
2. The amount of brideprice required has increased steadily. In 1974 I recorded a brideprice of \$210 (Australian) and two pigs. In 1987 I recorded brideprices of up to K650, and figures of K1,000 or more were being discussed.
3. Affinal name avoidance made collecting genealogies difficult; people would not say affines' names even in private. Literate individuals were, however, willing to spell names for me.
4. Setifo is apparently a Kamano loan word, adopted because Ontena residents had cross cousins in Kamano speaking tribes. The people who speak the dialect most closely related to Ontena baya, the Gadsup, have an Hawaiian system of cousin terminology which classifies all cousins and siblings together (Du Toit 1975:324-325).
5. Adoption in Ontena is substantially the same as among the neighboring Kamano groups. As Mandeville observes: adoption is a touchy subject, more unsuitable for public discussion than adultery or sorcery. A woman will react angrily, even violently, to public talk about the status of the child she mothers, and most people discuss the topic only in private and in low voices. Villagers showed embarrassment at being questioned about cases of adoption, and preferred to discuss their own and other people's involvement in the practice during private evening meetings when the risk of being overheard was small. Investigating adoption, then, was like investigating scandal, and like scandalous doings its presence was not marked by any public ceremony or notice. (Mandeville 1981:235)
6. Payments to the mother's brother have given rise to the metaphor that a sister's child is the mother's brother's bisnis (Tok pisin for a commercial enterprise).
7. Some boys, at least, resisted the restrictions imposed on them after the ordeal of initiation. One man told me that he had accepted food from one of his classificatory mothers, was caught and was subjected to an additional forced nose bleeding.
8. Older informants tended to compress their accounts as though only one ceremony was involved. One informant began

his account of initiation with his being taken from his mother as a small boy, and ended it with his marriage.

9. See Finch (1985) for an analysis relating this myth to other Ontena mythology.

10. The man quoted here was from a different part of the Eastern Highlands (Lufa), but his observation about the flute cult applies equally well to Ontena.

11. "[T]he Tairora strong-man mystique lays greater stress on fighting competence and aggressive masculinity than on the possession or use of wealth" (Watson 1971:264).

12. Matoto seems to have appeared more formidable to his Tairora followers than to his Ontena enemies. His name was known, but he was not singled out by informants. Surrounded by enemies, Ontena faced several men who were as serious a threat to Ontena as Matoto was.

13. In spite of this general equality among tribes, imbalances of power did occur. It seems likely that Ontena-speaking tribes were losing ground to their more numerous neighbors, since today they are concentrated along a ridge of high land and are surrounded by tribes that speak languages only distantly related to their own. Ontena's isolated position also led colonial officials to speculate about its status within the region. One patrol officer wrote:

There is a small group of Gadsup speaking people [i.e. Ontena] in a pocket between the main Taiora (sic) people and the Kamano people, divided from the other and main Gadsup groups by the Taioras. How this came about, they themselves cannot say, but it is extraordinary that this small group, so completely isolated from the others, should have been able to maintain itself in existence, without either the Taioras or Kamanos apparently having been able to extinguish it in times past, particularly since the Ontenu people occupy what to the mainly grassland Taioras is the most desirable forested hunting ground and pandanus country of the range foothills. Probably the inherent disunity of the Taioras and the corresponding cohesion of the isolated Ontenu group has been the main cause. The Taioras have been so disunited and prone to fight among themselves that they have never been able to band together to oust the Ontenus. In fact it would appear that this comparatively large and strategically well situated group was held in some fear by the various neighboring Taiora people, even though the Taioras in numbers were much greater. (Linsley 1951: 6)

Ideas held about Ontena by their neighbors provide another indication that its position was relatively weak. Lindenbaum suggests that sorcery accusations are likely to be made by the powerful against the powerless, as a way of justifying their own hostility, and that "[t]he direction from which sorcery emanates is a clue to regional ranking" (Lindenbaum 1979: 138). Members of a nearby Tairora-speaking tribe state that the Ontena "make poison because their line is the mother of sorcery. Their bush is full of sorcery materials. When they make poison they never miss. The victim always gets sick and dies" (Watson 1972: 112).

14. Women are symbolically cold, moist, and soft, and therefore not capable of sorcery. Femininity can give rise to lethal pollution, but it is antithetical to sorcery.

1CHAPTER III. CHANGING VILLAGE SOCIETY

A. Introduction

The coastal regions of Papua New Guinea were brought under colonial rule in the 1880s, but the interior remained isolated until well into the twentieth century. The isolation ended with the simultaneous penetration of the area by the colonial Administration, commercial interests, and missionaries, each of which had a major impact on Highland societies. The Administration incorporated them into a political structure larger than the previously known world. Commercial interests used local labor and natural resources to produce commodities for foreign markets, while at the same time introducing into the local economy items produced in distant countries by mysterious means. Missions converted the population to religions which were organized on a vast scale and according to principles unknown to local cultures. Isolation had produced autonomous political, economic and ideological systems in the Highlands. These were unalterably changed when the isolation came to an end, but local societies were not extinguished and elements of the local political, economic and ideological systems continued to play an important if subordinate role.

B. The establishment of colonial rule

Christian missionaries and prospectors seeking gold first entered the Kainantu region in the late 1920s. Both

groups sought Administration protection for their activities as missions found themselves "threatened by tribal fighting" (Kershaw 1986:33), and miners experienced "tensions" with local people (ibid). By 1932 the Administration had founded a permanent patrol post at Kainantu and begun the process of establishing control over the surrounding area.

The first white man encountered by the people of Ontena was a prospector named Ted Ubank (Pataki-Schweizer 1980:22). He moved on quickly without finding significant gold in Ontena's streams. Missionaries had a more lasting impact, beginning in 1933, when Wilhelm Bergmann, a German Lutheran, established a mission at Onarunka in the territory of KaruFINavi, a Kamano-speaking tribe on Ontena's western border (Radford 1987:59). Catechists from the Kate speaking area of the New Guinea coast, and trained by the Lutherans brought the missionaries' message to more remote villages.

Ontena remained just outside the area under Administration control until about the end of World War II, but influences from the new center impinged immediately. The presence of missionaries, prospectors and administrators inaugurated a vigorous trade in pigs, vegetables, and labor for shell, steel tools, salt and other goods (Finney 1973:31). Manufactured goods, especially steel tools, quickly became necessities. These goods entered local trade networks, and had an impact far beyond those villages in direct contact with the Administration. The concentration

of exotic wealth at Kainantu caused an influx of wealth from the hinterland. Women, pigs, and other valuables all moved toward the new Administrative center.

Tense relationships often developed between local people and the powerful newcomers (Kershaw 1986:26). In the 1930s the administration allowed prospectors "a free hand" in their dealings with the local people (Finney 1973:29), and sided with prospectors when conflicts arose. No major discovery of gold was made near Kainantu, but enough alluvial gold was found in the rivers and streams to keep several prospectors active. The uninvited presence of armed prospectors in village territories provoked hostility. In 1934 a prospector was killed in a fight with Highlanders at Finintegu creek, and a punitive expedition was launched from Kainantu by prospectors and administration officials. The administration documented that this raid killed nineteen Highlanders, but the actual casualties seem to have been significantly higher (Connolly and Anderson 1987:188-9).

During World War II, the Japanese occupied the north coast of New Guinea, and although they never occupied the Highlands, Australian Administration was seriously disrupted. Highlanders suffered from the war because an epidemic of amoebic dysentery was introduced by carriers serving Allied troops. The epidemic spread beyond the area under Administration control, killing large numbers of people between 1943 and 1947.

Ontena's initial relations with the Administration were not good. One police raid resulted in an Ontena man being killed outright and a teenage girl and a baby suffering gunshot wounds that led to their deaths. It is unlikely that the Administration ever learned of these deaths, but they are remembered with bitterness in Ontena. On another occasion, the police were summoned to Ontena to intervene in a dispute, but they seized several villagers who were not parties to the dispute, raped one young woman, and marched their captives to Kainantu tied together "like pigs" with ropes around their necks. One woman reported how she had tried to spit "poison" into an official's face. The police were feared, and village children were warned to keep quiet or "the police will come to shoot you."

The wealth and power of the Australians inspired cargo cult activities in the Eastern Highlands during the 1940s.¹ This cult, like others in Melanesia, attributed the production of Western material culture to the actions of the dead, and tried to gain control of manufactured goods (cargo) through direct communication with ghosts. The 1940s cult was called the ghost wind, babasi. At cult ceremonies men tried to make contact with ghosts and imitated policemen by holding military drills with wooden rifles. Ontena's cult leader was eventually arrested and taken away to prison on the coast where he died. His body was never returned. There were also later cargo movements organized by local

followers of Yali of Madang Province (see Lawrence 1964), but they never attracted large followings in the Kainantu area.

Trade between Highlanders and Australians was initially conducted using sea shells and goods. Shells soon lost their value because of the vast quantities imported into the region by the Australians. By 1945, people near Kainantu were no longer willing to accept nassa (girigiri) or ovulum (komokomo) shells, instead they "avidly sought" salt, newspaper (which was used to roll cigarettes), and stick tobacco (Blyton 1945b:3). These items served as a form of currency until money was systematically introduced into the Eastern Highlands economy in 1946 and 1947.

Cash payments were first made to Highlanders at the Aiyura Agricultural Research Station in 1946 (Kershaw 1986:61), and workers at the district headquarters at Goroka were paid cash wages from 1947. At first, money was difficult to convert into useful goods and "was poorly received," (Finney 1973:40). When the first retail store in the Highlands was opened in Goroka in 1948 (Finney 1973:41), however, it sold out its entire stock twice in the first week, and the use of money became firmly established. Already in 1947 a patrol officer reported that in "influenced areas" natives were interested in "cash, newspaper, steel, salt in that order, depending on the size of payment required" (Skinner 1947:12). By November 1949,

In the KAMANO area Cash is in the greatest demand, after which Steel, Cloth, Salt, and Newspaper, in that precedence, are the best mediums of trade.... Shell, of any kind, has practically no value anywhere in the Kainantu Sub-District. (Linsley 1949:3)

As the use of money increased, it came to replace traditional valuables such as shells, even in kinship transactions. Brideprices and mortuary payments became monetized. By 1954, the demand for money was becoming a dominant feature of the local economy:

The commercial interests of these people, gold mining, timber cutting and cash cropping, are on the increase and the resulting swing to a cash economy is shown by the decrease in the purchasing power of trade goods, except steel in the [Tairora] Sub-Division. (Burge 1954:4)

Within the developing money economy, however, people retained a large measure of control over their land and their labor. Efforts made by the Administration to recruit Kainantu people for work on coastal plantations under the Highland Labour Scheme, met with limited success. "During the early years of the scheme (1952-57) very few Eastern Highlanders participated" (Kershaw 1986:62). As a 1954 report observed, "These natives [Tairora] have never been keen on leaving their homes to work for long periods outside their District (Burge 1954:3).

Even projects within the region experienced difficulty in recruiting local people as laborers. Kainantu area villagers preferred to conduct their own enterprises, and when they did seek employment as wage earners, prospective

employers found their attitude intimidating: "the younger males are ... in some cases demanding, work from their European neighbors" (Burge 1954:3). The Highlands Agricultural Experiment Station at Aiyura, quickly abandoned its attempt to rely on local workers who were deemed "unreliable as they continually failed to turn up for work" (Kershaw 1986:63).

The enterprises which provided cash income to Highlanders in the decade after 1945 included cash cropping, timber cutting, and panning for alluvial gold. All of these activities have continued to the present. Provisioning administrators, missionaries and commercial interests with vegetables, became increasingly important, as more foreigners moved into the Highlands (Kershaw 1986:85). Efforts were made after the war to establish cash crops for export including coffee, tea, cinchona, passionfruit, and pyrethrum. Apart from coffee, these crops "met with little success, usually because of poor economic returns or technical difficulties" (Grossman 1984:25). Coffee, however, flourished, and came to dominate village economies.

C. Colonial Impact on Village Organization

1. The Imposition of Political Institutions

The form of political organization that the Administration imposed on the various societies of Papua New Guinea was totally unlike the indigenous systems (cf. Narokobi 1986). Traditional societies in the Kainantu

region lacked institutionalized political offices until the Administration created them. In the first years of colonial rule, the Australians tried to identify local leaders and co-opt their authority by making them appointed officials of the Administration. In each village, they established the offices of luluai (village chief), and tultul (interpreter) as part of a strategy of indirect rule. The first luluai in the Highlands was appointed among the Agarabi in 1933 (Westermarck 1986:135), but Ontena did not get its own luluai until much later. The people of Ontena avidly sought the appointment of these officials in order to deal directly with the Administration. Although luluais and tultuls were originally intended to be first and second in command, in the Highlands they were often appointed from separate groups so that as many groups as possible had a representative. In 1952, Ontena had two luluais, and two tultuls representing four different clans. They were all men of note but did not include the tribe's most important leader, Kawono. Nor was Kawono's clan, Enao nanti, among those represented.

In 1960 the Administration decided to replaced the system of appointed officials with elected Local Government Councils in Kainantu sub-district. By 1967, four councils had been established, one for each census division (Agarabi, Kamano, Gadsup and Tairora). Because of its geographical position, Ontena was included in the Tairora council area, the last one of the four to be established. The four

councils were consolidated to form the Kainantu Local Government Council in 1970 (Kershaw 1986:70). In addition to their function as village representatives at council meetings, councilors took over the luluai's "unofficial role" in settling village disputes (Westermarck 1986:135).

In 1973, the Administration again modified the structure of local government and established an additional level of government, intended "as a political grouping ... more representative of the village people, to enable villagers themselves to take responsibility for local projects" (Uyassi and Martin 1974:2-3). These small units became known as area communities, and 35 were established in Kainantu District (Westermarck 1986:135; Kershaw 1986:71). Villages were able to choose which area community to join, and each one could "set its own rules and its own taxes" (Westermarck 1986:135).

Area communities were required to be larger than the traditional tribes or villages of the District. Although villages were free to select which area community to join, Ontena, being linguistically isolated, had a difficult decision. It eventually decided to join with Anumaga, a Kamano speaking village that bordered it to the west, to form an area community named Onamuga. There was one Ontena hamlet (Agatafa) near Anumaga, but Anumaga was separated by several kilometers of forest from the main Ontena settlements. The area community center was built in between

the Ontena hamlet and the Anumaga village. Access to the area community center from Ontena was difficult because no road linked the two villages. The center could be reached only by walking through the forest or by driving through town. Either way took five or six hours. The difficulty of travel between the two parts of the area community led Ontena to become less active in area community affairs, and eventually to withdraw from Onamuga to join its Tairora neighbors, and traditional enemies (see Chapter 2), in the Kosa Area Community.

2. Authority and Leadership

The Administration worked assiduously to remove despotic local leaders (see Salisbury 1964), but its own position was essentially despotic. Even when its officials were acting correctly, their decisions often appeared arbitrary and mysterious to the people they administered. Moreover, especially in the early days, officials did not always abide by their own regulations.

Although the Administration was feared, it was widely admired, and its powerful, aggressive officials were perceived locally as variants of traditional leaders. One villager remembered the strength of the Administration with respect:

The Administration told the luluai and tultul what to do, and they cooperated. The natives were afraid of the government and they were quiet.... People did road work or whatever, because they were afraid of jail, and they did not want the police to take them away to jail (cf. Gordon and Meggitt 1985).

From the Administration's perspective, however, the local situation seemed chaotic. Field officers complained that the population had "an individualistic rather than a community spirit" (W.T. Brown 1953:7). "Village officials have little idea what their position entails" (Blyton 1945a:5). "There seems to be far too much 'buck-passing' between the luluai and his tultul" (Linsley 1949:14). "[T]here is a lack of influential leaders and hence the village officials do not have the power most officials in other Sub-divisions have" (A.L. Redwood 1955b:7).

Pacification removed the basis for traditional leadership, resulting in a collapse (A. J. Strathern 1984:23) or "vacuum in the leadership structure" (Uyassi and Martin 1974:10). After pacification, military skills could no longer be used to establish strength. Great warriors retained prestige, but could no longer act independently.

The institution of Local Government Councils was intended to allow people to partially control their own affairs, but councils were imposed institutions without any inherent connection with local political ideas. Councils were frequently unpopular (cf. Langness 1963:152). In Kamano, people "protested against electing their own leaders" (Kershaw 1986:69) and had to be pressured into accepting "the new concept of self-government" (ibid). Rumors spread that the introduction of the council system lead to the breakdown of the social order. Visitors from

the areas where councils were first established warned Ontena people about the chaos that would result when their council was formed and "all of your women will become promiscuous, and take up whoring."

A more fundamental problem with the elected councilors was that they were not seen as strong men: Strong men should be the source of their own strength, not dependent on an electorate. Aroako, Ontena's Councilor from 1972 to 1981, explained how people reacted to councilors: "The natives say 'You are only a big man because I voted for you. I do not have to listen to you.'"

By 1974, when I began my field work, the status of councilors was improving because councilors were beginning to exercise a significant patronage function. Councilors could influence the provision of government services such as schools and aid posts. The actual council meetings, however, were still dominated by the foreign officials appointed to supervise and educate the councilors, while most councilors sat quietly through the meetings.

After the establishment of area communities, the proliferation of formal political offices conflicted with traditional ideas about the nature of political power:

"There are area representatives; there is the magistrate; there is the peace officer; there is the councilor. There are too many kinds of bosses, and this confuses the natives.... Each boss says 'Follow this law.' He just makes it up. He scratches his head, and makes it up. Each boss makes up his own law, and the way of life of the natives become very confused."²

Village leaders attempted to impose their will on the community as an expression of their personal strength, while ordinary villagers resisted by asserting their autonomy. Leaders expressed authoritarian tendencies, but were opposed by villagers asserting their equivalence to their leaders. The following case illustrates the tension between authoritarianism and anarchy in local politics.

In the early 1970s, Ontena was divided over the issue of whether to allow drinking and gambling in the village. Drinking only became legal for Papua New Guineans in 1962, and gambling was then an illegal, but widespread, activity in the Highlands (see Grossman 1982, 1984: 196-204; Sexton 1982). Neither gambling nor alcohol were known before the colonial period, however, by the 1970s these practices had become so popular that they were disrupting village life. A geographer working in a Tairora speaking village near Ontena judged that "devotion to spending large amounts of money on beer drinking and gambling had severe negative consequences for food gardens and pigs" (Grossman 1984:182).

The two leading opponents of village drinking and gambling, Aroako and Ampona, had established themselves as village leaders before they held any formal office, but Aroako became local government councilor in 1972, and Ampona became Ontena's first village magistrate under the area community system in 1974. Aroako explained the formation of

their policy and its eventual rejection by the village:

We saw that in villages where they drink, people do not do any work; they just think about drinking, so we came back and made a strong argument: We said, "No one may drink in the village or play laki (a card game) in the village. If you are playing cards, you cannot work. You cannot make gardens or fences for pigs or chickens. If you are always playing cards, your children will be hungry and starve. Your wife will be hungry and steal from another person's gardens. This causes trouble. And if you do not have pigs, you will be hungry for meat and steal another man's pig. There will be trouble over pigs." Thus we prohibited playing cards and drinking.

Everyone behaved well during this time - until the time when they were gathered for Yelista's funeral [in 1974] (see below). Then although we still forbid playing cards, they [ordinary villagers] authorized themselves to play. They said, "We will play laki. We do not have to listen to those two men. We are not playing with their money. It is our own money. We allow drinking. We will drink. It is not their money, it is ours, and we can spend it for drinking."

So they reversed our decision and said, "those two were wrong to stop us. We see how things are in other villages, their councilors and leaders play cards with them and drink with them. How can those two stop us? Stopping us is wrong. We should be able to do these things," and they allowed playing cards.

Aroako and Ampona attempted to impose a social policy on the village. The policy was based on realistic evaluation of the negative consequences of gambling and drinking, and it had the support of many people within the village, especially Christian religious groups and women, who generally did not drink and participated in gambling much less than did men. The leaders did not, however, rely on this support to set the policy, but imposed it on the village as an expression of their personal strength. They

enforced their policy by disrupting late night gambling parties and chasing the participants. The policy broke down when the gambling and drinking became too open and too widespread for them to personally intervene. Those who wanted to gamble or drink asserted their own strength, and reestablished the principle of 'equivalence' by denying the two leaders the power to tell them what to do.

3. Sorcery and Conflict

Freedom from the constant fear of enemy raids was greatly appreciated during the colonial period. But the antagonisms that motivated traditional warfare persisted, and a sort of underground warfare continued using sorcery. As one informant explained, "When the white men came here we gave up everything. Now we only fight secretly with sorcery. We gave up the bow and arrow, and only the secret way is left." Although to an outsider the area appeared to be "pacified," Ontena was still involved in a "cold war" with its traditional enemies. Fear of sorcery may even have intensified due to "an increase in jealousy and distrust" caused by unequal access to economic opportunities (Uyassi and Martin 1974:14).

Sorcery beliefs were influenced by changes in the society but were remarkably resilient (see Westermarck 1981). An informant complained about the trouble he had convincing foreigners about the reality of sorcery:

Whenever we, New Guineans, discover the identity of a sorcerer, and we discuss it and tell a white man so

that he can help us end this practice, he only says, "No, you did not discover the truth. He died because he got sick. Germs are what killed him."

He shoots accusations at germs and disease, but we, New Guineans, know what really causes these things. When someone dies we say, "A man made sorcery."

White men say, "We do not believe in sorcery. Sorcery cannot kill anyone."

The defensive aspects of the sorcery "cold war" were easily observable. Defensive measures taken against sorcerers included regular guarding of the village by men armed with bows and arrows, and mobilization of all the men of the village for defence during emergencies. There were frequent reports of sightings of sorcerers in the village during the 1970s. In an incident that occurred while I was in the village, a man reported shooting a sorcerer who had been hiding in a nearby banana garden. He produced a bloody arrow shaft to substantiate his claim, and the following day about eighty men armed with bows and arrows, knives and shotguns drove in a convoy of five light trucks to check if anyone in the suspected enemy village had an arrow wound. The convoy never reached its destination, Oyana, because a police vehicle happened to be travelling on the same road. When the police saw the armed convoy, they stopped it and escorted it back home.

Acts of sorcery were performed secretly, but rumors hinted at the involvement of people whom I knew. Divination rituals to identify sorcerers were routinely held after each

death in order to identify those who had been responsible, but the ceremonies were private and the results were kept secret. The kin of the deceased were obligated to retaliate by killing the suspected sorcerer or one of his relatives. Suspected sorcerers were high status men, and included clan leaders and men who held elected offices in the village. They were seen as retaining the traditional role of the leader as a great warrior by carrying out sorcery killings against enemies.

The division between sorcery and other forms of violence is blurred by the growing importance of a form of sorcery called "sutim nil" or "sangguma" in Papua New Guinea Pidgin. In Ontena it is called yika'i. It is an innovative form of sorcery which includes a violent physical attack on the victim, as well as the use of elements that might be considered magical (cf. Glick 1973:183-184). It is widely feared: "This sorcery that they call sutim nil and we call yika'i is very powerful. Its victims cannot be helped by medicine or a doctor."

To execute a sutim nil attack, several assailants must find their victim alone. People are vulnerable if they go to gardens alone, or when they go to the toilet at night. The attack involves a brutal physical assault on the victim. The assailants may thrust nails into his body, break his joints with a hammer, or thrust a cane studded with razor blades down his throat. After the attack, the victim

returns home but is unable to remember what happened. "He will conceal it until he dies. But later they will rub his skin with a special leaf and they will discover the wounds."

Sutim nil men are described as operating in small groups of three or four, and as being available for hire. Sutim nil is considered a specialty of the Fore people of Okapa district, but interestingly, the best documented case of this form of sorcery involved a killing in an Ontena baya speaking village (Lindenbaum 1979:151). In 1969 Oyana's Local Government Councilor, Sinakure, was assassinated by two leaders of rival clans and three hired sorcerers from Okapa. The five men were successfully prosecuted for murder (Post Courier Nov. 26, 1969).

Sorcery accusations within Ontena were an extremely sensitive matter. Factions in Ontena suspected each other of sorcery attacks, although they rarely made open accusations. No alleged sorcery victim had ever been the subject of an official autopsy, and no prosecutions have occurred. Suspicious deaths might bring tensions to the surface but superficial harmony eventually returned. The village was seriously disrupted in 1974 by the death of Yelista, a man in his early thirties. His death was attributed to sutim nil sorcery. The dying man was taken to the hospital in Kainantu, although, because of the putative sorcery, it was believed that nothing could be done to save him. As usual, no autopsy was performed. Conventionally,

victims of sutim nil were not supposed to remember the attack, but Yelista was said to have described the attack and named his attackers before he died. His death re-opened a rift between two Ontena clans which had been feuding intermittently for three generations. Relations between these two clans were noticeably tense, but I did not learn of the sorcery suspicions until many years later.

Oyana sorcerers were suspected of the leading role in Yelista's killing, and a suspicious death in Oyana a few months afterwards was rumored to be caused by sorcery to avenge Yelista's death. Other informants asserted that the Oyana death was simply part of an internal Oyana feud, and was carried out by Sinakure's kinsmen.

D. Christian missions in the village

Lutheran missionaries first entered the Kainantu District in the 1920s, and Seventh-Day Adventists in the 1930s. Together they have succeeded in converting most of the population. While missions were generally supported by the Administration, there was rivalry and suspicion between these two missions, and officials sometimes found them over zealous. In 1947, one patrol officer acted to lift a ban on singing and dancing ordered by the Lutheran mission (Skinner 1947:11). Another complained in a patrol report that the Seventh-Day Adventists sent "native mission teachers" to villages "outside the area which missions have been granted permission to visit" (Linsley 1949). The German nationality

of Lutheran missionaries was another source of tension between them and the Administration before and during World War II.

The Lutherans gained a larger number of converts, especially in the earliest period, but the Seventh-Day Adventists were more effective as agents of social transformation (cf. Westermarck 1987). A 1955 patrol report observed differences between the two missions: "The two S.D.A. churches are spotlessly clean and well constructed, whereas the Lutheran churches are the direct opposite" (Redwood 1955a: 6). The Seventh-Day Adventist converts in Highland villages distinguished themselves from members of other denominations by their Saturday worship, their refusal to eat pork, and their ban on smoking and drinking.

The Seventh-Day Adventists have increased their membership in recent years, and in Ontena this has been at the expense of the Lutherans. Nearly all of Ontena's Seventh-Day Adventists were former Lutherans, and the first Seventh-Day Adventist church in Ontena was not built until 1982. Both denominations, however, seemed reconciled to each other's existence, and derived legitimacy from having been present in the region from the beginning of the colonial period. They had a competitive relationship resembling pre-contact relationships between local groups. Some hostility was present, but both churches were seen as somehow "belonging."³ Other denominations were less easily

accepted.

Although Lutheran pastors frequently asserted that God created pigs for people to eat, when Lutherans prepared large-scale feasts they always included food cooked away from the contaminating influence of pork so that Seventh-Day Adventists could eat it. The Adventists' doctrine that pork is an unclean form of food parallels the traditional view of pork as a vehicle for sexual pollution. Men did not eat meat from pigs that their wives had fed. Feasts had to accommodate personal food taboos based on pollution beliefs, so it was culturally easy to accommodate the Seventh-Day Adventists' group food taboo.

There were important differences in belief and practice between the Seventh-Day Adventists and the Lutherans which were becoming more marked as the two churches became better established. Not only did Lutherans allow people to eat pork, they were also much more tolerant of local customs. They had books of religious songs written in a local language (Kamano) to be sung in traditional style, and they even allowed dancing at some of their ceremonies. Seventh-Day Adventists' songs were usually standard hymns sung in English. Their extreme break with the past was part of the attraction of the Seventh-Day Adventists. People had lived through a time of unprecedented social change, and many felt that the upheaval in their lives heralded the last days before the second coming of Jesus.

In 1988 the Lutherans' congregation was still larger than the Seventh-Day Adventists. They usually attracted about a hundred worshipers to their regular Sunday service. About two thirds of the worshipers were women. The Lutherans have had a "pastor"⁴ resident in Ontena for more than thirty years, although they did not have a church building for much of this time. Ontena's first pastor was a Kate speaking man from the coast who returned to his own province long ago. His successor, Baito, came from the Kamano speaking village of Sonofi, a few miles to the west, and moved to Ontena in 1968. Baito married an Ontena woman, became well established in the village, and owned more coffee trees than any other villager. He was educated at a Lutheran Bible school, but did not read or write well. An Ontena man, also in his fifties, was his assistant pastor. Both men received a nominal salary from the Lutheran Church.

The role of the Lutheran Church in the village was strengthened by institutional ties to the village school. Although the school was run by the government, the Lutheran Church provided it with additional financial support and all the teachers were church members. One teacher was the son of Kate- speaking missionaries who came to the highlands in the 1930s. He and the other teachers and their wives played active roles in the village church.

The present Lutheran church was completed in 1987. It was located in one of the village's main residential areas,

near where the pastor lived. The church was built from local materials, and had a somewhat unfinished appearance, but it was one of the largest structures in the village. (Only the school's classrooms were larger). Its gables were left open and the church's windows were unscreened, but it was neatly decorated. A large white wooden cross stood over the door, the altar was painted with a tropical scene with a Bible verse written over it, and a net-bag with a white cross on a black background served as an altar cloth. The last was an example of the how the Lutherans utilized elements of local culture.

The Lutherans held regular services every Sunday. Services lasted for about an hour and stressed the New Testament. The pastor and his assistant led the service, and young men from the congregation often led prayers. Women played a less prominent role, but occasionally were called to read aloud from the Bible. The entire congregation participated in singing songs which were mostly composed in traditional style and in the Kamano language. A few songs were in Tok Pisin.

Seventh-Day Adventists made a larger commitment of time to their church. They held regular services in Ontena on Wednesday afternoons, Friday evenings and all day Saturday. Their church was also a thatched building made from local materials, and although it was slightly smaller than that of the Lutherans, it was more neatly built and had screened

windows. Seventh-Day Adventists avoid the use of images, so no cross was to be seen in the church. There were, however, three stylized angels on a large carefully lettered sign outside the church. The Seventh-Day Adventist church stood outside the main village in Sintamariopa, a small new hamlet occupied almost exclusively by Adventists. Only one hamlet resident owned a pig. Adventists were represented in all parts of Ontena and some traveled a mile or more to attend church.

In keeping with their name, Seventh-Day Adventists were strict about keeping their Saturday sabbath. Church members closed their shops, and would not light fires or cook meals between sundown on Friday and sundown on Saturday. Saturday was reserved for worship. The church sign proclaimed that sabbath school starts at 9:30, and the church was usually full by this time. Church members who were even slightly literate spent their evenings reading the Bible in Tok Pisin by the light of kerosine lamps. They were asked about their Bible reading at sabbath school. They were also asked about charity, buying food for others, and their efforts to convert others. Mornings were taken up with the congregation divided into separate classes of children and adults discussing various Biblical topics. Discussion leaders recorded attendance at these groups.

The Saturday service began at 11:00. The congregation divided by sex, men sitting on the right and women and

children on the left. About twice as many women attended as men, so occasionally women sat on the men's side. Women hung their net bags on the wall outside before entering the church, apparently emphasizing the sacredness of the occasion. About 70 people attended the service on a normal day.

The Adventist service emphasized elements which contrasted with traditional culture. A choir of young men and women dressed in uniforms stood at the front of the church, and sang well practiced church songs in harmony. Seventh Day Adventist never used local languages or traditional singing styles in their songs. Some songs were performed by the choir alone, but others were sung by the entire congregation. The pastor who normally led the service did not live in Ontena, but Ontena deacons were able to hold services in his absence. There were also Ontena deaconesses, but I only ever saw men conduct services. Sermons were delivered in Ontena baya and Tok Pisin and treated Old and New Testament topics.

Besides the Lutherans and the Seventh-Day Adventists, a few other churches operated in the region. The American based Summer Institute of Linguistics called its local church the Evangelical Alliance. It wielded considerable influence because Ukarumpa, the S.I.L. headquarters for Papua New Guinea was nearby. Ukarumpa is a small, self-contained American-style town, located in the territory of

Aiyura, between Ontena and Kainantu. Aiyura was an ally of Ontena in the pre-contact period. Many of Aiyura's residents are immigrants from Ontena (Swadling 1973:40) who retain some affiliation with their home village. Ontena people were attracted to Aiyura by opportunities for employment and education in Ukarumpa, and could also commute to Kainantu easily from there. Ties between Aiyura and Ontena helped to establish the Evangelical Alliance in Ontena.

Evangelical Alliance doctrines were similar to those of the Lutherans, so it did not have a strongly defined separate existence in Ontena. Lutherans and Evangelical Alliance members often attended each other's services. The lack of sharp definition limited the influence of the Evangelical Alliance in the village. In spite of the large number of Evangelical Alliance parishioners, it did not have a functioning church or a resident pastor in Ontena in 1987. Enthusiastic Evangelical Alliance supporters often left Ontena to be closer to Ukarumpa. Sermons were scheduled irregularly, depending on the availability of a pastor from Aiyura, and were held outdoors. Services were brief and similar in content to those of the Lutherans, but appeared to make less use of local cultural elements. For example, their songs usually had simple lyrics in Tok Pisin set to the tunes of American children's songs.

The only significant dissident church in Ontena was a

Pentecostal group, which had recruited a small following, mostly of young single women. Village leaders ridiculed their practice of speaking in tongues, and made them build their church outside the village. They held prayer meetings on their own, but depended on visiting pastors to hold their services. Other sects such as Jehovah's Witnesses and Baptists were known but had not gained any following in Ontena.

E. Accommodation and contention

Although some details of traditional beliefs were thrown into question by their contrast to those of Christianity, to a large extent Christianity focussed on different issues. Because indigenous religion was not codified and did not have specialist practitioners, it put up little resistance to the introduction of Christianity, although traditional beliefs shaped the manner in which the new religion was accepted. Many people converted by simply adding Christian beliefs to those they already held. At the same time, growing knowledge about the world beyond their village also forced people to modify some traditional beliefs, requiring, for example, that the land of the dead be relocated from the Markham valley to someplace more remote.

The process of conversion was not as dramatic as in other parts of Papua New Guinea where organized cults first resisted Christianity then suddenly collapsed under its

onslaught (see e.g. Tuzin 1989). Christianity was quickly accepted, almost without resistance, in the earliest days of colonial rule. Christianity in Ontena produced no prophets, only religious bureaucrats. While many were devout, none were especially innovative. Even when "cargo cults" occurred in Ontena, they were administered by functionaries (if not by simple opportunists) who looked beyond the village for leadership.

Ritual practices were, however, greatly altered by the power of Christian missions. Missions opposed most traditional rituals and insisted on regular church attendance. Thus, most of the traditional purification rituals were abandoned, although the beliefs that supported them were not necessarily. Nevertheless, the adoption of Christianity altered both the meaning and the form of those traditional rituals which were still performed in Ontena (cf. Bloch 1986).

Christian missions changed women's lives through their opposition to the men's cult and to such customs as polygyny. The leaders of Christian churches were predominantly men but, unlike the traditional cults, the churches did not exclude women, and women became active church members. Under Christianity, gender relations were structured differently from what they were under the traditional men's cult, and women encountered a different, more subtle ideology of male supremacy. Men quoted from the

Bible to preach cooperation between the sexes based on women's natural and moral submission to men. The story of Adam and Eve, emphasizing women's secondary status, was often told at feasts held at funerals or to celebrate marriages. The traditional myth of the bamboo flutes presented a very different image of gender relations. Traditional beliefs stressed conflict between the sexes in which women were forcibly subordinated, but they also allotted women a primal status. The woman who owned the original bamboo flute was self-sufficient and complete without men, whereas, in Christian myth, Eve was God's afterthought. Thus although women had much greater access to sacred rituals the importance of this "improvement" in their status is ambiguous.

Traditional beliefs both accommodated and contended with those introduced by the missions. Marriage and funerary practices incorporated Christian elements but remained grounded in local traditions. Missions persuaded most people to believe in Jesus, but were unable to induce people to marry in church; and they could not eliminate polygyny, even among their own followers. Ideology and belief in contemporary Highland villages are the outcome of a complex interplay of local and external social forces.⁵ Religious dogmas propounded by missionaries have become an important part of village culture. Local beliefs have not coalesced to oppose the hegemony of introduced forms of

religion, but neither have the introduced forms demonized local beliefs (cf. Taussig 1980). People attempted to uphold traditional values together with Christian ones. Devout Christians continued traditional practices such as performing garden magic, without regarding themselves as participating in a competing religious system.

1. Celebrations of menarche

Traditional rituals were still held for each young woman in Ontena to celebrate her menarche. The ceremonies were attenuated versions of traditional ones, but were still important occasions (see Appendix B). The ceremonies were held in a dwelling house where a large fire was built, but instead of being secluded for the duration of the ceremony, young women merely gathered in the house on successive nights. The food given to them included imported purchased items as well as the traditional leaf vegetables, pitpit and sugar cane. The young women were not beaten as severely as in the past nor were their noses bled. Although a ceremony was held for every young woman, it might be until a year or more after the actual onset of menstruation, because of the time needed to accumulate the resources for the feast. The food could cost several hundred kina.⁶ Occasionally the ceremonies for two young women would be held together which also reduced costs.

The lectures delivered to the young women were based on traditional ideas about work and sexual morality. Nothing

overtly religious was mentioned. Senior men beat young women to punish violations of rules.⁷ They were beaten for writing letters to boy friends, for being "show offs" (wearing their hair in braids), or for being lazy or disrespectful to elders. The young women did not resist the beatings, but retaliated with skits caricaturing contemporary male behavior. "Men," played by women, stole money from their wives in order to gamble, or raped their pregnant wives while drunk. Menarche ceremonies provided an occasion to reassert the traditional view of the correct relationship between the sexes. Each sex used the proceedings to accuse the other with failing to uphold its part of the sexual division of labor, and with seeking sexual intercourse for pleasure rather than pro-creation.

2. Local spirits and entrepreneurs

Interaction with non-Christian supernatural beings was no longer a prominent part of life in Ontena, but it had not entirely disappeared. In October 1987, Ampona, the leader of Ionanti clan, and his brother, Nohove, set up a portable sawmill in a remote part of his clan's forest. Ampona had bought the sawmill for K5,000 earlier that year. Nohove was left in charge of the sawmill's day to day operations, and he frequently remained in the forest overnight with his work team. A few weeks after the saw mill was set up, a storm blew down three trees, which fell around the sawmill but did not hurt anyone or damage the equipment. The storm, which

was restricted to the vicinity of the sawmill, was attributed to the anger of forest spirits, disturbed by the sawmill operating near their home. The spirits are a married couple, known to the villagers by name. The wife is called Yevenonti, and her husband is Iyuyawayo. No acknowledgement had been made to the spirits when the sawmill was first brought into the forest.

Ampona immediately decided to stop work, and to hold a feast to compensate the forest spirits and persuade them to return to their home. The feast was held at the site of the sawmill three days after the storm. Food carried into the forest included a pig which cost three hundred kina. Nearly a hundred people from the village came to the forest for the feast. The spirits were also offered compensation of seventy-six kina in cash. The money was eventually donated to the village Lutheran church.

Several senior men made speeches, placating the spirits, offering them compensation, and asking them to return to their home. A man standing in the forest answered for the spirits, and another man acting as one of the spirits was led out of the forest to accept the compensation. The role was played by a young man from a nearby settlement. He was normally dressed, in a shirt and long corduroy pants, but was completely covered with leaves so that not even his head could be seen. He carried another head, carved of fern wood on the end of a stick, which he

held in front of his own. The overall effect was dramatic. The senior men shook hands with the "spirit" while he stood near his gifts, apart from the assembled people. The "spirit" also carried a cordyline branch, used to mark borders and ownership of land. When he returned to the forest, the cordyline branch was planted and the gathering broke up. The people who had attended the feast carried sawn timber back to the village, a difficult walk of forty-five minutes.

Ontena's local spirits live in remote and inaccessible places, and they are seldom encountered. People gave varying accounts of their characteristics. There are several different categories of spirit beings, both male and female, all of which are nowadays lumped together under the New Guinea Pidgin term masalai. They may live alone or in couples, usually in the forest, and always distant from people. They are "wild," unlike human beings, and hence, contact with them is dangerous. It can result in illness, or in possession, whereby the person possessed also becomes wild and runs away to live in the forest. Some spirit beings own wild animals, just as human beings own pigs. One spirit woman is known as "the mother of possums," (cf. Strathern and Strathern 1968:190, Rappaport 1984:40). Others lure pigs away from their owners by feeding them and causing them to run away and become "wild."

Ethnographers working among other Eastern Highlands

communities have noted similar beliefs in spirit beings and their effect on humans. Among the Fore: "Spirit caused ailments result from human intrusion into spirit places... the forest reserves associated with every parish. Gardening is permitted at the edge of a spirit place but not within, and certain kinds of timber, vines, animals, and wild foods that may be collected elsewhere should not be touched.... In some, to speak or even make a loud noise is considered dangerous" (Lindenbaum 1979:56).

The forest where the Ontena sawmill was set up was similarly considered to be a dangerous place. Before I went there, the mother of the boy who was guiding me warned her son not to cut any vines, or remove anything away from the forest. Masalai induced ailments were not uncommon in Ontena,⁸ and I attended ceremonies in which an entranced curer appeared to remove white pebbles, implanted by a masalai, from the body of the patient.

"Wild" things were important in pre-contact Ontena rituals. Although wildness was dangerous, it was also associated with magical power, on which spells attempted to draw to promote the growth of pigs and of food crops (cf. Strathern and Strathern 1968; Gillison 1980). Forest spirits were also invoked for this purpose. One man explained: "Our ancestors said that if you want to do something, you must call on the forest spirits. It is because of them, that food grows well, and pigs grow well."

Leaves from the forest, such as those wrapped around the actor who played the spirit, were important in several now discontinued ceremonies, including male initiations and the inauguration of a men's house.

A special connection existed between the human occupants of land and the spirit beings who lived on that land and were acknowledged to be its co-owners. An ethnographer working with Ontena's immediate neighbors, the Abiera, records "...the belief that the legitimate owner and his kinsmen are exempt from malice of spirits resident in their own forest area" (Watson 1983:46).

The Christian beliefs of the participants did not interfere with the forest ceremony. Iyuyawayo and Yevenonti were not thought to be malevolent. Even if foreign missionaries regarded indigenous spirit beings as implacably evil, with local culture seen as "corrupted by Satan" (e.g. Schendel 1978:51), Ontena Christians evidently did not agree and continued to include local spirits in their gift exchange networks. Both the spirit beings and the Lutheran Church actually received the same money as a gift.

The competing religious principles operating in Ontena, have interpenetrated and modified each other. Although obviously rooted in pre-contact beliefs, the ceremony in the forest was not free from introduced values. It was organized to support a commercial venture and, even though it was held to acknowledge the property rights of spirits,

nothing was done that interfered with the sawmill's operations. The conversion of the money into an offering to the village Lutheran church recognized the role of the Church in managing the supernatural world. Nevertheless, the ceremony extended and confirmed the social ties between the spirits and leaders of the land-owning clan. The long term property rights of the forest spirits were recognized in the planting of the cordyline branch, which one man likened to a surveyor's cement marker, and by giving the local spirits money, the sawmill's owner, in a sense, incorporated them into the world system.

3. The politics of death

As noted above, most deaths are attributed to sorcery, and funerals are charged with emotion. New Guinea Highland funerals are characterized by loud unrestrained sobbing and demonstrations of bereavement. Funerals involve scores, sometimes hundreds, of mourners, who arrive in groups from different villages. Each group arrives with their faces covered in ashes and yellow mud, sobbing loudly and with tears streaking their faces. Individual mourners may break into the shelter where the corpse is laid out and embrace the body. The corpse is wrapped in blankets and placed in a plywood coffin, purchased either in town or from one of the religious missions. A special shelter is erected to house the corpse, which is laid out for several days.⁹ An undercurrent of anger accompanies the death as mourners

direct blame not only at the deceased's killers, but to his/her kin for permitting the death. Destruction of property is a marked feature of many funerals. Sugar cane, green bananas, and green betel nuts are cut and hung to decorate the shelter where the corpse is lying.

After lying out for as long as ten days, the body is taken to be buried. Dozens of mourners follow the coffin to the grave, but the interment itself is fairly casual. There is a Bible reading at the grave site, which is the only Christian part of most funerals. Graves are usually marked by a simple white painted wooden cross. The grave, about one and a half to two meters deep is frequently lined with blankets and sheets purchased for the occasion. Ontena has two main graveyards, both are just outside the residential areas of the village, although people are occasionally buried in other locations inside the village.

The occurrence of death forces public debate on issues that can usually be disregarded. Funerary rituals must confront the fact of human mortality, and the complex emotions generated by death. Death, in itself, mandates a heightened concern with ideological issues, and the presence of competing ideological systems can result in rituals which tear "society apart rather than integrating it" (Geertz 1957:48). Here I discuss two funerals that exposed tensions and contradictions between introduced religion and what has (thus far) been retained of traditional beliefs. The first

controversy occurred during the funeral of an Ontena migrant to Aiyura.

Senta was an important man who had lived in Aiyura for more than thirty years. His major achievement was his role in founding the first English language primary school in Aiyura. The school's chief sponsor among the expatriate community was Professor Schindler, a retired professor of linguistics from the University of Queensland. The school was founded in about 1958 and named after Professor Schindler. When he died in 1969 he was "buried on the school's grounds" (Kershaw 1986:87).

Senta died suddenly on Sunday, August 4, 1985, after an ordinary day spent in Aiyura. He spent the afternoon visiting friends, then he went home, vomited once, collapsed and died. Most people suspected sorcery. Rumors about the death reached Ontena on Monday, and on Tuesday afternoon a delegation of mourners set out; they included members of Senta's own Sibinpekena clan and his mother's Waisiona clan. The mourners arrived in Aiyura at about 4:00, after stopping to smear mud over their clothing and faces. By the time they arrived the body was already in a coffin and laid out in a newly constructed shelter hung with sugar cane, green bananas, and green betel nuts.

When the Ontena delegation arrived, a debate began over where to bury Senta. Ontena people demanded that the body be handed over to them to be buried in Senta's ancestral

territory. There were two hours of often angry discussion, mainly in Tok Pisin to accommodate the mixed Gadsup, Ontena, Agarabi, and Kamano crowd. The debate was moderated by Koki, the Aiyura village magistrate, an Ontena man who had lived many years in Aiyura. Koki assumed a neutral stance in respect to the issue of where Senta should be buried, but demanded that, once a decision was reached, it be adhered to; that people must not agree to do one thing and then change their minds and do another. Koki's style was aggressively assertive. He gestured violently and demanded that the speakers include only senior men who had had "their noses bled" and had been "made into fumara."

Mabito, Senta's younger brother, was the Ontena village magistrate and the senior representative of the Sibinpekena clan. He was Ontena's principle advocate, but he was recovering from a recent illness and was a weak speaker. He spoke in Ontena baya, and was barely audible. A'ume, Ontena's last luluai, spoke as the senior representative of Waisiona, the dead man's mother's clan.

The men who spoke on behalf of the teachers and the school were younger and spoke apologetically. One began by saying "True I am not a big man, and they never bled my nose." The younger men's position was that Senta should be buried at the school, next to Schindler. One school teacher claimed that, although he had only been in Aiyura for a short while, he had asked Senta where he wanted to be

buried, and that Senta had told him that he wished to be buried in Aiyura where he had lived. Privately Ontena people dismissed this story as a lie because Senta would not have confided his true feelings to a newcomer.

Finally an old Aiyura man made a speech in which he described Senta as a guest who had benefited from Aiyura's hospitality. Koki's brother, Aroako, interrupted, and began his response dramatically, "That is it, they have admitted that he does not have land here. We will take him with us." Aroako also demanded that Ontena be paid compensation for the shame caused by Aiyura's opposition to the holding the funeral in Ontena.

The debate seemed firmly settled when Miki, Senta's oldest son, spoke to support the decision to take the body back to Ontena for burial. After the decision was reached, at about 6:00 P.M., Miki drove Aroako and me to Ontena.

Religion did not enter directly into the debate, but those who wanted to bury Senta in Aiyura asserted that it was not important where someone was buried. This was a Christian, and specifically Seventh-Day Adventist, attitude toward the body and was implicitly at odds with the traditional view which attached great significance to the location of the grave (see Chapter 2).

The next day, Wednesday, the funeral was held at the Schindler school in Aiyura. Senta was buried next to Professor Schindler, in recognition of his contribution to

the school. The service was elaborate but non-traditional, and included a large choir of Seventh Day Adventists neatly dressed in uniforms. I was back in Aiyura by chance, and I was taken by surprise at the suddenness as well as the location of the burial, which I watched from outside the school-yard fence.

When I returned to Ontena, I told Aroako about the funeral, and, contrary to the mood of the day before, he seemed resigned to what had happened. He had won the emotional debate, but that victory had only meant that the other side had not wanted a public confrontation with the senior men. They were willing to override the group consensus. What had appeared to be a small but significant victory for the elders and tradition had been turned into their quiet defeat. I think that the elders already knew where Senta would be buried. The debate had, at least, given them a chance to assert their position and had shown that no one could stand up to them publicly; perhaps they had expected nothing more from it. Besides, the Sibinpekena elders had put their case forward feebly, and it was they who really bore the responsibility for the defeat entailed in the burial at Aiyura.

The second controversial funeral reflected a similar struggle between local traditions and Christian belief, but it took the form of a dispute between the adherents of two Christian missions: Lutherans who were willing to

accommodate local customs to some extent; and Seventh-Day Adventists who consistently opposed them.

Karamo, a single woman in her twenties, was one of A'ume's daughters and a Seventh-Day Adventist. She died on December 25, 1987, at her mother's house on the outskirts of the village. She had apparently been sick for a while and was taken to a traditional curers a few days before she died. Her death was kept secret for a day, but I was not aware of divinations being performed. People did not suggest sorcery as the cause of death, but instead blamed typhoid, which has been present in Kainantu District since 1985. Typhoid is considered a credible explanation for death, and deaths of young adults are now often ascribed to typhoid.

When the death became public knowledge, the body was moved to Karamo's sister's house at Amunta. Young women who had been her friends crowded into the house, some of them with babies nursing at their breasts. Several men, including her father and the village Aid Post Orderly waited outside. The A.P O. was the only person present with any medical training, but he expressed ignorance about the cause of Karamo's death.

On the 28th the body was moved again to a specially constructed shelter at Sayafapa, the hamlet where her father and two other sisters lived. She was placed in a plywood coffin bought for thirty kina from the Swiss Mission. There

was some discussion about buying a better coffin, but nothing came of it. Religious tensions developed at the funeral because whereas Karamo had been a Seventh-Day Adventist, her mother and father were Lutherans. Sayafapa, where the body was kept, was where Baito, the Lutheran pastor, lived and was predominantly Lutheran. Baito was married to Karamo's (half) sister, Saruko. A'ume had adult eight children living in Ontena. Four were Lutherans and four were Seventh-Day Adventists.

A'ume was one of the first generation to accept Christianity, and had incorporated the beliefs brought by the missionaries into his own fundamentally traditional worldview. He was not literate, but found the message of the missionaries compelling, especially their prophecies for the future. Both his reverence toward pigs and his syncretism were obvious when he recited a traditional myth explaining the importance of pigs in Ontena culture (see Chapter 4). After telling the story, he said:

"Now everything has changed, cattle, sheep and goats have come with the whiteman to compete with the pig. But the pig is still strong. It will not change. Our ancestors have kept pigs ever since a man turned into a pig. We will always keep pigs. Later when God returns and heaven and earth finish, maybe the pig will finish then. I do not know what will happen."

A'ume's Seventh-Day Adventist son, Kokena, made a speech asserting that the funeral should be directed by the Seventh-Day Adventists. Meanwhile mourners were crying and singing mourning songs in the Kamano language. Baito

conducted a Lutheran religious service in his house (In Tok Pisin mostly, with Kamano language songs). The Seventh-Day Adventist choir outside began to sing simultaneously. The Seventh-Day Adventists' English hymns underscoring the chasm that separated the two sides. Karamo's brother, Mamara, another Seventh-Day Adventist, delivered a very emotional prayer stressing the need to believe in Jesus and the imminence of His second coming. After the prayers ended, however, the traditional singing and wailing, condemned by the Seventh-Day Adventists, resumed. It continued well into the night, and I could hear it easily from my house about 300 meters away.

Traditional mourning continued all the following day. At night Baito preached another service in his house, which was almost large enough to hold a full congregation.

The burial was on the 29th. The Seventh-Day Adventist pastor came to Ontena to conduct the funeral service. About sixty people came to Sayafapa for the service, many fewer than were there earlier. The Seventh-Day Adventist youth group arrived just after noon. Instead of the traditional mourning attire of shabby clothes, mud and ashes, the men were dressed in their uniforms, cream colored shirts and green shorts. Some of them had flowers around their necks.

The sermon provided an exposition of the Seventh-Day Adventists ideology and touched on points where it differed from traditional beliefs. First the sermon dealt with the

nature of death: why it occurs and what it means. The pastor started with the story of Adam and Eve. People die because Adam and Eve disobeyed God and ate the forbidden fruit. Death was deserved punishment for humankind's sins.¹⁰ After this grim assessment of the human condition, the pastor talked about the second coming. He said "Karamo is sleeping, she has not really died. The Bible says that she has not really died, but is sleeping. When Jesus returns for the second coming, she will arise and go to meet him." Finally he touched on the main dilemma for those trying to accommodate tradition and Seventh-Day Adventism. For the Adventists death should be welcomed, not feared, and the expressions of sorrow that tradition calls for are entirely inappropriate. The pastor told his congregation, "You must not be too sad about this woman because she was ready.... She was ready and she went to the hand of God.... God knows that she is Christian, and he has taken her."

After the sermon, Karamo's coffin was carried to one of Ontena's graveyards not far from where she had lived to be buried near other members of her clan.

Although both of these funerals forced people to take sides on important ideological issues, neither case clearly resolved those issues. In Senta's funeral, the traditional mandate to bury a person in a specific place was opposed by the Christian dismissal of the location of the grave as unimportant because it was irrelevant to personal salvation.

So Senta was buried in Aiyura in a location that marked him as a modernizer, but not in a socially unimportant place. His grave site affirmed his position as the co-founder of the first school in the area. Since 1985, several Ontena migrants to Aiyura have been brought back to Ontena for burial. In Karamo's funeral the traditional abhorrence of death was opposed by the Seventh-Day Adventists welcoming of it. It is difficult to reconcile ideological systems in which one prescribes mud and ashes, and the other prescribes uniforms and flowers. But the abject misery of traditional mourning practices derives from felt experience rather than from a supernatural mandate, and both forms of mourning occurred.

F. Conclusion

The Australian Administration incorporated the small scale societies of the Papua New Guinea Highlands into a larger and more powerful polity, and recruited local leaders to be its agents. Nevertheless, indigenous social units persisted within the larger polity, as did the indigenous emphasis on strength and equivalence. Assertive and sometimes violent behavior remained the basis of political legitimacy, and the strength of the Administration was widely admired. Pacification limited the role of local leaders, but local initiative remained important in coping with political issues, such as sorcery, that were not addressed by the state. The countervailing value of

equivalence acted to check political power at the local level.

Christian missions also incorporated Highlanders into a larger more powerful system. Nevertheless, as with the political system, local values persisted and aided in the incorporation, producing a distinctive locally grounded ideological structure. It was Highlanders' admiration for the strength of their colonial administrators that prompted them to adopt their religion. The success of the Seventh-Day Adventists was due, in part, to a serendipitous agreement between the key mission tenant forbidding pork and local beliefs that pollution was transmitted by pork. Christian morality echoed traditional injunctions against stealing, fratricide and adultery. Just as traditional politics continues submerged within the nation state, elements of traditional ideology and ritual survive among Christian villagers.

The open, unsystematic nature of traditional religious thought in Ontena has proved to be its strength as well as its weakness. Practices that did not seem to missionaries to form a "cult" did not encounter serious opposition from them, and more importantly were retained by local Christians. Thus, Christians continue to perform rituals for a girl's menarche, and routinely utilize magic. Socially based customs such as the payment of brideprice, polygyny, and mortuary payments have withstood repeated

attacks from missionaries.

Although there can be no doubt that there have been far ranging changes in ideology, the resilience of traditional culture in Ontena is striking. Beliefs which seem to have been supplanted reappear unexpectedly: as in ceremonial exchanges with forest spirits, or in a debate where male initiations re-emerge as an issue.

Notes

1. See R. M. Berndt 1952-3 for a discussion of this cult among Ontena's western neighbors.
2. Andrew Strathern makes a similar observation about the effect of the proliferation of offices at Mt. Hagen:
It is evident that several separate structures have been established with none dominant to the extent that the kiaps were dominant in the eyes of local people before self government in 1973. Further, the activities of persons in these structure may in theory be separate and yet coordinated but there is no integrated form of communication between them" (Strathern 1984:29).
3. The Lutherans and the Seventh Day Adventists competed for converts, but the neither church attempted to extinguish the other.
4. "Pastor" may not be his official title, but it is how villagers refer to him and it is what he calls himself. He is in charge of the Ontena church and frequently visits outlying hamlets to lead sermons.
5. When Christian customs are adopted by villagers the results are not always what missionaries might expect. For example, many villagers now use Biblical names for their children, but the choice of a specific name often seems obscure or odd. One young boy is named "Pontius" after Pontius Pilate. The boy's father just liked the name and intended no irreverence in choosing it.
6. At one party an estimated K500 was spent on food, including frozen imported beef, rice and canned food.
7. A young woman complained to me that at one ceremony the men had concentrated on trying to humiliate them rather than instructing them about how to care for their husbands.
8. On another occasion, I was with a small group of people walking through the forest and we passed a tree with a large swelling on one side. One of the group told us each to pick up a stick and leave it as firewood for the spirit who lived there, so he would not cause our bodies to swell in a similar way. Not everyone seemed equally convinced of the importance of doing this, but there was already a pile of sticks beside the tree, and we all added to it.
9. Bodies were often laid out in Ontena's circular festival house, until it was torn down in 1975. It has not been replaced.

10. Biblical citations included Genesis 3, the Prophet Ezekiel who said "Man who sins must die," and Romans 6:23 "The wages of sin are death."

CHAPTER IV. VILLAGE AGRICULTURE: SUBSISTENCE

A. Introduction

Agriculture is the mainstay of life in Ontena, providing villagers with "a culturally and socially meaningful complex of activities" (Grossman 1984:133) as well as with their sustenance. In contemporary Ontena, agriculture is divided into two distinct sectors, a "subsistence" sector geared toward producing long established crops (or close analogues) for village consumption, and a "commodity" sector which produces one crop, coffee, for sale and eventual export. Only a minute proportion of the food crops grown in Ontena is sold outside the village, but village grown coffee is never consumed in the village. The crops in each sector are grown for completely different reasons, but they necessarily compete for land and labor.

Subsistence in Ontena, as in other parts of the Papua New Guinea Highlands, is based on the cultivation of sweet potatoes. Traditionally, pigs are the only important domestic animal. Pigs provide animal protein and fats that are scarce in the diet, but they place additional demands on the subsistence system because crops must be grown for fodder and because gardens must be fenced to keep out foraging pigs. Locally grown vegetables are mostly consumed within the producing household, whereas pork is reserved for

public feasts marking special occasions.

Coffee became important to the local economy in the 1950s, and increasing needs for cash encouraged its steady expansion. Because coffee flourishes under exactly the same growing conditions as sweet potato, it competes for the same land. It is commonly planted in old food gardens and because it is a perennial, permanently displaces food crops.

1. Division of labor

Many tasks are allocated by sex in Ontena, making men and women interdependent. Women do most of the work associated with cultivation of gardens and pig raising, although men also participate in these activities. Men, exclusively, perform the heavier tasks associated with gardening, including cutting down or ring-barking trees, constructing and maintaining fences, and constructing drainage ditches. Women do most of the cultivation, planting and harvesting, but most gardens cannot be built without some male labor, and therefore, even though a disproportionate amount of the workload falls to females, males are the indispensable sex.

Specific crops are associated with women or men. Women plant sweet potato and most other crops, especially pitpit (uwo'imi, *Setaria palmifolia*) and leafy greens, which are symbolic of women. Bananas, sugar cane, and yams are symbolic of masculinity and are planted by men. Thus, women produce the basic food supply, while men provide scarce

luxuries.

Although men's tasks associated with fencing or digging ditches are never performed by women, the sexual division of labor about crop tending is more flexible, and members of one sex occasionally engage in chores usually performed by the other. Men may plant small amounts of sweet potato, or occasionally help women with its cultivation. Women are not totally barred from growing male crops, but are reluctant to add to their workload. As one man explained: "If a man teaches his wife how to plant sugar cane, she will do it, but most women do not plant it. They say 'It is for men.' So they plant sweet potato, and we men plant sugar cane."

2. Garden magic

The preparation of productive gardens requires not only labor, but also knowledge of the appropriate magic. "If a person were to plant something without using the spell, it would not grow." Knowledge of specific spells is jealously guarded. Men and women each know spells appropriate to the crops which they routinely plant. Ignorance about the needed spells discourages people from planting crops associated with the opposite sex.¹

Women are normally the only ones present when they perform the magic for sweet potato, pitpit and leafy green vegetables. The magic consists mostly of reciting the spells in a low voice to the individual slips as they are put into the ground. At one garden where I was present, a

bamboo, filled with rain water, was heated over a small fire until it exploded, and the water was sprinkled on sweet potato slips before they were planted, an apparent sexual metaphor.² Special plants are also placed at the corners of the field in order "to keep away birds and rats that might eat the seeds." These plants are bespelled before planting.

The magic that men use also invokes sexual symbolism, especially images of swelling. Sugar cane magic invokes the height of mountains so that the canes will grow long. Magic for bananas invokes images of swollen corpses so that bunches of bananas will swell.

B. Cultivation

Ontena territory is ecologically diverse, and gardens are made in several different ecological zones. Forest lands, steep grassy slopes, grassy flats and swampy flats areas are all cultivated. Each zone has distinct characteristics, and different labor requirements. Forest clearings are very fertile, but the forest is mostly located at high altitudes where crops mature slowly and risk damage from frosts. A great deal of labor also has to be invested to clear away large trees. If forest gardens are not allowed a sufficient fallow period the regrowth is grassy scrubland with diminished fertility. Secondary scrub is, however, easier to clear.

The grassy slopes which comprise much of Ontena territory can be cultivated with the least input of labor,

but these areas also produce the lowest yields. Grassland gardens are tilled to incorporate ash and dead vegetation and to conserve moisture, as both fertility and water are scarce in these areas (see Grossman 1984:143). Grasslands experience ecological deterioration if they are overused. In some garden areas at Aiyura, "the soil has degenerated so far that it is doubtful if they could be brought into cultivation again" (Schindler 1952:305). Ontena contains areas with similar conditions.

The preferred zone for most gardens is in flat grassy valley bottoms. Gardens built in these areas have higher fertility and are less apt to dry out than gardens made on slopes. Swampy areas are also very fertile, but require substantial labor to cut through the root systems of the cane grasses, and to dig large drainage ditches. Swamps were usually not cultivated before the introduction of steel tools (Grossman 1984:153).

Sturdy fences must be constructed around most gardens to keep out domestic pigs which spend much of their time foraging for food in the vicinity of the village. Ontena is fortunate in having access to a good supply of durable hardwood for fencing. The amount of labor needed for gardening is reduced by the building of long fences which surround several gardens. The practice of building a communal fence seems to be a long established one. An early patrol report noted "very large" gardens in the vicinity of

Ontena, including "one about 30 acres in area" (Blyton 1945a:3). Another method used to reduce the need for fencing is cultivating gardens far away from the village in areas of the forest which are not frequented by pigs (cf. Grossman 1984: 169).

Gardens are arranged in an orderly fashion with sections devoted to specific crops: Rows of small mounds are made for sweet potatoes; narrow hills made for yams or winged beans; and tall stakes set up for sugar cane. An early observer commented: "[T]he natives are great gardeners and it is a pleasure to see their cultivation areas, well drained and the plants are set out in neat rows" (Blyton 1945a:3). Crops are not stored and women usually harvest the food their families require every day. Root crops are heavy, and since women must carry them from the gardens in net bags, the distance from a residence is a major consideration in the placement of gardens.

Three methods of cooking were widely used in pre-contact times; a) an earth oven, steam cooking with heated stones in a pit or wooden drum, b) steaming or boiling in a length of green bamboo, c) roasting tubers directly in ashes. These methods are still used, but aluminum cooking pots are now a standard part of every household's equipment, and many meals are cooked in them. The earth oven is suitable for feeding a large group of people and is used to prepare feasts.

Crops are both planted and harvested throughout the year. Gardens are prepared, as Schindler noted at Aiyura, "[w]henver rains make the soil friable and easily worked" (Schindler 1952:303). Sweet potato predominates everywhere, but most gardens also contain secondary crops. Harvesting begins about three or four months after planting, and continues as different crops reach maturity.

The length of time that a field is kept in production and the amount of time it is left fallow depends on the gardener's assessment of the condition of the soil. As Watson notes for Tairora, "garden activity is nearly continuous" (Watson 1983:44) in fertile valley bottoms. On the other hand, dry slopes with marginal fertility may only produce for a year or so before requiring a long period of fallow. If a garden is near a settlement, it is more likely to be put back into cultivation quickly, because ease of access compensates for relatively low yields (cf. Grossman 1984: 146).

Even the low-intensity traditional agricultural system produced significant deterioration of the environment. The grassland cover that predominates in the region is the result of centuries of human activity. The practice of burning large areas of grassland for clearing, hunting small rodents, and sheer spectacle promoted soil erosion. Another problem was overuse of drainage ditches. Schindler worried that:

"...the drainage idea is adapted to slopes which hardly need any draining and as the ditches are dug straight up and down the slope they add to the general danger of erosion where large volumes of water run in them" (Schindler 1952:305).

1. Sweet potato

Although agriculture is very ancient in the Papua New Guinea highlands, the staple crop throughout most of the region is the sweet potato, a South American crop introduced to New Guinea "within the past 400 or so years" (Golson 1977:605). There is evidence from local traditions which suggests that its adoption as a staple crop is even more recent in the vicinity of Ontena, and that taro and yams were the previous staples.³ Furthermore, Ontena is not far from the only portion of the highlands where taro is retained as the staple crop (see Boyd 1981).

Sweet potato has displaced other crops because it thrives at higher altitudes than taro or yam, and shows greater tolerance for poor soils. The productivity of sweet potato "lasts longer than that of taro and much longer than that of yam" (Golson 1977:608). Sweet potatoes also make excellent pig fodder because they can be fed to pigs without preparation.

Sweet potato (kama, *Ipomoea batatas*) is by far the most important crop grown in Ontena. Grossman determined that in Kapanara, a Tairora speaking village not far from Ontena, sweet potato covered 78 percent of total cultivated area. The figure would be comparable for Ontena. The land area

devoted to sweet potato understates the importance of the crop in the diet, because sweet potato is among the most prolific of the crops grown in the region. Sweet potato is the essential food in Ontena and is eaten at every meal. Several varieties of sweet potato are grown, and hardier more prolific varieties recently introduced from other parts of the highlands have replaced most of those known locally in pre-contact times.

2. Other indigenous crops

Taro, yams, winged beans, bananas, sugar cane, pitpit, cucumbers and a variety of green leaf vegetables antedate sweet potato in the area, and are still grown in Ontena. Taro (yami *Colocasia* sp.) is grown infrequently in Ontena, although it is often mentioned in mythology (see below). It thrives in fertile forest gardens, and was frequently included in gifts visitors brought to Ontena from Oyana or Agatafa.

Two crops that receive special attention are yams (banti, *Dioscorea* spp.) and winged beans (naba, *Psophocarpus tetragonolobus*). Both are grown with neat rows of stakes for the vines. Yams are symbolically significant as male crops but they are seldom planted. Ontena's settlements are between 1890 and 1950 meters above sea level (Pataki-Schweizer 1980:64), and the upper limit for yam cultivation in the Papua New Guinea highlands is "about 1800" meters (Golson 1977:605). Winged beans are highly valued for their

tubers, pods, flowers and seeds. They are a valuable source of protein in a generally protein deficient diet (Board on Science and Technology for International Development 1981). It is believed that if either yams or winged bean tubers are handled by people who have recently had sexual intercourse, they will not cook properly.

Sugar cane (ya'i, *Saccharum officinarum*) and bananas (e'i, *Musa* spp.) are crops that receive ritual emphasis. Both crops are obvious phallic symbols and are planted by men. Large bunches of bananas and long sugar canes are displayed tied to poles at ceremonial exchanges. Sugar cane is consumed in large quantities at ceremonies, and is given to visitors as a gesture of hospitality. Bananas have an unusual status as the only traditional crop that is frequently sold within the village. A large bunch of ripe bananas is often divided and sold at card games or other small gatherings. The prices charged for bananas are low, three or four costing ten toea.

3. Introduced crops

Maize, pumpkin, *Xanthosoma taro*, and tobacco preceded the Australians into the highlands. Maize (antibi) is a common minor crop, and has become nativized to the extent that it has its own garden magic. It is prepared either by roasting the ears directly on the fire, or by steaming in an earth oven (much like pitpit). Pumpkin is usually steamed in an earth oven. It is a frequent component of food gifts

at major feasts. Xanthosoma taro (kafe) requires damp growing conditions. It is prepared like true (Colocasia) taro by steaming in an earth oven or boiling. Locally grown tobacco was smoked in bamboo pipes, but has now been completely displaced by smoother tasting commercial varieties.

Potatoes, cassava, peas, beans, cabbages, and peanuts are the most significant crops adopted in the early years of Australian rule. Potatoes are grown in Ontena mostly as a cash crop, but they are occasionally eaten in the village, cooked by roasting them in ashes like other tubers. Potatoes are more important in Oyana and Agatafa where frosts make the production of other root crops more uncertain.

Cassava does well in dry and impoverished soils, and is frequently intercropped with young coffee trees. It is bland tasting and is usually prepared in the same way as the similarly bland green bananas. It is grated and either wrapped in banana leaves or stuffed into a bamboo tube. Canned meat or fish is frequently added to the grated mixture, adding flavor and protein. The addition of protein is especially important since cassava "is very poor in certain of the essential amino acids and is thus by itself of only slight value as a protein source" (Rappaport 1984:74).

Introduced peas and beans are treated like the local

varieties and cooked in earth ovens, or bamboo tubes. Cabbages are treated like local leafy green vegetables, and are usually prepared either by boiling with meat in saucepans or bamboo tubes.

Peanuts occupy a special niche of luxury products that are frequently sold in the village. Peanuts are usually prepared by roasting them in ashes while still attached to the roots. Small bunches are sold at card games in the village for ten toea each. Cabbages and potatoes are both grown in Ontena for sale in Kainantu. Villagers produce most of these crops during the rainy season and may be unable to sell them at acceptable prices.

C. Domestic animals

The complex interaction between indigenous and introduced economic systems is nowhere more apparent than in the treatment of domestic animals and their products. Meat is the most commoditized of village products, but it is simultaneously the most caught up in tradition. Unlike vegetable food which, apart from the odd cases of roasted peanuts or ripe bananas, never gets sold in village contexts, meat is sold regularly. Small pieces of cooked pork are sold in "pork markets," several times a year. Meat is distributed without charge at every major feast, but increasingly the person giving the feast buys pigs or cattle from another villager. In addition, large quantities of frozen imported beef and mutton are given away at many

village feasts. While the important food animals are pigs and cattle, chickens are also sold for food in the village, and form a small part of feasts and gift giving.

1. Pigs

Pigs (fonti) are the most numerous and important domestic animal in Ontena. They provide the bulk of the animal protein that is consumed as well as a focus of cultural interest. Pigs are the only animal that was raised for food in the pre-contact period. The following well known myth illustrates their importance in Ontena culture:

Two brothers wanted to hold a feast for their neighbors, but they did not have any pigs. The elder brother told the younger to prepare firewood and vegetables. He obeyed his older brother, but he wondered where they would get a pig to cook. The elder brother told him to go to the taro garden where he would find a pig asleep. The next morning, the younger brother discovered a huge boar sleeping in the garden. He killed it and prepared it for the feast. Afterwards, he searched for his elder brother, but he was nowhere to be found. He had changed into this pig. The big men know this story and tell us that everyone must keep pigs.

419 pigs were being kept in Ontena when I conducted my survey in July 1987, about .63 pigs per capita.⁴ This is a smaller ratio than Watson recorded for Abiera in 1963 (1983:52), but is comparable to the figures reported by Grossman for Kapanara in 1976 and 1977 (1984:160). Village pigs are cross between local stock and larger introduced varieties. Pigs are left free to wander outside fenced gardens, and obtain some of their food by foraging. Older pigs may become semi-wild, and obtain all their food from

foraging. Women are responsible for feeding pigs and for the spells and medicines that make them grow quickly. Pig fodder consists mostly of small sweet potatoes considered unsuitable for human consumption. Pigs can eat raw sweet potato, but those fed to pigs are often cooked to make them more palatable. The village pig population has a low birth rate, and high mortality of piglets. Most male pigs are castrated, although some are kept intact for breeding. Men are responsible for slaughtering pigs, an activity which "closely resembles hunting" (Watson 1983:56). Pigs are tracked by dogs and killed with bows and arrows.

Only small numbers of pigs are slaughtered at any one time. Traditional ceremonies require neither massive slaughter of pigs, nor gifts of live pigs. As Watson notes "an exchange involving the slaughter of as many as five to ten pigs would be outstanding in Northern Tairora" (1983:52). Live pigs are rarely transferred between villages, although piglets are sometimes given to friends to raise. In A. J. Strathern's (1969) terms, it is a system of "home production" rather than finance. Pigs are slaughtered (and usually cooked and butchered) before being given away in formal exchanges. Exchanges highlight vegetable foods, especially the products of male labor, sugar cane and bananas, as well as pork. Pigs are prepared for cooking by removing the organs of the body cavity and the bones of the rib cage. The rest of the pig is left in one piece,

flattened out and cooked in an earth oven, producing a large slab of cooked meat.

Slaughtered pigs must be exchanged because fear of sexual pollution prevents men from eating the meat of pigs that have been fed by their wives. Men fear that these pigs may have ingested traces of their wives' menstrual blood. If a man were to eat pork so contaminated, his stomach would become "blocked and swollen," and could possibly cause his death.

Pigs are only slaughtered in order to become gifts. Many different occasions require gifts of meat to be made between relatives. These include births, menarche ceremonies, marriages, and deaths. As Watson describes among the nearby Tairora villages, it is a system of "frequent but small scale slaughter of pigs" (1983:52). A gift of a pig creates an obligation for a return gift. In some cases, exchanges of pigs have become monetized: Return gifts can be made with cash rather than pigs, and pigs are sometimes purchased in order to be presented as gifts. They are expensive (cf. Watson 1983: 54); a mature pig costing from two to three hundred kina, and an extremely large one twice that. Nevertheless, in spite of the possibility of sale, in Ontena as in Kapanara

"The primary reason for raising large pigs is not to sell but to kill and give them to others on special occasions to satisfy debts, create new ones and obtain prestige and cash" (Grossman 1984: 165).

Pigs frequently break through fences to get into food gardens.irate garden owners may shoot an invading pig with a bow and arrow. Many pigs die as a result. Grossman found that at Kapanara 34 percent of all pigs killed were shot while damaging gardens. Garden owners are eligible for compensation for damage done to their gardens by a pig, but are often angry, and it may be difficult to prove which pig was actually responsible for the damage.

Specific pigs are usually earmarked for anticipated transactions (impending deaths, or marriages), so killing one causes a problem for its owner. Pigs that have been shot for invading gardens may be used as gifts to mother's brothers or sister's sons, as these relationships are ongoing ones, but the timing is unlikely to fit to the requirements of major events such as mortuary or brideprice transactions. The meat from a pig that has met an untimely end may be sold at a "pork market," but this raises only about forty or fifty kina. Outside of coffee season it may not even be worth trying to get cash for the cooked pork, and the meat is just given away. Grossman also noted that "the returns from marketing [pork] are poor" (Grossman 1984: 165). Shooting a pig significantly diminishes its value to its owner, and often produces ill feeling. The difference between the price of a pig and the value of its meat underscores the social importance of feast giving. Even though a pig is killed before it is given away, the owner's

power to determine its use makes the difference between a gift pig worth three hundred kina and fifty kina worth of cooked pork.

Of all events, mortuary feasts require the slaughter of the greatest numbers of pigs. An exceptionally large mortuary feast, involving the slaughter of 42 pigs and a steer, was held in 1988 for Sunome, the mother of both Ampona, the village magistrate, and Noya, the owner of the Ontena plantation. Mortuary feasts are usually much smaller, and only if the deceased was of considerable importance are as many as ten animals (pigs or cattle) slaughtered. A brideprice usually includes one or two pigs.

Various factors have weakened the role of the pig in local culture. For reasons of hygiene, the Australian Administration discouraged close association between pigs and people. Pigs are now rarely kept in people's houses, and are excluded from some hamlets. Large scale conversions to Seventh Day Adventism have also diminished the role of pigs in the village. Seventh Day Adventists subscribe to Old Testament dietary laws and ban the consumption of pork. Pigs are taken by both Seventh Day Adventists and non-Adventists to emblemize traditional culture. Seventh Day Adventists participate in traditional feasts, but they insist that their food not be cooked in the same earth oven as pork. The presence of large numbers of Seventh Day Adventists among mourners encourages the substitution of

steers, or even cartons of frozen imported beef or mutton, for pigs at mortuary feasts. These alternatives are also cheaper than locally raised pigs.

2. Cattle

Cattle were first raised in Ontena in the 1970s, when the Administration began promoting smallholder cattle projects in order to diversify the rural economy and provide beef to an expanding internal market. Ontena's cattle projects were financed with loans from the Papua New Guinea Development Bank. In 1987 there were forty-two cattle in Ontena, about .06 cattle per capita. Nine people owned cattle. Cattle were never as numerous or as important in Ontena as they were in the smaller village of Kapanara where Grossman (1984:64) did his study of cattle projects.

Cattle raising is incompatible with other uses for land and requires large areas to be fenced with barbed wire. Holding pens have to be built. Local grasses are not suitable for cattle so pasture must be planted with introduced species of grass if cattle are to thrive.

Initially, Ontena's cattle projects were not successful, and their owners had difficulty repaying the loans. Many cattle died as a result of poor management.⁵ Cattle projects did not succeed as economic ventures, but they did as "conspicuous investments" which contributed to their owners' prestige (cf. Finney 1973:81). Control established over land for cattle projects was also useful,

when failed cattle bosses became interested in starting coffee projects. The government eventually recognized the economic realities of the situation and stopped funding cattle projects after 1981.

Ontena's largest cattle project was a group venture undertaken by several men. Initially the owners had difficulty meeting their loan payments, but things improved in 1975, when one of the owners took charge. He bought more cattle and took more care managing the pasture. For a while the project was moderately successful, however, its owner eventually lost interest in cattle raising, and turned the operation over to his elder brother (who had been among those involved in the original project). In 1987, this herd contained most of Ontena's forty-two cattle. Twenty-five of the cattle were owned by one man, and an additional six cattle owned by other people were kept with the herd.

Ontena's cattle frequently escape from their fenced pasture, and wander around gardens and the village. Cattle are occasionally shot for damaging gardens. Escaped cattle are observed to lick around toilets (for salt) and therefore some people regard local beef as polluted and refuse to eat it. Women seldom participate in cattle rearing, but one woman owned a steer which she inherited when her husband died.

Village cattle are slaughtered in much the same way as pigs, by shooting them. For slaughtering cattle, a shotgun

loaded with birdshot usually replaces the bow and arrow used to kill pigs. Even so, the procedure is cruel and the animals often take hours to die.

Cattle are used to substitute for pigs in village feasts. Because so few people own cattle, however, the feast giver usually purchases a steer rather than providing one of his own. Many cattle used in Ontena feasts, are purchased from outside the village, especially from Aiyura. A steer provides more meat than a pig, but costs about the same price. Steers are too big to cook in one piece like pigs, so they are quartered. Beef does not offend the religious sensibilities of Seventh Day Adventists. Cattle are cooked in earth ovens with the hoof protruding to emphasize that beef not pork is being cooked.

One mortuary feast held in 1987, included three pigs and six cattle. The pigs were contributed by kin of the deceased, but the cattle were all purchased for a total cost of K1,940. (Three of the cattle, K900 were purchased from Aiyura) As Grossman notes, the purchase of cattle for such a feast involves "a sum far exceeding the value of other transactions in the village" (1984: 72).

3. Chickens

Chickens (kokore) reached the highlands in the twentieth century, and were initially kept mostly "for the prestige value of their plumage." (Kelly 1952:7). By the 1980s, people no longer had much use for plumes, but

chickens were still kept in the village. Chickens that ran freely around the village became very lean and stringy and were seldom eaten. In the 1980s, commercial chicken raising became common in Kainantu District. A few Ontena men participated in this small scale farming. They bought baby chicks in Kainantu or Aiyura (as many as fifty at one time), and brought them back to the village. The chicks were kept penned in a hut or a specially built chicken house and fed imported chicken feed until they reached maturity, when they were sold to villagers at prices ranging from six to seven kina (several days pay for a coffee picker). Even at such high prices, the chickens sold out quickly in Ontena. Farmers sold all of their stock before they bought new chicks, and waited months before restocking. Since chickens were usually unavailable in Ontena, villagers sometimes bought them in the Kainantu market where prices were about 50 toea cheaper.

In spite of its dependence on imports, chicken farming was encouraged by the Papua New Guinea government as rural development. The first man to start a chicken farm in Ontena received a start up grant of eight hundred kina from the government. He used this money to build an elaborate chicken house which even had its own tank for storing rain water. Other chicken farmers kept their chickens in ordinary structures built from local materials. Village chicken farming only made small profits because of the cost

of the chicks and the feed, and the chicken houses were usually empty.

4. Other animals

Dogs are kept for hunting and to guard their owners' homes against sorcerers. As noted above, dogs are needed to track pigs and hold them at bay when their owner tries to slaughter them. Dogs are sometimes eaten, but this is not a common practice. Wild cassowaries are caught as chicks and raised in the village. Their meat is highly prized, and, until recently, their feathers were valuable for decoration. Possums, bandicoots and parrots are all hunted and babies are occasionally kept as pets.

Apart from cattle and chickens, introduced animals were unimportant. There was one short lived effort at raising sheep, and for a while one man kept a water buffalo. The buffalo was allocated to Ontena by a village development project. It was used for plowing until it became too difficult to handle, and had to be slaughtered. The carcass was cooked and eaten, but some people thought the meat looked strange and refused to eat it. Goats were introduced by the Seventh Day Adventists to some parts of the Highlands, but have never been raised in Ontena as far as I know.

D. Competition for land and labor

Unlike food crops and animals, which are consumed by those who produce them and whose meaning is imbued with

cultural values, coffee is grown to be sold and sent overseas. Ontena people do not consume any of the coffee that they grow, nor do they make any ritual use of coffee (other Eastern Highlanders apparently do, see Sexton 1986). The cultural meaning of coffee is its ability to earn money. Nevertheless, because Ontena culture has an ingrained respect for wealth and power, coffee growing has achieved central importance. Highland villagers became coffee growers largely through their own efforts. No effective extension services were offered to smallholders during the period when coffee became important. Although they have always depended on outsiders to buy their coffee, village coffee growers are self-taught.

Villagers often use coffee gardens for purposes besides growing coffee. Food crops, especially cassava, sugar cane, bananas and pineapples are commonly interplanted with young coffee trees. Other crops planted in new coffee gardens include maize, potatoes, peas, peanuts, taro, winged bean and yams. Mature coffee gardens may still contain bananas and cassava, as well as a few special plants that do not interfere with the coffee trees, such as areca palms (for betel nut) and medicinal plants (including ginger and stinging nettles). In addition to growing food crops in coffee gardens, villagers use shade trees for firewood, and use sticks pruned from coffee trees for temporary fencing.

Raising livestock also interferes with coffee growing.

Pigs do not eat coffee trees, but their foraging for grubs disturbs the roots. Many villagers do not bother to fence their coffee gardens, which are, consequently, damaged by pigs. Some people fence their coffee gardens, but keep pigs inside the garden. It is more efficient to keep pigs in an enclosed area, but the coffee trees get damaged.

Although there is not yet a land shortage in the vicinity of Ontena and large tracts of undeveloped land are still present, the most desirable portions land are already in use and what remains varies in its suitability for agriculture. The population is increasing, and finding land suitable for growing food crops is becoming more difficult. The establishment of permanent groves of coffee trees removes land from the pool available for subsistence purposes and exacerbates the problem.

Coffee is gradually displacing food gardens near Ontena's main settlements. Coffee gardens are planted in old food gardens instead of permitting the land to lie fallow. Planting coffee establishes permanent crops on land that would have been re-used for food crops. The same process is occurring throughout Papua New Guinea, as "permanent tree crops tend to be planted increasingly on the best pieces of garden land located nearer the village" (Lam 1984:194).

Village coffee gardens require little expenditure of labor to establish, but the productivity of mature gardens

is related to their level of maintenance. Fencing, pruning, drainage, and weeding contribute to improved crop yields. The competing interests of food crops and livestock prevent villagers from maintaining their coffee gardens at plantation standards, but many have worked on coffee plantations and know exactly what is done there. Yields of village coffee gardens vary but are "much lower than average plantation yields" (Hassall and Associates 1982: 19). For the Eastern Highlands, smallholders harvest an average of only 980 kilograms of green bean per hectare, compared to 2,632 kilograms per hectare for plantation coffee (ibid:20).

The labor requirements of coffee cultivation interfere most with food production during the coffee harvest season. Labor is needed to pick and process cherry coffee. The coffee harvest falls in the dry season when little planting is done, but fewer food crops are harvested. Cash is available from the sale of coffee, however, so villagers buy imported rice to substitute for the crops that they were unable to harvest.

Intensive commitment to coffee growing also increases the labor requirements of subsistence farming. More labor is needed to obtain the same crop yields from marginal land, and to transport harvested food crops longer distances between gardens and settlements. The division of labor between men and women is effected by this, since nearly all the additional labor falls to women.

Notes

1. Only traditional crops have spells. Introduced crops are planted with fertilizer instead of spells, since "Europeans" did not bring spells for the new crops that they introduced.

2. On this occasion, two women and five teenaged girls were planting a bottom land garden with sweet potato, maize, winged beans, pitpit and four varieties of leafy green vegetables. Before she began to plant, the garden's owner went to get cuttings of kuwami, a special tree. She explained "We plant kuwami beside the ditches at the top of the garden to keep away birds and rats that might eat our seeds." She also recited a lengthy series of spells, to "give instructions" to the plants. Each bundle of slips was picked up and carefully bespelled. Sweet potato received the most attention.

One of her daughters brought a two and a half meter length of bamboo to the garden. The nodes were filled with rain water, so when it was put into a fire, it exploded releasing a trickle of water. The girl sprinkled each of the bundles of slips with the water that dripped out. She repeated the process, heating another segment in the same bamboo until it exploded. The cuttings of kuwami and a purple coleus (?), were bespelled and used to brush water over the bundles of slips. She swept the field with these plants and then the other girls followed her, placing sweet potato slips at proper intervals. Then the kuwami and coleus were planted in the corners of the field. Finally, the garden's owner planted pitpit slips around the edges of the garden, saying spells in a low voice as she planted them.

3. Ontena myths refer frequently to taro and yams (not sweet potato), and the ritual importance of these two crops is out of proportion to their minor role in the subsistence system. Ontena also traditions record that until a few generations ago sweet potatoes were grown staked in the manner of yams. Staking sweet potato plants is unnecessary, but it might be done by people unfamiliar with sweet potato who were used to growing yams vines. Sweet potato plants are also vines which looks as though they should be staked. During the time of the darkness, ("about 1880" according to Watson (1983:48)) ice or sand falling from the sky knocked the staked sweet potato vines over, and they were found to grow just as well as before.

4. The population of the hamlets included in my census was 662 (excluding school teachers who had gardens but no pigs or coffee land).

5. In 1974, the largest cattle project in Ontena was a collective venture involving eight men. The owners of this project were unable to make the required loan repayments to the bank, and had only four surviving cattle. Of the thirteen cattle that were originally bought and the four that were born in the project: seven died before they could be slaughtered; four were killed to sell the meat in the village; and only one was sold to the government run abattoir. In a second village cattle project there were three surviving cattle. Of the five cattle originally purchased and the three born in this project: three died before they could be slaughtered; two were sold to the government-run abattoir, but all the proceeds had to be used to repay the loan.

CHAPTER V. PAPUA NEW GUINEA'S COFFEE INDUSTRY

A. Introduction

An international market in coffee existed long before Papua New Guinea Highlanders saw their first coffee tree. Coffee is grown commercially in most tropical less-developed countries. The market for coffee is mostly in developed countries, where it is consumed as a beverage. A very high proportion of the world's coffee crop is, therefore, internationally traded and is an important source of foreign exchange earnings for many producing countries (Streeten and Elson 1971: 13). In Papua New Guinea, for example, coffee accounted for fifteen percent of the country's total export earnings in the period from 1982-1986 (The World Bank 1988: 1:x).

B. Characteristics of the global coffee industry

The cultivation of coffee does not require large investments of capital or elaborate technologies, and small scale coffee farms exist in many parts of the world. Although coffee is "mainly grown by smallholders" (Streeten and Elson 1971: 27), who are able to meet the labor requirements of production using family labor, it is also grown on large plantations in some countries.

Usually, coffee trees are raised from seeds in a nursery, and transplanted into fields. They begin to bear two to four years after transplanting with the yield

increasing over the next several years. The productive life of trees can be thirty years or more depending on variety, climate and cultivation practices. Because coffee trees take several years to reach peak yields, it is difficult for growers to reduce production levels when prices drop. Lack of alternative crops also encourages coffee growers to maintain excessively high levels of production.

Coffee beans are contained in a small fruit which turns red when it ripens, and is known as a cherry. Each cherry normally contains two coffee beans. The beans are cleaned, dried, roasted and ground to produce the finished product. Depending on conditions, some coffee may ripen year round, but most of the crop ripens during a seasonal peak. In Papua New Guinea where it runs from May to September, it is known as the "coffee flush". This is the period when coffee production requires the most labor.

1. Milds, Brazils, and Robustas

The world market for coffee is segmented into three major categories, known as mild coffees, Brazil coffees, and robusta coffees. Within each category there are further gradings according to quality and price. Milds and Brazils are both produced from the arabica coffee tree (Coffea arabica), while robustas are produced from a tree of a different species (Coffea canephora). Arabica coffee is grown mostly in the highland tropics, while the hardier tree that produces robusta coffee is grown at lower elevations.

The highest quality coffees are the milds. These are produced in Central and South America outside Brazil, in parts of Africa, and in Papua New Guinea. The dominant producer of mild coffees is Colombia, which produces by far the largest portion of the world's supply. Other major producers include El Salvador, Guatemala, Costa Rica, Mexico, Kenya and Tanzania. Brazil coffees are produced exclusively in Brazil. Although Brazil coffees come from the same species of tree as milds, because of the methods used in their harvesting and preparation, they are harsher tasting and command lower prices.

The tree which produces robusta coffee tolerates hotter climates than does arabica so it is grown at lower altitudes. It produces larger crops than the arabica, but the coffee has a distinctive flavor which commands the lowest prices. Major producers of robusta coffees are African countries and Indonesia. Papua New Guinea produces a small amount of robusta coffee in lowland provinces.

The care taken in harvesting and processing the coffee is crucial in determining its quality and therefore its price. To produce mild coffees, the cherries are picked individually as they ripen. The quality of the coffee is lowered if green cherries are picked. After harvest, the outer skin of the cherry is removed mechanically or by hand. Next the beans are wet processed, fermented for a few days, and thoroughly washed to remove the adhering mucilaginous

film. The coffee beans are then dried either mechanically or in the sun. At this stage the beans are still covered by a layer of papery skin, and are known as 'parchment' coffee. The parchment and the 'silver skin' are removed by machine to produce 'green beans' which are the export product.

The simpler 'dry process' is used to prepare both Brazil and robusta coffees.

"With the dry process the cherry is dried in the sun.... The dried cherry is then "hulled" in machines which remove the dried husk of the cherry, the "silver skin" and the "parchment" covering over the beans, all in one operation, thus producing the "green coffee" which is the unroasted coffee of commerce" (Rowe 1963:25).

2. The Structure of Prices

Mild coffees command a price premium over Brazils because of their superior quality and flavor. Brazil coffees are used for blending with milds to produce a less expensive product of acceptable quality. Because Brazil is by far the largest producer of coffee it plays "a critical role in the world coffee economy" (Hassall and Associates 1982:98). The size of the Brazilian crop determines the general price level from year to year, and "when the price of Brazils is high, the milds usually command a very much smaller premium than when the price of Brazils is low" (Rowe 1963: 24).

Robustas are used mainly in the manufacture of soluble (instant) coffee, but because of their distinctive flavor most robustas cannot be used for blending with milds.

Whereas Brazils can substitute for milds to some extent, robustas cannot. Both milds and Brazils can be used in the manufacture of soluble coffee, producing a high quality product, so if their prices are low enough they can replace robustas. In effect robustas "largely have their own market, but only at a lower price than Brazils..." (ibid).

Thus the supply and demand for Brazils sets the general price level, and mild coffees command a premium varying mainly with their supply and the price of Brazils in the short period, and also with changes in consumers' tastes in the long period, while robustas sell at a substantial discount varying with their supply and demand, the latter being much influenced by the relative price of Brazils. (Rowe 1963: 24)

3. World Supply and Demand

Coffee drinking habits change slowly and are not strongly affected by price changes. World demand is characterized by "low price elasticities" (Hassall and Associates 1982:98), i.e., consumers do not usually drink much more or much less if the price of coffee falls or rises. Short term changes in coffee prices have been the result of fluctuations in supply rather than of changes in demand.

Nevertheless, certain long term consumption trends are important to the world market in coffee. In general, coffee consumption has risen with improvements in income and standards of living. Recently, however, there have been some significant trends in the opposite direction. For example, the U.S.A showed a declining rate of coffee

consumption through the 1960s and 1970s, as soft drinks, fruit juice, and tea increased their share of the beverage market (Hassall and Associates 1982: 108).

The supply of coffee, on the other hand, fluctuates sharply, which causes corresponding price fluctuations. Brazil's coffee crops especially "have always been subject to great variations in size from year to year" (Rowe 1963: 13). The 1920s was a period of major expansion of coffee planting in Brazil. "By 1929 Brazil's productive capacity was nearly double what it had been five years or so earlier" (ibid). Brazil entered the period of the great depression with coffee production well in excess of what it could export, and it "held back supplies on a huge scale," (ibid) to prevent the price from collapsing. It even resorted to bonfires to destroy part of its stocks. World War II further diminished the market for coffee, and Brazil continued to build up stocks. By the end of the war, Brazil's productive capacity had declined somewhat, but it was holding stocks of "at least 6 million bags" (ibid) or an amount slightly greater than the annual production of Colombia, the world's second largest producer.

After the end of the war, "demand rapidly and greatly increased, and was soon in excess of world exportable supplies, but the deficiency was met from the remaining surplus stocks in Brazil" (ibid). While Brazil was reducing its accumulated stocks, production was not increasing to

match the rising demand. After the Brazilian stocks were exhausted in 1950, there was "a sharp rise in prices" (Streeten and Elson 1971: 16). Prices nearly tripled between 1948 and 1954 and this stimulated "a period of intense planting" in Brazil and in Africa, as well as efforts to increase production in other parts of Latin America. (Streeten and Elson 1971: 17). This was also the period that saw the beginning of the coffee industry in the Papua New Guinea Highlands.

4. International Coffee Agreements

Beginning in 1957 the major coffee producing countries made agreements in an effort to control unstable coffee prices by limiting exports, and in 1962 an International Coffee Agreement was concluded "including major importers as well as exporters" (Streeten and Elson 1971: 20). The parties to the Agreement also set up the International Coffee Organization to oversee and enforce the Agreement. The Agreement aimed at stabilizing coffee prices by imposing quotas based on the current price and production structure (ibid 21). Quotas were based on existing production and did not make allowances for coffee acreage that had already been planted, but was not yet bearing, and thus placed smaller newer coffee producers at a disadvantage (Maitha 1974: 36-37; Lam 1984: 148). Newer coffee producing countries had no choice but to sign the Agreement; however, because the markets of importing members were closed to coffee from non

members. The countries who joined the Agreement accounted for "97.4 per cent of world coffee exports and 96 per cent of imports" (ibid 20).

Australia signed the original International Coffee Agreement as an importing member, and in so doing it brought its then colony of The Territory of Papua and New Guinea into the Agreement. Together Australia and Papua New Guinea formed one production and consumption unit, so Papua New Guinea was allowed to sell an amount of coffee equal to what Australia consumed (Finney 1973:66). The Agreement also required exporting members to limit further expansion, and the Administration in Papua New Guinea banned "any further alienation of land for European coffee plantations" and ended its "extension work designed to spread coffee growing among New Guineans" (Finney 1973: 66).

The Agreement was renewed in 1968, "along the same lines as before" (Streeten and Elson 1971: 20), and the quota system was continued with some modifications. Papua New Guinea joined the International Coffee Organization after it became independent in 1975 and participated in the negotiations for the 1976 Agreement (Lam 1984: 148).

Export quotas were lifted early in 1973, and remained in suspension until 1980 "largely as the result of persistent production setback in Brazil" (Lam 1984:148).¹ Quotas were reimposed in 1980 and remained in force until February 1986, when they were again suspended "because of a

rise in prices following a Brazilian drought" (The New York Times July 7 1986). The International Coffee Organization reimposed export quotas in October 1987 when Brazilian production returned to its normal level. Papua New Guinea's allocation was 548,169 bags out of a global export quota of 51.5 million bags for the 1987-88 coffee year (1.06 percent of the world market) (Niugini Nius October 15, 1988). The quota system eventually collapsed in July 1989 when Brazil refused to reduce its allocation below 30 percent of the global market and withdrew from the International Coffee Organization (The Washington Post March 23, 1991).

C. The development of the plantation sector

1. The colonial period

Commercial production of coffee in Papua New Guinea was started by Australians who had come to the Highlands to prospect for gold. When commercial production of gold did not eventuate, they began to consider other enterprises. Coffee had already been successfully grown in the experimental plantings made in Aiyura in the 1930s (Bourke 1986:101), and in 1948, a former prospector, Jim Leahy, obtained "coffee seeds from the agricultural experiment station at Aiyura" (Finney 1973: 43) and started the first coffee plantation in the Highlands. Coffee was "an ideal crop for a man like Leahy with little capital, because it could be grown economically in practically any amount and because coffee processing technology was relatively simple

and inexpensive" (Finney 1973: 44).

At first the Administration did not favor the alienation of extensive areas of land in the Highlands. There was a large indigenous population, and the official policy was that land could be alienated only if "the local owners be willing to sell and that the parcel of land was surplus to the present and future subsistence needs of the owning groups" (Lam 1984:72). Since it was clear that the Highland population was growing rapidly, these conditions were difficult to meet and between 1945 and June 1952 only 2,797 hectares of land was alienated from the traditional owners (ibid).

A combination of high world coffee prices and cheap local labor made coffee plantations economically irresistible, however, and in 1952 the Administration opened the Highlands to applications for land alienation. Under the Land Ordinance of 1922 the Administration was the only entity legally entitled to purchase land from its traditional owners. The land used for coffee plantations was purchased by the Administration, which then granted planters 99 year leases. Highlanders had various motives in making land sales. Certainly many of the sellers had questionable claims to the lands they sold; others may have seen the establishment of a plantation on their land as creating a partnership with the powerful foreigners (Finney 1973: 49).

The news about the high prices that Highland coffee was receiving led to a "land rush" which resulted in the alienation of 7,034 hectares of land for agricultural leases between 1952 and 1955 (Lam 1984: 73). Many of those who received agricultural leases were Australian ex-servicemen, who were treated generously by the Administration, and benefitted from an "old Australian idea ... that the returned soldier should be rewarded with land" (Rowley 1966:119). Forty-five expatriate owned plantations were started in the Eastern Highlands during the 1950s (Bureau of Agricultural Economics 1961: 8), including one in Ontena and two in adjacent Tairora villages. The latter two were started in 1953, during the period of the "land rush". 49.7 hectares of land for the Bonta'a plantation were purchased in September 1953 for £74/10/6. 43.25 hectares of land for the Abiera plantation were purchased in 1953 for £64/17/6. Both of the planters were Australian ex-servicemen. The Ontena plantation was started in 1959 as an extension to the one at Abiera. Its 46.1 hectares were purchased for £165.

The political controversy aroused in Australia by the escalating land alienation forced the colonial administration to reconsider its actions, and a more restrictive policy went into effect in 1954. Administration officials stressed the need to evaluate each piece of land being considered for alienation and allow alienation only of land judged to be "neither essential now, nor ... in the

future, to meet the needs of the natives themselves" (Paul Hasluck quoted in Finney 1973: 47). The pace of land alienation slowed, and Highland lands were preserved for their traditional owners.

Officials in the Administration exhibited a range of attitudes about alienating native land for plantations. Some officials looked favorably on the economic possibilities of plantations, equating "white settlement with economic development" (Rowley 1966:120). :

...land availability was discussed with the inhabitants of Ontenu and Bonta Villages. There is a long narrow strip of land about four miles wide and nine miles long to the South South West of Kainantu; a large section of this could be alienated as a pastoral lease as the population in the surrounding villages is small. The area is undulating grassland with a large number of small creeks running into the Ramu river. (Redwood 1955b:8).

Generally, however, the Administration adopted a paternalistic attitude, especially after 1954. They tried to protect villagers against the possibilities of foreign exploitation, and to limit the development of plantations.

It would be unwise to alienate more land in this area, even though the people are prepared to sell, until such time as more intensive methods of agriculture are adopted. (Burge 1954:5)

The Administration opposed plans to extend the plantations near Ontena. Both the owners of the Abiera plantation and the Bonta'a plantation applied for, and were denied permission to expand their enterprises. The application to extend the area of the lease at Bonta'a plantation received

the following evaluation in March 1958:

Of the total area of 5,360 acres of land owned by BONTA'A people the total arable land holdings is an area of 1,340 acres, exactly one quarter of their total land, and of this the Assistant Agricultural Officer estimates only 268 acres is suitable for coffee growing. In fifty years' time there will be a mere 234.5 acres surplus to the then land requirements; furthermore the 268 acres represents the only source of future large scale cash cropping. A decrease in this acreage is quite unjustifiable. ...I recommend that this application not be proceeded with. (Department of Lands file L.A. 3737)

The application to extend the area of the lease at Abiera plantation received the following evaluation in September 1958.

Two extension areas have been applied for, and the areas are owned by the people of Abiera and Tonkera. The present combined population of these villages is 379, and the average rate of increase of population in the area is 1.5% annually, a figure which is substantiated by the natural increase details given for the particular Census Division in the District Officer's memorandum. The total estimated arable land holdings of the owner groups are 2800 acres. Assuming that the average requirement per head of population is about 3.3 acres of arable land, the District Officer considers that the present rate of population increase, if maintained, will mean that the population will need all its reserves of arable land in the foreseeable future, and he feels that he is unable to issue his Certificate of Alienability. (Department of Lands file A.L.33/182)

Nevertheless, in 1959, the Australian ex-serviceman who had been unable to expand his coffee plantation at Abiera, was allowed to buy land in Ontena. Ontena had a larger population than either Bonta'a or Abiera, but it also had a larger territory. The money from the sale was divided among the several village elders who negotiated the deal with the

administration, but there were allegations that the man who received most of the money was not a true landowner.

"European" coffee plantations were fairly small enterprises. In 1959, the average size of plantations in the Eastern Highlands was 206 acres [83.4 hectares] (Bureau of Agricultural Economics 1961:16). Many plantations had only limited processing facilities. Plantations derived their planting material from the same sources as smallholders, "research stations in the Territory" (ibid 18). Although capital requirements for establishing plantations were small, a study made in 1959 found that "the amount of capital required for establishment ... had in many cases been greatly underestimated, and that after available funds had been exhausted, further development was held up... (ibid 51) The sources of funds used in establishing plantations included "bank overdrafts" and "accounts outstanding with the large trading companies" (ibid 51) By 1960, when advances became available from the Ex-Servicemen's Credit Board, "much of this amount was absorbed in paying off outstanding creditors" (ibid 51).

The cost of Papua New Guinean labor was very low² but it still "averaged 40% of operating expenses." (ibid 38) The rates of payment were set by the Administration, but "In the early stages of plantation establishment in new districts such as the Highlands, it has not proved practicable to apply the full terms of the ordinances" (ibid

38-9).

In spite of the availability of cheap labor, none of the three plantations started in my study area was successful. Inexperience, a poor choice of land and falling coffee prices were factors that contributed to their failure: "The lease is not suitable for coffee or even native foods" (Department of Lands file A.L.33/182). Some idea of the extent of their failure can be seen in the following, rather pathetic, letter sent to the Director of the Department of Lands by the owner of Bonta'a plantation in May 1959:

Evidently the Ex-Serviceman's Credit Board does [not] agree that my block in the Akwitanu River Valley, Kainantu, Eastern Highlands, constitutes a living area as they have refused my application for a loan by which I hoped to go onto the place immediately and develop it myself instead of as heretofore using my salary to pay someone to do it for me. Now with all my savings gone and my salary overdrawn and unable to obtain credit from banks, private persons, or the Credit Board, I am completely unable to continue developing or even maintaining the block either by proxy or in person, as there is still a considerable time to elapse before it could become self supporting. Therefore I am left with no alternative but to try to get back whatever I can from selling the block, other than that leaving it to the kunai [grass]. I am therefore asking that should such a sale be arranged I would be very grateful for assistance with speedy transfer of lease etc. I am not familiar with requirements for sale or transfer of lease as I have never considered selling, and never inquired. It was to have been our home. (Department of Lands file L.A. 3737)

The owner of the Bonta'a plantation was able to transfer the lease to another "European" in December 1959. The new owner maintained the plantation until 1973, when he

sold his lease rights to it and another plantation to the Australian Overseas Development Corporation for \$70,000 (Australian).

The Abiera and Ontena plantations also experienced financial problems. They were abandoned after their owner died in 1962 and his widow returned to Australia. The Ex-Serviceman's Credit Board held the mortgage on the leases and took over control of the properties. Leases held by the Ex-Serviceman's Credit Board were assigned to the Papua New Guinea Development Bank after it was formed in 1967.

2. Independence and localization

When the coffee industry in Papua New Guinea began, it was sharply divided into two sectors: coffee was grown by "Europeans" on plantations, or it was grown by "natives" on smallholdings. But this racial division began to break down as Highlanders developed their own coffee plantations. Already in the 1960s Papua New Guineans had been admitted into the Highland Farmers and Settlers Association, the organization representing "European plantation and allied business interests" (Finney 1973: 168). "European" coffee growers were able to enlist Highland businessmen in a politically conservative alliance that supported their interests and opposed early political independence of Papua New Guinea.

This conservative faction lost the pre-independence power struggle to a more radical nationalist coalition based

in the coastal provinces, which in 1972 had as one of its stated aims to rapidly "increase the proportion of the economy under the control of Papua New Guinean individuals and groups" (Somare 1975). Just prior to independence, the government adopted a policy of acquiring plantations owned by expatriates and returning them to local ownership. At independence, the Papua New Guinea Development Bank owned the Abiera and Ontena plantations, and the Australian Overseas Development Corporation owned the Bonta'a plantation. Finding local owners for these plantations was difficult because few local people or groups had the financial resources to buy and run them.

Noya, an Ontena man, purchased the Ontena plantation from the Papua New Guinea Development Bank for K.4,000 in 1975.³ This was the least developed of the three plantations; it had been developed as an annex to the Abiera plantation and had no buildings or processing facilities. At the time only about half of the plantation's 46.1 hectares was planted with coffee. The other two plantations did not find buyers at once. In 1979, they were acquired by the Kainantu Plantation Trust, which had been established by the Kainantu local government council for the purpose of transferring plantations to national ownership. The Kainantu Plantation Trust bought the plantations at prices "freely negotiated ... on the open market" (Corin 1981:170), and held them for a few years before they could be resold to

private interests. In December 1979, the Kainantu Plantation Trust paid the Australian Overseas Development Corporation K90,000 for the Bonta'a plantation, and paid the Papua New Guinea Development Bank K12,500 for the Abiera plantation.

The Bonta'a plantation was acquired from the Kainantu Plantation Trust in 1980 by the Taiga Development Corporation, which was headed by Lennie Aparima⁴ who was then the Member of Parliament for the Obura-Wonenara open. At the time, he was a member of Julius Chan's ruling coalition, and he used his political connections to get financial backing for the purchase. Some of his negotiations are contained in the following letter from Thomas Kavali, O.B.E., M.P. Minister for Lands dated May 1980:

I refer to your recent request to the Honourable Prime Minister, Sir Julius Chan, K.B.E. M.P. for K50,000 from the Plantation Acquisition Trust Fund to purchase three (3) plantations in the Kainantu area of Eastern Highlands Province.

I wish to advise that under normal circumstances and for legal reasons, it is not usually possible to give monies to people or to groups from this fund. However, following the Honourable Prime Minister's direction I have directed my department to make this money available to you from whatever source may be possible. (Department of Lands file L.A. 3737)

The third expatriate-started plantation waited until 1983 to be taken over by private interests. It was purchased by Kembris, a young man who is in the process of putting together a small business empire in Kainantu. He

raised money from a successful retail store in town, started his own plantation on land in his own village, and finally bought the Abiera plantation from Kainantu Plantation Trust for K75,000. He has kinship connections with Abiera but comes from a nearby Kamano speaking village.

Since about 1980 agricultural extension efforts have been aimed at establishing twenty hectare coffee plantations owned by village businessmen, on land where they have traditional claims. Three men in Bonta'a and two in Abiera have started such plantations. The owners receive a small salary for assisting in running the plantation, and have to pay high monthly fees to a management agency.⁵ The owners of twenty hectare projects are not rich. Most live in ordinary thatched huts, and do not own vehicles (see Chapter 7).

The policy of localizing ownership of coffee plantations in the 1970s was successful, and by 1980 the executive officer of the Coffee Industry Board was able to report that "Papua New Guineans own or have a major shareholding in virtually all coffee plantations" (Mitio 1981:182). Foreign involvement, however, remained significant both in plantation management and in the ownership of coffee exporters.

D. The development of the small-holder sector

The population of the Eastern Highlands Province is concentrated in areas that are suitable for the cultivation

of their staple crop, sweet potato. Sweet potato thrives under similar conditions to those required by arabica coffee, so that when the Highlanders were first contacted by outsiders, most of them were living in the areas best suited for coffee cultivation. Few villages in the Eastern Highlands do not own at least some land that can be used to grow coffee.

Villagers began growing coffee before the first expatriate- owned plantations were established (Bourke 1986:102). Coffee was actively promoted by the wartime administration (Australian New Guinea Administrative Unit) as part of their effort to involve Highlanders in the cash economy. ANGAU officers had villagers plant coffee plots in parts of Goroka, Henganofi and Kainantu Districts in 1944 and 1945. Villagers applied their expertise as cultivators to coffee, and by the end of 1945 ANGAU patrol officer reported satisfactory coffee plots in the Kamano area (Blyton 1945b).

Coffee extension work continued after the country was returned to civilian Administration. Officials in the Department of Agriculture Stock and Fisheries (DASF) based at Aiyura were distributing coffee plants "from early 1949 onwards" (Bourke 1986:103). Patrol reports document that coffee growing was established in Ontena by July 1952.

"Coffee plots, planted at ONTENU, were visited. These plots were recently inspected by an Agricultural officer from AIYURA and his advice is being carried out by the native owners and the plots appear to be

thriving." (Kelly 1952: 7)

No real commercial outlet for village coffee existed at this time, however, although some coffee was being purchased from villagers in Kainantu and Goroka from about 1947 (Bourke 1986: 102). In the late 1940s "sales of coffee were minor compared to those of vegetables" (Finney 1973: 43).

Because selling coffee was difficult, the extension efforts did not always meet with success. In the Tairora area, the practice of growing coffee for sale was still not firmly established in 1954 when a patrol officer complained that:

Numerous plots have been planted by Agricultural Officers for these natives but the lack of perseverance on the part of the people is adversely affecting the plots.

This attitude can be expected to continue until such time as some of the plots begin to bear and the people can see the actual cash return that can be extracted from a small area of coffee. (Burge 1954: 5)

As late as 1955 villagers in the Tairora census division were still having difficulty marketing their coffee. A patrol report for that year observes that coffee growing is "Another commercial enterprise which as yet is not yielding any cash returns" (Redwood 1955b:4).

The establishment of a plantation sector of the coffee industry improved the possibilities for marketing village coffee. As marketing facilities improved, so did the enthusiasm of villagers for growing coffee. A 1955 patrol report notes a dramatic change in the Kamano census

division:

Native coffee growing has greatly increased over the last few months. Previously only a few villages had planted coffee, but over the last few months quite a few village officials have obtained coffee seed from the Highlands Agricultural Experimental Station at AIYURA. (Redwood 1955a:8)

In 1955 DASF extension workers were besieged by requests from Highlanders for help with coffee growing. "[I]t is impossible for the present staff to keep up with the demands for assistance sent in by natives. More staff is urgently needed there to direct and supervise the coffee growing in the area" (Dwyer quoted in Finney 1973: 65).

After 1955 the amount of coffee planted by smallholders increased rapidly. By the 1958-59 coffee year (September through August) smallholders were producing about 30 percent of Papua New Guinea's coffee crop (Bureau of Agricultural Economics 1961: 53), and large numbers of trees had been planted but had not yet started to bear. The Eastern Highlands was becoming the most important area for smallholder production. By 1959, the number of trees owned by smallholders (2,032,000) had surpassed the number on "European" plantations (1,226,000) in the Eastern Highlands (Bureau of Agricultural Economics 1961:6)

The falling world price of coffee caused the Administration to rethink its policy of promoting village coffee growing and to worry about the problem of over-reliance on coffee. In 1959, DASF officers in the Highlands

received orders "to temporarily reduce emphasis on coffee and to cease active encouragement of new plantings until accurate marketing forecasts could be made" (Finney 1973: 66).

This policy became even more firmly established after Australia joined the International Coffee Agreement Organization in 1962. When it joined, Australia had to agree to limit the expansion of coffee production in Papua New Guinea. The limitations imposed on the Papua New Guinea coffee industry required both the "banning of any further alienation of land for European coffee plantations and ... ceasing active extension work designed to spread coffee growing among New Guineans" (ibid). Thus, "the active phase of coffee extension work" (ibid) came to an end. However, by this time village coffee "already had achieved the stage of self sustaining growth" (Lam 1984:135), and its production continued to expand even without assistance from the government.

Because of the quotas imposed under the International Coffee Agreement, the Administration discouraged Papua New Guineans from planting coffee in the 1960s and 1970s. Agricultural leases granted at this time, such as that granted to a non-Highland Papua New Guinean at Bonta'a in 1971, specified that "No coffee is to be grown on the lease" (Department of Lands file A.L.70/246). Instead of promoting coffee, the DASF introduced smallholder cattle projects in

an effort to diversify the rural economy and to provide beef to an expanding internal market. Coffee growing could be undertaken independently by villagers, but cattle projects required significant government assistance. This assistance included not only advice from agricultural extension officers, but also loans from the Papua New Guinea Development Bank. Even a small cattle project needed finance and supervision from the government, and therefore participation in cattle projects was limited to a few individuals. A "cattle boss" (Grossman 1984) also had to be able to establish exclusive rights over a large area of land, fence it with barbed wire, and withdraw it from other uses.

Cattle projects in Ontena were important not because they generated income, but because they enabled some individuals to secure control over large areas of land. In Ontena and neighboring villages they usually produced losses (see Chapter 4), but were nevertheless prestigious "conspicuous investments" (see Finney 1973:81). The government eventually recognized the economic realities of the situation and stopped funding cattle projects after 1981.

Coffee production in the smallholder sector surpassed that of the plantation sector by 1965. In 1973 smallholders grew 76.6 percent of the country's coffee crop (The World Bank 1978: 156), and in the 1980s smallholder production was

about seventy percent of the total (McConaghy 1987).

E. The coffee industry in the 1980s.

In 1986, a year of good world coffee prices, coffee accounted for sixty-two percent of Papua New Guinea's export earnings from agriculture, (The World Bank 1988: 1:121) or 20 percent of its total export earnings (McConaghy 1987:8). It totally dominates the economy of the highland provinces where it is the only significant export commodity produced.

1. Coffee Industry Board

The Coffee Industry in Papua New Guinea is overseen by the Coffee Industry Board which has powers "to control and regulate the production, processing, marketing and export of coffee grown in Papua New Guinea" (Papua New Guinea Coffee Industry Board 1983:3). The Coffee Industry Board is a statutory body composed of ten members: nine represent the coffee growers and are appointed by the Minister for Primary Industry for three year terms and the other is the secretary of the Department of Primary Industry or his representative. The CIB closely regulates the industry at two levels: It licenses factories which buy unprocessed coffee; and it licenses exporters, and sets their quotas in years when the country is subject to export quotas. The other important function of the Coffee Industry Board is the management of a price stabilization fund. The Coffee Industry Fund (CIF) aims to reduce fluctuations in prices paid to coffee growers by imposing a levy on coffee exports when the world price is

high, and paying a bounty when the price is low.⁶ Both levies and payments are made at the point of export, and are expected to flow down to growers. The fund is self-financing, and has built up a substantial surplus (World Bank 1988 1: 21). The fund is considered to be well managed, and has reduced short term price fluctuations, although it cannot have any impact on long term trends in world prices. Coffee prices were low in 1987 and have continued to decline.

The Board is supposed to remain above politics, but it is finding that progressively more difficult. Not only does it have to balance contradictory long term and short term aims, but it can do nothing about the major problem of the industry, a long-term trend to lower prices brought about by worldwide over-production. Few alternatives to growing coffee are available in the Highlands either for villagers or for businessmen with large investments. The interests of small holders, plantations and exporters sometimes differ. The board itself, composed largely of owners or managers of plantations, is structurally aligned to the largest growers, whereas politicians are trying to appeal to the most numerous category, the smallholders. The administration of an important industry with a large budget and serious problems lends itself to allegations of corruption and mismanagement.

The revelation that "In seven months of bad coffee

prices the Coffee Stabilization Fund has paid out K20.6 million" (Post-Courier July 28, 1987) prompted the Agriculture and Livestock Minister to announce an end to bounty payments, contending that "the full amount of the bounty is not being passed on to all smallholder growers" (Duwabane 1987). After an outcry from the industry spokesmen connected with the CIB the bounty was restored, however, the following December, the Agriculture and Livestock Minister suspended the CIB's chairman. The suspension (originally reported as a "dismissal") was justified by "allegations ... about the board's misuse of coffee monies" (Post-Courier December 9, 1987). The suspended chairman's supporters in parliament claimed that the charges were part of "a personal vendetta" (Post-Courier December 11, 1987), and he was eventually reinstated after "a Committee of Inquiry ... concluded that allegations of mismanagement ... were baseless" (CIB 1988). Controversy has continued to plague the CIB, and in 1991, a new government dismissed the entire board charging that "board members were using CIB funds as if they were their own property" (Post-Courier, January 11, 1991). An interim board was appointed, led by the man who had been suspended by the previous government, and it was announced that a Coffee Industry Corporation would be formed to supercede the C.I.B. later in the year.

2. Coffee Growers

Papua New Guinea's coffee production is concentrated in three Highlands provinces, Western Highlands, Eastern Highlands, and Simbu, which produce 85 percent of Papua New Guinea's

coffee crop (McConaghy 1987:5), but ownership is widely dispersed among coffee growers. As noted above, about 70 percent of the country's total crop is grown on smallholdings and 30 percent on plantations. There are an estimated 300,000 smallholders in Papua New Guinea. They are mostly producers on a very small scale. "The average smallholder plot would probably comprise 600 trees covering about 0.15 of an hectare in area" (McConaghy 1987:6). The income generated from such a plot would be correspondingly small, perhaps "between K350 and K400" (ibid) in 1986.

Because the prices received for Papua New Guinea coffee are dependent on its quality, industry representatives express concern that smallholders, operating "on a philosophy of low input/low output" (ibid) will adversely affect the reputation of the nation's coffee. The quality of smallholder coffee may be affected by poor selection of planting materials, poor picking practices, and poor processing (see Hassall and Associates 1982: 29ff).

In 1987, there were 175 coffee plantations in Papua New Guinea 95 percent of which were owned by Papua New Guinean individuals or businesses (McConaghy 1987: 7). Plantations vary in size, many are only about twenty hectares, while the

largest plantation in the country is the 450 hectare Gumanch plantation in the Western Highlands (ibid).

Smallholders generally grow their coffee on land held through "traditional" land tenure, rely on family or informally hired casual labor, and have no external financing.⁷ Plantations are organized very differently. They have legally recognized control over land, either through government leases, land tenure conversion or registration of customary land. They also employ large numbers of workers, and depend on bank financing.

a. Extension Services

After the initial efforts to induce smallholders to grow coffee in the 1950s, problems with quotas led the Administration to discontinue extension work involving coffee. Smallholders learned what they know about coffee husbandry through experimentation and through observation of practices on plantations.

After independence in 1975, the old Department of Agriculture Stock and Fisheries was replaced by the Department of Primary Industry, and its functions were assigned to the new provincial governments. Coffee extension thus became "a Provincial Government responsibility" (Hassall and Associates 1982: 22). But because there was no coffee extension work for a decade before provincialization, DPI staff members "had little opportunity to gain experience in the industry" (ibid 21).

Furthermore, they were poorly funded and supervised and developed a reputation for "general apathy and hopelessness" (McConaghy 1985: 61).

Smallholders continued to be neglected by the provincialized DPI, but there was some effective extension work aimed at organizing small plantations. In the Eastern Highlands, a "coffee development team" was set up. The team concentrated on establishing "clan owned blocks of about 20 ha. in size," (Hassall and Associates 1982: 158) rather than smallholder gardens.

In 1986 an event occurred which forced the coffee industry to devote more attention to the smallholder sector. Coffee leaf rust disease (*Hemileia vastatrix*) became established in Papua New Guinea's orchards. Smallholdings were often poorly maintained, and such conditions as excessive shade, poor drainage, and inadequate weeding all make trees more susceptible to coffee rust. In order to control the spread of the disease, it became necessary to introduce a program of smallholding rehabilitation (Post-Courier May 8, 1987). The crisis generated by the spread of coffee rust led to the first effective extension services provided to small producers of coffee in nearly twenty years.

In January 1987 the Coffee Industry Board established the Coffee Development Agency "to take over the coffee extension function of the Department of Primary Industry

throughout the country" (Mitio 1987). Extension services offered by the CDA aimed at both "improving the village coffee gardens through rehabilitation programmes" (ibid) and the "prevention of coffee leaf rust disease" (ibid). In 1987 CDA extension workers contacted 167,000 coffee farmers "or 67% of the total smallholder population" (CDA 1988).

Not all observers agree that the CDA has been effective. One politician complained "The CDA was set up to oversee the coffee rust eradication program, and to date its performance in respect of the rust campaign is pathetic." (Kerowagi MP Jim Yer Waim quoted in the Post-Courier, January 14, 1988). Another politician accused the then ruling party, the People's Democratic Movement, of establishing the CDA "to promote their political ends" (Nuigini Nius, August 31, 1988). Politics aside, the CDA did get extension workers out to coffee growing villages, and that was a significant development in and of itself.

b. Land

The land used by smallholders is acquired through purely local "customary" arrangements, but plantations require more secure land titles. As one expatriate businessman comments:

"Although customary title covers 97 per cent of the country's total land area, this form of ownership is fraught with difficulties due to land disputes and insecurity of title to such a degree that it is unacceptable security for borrowings. In practical terms customary ownership is totally inappropriate for commercial use." (Corin 1981: 170)

Some plantations are on government lease hold land taken over from expatriates, others are on freehold land that has gone through a land tenure conversion. In some instances land that has been converted is owned by individuals or groups who previously had traditional rights to the land, but in other instances land is purchased by individuals or corporations with no prior connection to the land. Once land is converted it can be sold freely.

Many plantations are owned by business groups. Business groups are a simplified corporate form developed in Papua New Guinea "to enable a clan or other customary group to do business as an incorporated company" (Finney 1987: 27). Business groups are not allowed to directly acquire freehold title of traditional land, but may purchase land from its traditional owners after conversion has been made.

Business groups are easy to form so it is not surprising that many are unsuccessful. "Most of the hundreds of business groups that have been registered [in Goroka] ... are now either moribund or are not working well. (Finney 1987: 65)

c. Labor

Coffee plantations require a substantial supply of labor, especially during the coffee flush when they need as many as 3.7 men per hectare for harvesting.⁸ Although wages in Papua New Guinea are considered to be "high relative to the skills and productivity of the labor force and to wages

in comparable or neighboring economies," (World Bank 1988: vol 1. 45) a rural minimum wage of K18.58/week in 1987 (ibid 106) was "just sufficient to attract the necessary labor" (ibid Vol. 2: 6).

During the coffee flush plantations must compete with family smallholdings for labor, and plantation management perceives "the shortage of labour as its most serious labour problem." (Heaney 1981: 122). Plantations experienced difficulties securing sufficient labor even before independence:

"The Farmers and Settlers Association expressed grave concern about labor shortage in the late 1960s.... This shortage continued for many planters through the 1970s, especially during 1975 and 1976 when coffee prices rose to record levels, and large yields required greater numbers of labourers at critical periods during the flush." (ibid: 119-20)

Not surprisingly, many of those who are engaged in plantation labor come from areas where ecological factors such as climate or soil conditions limit the cultivation of coffee (Heaney 1981: 121). In other areas, however, the colonial pattern of a "temporary single male labour force, with workers bound by labour contracts," is giving way to a mainly "casual labour force, not bound by contract," and "including large numbers of women and children," (Burse 1981: 146). This new pattern fits more easily to local values, as families working close to home need not sacrifice their own crop to work on plantations, and can move freely between wage labor and work on their own farms.

d. Capital

Both government owned and private banks finance coffee plantations. The most important source of capital is the government owned Papua New Guinea Agriculture Bank. The Agriculture Bank was started in 1967 as the Papua New Guinea Development Bank. It has been an important source of funds for rural development since the late 1970s (Finney 1987: 26).

Banks have been reluctant to make loans for rural development because many "prospective borrowers can provide neither security nor management skills" (Hassall and Associates 1982: 28). To overcome these constraints the (then) Papua New Guinea Development Bank "inaugurated a scheme to provide loans for group developments of 20 ha blocks for which titles have been issued" (ibid). In addition to requiring land titles, whenever a bank "grants a loan for the purchase or development of a coffee property the bank requires that an expert manager or a management agency be hired to operate the property." (Finney 1987: 28)

The Agriculture Bank's policy "which makes the granting of loans dependent upon the appointment of professional management services, ensures a high standard of ... upkeep during immaturity" (Hassall and Associates 1982: 22). It also ensures that the "owner" has little or no control over the revenues from his plantation.

The National Plantation Management Agency was a

statutory body formed by the government to take over the management of plantations that had been acquired under the plantation redistribution scheme. It provided basic accounting and other management services to these plantations, and also provided expert management for new plantations. The government refused to continue its funding and it ceased operations in December 1987 (Niugini Nius March 1, 1988). In addition to the NPMA, several private sector companies also provide management services for plantations that are acceptable to the banks. These are still operating and have taken over the NPMA's clients.

Management agencies are required by government guidelines to give owners of coffee blocks with "on-the-job training so that the landowners eventually can take full control of the block" (Finney 1987: 59). The agency selects a member of the business group to oversee the property, appoints him foreman, and trains him. The business group is expected to be able to take over by the time the loan is paid off (ibid).

3. Processing and marketing

Processing and marketing arrangements depend on the scale of the producer. Plantations usually process their coffee to green bean and sell directly to exporters (Hassall and Associates 1982: 31). Some smaller plantations only have "wet factories" which process the coffee as far as the parchment stage. The equipment for these factories includes

generators, pumps, fermentation vats and power driven coffee pulping machines. The smallest plantations do not even have these, and process coffee to parchment using only portable machinery. Those plantations which only process coffee to parchment "have it custom milled and sell their own green bean" (ibid) to exporters.

"Smallholder coffee has a more complex marketing chain since few smallholders produce enough coffee to make it economic for them to sell green bean to exporters. Smallholders sell their production in one of the following six ways"

- i) parchment [to] roadside buyers
 - ii) cherry to roadside buyers
 - iii) parchment direct to the factory or a buying depot
 - iv) cherry direct to the factory or a buying depot
 - v) parchment to DPI marketing section, or
 - vi) green bean to exporter (after custom milling)
- (ibid)

Some smallholders sell cherry coffee, but most process their coffee into parchment before selling it. Little technology is required for this stage of processing. Some people have to use a round stone and an oil drum lid to remove the outer skin of the cherry, but hand operated pulping machines costing a few hundred kina are common in villages. After the outer skin is removed the coffee is washed and left to dry in the sun. Smallholders lack the facilities to process parchment coffee to green bean, but some produce enough coffee to have it custom milled and sell it directly to an exporter. For smallholders who produce on a large enough scale "there are substantial financial advantages in having parchment custom milled rather than

selling it to factories" (ibid: 40).

The majority of smallholders who sell their coffee as parchment have two main choices about where to sell it. They can sell to roadside coffee buyers who visit villages during the coffee flush, or they can transport the coffee themselves, and sell it to factories or buying depots. Prices are somewhat higher at the factory door. The DPI only purchases coffee outside the main growing areas.

The activity of roadside buyers has been decreasing in recent years because of the growing problem with armed robberies. Roadside buyers are "better informed than sellers" (ibid: 34) about current prices, but because they are operating in the sellers' territory they are at some disadvantage. Inferior quality coffee may be disguised. "Bags of parchment are frequently packed with No. 1 on top grading down to No.4 at the bottom" (ibid: 37), but "Buyers do not examine the content of bags as to do so might lead to assault" (ibid: 37). In the main coffee growing provinces, all coffee buyers are Papua New Guineans and non-citizens are legally barred from trading in unprocessed coffee.

a. Factories

Coffee is processed into green bean and graded at dry factories before it is sold to exporters. Factories which purchase either cherry coffee or parchment from other producers must be registered with the Coffee Industry Board. There are also unregistered factories which "only process

coffee from an associated estate" (ibid: 44). In 1980, 90 percent of Papua New Guinea's production was processed in the forty-five registered factories (ibid). The registered factories that buy coffee are mostly located in the Eastern and Western Highlands Provinces.

Because coffee production is seasonal some factories have problems with under utilization. In the Eastern Highlands, however, average utilization was "over 80 percent" (ibid: 50) in 1980, and "a number of factories reported that they could not handle any additional crop" (ibid: 49), and no longer engaged in coffee buying. One consequence of this was that services such as custom milling cost more in the Eastern Highlands than in other parts of the country.

b. Exporters

Less than one percent of Papua New Guinea's coffee is consumed locally, the rest is exported, mostly to Australia and West Germany (McConaghy 1987:8). Export and international marketing is carried out by ten registered private companies. These companies must be "registered with, and approved by, the Coffee Industry Board" (Lam 1984: 149-50) in order to export coffee. The Board also determines each company's share of the country's quota in quota years. Quotas are based on pre-quota performance and the allocation criteria are "the most contentious issue" between exporters and the Board (Hassall and Associates

1982: 96).

For the 1987/8 coffee year the breakdown of quota shares allocated to the ten coffee exporters was: "Angco 33.63 per cent, Coffee International 17.14, Cofex 6.68, Kumul Kofi 4.29, Kundu Kofi 7.61, Namasu Coffee 6.40, Panga Coffee 5.82, PNG Coffee Exports 13.97, Pacific Trading 1.83, Whagi Mek (sic) 2.64" (Post-Courier Nov. 12, 1987). Coffee exporters have "a wide range in size, ownership pattern, asset structure and performance" (Hassall and Associates 1982: 63), but foreign ownership is still dominant at this level of the industry,⁹ a fact which has drawn condemnation from national politicians (Post-Courier Nov. 20, 1987).

E. Summary

The past sixty years have seen the New Guinea Highlands change from being largely self contained to being part of the global economy. While Highlanders had no part in initiating the process that resulted in their incorporation in the World System, they have actively responded to the changed circumstances in which they found themselves. The coffee economy is largely the result of local initiative rather than government policy, and in fact became firmly established during a period when the colonial administration was trying to limit the spread of coffee cultivation.

Notes

1. Between 1961 and 1981, "changes in Brazilian production measured year to year... averaged 39 per cent" (Hassall and Associates 1982:98).
2. "The value of the minimum rations, issues and clothing is estimated at £71.10s. a year at prices prevailing during the survey [in 1959]. If pay is added to this at the rate of £15 a year, an annual minimum cost of £86.10s or about 6/3d. per unit (276 working days or units a year) is obtained." (Bureau of Agricultural Economics 1961:39).
3. The value of Papua New Guinea's currency, the kina has fluctuated between U.S. \$1.00 and U.S. \$1.50. In 1987 it was equal to about U.S. \$1.30.
4. Ontena people have been among Lennie Aparima's political supporters because he comes from Aiyura, a village with close traditional ties to Ontena.
5. The salary of one owner was K50 a fortnight, while he paid K860 a month in management fees.
6. "When prices are above the ten year moving average price (m.a.), payments are made into the CIF at the rate of half the difference between the current price and the ten year moving average. When prices fall below 90 per cent of the m.a., funds are paid out equivalent to half the difference between current price and 90 per cent of the m.a. On this basis, the system is weighted slightly in favour of the CIF." (Hassall and Associates 1982: 117)
7. Bank loans only became available to smallholders in the mid 1980s, when the Agriculture Bank started a new program. Funds were disbursed in the form of fertilizer and farming supplies, and were repaid in cash installments. By 1987 there were three men in Ontena who had received such loans.
8. "[T]here are key periods during the flush that require 1.5 men per acre of land in production." (Heaney 1981: 122)
9. "Of the 10 coffee exporters in the country, one - Kumul Kofi - is 100 per cent owned by Papua New Guineans. Another, ANGCO is in the process of floating its shares..... PNG Coffee Exports had substantial German shareholding" (Post-Courier Nov. 20, 1987)

CHAPTER VI. VILLAGE COFFEE PRODUCTION: SMALLHOLDERS

A. Introduction

Coffee absolutely dominates the economies of the highland provinces where it is grown. There is no industry, little mining and few alternative cash crops. Highland villagers adopted coffee cultivation enthusiastically as soon as it became possible for them to sell their crop for cash, and coffee sales have brought a considerable amount of money into the villages of the region. By the 1960s villagers were buying, not just bush knives and trade cloth, but also trucks and tractors. Economic development has spread quickly throughout the Eastern Highlands. By the 1980s, several Ontena residents owned assets which would have made them among the richest men in the Province in the late 1960s (see Finney 1973).

In this chapter I examine the impact of this coffee income on the village. If there has been a proletarianization of villagers in the Eastern Highlands, what role have smallholders played in this process? What are the conditions under which smallholder coffee is produced? How has village society been affected by its participation in petty commodity production?

Good has argued that the villages of the Eastern Highlands are now dominated by a class of "rich peasants." He bases his contention on three main points: First, coffee pulping machines are inequitably distributed (Good 1986:

56); second, only "6 per cent of coffee growers held more than 1,000 trees" (ibid), and third "the use of wage labour was of the utmost importance to the management efficiency of larger indigenous farmers" (ibid).

While Good's observations do apply to some extent to Ontena, I would argue that they do not constitute the basis for a class division within the village. Some economic resources, including coffee pulpers and coffee gardens, are not equally distributed, but no one is denied access to basic productive resources. Everyone has food gardens and virtually every household has its own coffee gardens, and thus, the ability to generate cash income.¹ Although wages are occasionally paid by one smallholder to another, no one relies on these wages for survival.

The existence of inequality is not, in and of itself, enough to differentiate the village into separate classes. Inequality in Ontena is still based on patterns of ranking that were present in traditional society, although economic factors have increased in importance as military ones have been eliminated. The individuals who control a larger share of local resources do so by means of their own hard work and the manipulation of their positions in kinship networks. Ontena's "wealthy" peasants do not live in different types of housing, eat different food, or exempt themselves from routine forms of labor. As expected in a "rank society," a high ranking individual is "compelled to work more arduously

than anybody else, because he is expected to be more generous in his distributions" (Fried 1967: 114).

Finally, the changes caused by participation in a cash economy are too recent to have produced class divisions in villages, especially considering several factors which act to delay their emergence. Eastern Highland society traditionally emphasized "equivalence" (Read 1959); inheritance practices tend to disburse rather than concentrate wealth; land used by smallholders is held under "traditional," collective forms of land tenure; and wealthy individuals are obligated to participate in mortuary exchanges which redistribute wealth widely within the society (cf. A. J. Strathern 1984: 188).

In spite of its place in the world system, I find little to indicate that Ontena is stratified by class, and suggest that one must look beyond the village for evidence of the class divisions in contemporary Papua New Guinea. Within the village, most inequality can be accounted for by either developmental processes of individual households or by the competition for rank in a traditional Melanesian big man pattern.

B. Typical smallholders

In 1988 there were approximately 113,000 coffee trees growing in 233 separate smallholdings in the central part of Ontena. (The area which I surveyed did not include outlying hamlets). The largest single garden contained more than

four thousand trees, the smallest only twenty-five. The contrast between smallholdings and plantations is enormous. Ontena's single plantation contains as many trees as all the smallholdings combined, and the productivity of the plantation trees is greater because of more skilled management and greater investments of labor and capital. Smallholders do not have the resources for the regular use of fertilizer and herbicides, although some do use them occasionally. They are only part time coffee growers, and their labor input is variable because of competing demands and responsibilities. Thus, many smallholdings are poorly maintained, and such conditions as excessive shade, poor drainage, and inadequate weeding make trees more susceptible to disease and reduce yields.

Coffee is grown by Ontena people solely for the purpose of earning cash, and it is their main source of cash income. Coffee is processed into parchment in the village and is usually carried into town in small amounts to be sold directly to coffee factories. Apart from coffee, there are no other export crops grown in the village, although about twenty percent of Ontena households occasionally grow potatoes as a cash crop. Potatoes can be sold in bulk to food shops in Kainantu and Lae, and a few people earn more than a hundred kina in a season from sale of potatoes. Many people also grow peanuts and bananas for sale in the village, and or in the Kainantu market,² but these sales

only generate a few kina at a time.

For the 113 households³ in the hamlets included in my census, the mean household coffee holding was just over nine hundred trees (including both mature and newly planted trees). The largest household coffee holding was more than five thousand trees divided between two coffee gardens. There were only four households which did not have any coffee gardens, and most households owned several.⁴ Stands of coffee, growing near the older settlements, had no owner and could be picked by anyone. However, there were also disputed gardens which no one was able to harvest (see Appendix D).

From table 6-1 below, which matches the size of coffee holdings with the age of the household head (usually, but not always a male), one can see that age had an important impact on the size of coffee holdings. While people with small coffee holdings were found in all age categories, most owners of large holdings were in their forties and fifties. The owners of the seven largest coffee holdings were between forty and fifty years old. Not only did younger people have fewer coffee trees, but many of their trees were recently planted and not yet bearing fully. There is a small number of households headed by individuals in their twenties because people in this age category were more likely to be living away from the village, and not all of them had established independent households.

Households headed by individuals in their forties or fifties had coffee holdings which averaged more than 1200 coffee trees. The largest average coffee holdings (1,285 trees) were to be found among individuals in their fifties. This age category also revealed the greatest inequality: One man owned more than five thousand trees while another owned only fifty.

Table 6-1 HOLDINGS OF COFFEE TREES

Age of Household Head	N	Mean	Std.Dev.
20s	14	587.9	647.6
30s	25	775.8	686.2
40s	31	1258.2	1264.1
50s	22	1285.1	1379.4
60s	13	663.5	460.1
70s+	8	145.0	162.7

Within households, men and women shared ownership and work on coffee gardens. Most coffee was owned by married couples with the husband and wife considered to be co-owners, but divorced, widowed or single people of both sexes also owned coffee gardens. In cases where men had more than one wife, each woman had her own separate coffee gardens. I have counted a man and all of his wives as a single unit for table 6-1.

Numbers of coffee trees can only serve as a very crude indicator of the value of a coffee holding. Some newly planted gardens were years away from bearing, other gardens were fully mature, while a few may already have past their prime bearing age. Most gardens contained trees planted at

several different times. Individual coffee growers varied considerably in the amount of care they devoted to their coffee gardens. A few gardens were maintained nearly up to plantation standards, while others were seriously neglected. Many gardens were unfenced and susceptible to damage from pigs foraging for food. Other coffee growers kept pigs inside their fenced coffee gardens. Most new plantings of coffee were not kept weeded, and old coffee gardens are often overgrown. Smallholder coffee trees were seldom pruned, as few growers were willing to sacrifice short term bearing capacity for potential long term benefits. In most gardens the trees were planted in rows, and properly spaced, but there were some where they were not. Most gardens were planted in suitable tracts, but a few were planted in areas that were too dry or too swampy and inadequately drained.

In order to illuminate the distribution of ownership among smallholders I have focussed on the residents of two adjoining settlements, "the Village" and Fifipapa. These two settlements can be considered to be the core of Ontena. They form a reasonably circumscribed unit, and my survey of coffee trees from this area is more detailed and accurate because my field assistant, John Uropa, lived there and knew the boundaries between gardens precisely. "The Village" and Fifipapa are the most densely settled part of Ontena, and have been continually occupied since the early 1950s (Kelly 1952). The settlement is surrounded by old coffee gardens,

presumably including some of the ones inspected by the 1952 patrol.

The twenty-six households in the "village core" conformed to the general pattern of Ontena in that households headed by individuals in their forties and fifties own the largest average numbers of trees. Overall the numbers of coffee trees per household were low, however, and no one living in the village core was among the top twenty coffee growers in Ontena. The mean coffee holding for a household head living in the village core was 446 trees. The impression of relative poverty is misleading since nearly all these trees were fully mature, and because they were near the village they were well tended. Productivity per tree was thus high. Another deviation from the pattern of the whole village was that the average figures for the thirties category dipped because there were only three such households and one of them was a single woman living alone. In the sixties category the average was pushed up by a polygynist with three wives who owned over a thousand coffee trees, and the dispersion of the figures was increased because another sixty year old, a widower, owned fewer than a hundred trees.

Table 6-2 HOLDINGS OF COFFEE TREES IN VILLAGE CORE

Age of Household Head	N	Mean	Std.Dev.
20s	5	384.4	365.7
30s	3	243.0	129.0
40s	8	559.4	326.6
50s	4	601.5	381.9
60s	3	490.3	477.6
70s+	3	179.7	133.8

Additional insight into the distribution of coffee trees in the village core can be gained by examining the relationship of household productivity to household needs. Sahlins, following Chayanov (1966), suggests that in an economy which consists of households producing for use "the intensity of labor per worker will increase in direct relation to the domestic ratio of consumers to workers" (Sahlins 1972: 102). Workers in households with a greater proportion of dependents will regularly work harder and produce more in order to support their households. This relationship, Chayanov's rule, can be expected to hold in households which are producing for use rather than for accumulation. Violations of the rule may also be caused by factors other than capital accumulation: Relationships between households, and especially a big-man system, which rewards overproduction with prestige, can cause certain households to produce more than they require for their own use, and others to produce less because they rely on the surplus of the overproducers.

Food crops are grown in Ontena almost entirely for

village consumption, with only a minute proportion being marketed. All households, even those belonging to the school teachers, participate in growing food crops, and no one regularly purchases locally grown staples. The production of food crops is clearly based on the consumption needs of individual households, with some households producing excess for exchange at life crisis events. Production of food crops might be expected to follow Chayanov's rule, simply because there is no way to do anything other than produce for use, since there is no market. Households producing cash crops, however, do not necessarily follow the rule since they can accumulate money and benefit from overproduction. Wealthy households produce more than their requirements, and accumulate the difference. Peasant economies, however, may produce cash crops "for use" in the sense that the money from their sale is sought only to meet household needs, rather than for accumulation. In this case, households will grow cash crops in accordance with Chayanov's rule. In the case of coffee growing, the greatest numbers of coffee trees per worker should be found in households which contain numerous non-productive dependents.

In order to see how Chayanov's rule applied to coffee growing, I calculated the ratio of coffee trees per worker, and the number of consumers per worker for each household in the village core. I counted the houses of each wife of a

polygynous man as a separate household, so there is a slightly larger number of households than in table 6-2 which covers the same population. I estimated (roughly following Sahlins 1972) each individual's contribution to the work and consumption based on age and sex: Each adult (21 - 60) was counted as one worker; each elderly adult (over 60) was counted as 0.5 worker; and each adolescent was counted as counted as 0.5 worker. Each elderly adult was counted as 0.8 consumer; each adult or adolescent male as one consumer; each adult or adolescent female as 0.8 consumer; and each child (under 13) as 0.5 consumer. These data are summarized in table 6-3.

From table 6-3, one can immediately see a relationship between a household's consumption requirements and its involvement in coffee production. As the ratio of consumers to workers increases so does the number of coffee trees per worker.

Table 6-3 COFFEE PRODUCTIVITY IN VILLAGE CORE

House #	Number of Coffee Trees	Number of Residents	Trees /Worker	Consumers /Worker
1	100	5	50.0	1.65
2	723	3	361.5	1.15
3	424	4	212.0	1.40
4	411	5	205.5	1.70
5	200	3	133.3	1.53
6	133	5	66.5	1.65
7	0	2	0.0	1.60
8	722	4	361.0	1.40
9	535	6	267.5	1.90
10	575	2	383.3	1.20
11	1,399	9	310.9	1.53
12	350	9	87.5	1.73
13	562	2	374.7	1.33
14	815	9	203.8	1.55
15	155	3	62.0	1.12
16	668	6	334.0	1.95
17	218	2	436.0	2.60
18	79	2	39.5	0.90
19	0	2	0.0	1.60
20	348	6	139.2	1.64
21	399	3	199.5	1.15
22	652	8	326.0	2.40
23	455	5	151.7	1.43
24	333	4	133.2	1.44
25	476	2	238.0	0.90
26	232	3	116.0	1.15
27	172	1	172.0	0.80
28	321	2	321.0	1.60
29	477	5	238.5	1.65

When coffee trees per worker are plotted against consumers per worker for each household, the points cluster around a line (figure 6-1). The average worker maintains 136 coffee trees to meet the requirements of each full consumer, and most households are situated near the line determined by this relationship. This line indicates a "normal level" of intensity of coffee production, and it is instructive to look at the examples that deviate from it most, either by

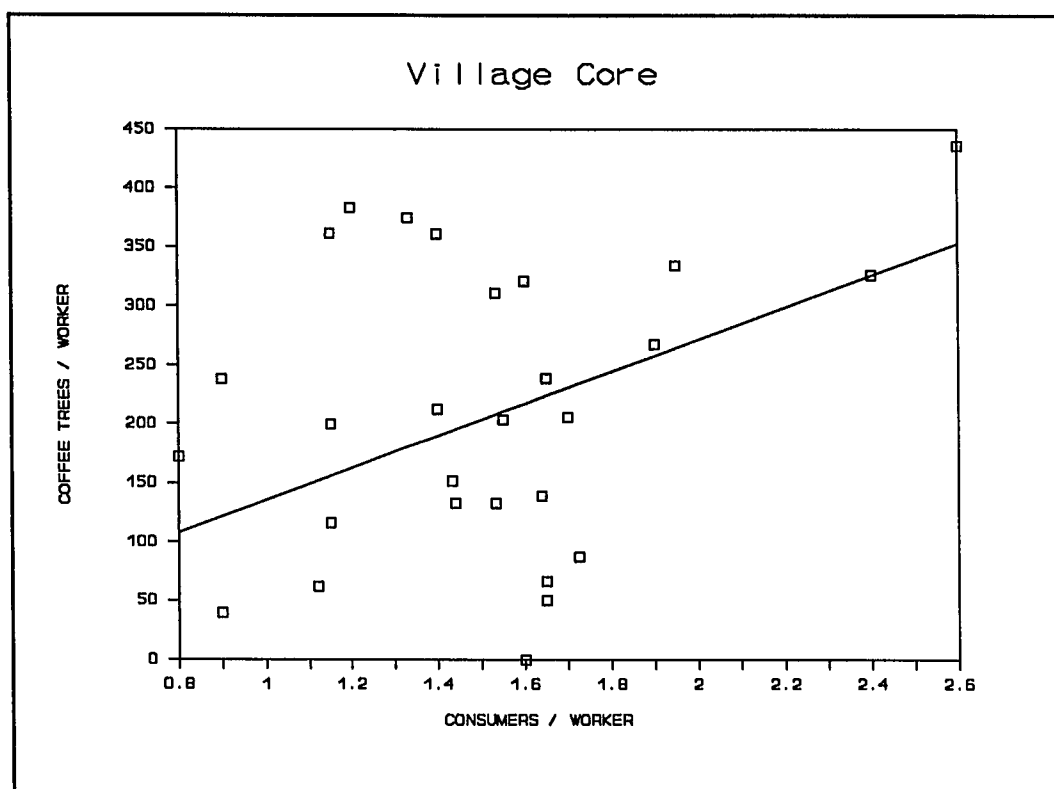


Figure 6-1 Coffee Productivity

overproducing or by underproducing. Four households fall significantly above the line, and five fall well below it.

Two of the overproducing households (8 & 10) belonged to Kaitna, one with each of his two wives. Kaitna is a quiet hard- working man in his early forties who also owns more coffee trees than any other resident of the village core. He did not have any political ambitions nor aspire to big man status, but he was respected for his industriousness, and contributed substantially to village feasts. The other two households which appeared to be

"overproducing" belonged to ambitious young men, Anasuru (2) and Yumito (13). The level of overproduction indicated in the table is misleading because their coffee gardens were still immature. In fact, Yumito only netted two kina for his first sale of coffee in May 1987. His coffee represented an investment of labor which was only beginning to pay off, but it was exceptional for a single man in his early twenties to have made such an investment. Both Yumito and Anasuru completed education beyond primary school and were involved in other economic activities in addition to coffee growing. Anasuru completed an agricultural training course at the Christian Leaders Training College at Banz in Simbu Province, and Yumito completed more than a year at Kainantu High School. After he returned to the village, Anasuru built an elaborate chicken house and, for a while, ran a business selling eggs to the Summer Institute of Linguistics missionaries at Ukarumpa. Later, he raised chickens which he sold in the village. In addition to growing coffee, Yumito ran the second biggest shop in the village, which maintained inventories worth more than K500 (retail).

Of the households that were significant underproducers, two grew no coffee. One household (7) consisted of two young single women who had grown up in an outlying hamlet and had not spent much time in the village core. Their household was a temporary one, and both were married before

the end of my fieldwork. The other household without coffee (19) consisted of two elderly widows, Kaitna's mother and her former co-wife.

Beyorako, a polygynist in his sixties, owned more coffee trees than anyone his age in the entire village, but he seems relatively poor when the number of his dependents is taken into account. All three of his households (12, 14 & 15) fall below the line, one (12) markedly. Another underproducing household (1) belonged to Simake, who was something of a village clown. He was liked because he was amusing, but was not considered a hard worker. The head of the remaining underproducing household (6), Dowolefa, may have been more committed than most to work on plantations, as he was staying away from the village (at Bonta'a) when I conducted my census.

Interesting associations existed between some of the overproducing and underproducing households. As already noted, Kaitna two households' produced more coffee than required to meet their own cash needs, while his widowed mother a few doors away did not own coffee trees. Anasuru lived with his wife and daughter in Simake's house for several months, including the period when I conducted my household census. He was rebuilding his own house at the time and had moved back by the time I counted the coffee trees. Yumito, who had invested heavily in his coffee gardens, is a son of Beyorako, the head of two households

which had underinvested. Because Yumito was young and still single, his status as head of his own household was somewhat ambiguous.

In the village core, households appear to be investing in coffee production based on their need for cash. Coffee production follows the pattern expected in production for use, and the relationship expected under Chayanov's law, that is between production per worker and number of consumers per worker, holds. Furthermore, as measured, even some of the households that, represent extremes of overproduction or underproduction are less extraordinary than they appear, because of the ties that exist between households.

C. Big men and entrepreneurs

In the village core, few households stand out as significant overproducers or underproducers of coffee, and some owners of large coffee holdings actually live in relatively poor, underproducing households. None of the owners of the largest coffee holdings live in the village core, however, nor do their households fit to the relationship expected under Chayanov's law. Any household that owns 2,000 or more coffee trees is a substantial overproducer, and therefore has a much larger cash income than the village average. However, as Sahlins points out, "a big-man system of a Classic Melanesian type" (1972: 117) leads to overproduction by some households, and perhaps this

accounts for the inequality in control over production in Ontena. In this section I examine how large scale coffee growers have achieved their position, and their relationships to the rest of the village.

1. Senior generation

Ontena people first began to grow coffee soon after World War II. They learned about coffee early because of their close ties with Aiyura where the Administration had established the Highlands Experimental Agricultural Station. Coffee growing in Ontena is recorded in 1952 patrol reports (Kelly 1952: 7). Initial efforts at coffee growing were on a limited scale because of the difficulty of marketing the crop, and large scale planting did not begin until the late 1960s. By this time coffee was not a new crop, and the individuals who are now the biggest planters grew up knowing about coffee. Most of the owners of the largest coffee gardens were in their 40s or 50s in 1988.

Smallholders get land for their coffee in essentially the same way that they get land for food gardens. People may make claims to any land in their clan territories that they or their ancestors have cleared. Members of the clans that have large tracts of land in the lower altitude part of Ontena are in the best position to assemble large holdings of coffee. Members of clans whose territories are in the high altitude forest, have to work out arrangements to use land elsewhere, in order to grow coffee. Short term

arrangements for food gardens are made easily, but since coffee gardens are expected to bear indefinitely, allowing someone to plant coffee trees amounts to a permanent transfer of ownership of that land.

Seventeen Ontena smallholders owned more than 1,500 trees in 1988, and they consisted of six Ionanti men, three Waisionanti men, one Waisionanti woman, one outsider in an uxorilocal marriage to a Waisionanti woman, two Anonanti men, two Abukuna men, and two outsiders, the Aid Post Orderly and his son who grew their coffee on land alienated to the government. The clan territories of Waisiona, Ionanti and Anonanti are all in the northern part of Ontena territory, between the road and the Ramu river. In 1974, fourteen of these big coffee growers (all except one of the Abukuna men, and the A.P.O. and his son) lived near each other in hamlets on the Amunta side of the school. One of the Abukuna men was the only one who lived in the village core.⁵

Noavi, born in about 1940, was the first man to plant really extensive coffee gardens in Ontena. He had no education apart from a few years in the Lutheran mission's village Bible school, and he never held a job outside the village. In 1988, he owned 3,487 coffee trees. Although other smallholders owned more trees, his income from coffee was probably the highest in Ontena because his trees were in well maintained gardens. He had three wives, two of whom he

married after he had planted most of his coffee.

When Noavi was a young man, he spent three months in Port Moresby, where he experienced poverty and hunger. He vowed that when he returned home he would plant sufficient food gardens so that he would never be hungry again. On his return home, he devoted the next three years to planting coffee. Before he went to Port Moresby he had lived in Bananinta with other members of the Waisiona clan, but in order to plant coffee he moved to Takaurepa, near an old village site that had been abandoned because of its reputation as a place of sickness and death. He built a house there and began planting on land that his father had used for food gardens; eventually, he extended his coffee gardens beyond the area he could claim in this way. There was some opposition to his use of the additional land, but he was able to persuade his clan brothers and cross-cousins to allow him to proceed. He later gave planted coffee gardens to relatives.

Takaurepa is at the northern end of the ridge where most of Ontena's population lives. For several years Noavi lived there with his wife in an isolated homestead, but in 1975 they were joined by several of his kinsmen. The settlement had eight households in 1988, as well as numerous large coffee gardens in all stages of maturity. There were no longer any Waisiona clansmen living at Bananinta where higher elevations cause coffee to mature more slowly.

Noavi's coffee gardens are not the only large holdings at Takaurepa: His brother's daughter, Siroako, has a coffee garden of 3,052 trees adjoining Takaurepa, and her sister, Saruko, and her husband have a coffee garden of 2,585 trees there. Neither woman lived at Takaurepa in 1988 and their gardens were showing signs of neglect. More recently, one of their brothers, Kevana, planted two gardens totaling 1,887 trees in Takaurepa.

Other men who aspired to be big coffee growers also looked for land away from the settled parts of Ontena. The land where the Ontena road meets the Tairora road had been occupied by Ontena's Tairora enemies, and no Ontena residents had active claims to it. Part of this land was alienated to the Administration to build the Aid Post. That parcel included land for the Aid Post Orderly and his family to use for gardens. The A.P.O and his son planted coffee trees, and by 1988 owned 2,100 and 1,521 coffee trees respectively. Another parcel of this land was sold to the Administration in 1959 to become a coffee plantation. The area between the aid post and the plantation had good potential for growing coffee, and because the Ontena road ran through it, transportation was convenient.

In about 1970, the settlement of Yantuna was begun in this area by Aroako, who later became Ontena's representative on the Kainantu Local Government Council. Like Noavi, Aroako moved to an area that no one was using.

Yantuna was reputed to be the home of a female ogre who killed men by forcing them to have sexual relations with her. Aroako (born about 1938) had a claim to the land through his maternal grandmother, but the principal owner of most of this land was a clan no longer represented in Ontena. Aroako overcame some initial opposition to his use of this land. One man actually began digging ditches in a field that Aroako had cleared, but Aroako successfully argued that the land should be his since he was the first one to clear it. Aroako planted a coffee garden of over 1,000 trees at Yantuna. He had one of the largest coffee holdings in Ontena until 1982, when a land dispute forced him to abandon all his property at Yantuna (see appendix D). In 1988, his coffee holdings were only moderate in size, and did not include the trees he had planted in Yantuna.

Several families moved to Yantuna after Aroako, and in 1988 two men lived there who owned more than 1,500 trees each. Both men had lived on the Amunta side of the school before moving to Yantuna. Ampona (born about 1938) planted his 3,705 coffee trees on land traditionally held by his own Ionanti clan. Boyala (born about 1938) planted his 1,681 coffee trees on land traditionally held by Ka' Nanti, a clan now virtually extinct. Boyala was linked to Ka' Nanti, although he usually gave his clan affiliation as Abukuna.

Before a piece of land can generate cash income, it must be cleared, tilled and planted. Most smallholders did

not clear land specifically for coffee, but took over old food gardens. The clearing and tilling were part of traditional subsistence activities, performed mostly by women. Only the actual planting of the trees was a new task, and it was usually undertaken by men. Noavi described how he and his wife divided the tasks for planting:

"As you know, women are not trained to plant coffee. So [my first wife] cut cane grass, and burned it and planted new sweet potato. After she dug it up for us to eat, I cleared away the sweet potato leaves and set up markers. I staked out the garden and then I dug the holes myself. I transplanted [the coffee trees] myself. My wife said, "Clear out the place where I planted sweet potato and plant coffee there. I will find somewhere else for a sweet potato garden." And so she looked for another place to plant her sweet potato garden."

Noavi did most of the planting himself, although at one point he paid a younger neighbor \$16 to help him. He was very proud of his achievement, and described his work schedule:

"I began in the morning, at six o'clock, before anyone had opened their doors and gone out to piss. I slept until I heard the rooster crow the first time. I listened to it crow, and waited until its second crow, then I got a file and started to file my spade. That's what I did until the rooster was ready to come down out of tree over the house. After he had crowed, when it was just starting to get light, the rooster would jump onto the ground. No one had opened their doors, and I was already off inside the coffee garden. At daybreak, after I was at work, the people got up, opened their doors, cooked their breakfast and went about their tasks.

My wife knew what to do. She cooked food and left it in the locked house when she went to the gardens. She gave me the key when she went to work, and said, "I will get your food in the house. Take the key with you when you work, and when you get hungry open it and eat." Okay, so she gave me the key and I worked. Until about noon, I didn't know exactly, I didn't have a watch. At about ten or eleven o'clock ... when I was dying of hunger, I stopped working, and came to get my lunch, after I ate I didn't take a break.... I gave

myself a half hour to eat and then I went back to work.

Everyone went to the gardens to get food, and returned home, cooked and ate, then my wife came back and cooked. She ate her own meal and left mine warming on the fire, to keep it hot. She didn't take it to me or call me, saying, "I have your food ready come and eat." She didn't do that.

What she said was, "Your food is waiting for you at home when you get hungry." and she got it ready for me. She had already eaten, and left my portion. So I still worked, and when she was about to lock the door, and was waiting at home, I came back. I put down my spade, and ate and went to sleep.

I slept only until the first rooster crowed, and then I went straight to work. I didn't want to stay around until seven o'clock. It would be bad if some friends came and saw me and talked with me. It would be bad if they came and imprisoned me by telling jokes. It would be bad if I wasted my time for working. I was afraid of this, so I went to work in the early morning....

I worked methodically, First I dug up a block, then I made drainage ditches. I worked like that for three years. When my coffee was mature, I picked it. I filled up copra bags. After I started to harvest I bought a truck: A used truck, not a new one.

Noavi cleared and tilled all of his coffee gardens by hand but several of the big coffee growers used tractors to plow the land they used for planting coffee. In order to do this, the coffee grower had to be able to make an outlay of capital years before the garden began to produce. 1973 was the first time that a tractor was brought in to plow land in Ontena, when Orafi, Aroako, and Ampona pooled their resources and hired a tractor. Orafi (born about 1938) was a member of Waisiona clan. The three men had already been associated in several economic ventures, including purchasing a Toyota Landcruiser truck and establishing a

small cattle project. Noya, Ampona's younger brother and the eventual purchaser of the plantation, also participated in most of these ventures. They acquired the money for these investments by working outside the village as coffee buyers or store clerks.

Ampona and Aroako paid about \$50 (Australian) to hire a tractor to come and plow about one hectare of land at Amunta where the three men lived. It was mostly Orafi's land, but it also included land that had been used by Ampona's father. Orafi gave a portion of the plowed land to Aroako. In 1988, Orafi had 2,402 coffee trees and Aroako had 940 coffee trees growing there. The third garden had 524 coffee trees, and now belonged to Ampona's younger brother, Nohove (born about 1951), who had contributed money to hiring the tractor, but had spent many of the following years away from the village while Ampona maintained the plot. When Nohove first returned to the village, Ampona resisted giving it back to him, but later returned it. By that time, Ampona had moved and become established in Yantuna.

By 1976, it was no longer necessary to hire a tractor from outside the village because Noya, Ampona's and Nohove's brother, owned a second hand tractor. Noya also bought a coffee plantation at this time (see Chapter 7), but he still grew coffee as a smallholder and carefully kept the tractor separate from the plantation. Noya used the tractor mostly for work on the plantation, but it was sometimes hired to

plow land for food gardens, coffee smallholdings and neighboring coffee plantations.

Smallholders vary considerably in the amount of attention they give to maintaining their coffee. Many are familiar with the way coffee is managed on plantations, but few have the resources to manage their coffee in this way. Several coffee growers reported that they used herbicide (Gramoxone - paraquat dichloride) to control weeds. Those who used herbicides included young coffee growers as well as owners of large holdings who had some experience on plantations. Little attention was given to safety when herbicides were used on plantations, and even less when they were used by smallholders, but most of those who used them did the spraying themselves.

Hand weeding was usually done by women. Many, but not all, of the largest growers occasionally hired groups of women to weed their coffee. Noavi reported that he sometimes paid a kina a day for weeding; if he did not have enough cash, he provided women who weeded his coffee with tobacco or cooked a meal of rice for them. Other coffee growers sometimes hired youth groups from either the Seventh Day Adventist or the Lutheran Church for five to fifteen kina a day. This money went as a contribution to the church, not to the workers. Some owners of large holdings never paid anyone to help with weeding. Orafi managed his 2,402 trees without hiring workers. He used herbicides and

relied on his large household, which included teenaged children and his still active mother. His divorced sister also lived nearby. On the other hand, some owners of eight or nine hundred coffee trees occasionally hired workers to weed or to pick their coffee. Nevertheless, below a certain level of production it was simply uneconomic to hire workers; as an owner of five hundred trees asserted: "A man who has some money can hire workers. But we don't have money so it is just our own hard work."

Even the owners of the largest smallholdings picked their own coffee, but harvesting often required hiring additional workers. Cherry coffee can be processed and sold for cash within a week, so lack of funds was not the problem it was when hiring workers for weeding. Because plantation coffee is ripening at the same time, however, there is plenty of work available, and smallholders have to pay about the same rate as plantations, Noavi quoted 70 toea a bucket as a sample rate. Not all of the owners of large smallholdings hired pickers: Orafi said "I use my own strength to pick coffee with my family."

Although Good (1986) attributes significance to the inequitable distribution of coffee pulping machines, their distribution does not seem to underlie a class distinction in Ontena. There were only about twenty coffee pulpers in Ontena, but it was not difficult for any of the 111 coffee producing households to work out an arrangement to use one.

Pulpers were important because they greatly speeded up the processing of coffee, but their purchase was not beyond the means of owners of moderate size coffee holdings. The man with 500 trees, who could not afford to hire workers, said, "At first we hulled each cherry individually with a stone, but we saved our money and bought a pulper, and now we hull coffee by machine." Many pulpers were shared by several individuals who had either contributed to the purchase price or agreed to share repair costs.

Coffee pulpers were not the most expensive items owned by Ontena villagers. Noavi bought a second hand truck years before he invested in his first coffee pulper. Noavi's new pulper, bought for K269 in 1988, was the most expensive in the village. About half of the pulpers had been purchased second hand, and others had been bought more than a decade before and carefully maintained (trucks did not last that long). Bowayako, who had more than four thousand coffee trees, described how he bought his second hand pulper:

"I bought it from a Simbu man living in Kainantu district, over near Obura. He went to Obura to take over a block [a twenty hectare project?] there. Eventually he left and was going back home to Simbu. He brought this pulper to the Kainantu market. I was looking for one. I had wanted to get a new pulper and I looked for one in Lae, but I gave up and came home. I was on my way to look for one in Goroka, and then I saw it in the market in Kainantu.... He was asking for a hundred and fifty kina, and I said "I have seventy kina." He wanted to leave, so he gave me the pulper and took the seventy kina."

Even more enterprise was shown by Nohove in obtaining his coffee pulper. He described his efforts in an

interview:

John: Do you have a coffee pulper?

Nohove: Yes. I didn't have one before. But I didn't buy a new one. It was in eighty-six. I used to use Orafi's pulper, but in eighty-six, I went down to Popondetta, and I saw one thrown out in the rubbish. So I went and asked them, "Why did you put that coffee pulper there?"

They told me, "It's no good."

This coffee machine, they carried it down from Kokoda to Popondetta town to repair it. And they threw it away, and left it broken. I went over and asked them about it, and they said it was no good. Then I went to the hardware store and bought rust remover. I sprayed it all over, took it apart, and put the parts in a bag. When I was ready to come home, I carried it down and booked passage on a ship, carrying this metal with me. I arrived in Lae, then I took a bus up to Kainantu. Then I got a P.M.V. which left me at the junction....

I hid it in the grass, and left it. I slept one night at home, and then I went back on a motorbike. I got the bag with the "bones" and picked it up and put it on the motorbike and brought it home. I put it here. I went down and bought petrol, and washed it thoroughly, then I went up to Goroka and bought "teeth" for it at P.S.S. I spent seventy-six kina on parts for it. Then I took it down and worked on it. I worked and worked, and the pulper became like new. Then I bought paint and painted it. Everyone asks me, "Where did you buy it?"

And I tell them, "It is rubbish that was thrown out. It is Kokoda rubbish which was thrown out in Popondetta, and I brought it back."

John: You didn't pay them anything in Popondetta?

Nohove: No. It was rubbish, and they threw it out as rubbish so I salvaged it. People ask me, "Did you repair it yourself or did you leave it at a workshop in Kainantu to be fixed?"

And I say, "I repaired it myself."

They stare and say, "You couldn't have done this."

And I say, "I did it all by myself."

The coffee pulper is right there, and I am using it this year.

Nearly all of Ontena's smallholder coffee was marketed as parchment, regardless of the amount being sold. It was

either transported into town to be sold to one of the coffee factories, or sold to a coffee buyer visiting the village. Coffee buyers now visit the village much less frequently than they did a few years ago because of the increased risk of robbery. A coffee buyer was robbed of K4,000 near Ontena in 1986 (Weekend Nius Aug. 9, 1986).

It was possible, however, for smallholders to have their coffee processed into green bean before selling it for a higher price than they would get selling it as parchment. Aroako, who in 1987 owned only a moderate size coffee holding (940 trees), arranged for his parchment coffee to be processed into green bean. He paid K20 to transport the coffee from the village to the factory, then paid the factory K60 to process 666 kilograms of parchment (11 bags) into 501 kilograms of green bean. He paid a further K10 to transport the green bean to Goroka where it was sold for K1,300. If he had sold the coffee as parchment he would have netted about K160 less. I did not learn of anyone else in the village selling coffee this way.

Few smallholders obtained any sort of financial support. Even after the Agriculture Bank began making funds available to smallholders in 1987, getting a loan required not only evidence of substantial coffee holdings, but also persistence, as little seemed to happen at the Kainantu office. In 1987 two men, the current and former Local Government Councilors, each obtained a loan of K1,000.

These funds were made available in the form of fertilizer, and were to be paid back in cash after the harvest. Early in 1988, a third Ontena smallholder obtained a K1,000 loan.

2. Junior generation

Although there were no established coffee growers in the younger generation, this did not mean that young people were all poor. Young people were not so much excluded by "a closed-shop in coffee production" (Good 1986: 58), as attracted to working in towns where the return for their labor was greater and more immediate than from coffee growing. Some education was required to get a job in town, and the establishment of the Ontena school in 1971 greatly improved the educational opportunities for Ontena children. Before the school opened, only a handful of Ontena children had been able to get into schools in other villages (Aiyura or Raipinka). Nine children from the class that graduated in 1976 went on to Kainantu High School. Many of those who left to go to high school had not returned to live in the village: One became a primary school teacher in Henganofi, another became a nurse and married a university graduate and aspiring politician and now lives in Port Moresby.

Failing the entrance examination for high school was a setback, but it did not preclude economic success. After Fukaso (born about 1962) failed his examination in 1976, he raised money by selling peanuts and went to Port Moresby, where he stayed with relatives and found a menial job taking

care of chickens and cows on the outskirts of town. After two years he enrolled in a course at the Salvation Army Vocational Center and trained as a mechanic and carpenter. He came back home to Ontena in 1980 penniless, but soon he was able to get a job working for the government as a carpenter. He was hired for the construction of the Ramu sugar factory, and later worked on various projects throughout the country. By Christmas 1985 he had saved up three thousand eight hundred kina. He used K2,500 of his money to buy a used Toyota Landcruiser truck. A few months later, the truck was damaged in an accident and Fukaso needed more money so he left the highlands again. This time he went to Popondetta in Northern Province⁶ where he obtained a job as a carpenter at the Oil Palm Office. He returned to Ontena again in October 1986, and then went back to Port Moresby, where he bought another light truck for seven hundred kina at a government auction. In order to get his truck back to the highlands, he had to pay a further K480 to have it shipped from Port Moresby to Lae. (There are no roads connecting Port Moresby to the Highlands.) In the following year, Fukaso invested a further thousand kina in two more trucks which he co-owned with a kinsman.

All through this period Fukaso had negligible coffee holdings. He had planted some trees when he was in sixth grade, but no one bothered to tend them while he was away. Nevertheless, Fukaso found other ways to participate in the

economic life of the village, and in 1982 he set up a small shop in Ontena. There were already several similar shops in the village. Small shops are common in Eastern Highland villages. Until recently, they maintained small inventories of imported foodstuffs, and did not make much profit or last very long.

In 1987, eight small shops were operating in Ontena. The largest, best stocked, and most likely to be open were the shops that belonged to men who, like Fukaso, were in their twenties and had had some experience living away from the village. No shop kept completely regular opening hours, but those owned by young men were likely to be open most evenings, often in the morning, and at lunch time. Village shopkeepers bought goods from one of several wholesalers in Kainantu, transported them back to the village and sold them for prices somewhat higher than those charged by retail stores in Kainantu. Village shops never sold locally grown produce, although on rare occasions betel nut from the Markham Valley was sold. Cash transactions in shops were the principal way money was used in the village. Limited credit was made available, but shop owners posted lists of customers who were late in repaying their advances. These notices included insults or threats to defaulters. No advance exceeded five kina. Several individuals named in a notice at one shop in June were also on the list posted in January (for the same amounts).

In 1987, Fukaso's shop was the largest in the village, and it was also the one most effectively run as a business. He maintained an inventory of about K900 (retail) and reported earning a profit of K1,700 that year. He made a conscious effort to attract customers to his shop:

"I have plenty of customers because I make a habit of treating them well. The village elders know well how I am. I talk with them, I joke with them, and lots of people like me.... When a little child is sent to spend more than a couple of kina at my shop, I give him a candy. As a present, for free. So when children get money they don't go to any other shop. They say, 'We have to go to buy it from the shop where they will give us a present.'"

Fukaso had hired other young men when he built his first shop in 1982. He employed them to run his shop while he was away from the village, and he continued to employ young men as shopkeepers after he returned. In 1987, he paid two young men "four or five kina a fortnight" to run the shop and to help him with various tasks. Although Fukaso was a carpenter, he maintained, "I don't know how to build a grass house," so he had his workers build his dwelling house. Fukaso also posted the village's first "no trespassing" sign (see figure 6-2): He erected a wire fence around a garden and blocked one of the main paths from the village to the Ontena creek that people used for bathing and washing. The sign (in Tok Pisin) forbids people to go through the garden and directs them to a new and longer path around the edge of the fence. It reads:

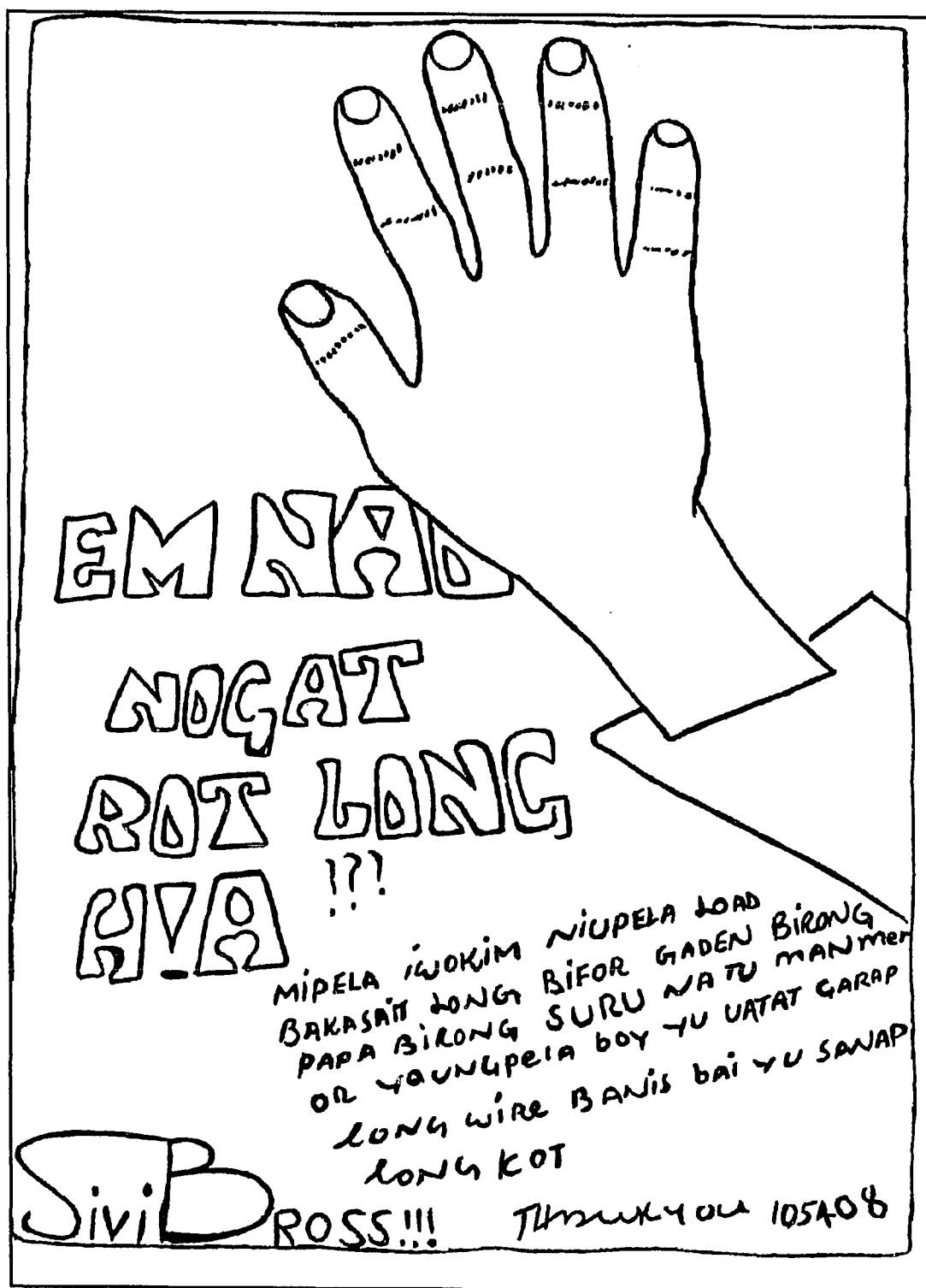


Figure 6-2 A "No Trespassing" Sign

There is now no path here!!! We have made a new path where Suru's father used to have his garden, and if people or children climb over this fence you will answer for it in [village] court. Thank you. Sivi Brothers!!!

Fukaso expanded his shop when he returned from Popondetta. The new shop made several improvements over the earlier one. He selected a better site and paid the landowner K30 for the land. The new shop was in the best location in Ontena, across from the school and near where the Ontena road met the ridge. It was centrally located and easily reached from all parts of the ridge along which most people lived, and most Ontena residents had to pass within fifty yards of it on their way to town. His father's land at the southern end of the ridge would have been much less accessible. His first shop was constructed from local materials, but for the new shop he bought lumber and roofing iron. He also bought a small generator, so that he could have electric light during the coffee harvesting season, and installed a pool table. Although Fukaso relied on cash transactions to a much greater extent than did senior men, in one respect he resembled them strongly: all his resources were tied up in his business, and for much of the 1987 he did not even own a house, but lived with various relatives.

Iriroka (born about 1964) was originally one of Fukaso's classmates in the Ontena school, but he completed his primary school education in 1983 at Norakori Community

School where his brother-in-law was a teacher. He was admitted to Kainantu High School where he completed two and a half years. He had to leave before the end of ninth grade because he was unable to raise the school fee. However, he was able to get a job in a retail store in Kainantu that paid K140 a fortnight. In less than a year he had raised enough money to buy a second hand truck from a kinsman who lived in Aiyura. The truck cost K4,500, but he did not have to pay the full amount immediately. He used the truck to carry passengers and it contributed significantly to his income.⁷ In nine Saturdays during the 1987 coffee flush, Iriroka's passenger truck took in more than K2,000.

Iriroka moved back to Ontena in November 1987,⁸ and set up a shop on the Amunta side of the village, north of the school. Houses were more dispersed here, and many were a long way from Fukaso's shop. At first Iriroka used an old shop that was empty, but after an argument with its owner, he decided to move to a new site across the street. He paid the site's owner K20 for permission to build. His new shop rivaled Fukaso's. He invested K184.20 in plywood and roofing iron, and bought K350 worth of lumber. He also bought a generator for K465.45, and a video set for K1,357.46. He planned to show videos and charge admission. Iriroka's shop had not been open during a coffee flush, so it was difficult to assess its earning potential, but he reported making a profit of three hundred kina between

November and February, while the new shop was under construction.

Prolonged absence from the village could lead to problems in fitting back into village life. Among the most serious were marriage arrangements made for absentees that did not suit their own plans for themselves. Fukaso learned that he was married when returned to the village in 1986.

He described what happened:

"When I was away in Popondetta... my parents... secretly bought my first wife. Then when I came back from Popondetta, I was surprised! I just arrived home and my father said, 'Here is your wife.'"

Fukaso had even been tricked into contributing most of the brideprice:

"My father had asked me to send him four hundred kina, telling me, 'I want to do some little project,' and I had no idea he wanted to buy a wife for me. He used the four hundred kina that I sent, and Ampona [his mother's brother] contributed two hundred, and he bought this woman for six hundred kina. When I came home I was surprised. There was no way for me to send her away or do anything."

Fukaso eventually accepted the marriage but balked at making large contributions to the brideprice:

I paid them K50 more after I came back, to make K650.... They wanted to charge K1,300, but I told them, "I am not a rich man who has a lot of money to pay you."

In spite of this modest assessment of his wealth, Fukaso had been popular with young women before his marriage. He had one girlfriend in particular whom he did not want to let go. He worked out what seemed to him to be

an acceptable compromise. He told his new wife,

"I still have my first girlfriend. I had a lot of girlfriends, but I have given them all up, except for her. I planned to keep her when my parents bought you, and I am still going to bring her here to be my second wife."

I explained this to her, and she told me, "If you bring her here I will cut her with a knife."

Fukaso married his second wife in August 1987. He put up K200 for the brideprice, and various friends and relatives put up an additional K400. She had only been in Ontena for a week when Fukaso's first wife made good on her threat, and attacked the other woman with a machete. By the time I left in early 1988, each co-wife had had an opportunity to inflict a serious knife wound on the other.

Iriroka was trying to work out an arrangement that would satisfy tradition and also let him marry his girlfriend. His girlfriend was an Ontena woman, but her brothers demanded a brideprice of "one thousand kina," because of Iriroka's obvious wealth. This was more than twice the amount being paid for other marriages contracted within the village. Iriroka was willing to pay the full amount, but his girlfriend proposed that she contribute to her own brideprice.⁹ She told him: "I will put up five hundred and you will put up five hundred, and we will pay it together." Although when I left in 1988, Iriroka did not have a house of his own, he and his girlfriend had plans to live in bourgeois luxury with a gas stove and a washing machine.

In 1988, Fukaso owned 142 coffee trees, and Iriroka owned none, but two other young men in Ontena had large holdings of coffee. One was Philip, Noya's son, who had a garden of 2,739 trees at Yantuna, and the other was Laifot, the son of Paule, the Aid Post Orderly, who had a garden of 1,521 trees inside the Aid Post compound.¹⁰ Both men's gardens were as much a product of their father's efforts as their own, and neither had as yet begun to produce very much. Most of the "trees" in Laifot's garden were little more than sticks surrounded by tall grass, and were difficult to locate and count. Philip employed laborers to work on his garden, while he worked for his father on the plantation. His garden was properly tended, although the coffee trees were still very small. It is significant that both gardens were in areas where they did not compete with the claims of other potential coffee growers. Laifot's garden was on land that no one from Ontena could use, and Philip's was a border outpost located at the junction of the Ontena road with the Tairora road.

Philip was in a position to benefit more directly from his father's enterprise than were most young men, and it will be interesting to see what he makes of this head start. But even Noya's resources were not sufficient to establish all of his children as coffee growers, and Philip's brothers have not been provided with similar benefits. Noya's obligations to other kinsmen and followers kept his

resources spread thinly, and worked against consolidating the family's wealth.

D. Women and coffee

Coffee, being a recent introduction, was not clearly a male or a female crop, and there was no entrenched division of labor. Both women and men worked in coffee gardens. Women did most of the weeding, unless chemical herbicides were used, in which case men did the spraying. Picking, and processing were done by both sexes, as these tasks often determined who would receive the proceeds from the sale. Traditional male tasks involved in coffee cultivation included ditching, fencing, and work done with an ax (pruning and maintaining shade trees). Men frequently insisted on planting the coffee trees themselves (as in Noavi's case discussed above) because planting implied ownership. Several men, however, admitted sharing the work of planting with their wives.

As in subsistence (see Chapter 4), women performed more than their share of those tasks that were not specifically allocated by sex. Male tasks were especially likely to be neglected in village coffee plots: Many gardens were unfenced and were neither properly shaded nor properly drained. Women never undertook male tasks and could do little except complain to their husbands if these were left undone. Both men and women used accusations of laziness to pressure their spouses to work harder, but made the daily

decisions about how to allocate their labor individually.

The labor of young single women also contributed significantly to coffee production. Single women seldom planted their own coffee gardens because they could not be sure that they would be living nearby when the coffee reached maturity. However, they often worked at weeding or picking smallholder coffee belonging to kinsmen. Young women improved their marriage prospects by establishing a reputation for industriousness. Contrariwise, a reputation for laziness would lead to general condemnation and even beatings on occasions such as menarche ceremonies.

Young women were allowed to keep some of the proceeds from selling coffee from plots where they worked, but their contribution in labor was greater than what they received. They had few opportunities to spend money. They were discouraged from personal display: They were ridiculed if they wore shoes, so they seldom did. Even braiding hair, which was fairly common, was disparaged as "showing off."

I learned few details about how coffee income was divided between spouses. Husbands and wives sometimes picked, processed and sold small amounts of coffee separately, and when large amounts of coffee were sold the money was often divided among those who had worked to pick and process it.¹¹ Spouses often kept details of their finances secret from each other and arguments about money were frequent (cf. Sexton 1986: 68). Wives particularly

objected to their husband's wasting money on drinking and gambling.

Married women used their cash income for much the same purposes as men. They paid school fees for their children, bought small amounts of food or consumer goods, and made contributions to brideprices and other kinship transactions. Women's participation in the gift exchange system was less than men's, but it was nevertheless important.¹²

As noted above, most coffee gardens had both a male and a female owner. In cases of where men were married polygynously, the wife's name would be the usual answer to the question "Whose garden is this?"

The disposition of coffee gardens upon divorce indicated that female ownership counted less than male ownership. Virilocal marriage caused most coffee to be planted on land that belonged to the husband's clan. A divorced woman who left the village would not retain any control of the coffee gardens she had shared with her ex-husband, and a woman forfeited any claim to coffee gardens planted on an ex-husband's clan land upon remarriage, but there were several instances where local women retained control of large coffee gardens after divorce.

Those single, widowed and divorced women who owned their own coffee gardens were all native Ontena women, with male kin living nearby. A few single women who were slightly past the usual age for marriage had planted coffee

on land belonging to their natal clan. Widows kept the gardens they had shared with their husbands. Some divorced women planted coffee on land belonging to their natal clan, but others were able to use gardens established with their ex-husbands. A divorced woman was more likely to retain control of her gardens if she had support of her kin and if the divorce was her ex-husband's fault.

The owner of the fourth largest coffee smallholding in Ontena was Siroako, a divorced woman. Her divorce was forced on her when her husband married her younger first cousin who was also her classificatory sister. The new marriage was irregular since sororal polygyny is forbidden,¹³ and he moved to just outside the settlement and started new coffee gardens with his new wife. Siroako kept their old gardens. Siroako's largest garden, containing more than 3,000 trees, however, was planted on land belong to her natal clan by her paternal uncle, Noavi.

Another divorced woman who managed to retain control of gardens planted on an ex-husband's clan land was Fe'eme. She was the widow of Yelista, the man whose sorcery death had traumatized the village in 1974 (see Chapter 3). After his death, she passed by widow inheritance to his younger brother. He married another woman shortly afterwards. His second wife was the only one who had borne him children.

Fe'eme had planted more than five hundred coffee trees with Yelista on land belonging to his clan. When she

married his brother he took over the coffee gardens. Thirteen years later, when the trees were well maintained and at their peak of productivity, he decided to divorce her, but wanted to keep the coffee gardens. As of 1987 he had been unable to do this because Fe'eme was vigorously supported in the dispute by her father-in-law and the village court also sided with her, insisting that she be allowed to keep the coffee unless she decided to remarry. Her control in the future was somewhat uncertain, however, as her ex-husband remained determined to take possession of the gardens.

E. Conclusion

Control over resources used to produce wealth in Ontena was widely but not evenly distributed. Everyone had access to some of the means of production, but there were individuals who controlled very much more than others. At the same time, there was an ideology of equality or "equivalence," (Read 1959), and this had a real effect on the distribution of wealth in the village. The material conditions of life did not vary much within the village. Individuals with large coffee holdings lived in thatched huts as did other villagers.¹⁴ They wore the same kinds of clothing, and ate the same foods.

There were three components to the inequality among households in Ontena in 1987-8: a Chayanovian process which linked household production to household needs; a big-man

system which rewarded overproducing households with prestige and required that they redirect their production to social ends; and last, the limited penetration of the village by capitalist relationships based on a market in labor and property.

Inequality based on sex within households caused women to do proportionally more work and have proportionally less control over income. Most women lived virilocally in male centered households, and men made most of the decisions about planting coffee. Sexual inequality was not so extreme as to preclude the possibility of successful female centered households, however, and there were several of these.

Much of the variation in size of coffee holdings was directly connected to the size of the household. Not only did larger households plant and maintain larger coffee gardens, but also household composition was fluid and children moved to wealthier households. Most villagers grew coffee to meet increasing needs for cash. It was grown in amounts that suggest a relationship to needs rather than accumulation. Younger people generally did not have extensive coffee gardens because they had few responsibilities and small households.

A number of Ontena households produced far more coffee than was required by their own immediate cash needs. Most of these were the households of village leaders, respected hard-working individuals whose large coffee gardens took up

a disproportionate share of Ontena's land resources.

Although some owners of large coffee gardens occasionally hired workers, most labor used for planting, maintaining and harvesting came from the smallholder's household. The difficulty of meeting the labor requirements of extremely large holdings was the most important factor limiting the size of coffee holdings. No household was able to properly maintain much more than two or three thousand trees.

Another problem in establishing a large holding was that it was likely to encroach on other people's land claims. There was not yet a land shortage, but large scale coffee growers had to seek land away from the main settlements where land was becoming fully occupied. Member of certain clans had advantages in becoming large scale coffee growers as not all clan territories included good coffee growing areas. Large scale coffee growers might assert rights to land beyond what they were traditionally entitled to claim, but they also had to appease public opinion.

Much of the income generated by large coffee holdings was redistributed in kinship transactions. Brideprices and mortuary feasts absorbed far more money than did the purchase of equipment for processing coffee. Coffee income was also used to finance "conspicuous investments" (Finney 1973:81), which generated prestige but generally lost money. Many owners of large coffee holdings had at one time owned vehicles, but none (except Noya) still had one in 1987.

The penetration of village society by capitalism is shown most clearly in the behavior of the younger generation. Young adults who had some education were able to find employment in towns at wages that enabled them to save significant sums of money. The senior generation had not been able to raise capital from jobs outside the village. They experienced only poverty and low wages when they worked in towns. Young men who returned to live in the village were likely to treat village land as private property. They hired younger kinsmen to be their employees. Some young educated men also appeared to make significant profits from ventures such as village shops and Public Motor Vehicles, activities in which their elders had always lost money.

The most successful young men did not yet produce much coffee. Their wealth was derived from sources outside the village, and they had not possessed it for very long. It is too soon to describe the handful of young single or newly married men who have assembled significant wealth as constituting a capitalist class in the village. What is clear, however, is, that when and if such a development occurs they or people like them are likely to be at its forefront.

Notes

1. One phenomenon could lead to the development of landlessness in Ontena: In the past few years several families have moved from Auyana villages to Ontena. They have settled away from the main village, and some of them have formed separate hamlets. While they have planted food gardens, (and in some cases coffee gardens), they do not exercise anything more than temporary rights to the land they are using. They have kin ties to Ontena, do not pay rent, and, of course, retain rights to land in their home villages. If they remain in Ontena and give up their use of land in their home, however, they could be the beginning of a class of landless peasants.

2. The Kainantu market is the only place near Ontena where local staples can be bought or sold for cash. The market is maintained by the Kainantu Council. Vendors pay a small daily fee (50 toea or 1 kina depending on how much they have to sell) for selling space in market. Produce is usually divided into 10 toea sized lots. The combination of the market fee, high transportation costs and low selling prices makes it difficult for Ontena people to make a profit, so they seldom sell produce at the market.

3. I had difficulty in defining a household for the purposes of my census. Houses themselves are insubstantial, and people move easily between them. Basically, I tried to count each sleeping house as a separate household, however, there were several instances where a husband and one or two children slept in a separate building from his wife and other children. I counted these as single households. There were also several instances where two married siblings with spouses and children shared living quarters. These arrangements seemed temporary, so I counted them as two separate households, even though there was only one house. Another complication was the households of polygynous men. I count a man and all his wives as a single unit when I want to measure control over property, but when I look at labor arrangements I count each wife's house as a separate unit, and count the husband in the largest.

4. Only four out of 113 Ontena households did not own coffee gardens. A household consisting of one elderly widow, and another one of two elderly widows had no coffee gardens, although they lived near children who grew coffee. One household consisted of two adolescent girls who had recently moved from another Ontena settlement and did not have any coffee gardens. Both married before the end of my fieldwork. One divorced woman who had been away from the village had no coffee gardens, although her brother who lived nearby had over two thousand coffee trees.

I have not counted in my statistics for this section outsiders living in Ontena who did not own coffee there. There were five school teachers who were paid a salary by the government and did not grow coffee in Ontena. The school itself owned coffee, and the teachers were given land for their wives to cultivate for food gardens. There were also a few immigrant families who had lived in Ontena for less than two years and did not own any coffee gardens in Ontena.

5. He later moved to nearby hamlet, but he is currently the only owner of more than 2,000 trees living south of the school. Several of his neighbors have holdings of more than 1,000 trees.

6. Ontena has a special relationship to Popondetta, the capital of Northern (Oro) Province, and its Oil Palm Plantations. Ontena migrants have been travelling to the area for many years, and some have inter-married with the local people. Popondetta is the major destination for Ontena migrants seeking employment, and many also travel there as casual visitors. Many more people have visited Popondetta than have visited Port Moresby. Northern Province is not a major destination for migration from the Eastern Highlands. In the 1980 census only 459 Eastern Highlanders lived there (Walsh 1983:88).

7. Trucks licensed to carry passengers for a fare are called public motor vehicles, or P.M.V.'s. Most trucks in outlying villages like Ontena are not licensed and carry their passengers illegally.

8. Iriroka was not included in my census of the village because he was living in Kainantu in July and August 1987, when I conducted my survey.

9. His girlfriend had also earned money by working in town, but I do not know whether her proposal to contribute K500 to her own brideprice was feasible.

10. Noya's second wife, Iyeriko, was Paule's daughter. The marriage strengthened Paule's and Laifot's hold on their coffee gardens in the Aid Post compound.

11. For example, one man allocated K500 of the K1,000 proceeds from one season's coffee harvest to his wife. However, after she received the money it became her responsibility, and a few months later he was unable to tell me what she had done with it or even if she still had it.

12. The brideprice of a young man in my household who married in 1988 illustrates women's role in kinship transactions. His adoptive mother was his main sponsor and contributed K130 out of a total K370. The other twelve contributors included two women.

13. A wife's sister should be treated formally, not regarded as a potential second wife.

14. There was one house in Ontena which stood out as extraordinary. It belonged to Ampona, a large coffee grower, who was the leader of the Ionanti clan. He was also the village magistrate from 1974 to 1983 and again from 1987 (see chapter 3). His house was the traditional round shape and was constructed mostly from local materials; it had a thatched roof and cane walls, but it was built on a concrete slab and painted with dark blue house paint. It was also large and internally divided into several rooms which was unusual for a round house. Ampona's house was unique and it was undoubtedly an expression of his claim to be leader of the village.

CHAPTER VII. VILLAGE COFFEE PRODUCTION: PLANTATIONS

A. Introduction

Coffee plantations in the New Guinea Highlands are not necessarily large enterprises, but they are much bigger than small holdings. A large small holding might contain just over 5,000 coffee trees, whereas a small plantation with just twenty hectares of land would have more than ten times that number. There were no coffee growing enterprises of intermediate size in the area where I conducted my study. Other features which differentiate plantations from small holdings are access to financial services from banks and management services of professional management agencies. Some plantations started without using banks as a source of capital, but in 1988 all local plantations were using bank loans to finance expansion and upkeep. In contrast only three small holders in Ontena had ever been able to get coffee loans, and no extension services had been available for two decades. While women occasionally owned large smallholdings, plantation owners were invariably men whose careers had included wage employment in fields not open to women (eg. coffee buying, operating Public Motor Vehicles).

Plantations present a far greater break with traditional forms of organization than do coffee smallholdings. Smallholders continue to control the organization of their production, operate by rules similar

to those governing production of subsistence crops. Plantations, on the other hand, differ in scale, organization and permanence from anything in the pre-contact economy. Both running a plantation and working on it are very different from managing subsistence gardens.

Nearly all coffee plantations in the Highlands are now owned by Papua New Guinean individuals or businesses (McConaghy 1987: 7), but there are important variations in how plantations are run and in the relationships that exist between the plantations and the surrounding communities. Some plantations are owned and managed by companies without local ties, whereas others have been started by entrepreneurs on land traditionally belonging to their own groups. In some parts of the highlands serious tensions have developed between the more socially remote plantations and local people. Managers on these plantations, often expatriates even in 1987, feared that huge quantities of cherry coffee were being stolen from plantations,¹ and some clearly felt themselves to be under siege from a hostile populace.² There were no plantations of this type in the territory of Ontena or its immediate neighbors, but the coffee exporting company, Angco, had a large plantation just outside the area of my study. The plantation did not appear to be experiencing any significant problems with its village neighbors, but it was not a plantation where Ontena people went to seek work.

There was only one plantation in Ontena so I expanded my study to include nearby plantations located in the Tairora speaking villages of Bonta'a and Abiera (see Watson 1983). Ontena is connected to the territories of Abiera and Bonta'a by the road that runs from Kainantu through Tairora census division. Use of this road has led to increased interaction among these villages. Ontena recently withdrew from the Onamuga Area Community, and joined its Tairora-speaking neighbors in the Kosa Area Community (see Chapter 3). The decision to change affiliations was based on the transportation links between the villages, rather than on any traditional ties. Ontena people worked most frequently on the Ontena plantation, but they also found work on the plantations in Bonta'a and Abiera.

In this chapter I consider the importance of plantations to three different categories of people. First, the different kinds of plantation owners; second, the partially proletarianized people who work on plantations while living in their own village; and finally, those who have left their villages either permanently or temporarily to become full time plantation laborers.

B. Plantation Owners

In this section I examine the careers of the individuals who have owned plantations in the vicinity of Ontena. I have divided them into three categories based on their differing relationships with the institutions of the

town and the village. The young town-based businessmen active in the area retain social ties with the people in the villages, but increasingly their relationships are oriented around the philosophy of the marketplace. The individuals I have called "grass roots"³ businessmen are based in their own villages and owe their plantations mostly to the initiative of government extension programs. Finally, several plantation owners do not fit into either of these polar types, but are intermediate in their relationships to town and to the village.

I obtained monthly harvest figures from five of the plantations operating in the area. I do not have figures from the two largest plantations, the ones owned by town-based businessmen. I obtained figures for grass roots businessmen's plantations from their copies of sales receipts of parchment coffee, or from the harvest books kept at the N.P.M.A. office.⁴ The intermediate businessmen had their own copies of harvest books, although both were missing some off-season data. The differences in levels of production reflect differences in the age of the coffee trees, and in the size of the plantations.

Table 7-1 1987 COFFEE HARVEST RECORDS
 (Thousands of Kilograms of Cherry Coffee)

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec

TAU											
0.5	0.5	1.3	0.3	1.0	0.8	1.9	5.2	0.0	0.7	0.0	0.0
BILIHU											
0.0	0.0	0.9	2.0	5.5	7.0	7.0	2.2	0.1	0.8	1.3	0.0
BOKA											
0.0	0.0	0.7	1.6	3.3	5.8	15.0	8.1	16.0	2.5	2.3	0.0
NOYA											
0.0	2.2	2.7	4.6	7.6	9.6	40.5	85.8	53.6	6.6	0.0	0.0
SETA											
0.0	0.0	1.3	1.5	1.3	5.8	9.1	22.2	9.7	4.4	4.0	1.8

(Sources: Noya, Seta and Bilihu cherry coffee harvest records; Tau and Boka parchment coffee processing receipts)

1. Young town-based businessmen

The Bonta'a and Abiera plantations discussed in Chapter 5 continued to be the largest plantations in the Kosa Area Community in the 1980s. Each of these was run by a young entrepreneur with an office in Kainantu. The plantations were only parts of much larger business interests controlled by these men, and their business success pre-dated their acquisition of plantations. I describe these men as town-based because their sophistication and easy access to financial institutions seem crucial to their success. In spite of their town base, however, plantations were their most important business activity.

Each man acquired his plantation from Kainantu Plantation Trust as part of the program to turn plantations begun by expatriates over to local owners (see Chapter 5). Both of these men were from the Kainantu region and claimed kinship ties with Tairora groups, but neither came from the

village where the plantation was located nor spoke the Tairora language. Both men also had other plantations beyond the area of my study.

a. Kembris⁵ Tokave

Kembris Tokave was born in the Kamano speaking village of Tararanofi. He was in his late twenties in 1987, but had already put together a substantial business empire. His sophistication in business matters seemed inconsistent with his level of education. Although he had not gone beyond the sixth grade, he controlled two coffee plantations; the Abiera plantation at 46.3 hectares, and the Agoga plantation at 128.3 hectares. He also owned several retail stores in Kainantu town, and had other projects in various stages of development.

Success came quickly to Kembris. After he got his driver's licence in 1977, he worked as a coffee buyer. He spent K200 to repair a village-owned truck and used it for buying coffee and carrying passengers. By 1978, he had saved enough money to start a retail store in Kainantu. Profits from the store financed his next venture, Agoga coffee plantation in his home village. In 1979 he began the process of land tenure conversion of 128.32 hectares of traditional land for this plantation. He bought a tractor and plow and began planting in 1980. He secured bank finance in 1982, after his first harvest. In 1983, he bought the Abiera plantation from the Kainantu Plantation

Trust for "K75,000," financed by a mortgage from Westpac Banking Corporation, a commercial bank with a branch in Kainantu. The sale had to be approved by the people of Abiera in accordance with K.P.T.'s rules regarding sales to individuals who were not traditional landowners.

Kembris employed a relative with local management experience to manage the Abiera plantation, and used the National Plantation Management Agency to manage Agoga. Even on an established plantation coffee harvests can fluctuate widely. Kembris reported that the biggest harvest from Abiera was 70 tons, but in 1987 it was only 40 tons, the lowest since he bought the plantation. In 1988, he expected the production to improve to 80 tons. His businesses had a 2.5 million kina a year turnover. The coffee sales from his plantations accounted for about five hundred thousand kina of this.

When the N.P.M.A. closed at the end of 1987, Kembris used the opportunity to found the Kainantu Development Corporation with John Wilkenson and Vanu, two expatriates who were former N.P.M.A. branch managers. K.D.C. immediately became the largest coffee management agency in the district by taking over not only most of the N.P.M.A projects, but also its offices, records, and many personnel. Kembris was K.D.C.'s founding chairman.

The owners of K.D.C. were to be the plantation owners who used its services, but their initial investment of

K2,000 was handled in way that was difficult for the mostly uneducated owners to understand. At the organizational meeting of the company, its founders explained that since dividends were taxable, while interest paid on loans was not, the owners' investments would be treated as loans.⁶ For the K2,000 required to join K.D.C., each plantation owner received one share valued at one kina, and a loan guarantee for K2,000. Owners were to continue paying the monthly fee for management services provided by the company, and would receive any profits made by the company as interest on the loan, rather than as dividends.

Even apart from his involvement with K.D.C., Kembris made efforts to maintain good relations with other local plantation owners. For example, he provided a pig for the feast held to mark the opening of the coffee factory at the Ontena plantation. Kembris modestly refused to comment on his relative ranking with other Kainantu business leaders.

Kembris's business philosophy reflects his start in retail sales and is based on an idea of service. According to him "business is not for millionaire[s]." He said, "It's good that you can become [a] millionaire," but what is important is "to get the right service to the people."

He also stressed that his relationship with his employees was based on fairness. He said, "I treat them like human beings," and emphasized providing them with "up to date transport service" and a compound area where they

can stay while they are working. For this reason he does not find it difficult to recruit pickers. He does not hire coffee pickers from any particular region; his work force includes people from Kamano, Tairora, and Agarabi. Ontena people often work at the Abiera plantation, and seem to hold Kembris in high regard.

b. Lennie Aparima⁷

Lennie Aparima, the other young, town-based businessman with a plantation near Ontena, came from the Gadsup speaking village of Aiyura. He was about 36 years old in 1987. He was well educated, having received a bachelor's degree in mechanical engineering from the University of Technology in Lae (Goode 1983: 147). Aparima was the Member of Parliament for the Obura-Wonenara open electorate from 1977 until 1987, and was a cabinet minister in the government of Sir Julius Chan. Political leadership and business success have been closely associated in the Eastern Highlands Province (cf. Finney 1973:118). Like Kembris, Aparima was young when he became successful. He was first elected to Parliament when he was still in his twenties.

Aparima controlled the Bonta'a plantation not as his personal property but as a director of the Taiga (for Tairora and Gadsup) Development Corporation which has owned the plantation and two others since 1980 (see Chapter 5). Taiga sold its shares throughout the area, and several Ontena residents were shareholders.⁸ Taiga aimed at

bringing economic development to the area, but many of its illiterate and unsophisticated shareholders could not understand the company's activities and complained that it was difficult to learn what the company was doing. Taiga had directors among its village shareholders, but they were as unsophisticated about corporate finance as other villagers.

Ontena people were Aparima's political supporters because of the social ties between Ontena and Aiyura. In the 1987 election, some Ontena voters defected to a second Aiyura man, a move which contributed to Aparima's narrow defeat. Partly because of their ties to Aparima, Ontena people worked on the Bonta'a plantation more frequently than on any plantation outside Ontena.

Taiga took advantage of the closing of N.P.M.A., by starting its own management agency, Highland Agricultural Management (HAM). HAM was to be 70% owned by Taiga and the remaining 30% was to be owned by the plantation owners who used its services. At a December 1987 meeting to recruit plantation owners for HAM, Aparima stressed the need for local control of the management company. He said that HAM would be cheaper than N.P.M.A. or K.D.C. because it would only hire Papua New Guineans, and claimed that N.P.M.A. was wasting money paying large salaries to foreign experts.

Aparima also said that HAM would devote more time to individual plantation owners and train them more effectively

than N.P.M.A. had done. To join HAM, plantation owners were required to pay a K500 entrance fee. That fee entitled the owner to a share in the company, but Taiga was to retain 70% ownership. The owner still had to pay a monthly fee for HAM's management services. The fee had not yet been set when the meeting was held, but was expected to be less than what K.D.C. would charge. Only one plantation owner in the area of my study decided to change management teams and join HAM. This was Seta Bolou (see below) whose plantation adjoined Taiga's plantation in Bonta'a. Seta felt that he would get good service from HAM because of the proximity of Taiga's plantation. Seta was also enthusiastic about the policy of employing only Papua New Guineans, and thought that Taiga's management team understood local problems better than did K.D.C.'s. Seta expected empathy from HAM, explaining that the manager, John Yogio "is a man who [was] born here and who felt all our feelings... and how poor we are."

2. Grass roots businessmen

Men who have become plantation owners without leaving their villages are often very different from the town-based businessmen described above. Twenty-hectare plantations owned by village businessmen have come into being through agricultural extension efforts since 1980. New twenty-hectare projects were financed by banks which required that they be run by an approved management agency. Project

owners often did not have much control over their own assets, and had little of the sophistication of town-based businessmen. Some project owners took a more active role than others in becoming established, but none of the project owners in my study area would have been able to start their plantation without outside help. In 1987 three men in Bonta'a and one in Abiera owned successful twenty-hectare projects.

The way that project owners are selected by government policy by N.P.M.A. managers resembles the system of indirect rule established by the Australians in which existing leaders were recruited and assigned government functions. Likewise, the position of the owners is based on established patterns of economic inequality, but is nevertheless unlike anything that existed in the past. Owners get their start because of their standing within the village, but as project owners they become clients of the management agency.

Project owners received a small salary for their role assisting in running the plantation, while they had to pay high monthly management fees to their management agency. Management fees and interest payments absorbed most of the coffee income, so owners of twenty-hectare projects were not becoming wealthy. They lived in modest houses made mostly or entirely from traditional local materials, and did not own vehicles.

Initially the management service used by most projects

was N.P.M.A. When N.P.M.A. closed, project owners had few choices about management agencies. It was difficult to judge the performance of a management company in advance, but by requiring that project owners have an ownership role in the company in addition to paying fees, both K.D.C. and HAM made it difficult for a project owner to switch companies.

a. Ahagi Ibi'i

Ahagi was one of three men who owned twenty-hectare projects at Bonta'a. He was in his late forties in 1987. His formal education only went up to the third grade. He had worked in the past as a free-lance coffee buyer and as a bus driver for the Aiyura National High School, but could no longer work because of injuries sustained in an automobile accident in 1978. He was confined to a wheelchair after his accident, but stayed in the village and grew some coffee as a small holder. Highland villages make little provision for the handicapped, so Ahagi's ability to continue with his life in spite of his disability was remarkable.

He got his start as a plantation owner in 1982, when John Wilkenson, the Kainantu branch manager of N.P.M.A. helped him arrange a loan of eighty thousand kina. He received the money in 1983, and used it to start his plantation. Most of the money went to pay for fencing materials, fertilizer and plowing. In 1987, he had to pay the N.P.M.A. K650 a month in management fees. His most

highly paid employee was a kinsman of his mother's who received K20 a fortnight as supervisor. His workers were recruited from the immediate vicinity, and sometimes included Ontena people.

Ahagi's living arrangements were modest. He lived in a thatched hut on his project and away from the main village. His compound was located next to the road so he could use his wheelchair. All the buildings in Ahagi's compound were made from local materials and he did not own a vehicle.

b. Tau Uriahi

Tau, another project owner at Bonta'a, was about forty-five years old. His only formal education was one year at a mission school at Abiera. He had some experience with bank loans before he started his coffee project because he had participated in a cattle project. The initiative to start a coffee project, however, came from the government. In 1980, Lennie Aparima and Julius Chan visited the area. The Prime Minister made a speech complaining about the amount of unproductive grassland, and exhorting people to develop it. At the time, Tau was a laborer at nearby coffee plantation, but he heard about the speech, and was inspired to apply for a loan when a business development office was opened in Kainantu in 1981.

He had no trouble getting the loan but he had little idea what to do after he got it. "We thought that the government would come and build the nursery, and the

government would till the land and put up the fences, so we just waited. We did not do any work in 1981."

Transportation between Bonta'a and Kainantu became a serious problem after he began receiving supplies. Another problem was that project owners were not provided with any training. Tau's first coffee seeds died because he did not know how to make a coffee nursery and planted the seeds too deep.

Tau knew what he was doing, however, when it came to getting control of the land for the project. He said:

"I gave money to several big men, to the old men. I gave them ten kina so they would approve me, but they would not. They did not like my plan. I also bought them beer. They drank it, but still they did not approve me. They gave me a huge problem, I tried to persuade these old men, but I could not. I even gave them money, but they still did not like my plan, and they blocked me."

The main opponents of Tau's project were kinsmen of Ahagi's, so Tau got John Wilkenson, the branch manager of the N.P.M.A., to intervene in the dispute. The N.P.M.A. was actively promoting the establishment of twenty-hectare plantations. Wilkenson persuaded rival claimants to the land to give up their claims by threatening to cut off funding for Ahagi's planation. According to Tau:

"John Wilkenson is a good man. He is the one who told them to approve my plan. Some men wanted to block me. They were very stubborn, and complained to Wilkenson. Ahagi's father and some of his family said, 'We want to stop him.'"

"They asked Wilkenson, but he said, 'If you go and block Tau, we will also block Ahagi, and you, Bonta'a, will not be able to start any businesses. Your land will be left unused.' After they heard that, they let me proceed, and I started to work."

Tau was hard working and persistent, but his project would never have come into being without outside support. It was inspired by politicians, and funded by banks. He even needed to harness outside pressure to gain control of the land for the project.

c. Bilihu A'aa

The third project owner at Bonta'a was Bilihu. Bilihu was also in his forties, and was a kinsman of Tau. He also had no formal education except for one year at a mission school. He was literate only in Tok Pisin.

Bilihu, Tau and other kinsmen were involved in an ill-fated cattle project in the 1970s. Disputes at this project led to fights, and Bilihu sustained an injury which left him with a permanent limp. The participants in the cattle project formed two separate business groups to start coffee projects but the leader of the cattle project dropped out of active participation. Bilihu started his project at the same time as Tau, and, like Tau, he was motivated to start his plantation by the government's extension campaign.

None of Bonta'a's project owners owned a vehicle. Only one vehicle was owned by a Bonta'a man in 1987. It had been purchased, not with proceeds from coffee, but with money gained from selling a block of land to an outsider. The land had not yet been developed.

d. Boka Muo

There had been two projects started in Abiera before

1987, but one had already failed, and I did not interview its owner. Boka, Abiera's successful project owner, was also a local politician. Like the other project owners, Boka had had little formal education. He went to the same mission school as Ahagi. According to Boka, he and Ahagi both dropped out of the school when they learned that after they finished they would be paid only £5 a year as pastors.

Learning to drive was of more practical value to Boka, and he worked as a driver for the Kainantu Local Government Council for fifteen years. His career in politics began when he was elected to the first Eastern Highlands Provincial Assembly. He served one term as the Member of the Provincial Assembly from Tairora, and was a member of the government when the extension campaign began. Boka's interest in starting a coffee plantation began with the visit made by Lennie Aparima and Julius Chan. After this Boka also actively promoted coffee projects among his constituents.

In 1981, Boka obtained a loan of eighty thousand kina from the Papua New Guinea Development Bank to start a twenty-hectare coffee block. Boka had problems arranging his loan because the land he wanted to use for coffee had been the site of a failed cattle project, and he had been a co-signer for this project. He arranged to repay the loan by having the amount deducted from his pay as a provincial government member, and the bank approved a new loan for

coffee. He did not remember the amount of the cattle project loan.

Boka depended on family labor to get his project started. At first, his kinsmen helped him build the nursery, and cut and transported fence posts without cash payment, but now he complained, "after I got some money they would not help me any more." In February 1988, when I interviewed him, he said he had run out of money and people were helping him again. His paid labor force came mostly from Abiera, and he also employed pickers from other nearby villages including Ontena.

Unlike the owners of projects at Bonta'a, Boka lived outside his plantation. His house was away from the village, nicely sited on a hill overlooking the plantation. He had spent over a thousand kina on his house, which was the most elaborate of those owned by the small plantation owners. It was made mostly of local materials, but it had a more complicated plan than most local houses since it had a veranda. The other feature that set it apart from most village houses was its corrugated iron roof. Of course, there was no electricity or running water, and while the location was pleasant, it was a rather simple dwelling.

Although he did not own a vehicle in 1988, he had in the past. In addition to being a project owner Boka was the chairman of the Urara Plantation, which had recently been purchased by villagers in Abiera and Bonta'a from the

Kainantu Plantation Trust.

3. Between town and village

Two plantation owners in my study area were not young town-based businessmen; nevertheless they managed to acquire plantations prior to the extension programs of the early 1980s. They were more sophisticated than the grass roots businessmen, but they were still based in villages. Neither had much formal education so their access to the resources of the town was limited. Their residence in a rural area also mandated their accommodation to village values, and their social base was in the villages rather than town. They were overtaken by developments in the regional coffee industry and absorbed in the expanding category of project owners.

a. Noya Se'e

Noya, the owner of the Ontena plantation, was the first man in the region to acquire a plantation. He bought it from the Papua New Guinea Development Bank in 1975, when he was in his early thirties. Although the Ontena Plantation was the least developed of the three in the area and only cost K4,000, his buying it was a significant accomplishment, which put Noya in a class by himself. An even more expensive purchase was a second hand tractor, which he bought for K7,100 at this time, becoming the only man in the region to own such an important piece of machinery.

Noya spent eight years working in town as a shop clerk,

but he was unable to save any money and quit his job because of the low pay. He earned the money for his purchases from his smallholder coffee and by working as a coffee buyer. He did not borrow money to buy the plantation, but he was approached by the bank and in 1981 he took out a development loan. With this loan, he expanded his plantation under the supervision of the N.P.M.A.

At first, Noya was unique, but he has become more like other grass roots businessmen. When he first bought his plantation, he referred to himself as "Masta Noya," emulating a white plantation owner. At that time Noya was outspoken about the need for replacing traditional norms with values more appropriate to the process of capital accumulation. He advocated "the new law of the government," in preference to the "old customs of my father." He mentioned the traditional violent methods of settling disputes as an example of these old customs. He also stressed the rights of his nuclear family over the interests of the clan, and wanted his estate to be inherited by his children, rather than to revert to the clan or village. He asked me to write this down for him so there would be no doubts about his intentions.

None of my brothers showed me how to do this work.... This plantation is mine.... My brothers did not help me. My in-laws did not help me. I did it all myself.

Unlike a town-based businessman, however, Noya remained closely tied to his clan and village. Even after he bought

the plantation Noya's wealth derived from his land, and all his land was in his home village. Lacking any significant outside resources, he could not move to another locality or transfer his status.

Noya had no formal education; he was kept out of school by his father. His lack of education limited him from conducting business from town. A minor problem between Noya and his bank illustrates the difficulties encountered by a semi-literate rural businessman. In 1980 he had a ten thousand kina certificate of deposit at a bank in Kainantu. He thought he had exactly that amount but the bank told him that he had significantly less. He had made a mistake, or the bank had made a mistake and he had been unable to prove it, but either way the incident points up his difficulty with financial transactions. Noya simply had to accept what the bank told him and admit his ignorance. He could not deal with banks in the same way as educated town-based businessmen did.

Although Noya was certainly very wealthy by local standards, it is important to recognize some of the limitations on his position. He has always depended on support from fellow villagers, and worked to maintain good relations with them. His wealth was invested in production rather than consumption. His coffee factory was built of concrete and corrugated iron and had an electric generator and a water pump, but he and his two wives lived in thatched

huts without electricity or running water. He was almost self-consciously shabby, dressing in torn clothing, like other villagers and pointedly unlike some town-oriented men.

The most important change to Noya's way of living occurred in 1981, when he made a second marriage and became a polygynist, after many years of trying. His first wife, Oraratiro, had worked hard to develop the smallholder coffee that provided Noya with his economic base, and she strongly resisted the idea of another woman moving in to share it. More than once, she drove away women that he had brought to the village as potential second wives. One woman even bore Noya a child before she was driven out.

Noya's second wife, Iyeriko, was about twenty years younger than he was, and was the daughter of the village medical orderly. Although her family was not from Ontena, her father's job made it impossible for Oraratiro to force her to leave.⁹ Oraratiro lived on the plantation, and Noya built a residential compound for Iyeriko just outside the plantation. Noya had fifteen children by his two wives, and adopted several others. His increasing number of children forced Noya to modify his ideas about leaving the plantation to his children, and he tried to help the oldest ones establish themselves as smallholders outside of the plantation. Several of Noya's children did work on the plantation, but he often quarreled with one of his eldest sons.

Noya's attitude toward his brothers and kinsmen softened from the independence he expressed right after buying the plantation. When he took out the development loan, he formed a Business Group with his two brothers, and involved them legally in the ownership of the plantation, although they were not involved in running it.

Noya was aware that his lack of education made his control of the plantation uncertain and was careful to keep some of his assets outside the structure of the plantation. His tractor and several light trucks remained his private property. He and his first wife also continued to produce coffee on the land which he used before he started the plantation, and he started new small holder plantings for his second wife.

The work force at Ontena plantation was composed of people who had social ties to Noya and could approach him as equals in other contexts. His location in a relatively remote village significantly constrained his ability to advance his position beyond what he had already achieved. In the years since he acquired the plantation Noya became more caught up in village affairs. In 1987, he no longer identified himself as "Masta Noya," but described himself as "grassroots."

Noya's relationship with other plantation owners reflected his ambiguous position. He acted like a Big Man in helping other project owners in the area get established.

He plowed land for Boka and Ahagi with his tractor. At the same time Noya fell behind the younger town-based businessmen, and sometimes had to accept a client status vis-a-vis them. During the 1987 coffee flush, when the equipment at Noya's factory broke down he trucked his coffee to Kembris's factory at Abiera in order to process it.

Noya participated prominently in the feast giving that played an important role in the village. His business also provided new opportunities for feast giving; when he opened a new factory in 1987, he spent one thousand six hundred kina of his own money on the feast to mark the occasion. The livestock slaughtered for this feast included two cattle, thirteen pigs and thirty chickens. Because the date for the feast was set by the completion of the factory, it had to be held in the wet season rather than the traditional feast giving period in the dry season. It rained heavily on day of the feast, and many fewer people came than were expected. Nevertheless, several hundred guests representing three language groups attended, and the gathering was addressed by local politicians and leaders of the Lutheran church. None of the project owners or management agency personnel attended the feast, although they had been invited, but Kembris participated by contributing a pig worth six hundred kina. The factory opening was thus a mixed success: Noya was able to present himself as a Big Man to ordinary villagers, but he had failed to impress the

town-based business community.

A more traditional example of Noya's commitment to a Big Man role came when his mother died shortly after I left the field in 1988. A letter I received described the elaborate mortuary feast Noya gave for her: "The party made for her was not a small one. They killed 42 pigs, one cow, and [bought] about 50 cartons of meat."

In spite of some individuals' growing wealth, kinship obligations and the tradition of gift exchange system are still important in village settings and they exert pressure to reduce the distance between both ends of the social scale. To the extent that anyone had altered relations of production within Ontena, it was Noya with his coffee plantation. His relationships with his followers/workers were complex; he was partially a Big Man and partially an entrepreneur. As Noya has struggled to balance these two roles, he has found it increasingly necessary to emphasize his Big Man role by redistributing significant amounts of wealth (cf. Finney 1987: 36-37).

b. Seta Bolou

Another plantation owner who falls between the town and grassroots categories is Seta Bolou. Seta is not a highlander, but he is a congenial and outgoing man who has assimilated into highland village life. He makes efforts to socialize with people in Bonta'a and Ontena and some of his children have married locally. He has lived most of his

life in small towns, but he is not well educated. He operates more comfortably in a rural setting than in a business one.

Seta was born in Milne Bay Province in Papua in about 1930. He first came to the Highlands in 1958 when he was transferred by the retail store where he worked to its Kainantu branch. He was eventually able to save enough money to consider the possibility of buying some land and retiring to become a farmer. In 1969, customary land could not be sold to individuals even if they were "Natives," but land was still being sold to the Administration for agricultural leases. Seta organized the purchase of 30.48 hectares of land in Bonta'a adjacent to the Bonta'a plantation for \$652.75. He obtained a ninety-nine year lease on the site in 1971. When Seta obtained his lease the administration was discouraging the expansion of coffee plantings, so the lease specified that "No coffee is to be grown on the lease," and "That portion of the lease which is to be used for grazing shall be stocked with a minimum of one head of cattle per two years within four years from the date of grant, and shall be kept stocked to that minimum for the remainder of the term."

At first Seta tried to raise cattle on the property, but his cattle business was unsuccessful. He was too far away from town, and could not rely on assistance from the Department of Primary Industry. In 1981 he approached the

Papua New Guinea Development Bank for a loan to develop a coffee project. The bank agreed to fund Seta's project and the government relaxed the lease conditions restricting coffee planting.

Because of his experience as a sales clerk, Seta was aware of the bookkeeping aspects of running a plantation, and he appeared to have a clearer idea about how his business was doing than did the grass roots businessmen. He probably did not have a much greater problem with theft than did the nearby projects, but he seemed more conscious of it. He noticed that small amounts of cherry coffee were taken opportunistically, although "they wouldn't go out of their way to steal." He was more disturbed by the four or five times a year when parchment coffee was stolen from the processing area.

Seta usually employed local people, but sometimes also hired pickers who came to the area to work at the Taiga plantation. According to Seta's son, John, most pickers came to work because they had specific short-term needs, and he was concerned that as production increased at the new plantations in Bonta'a, labor would become more difficult to get.

B. Villagers as plantation laborers

Why did people work on plantations when they could have worked on their own coffee? Partially it was their short-term need for cash, since planting one's own coffee required

a long start up period. People perceived that they still had the ability to withdraw from the cash economy and frequently asserted that if problems arose they could always eat sweet potato. Therefore cash was seen by many people mainly in terms of meeting immediate requirements.

However, there was considerable evidence that cash was more of a necessity than people wanted to believe it was. First, cash had replaced most traditional valuables in the ceremonial exchanges associated with birth, marriage, and death. Second, as more land was devoted to the cultivation of cash crops, subsistence crops were displaced, and people had to buy food. Even in remote villages small stores sold imported rice, canned mackerel, and canned corned meat. Third, school fees required cash, as education in Papua New Guinea was neither free, nor universal. Primary school fees were fairly low, but secondary school fees were very high.¹⁰

Income for these needs came principally from either the sale of smallholder coffee, or work on coffee plantations. Most people participated in both activities. Noya's plantation provided wage employment in Ontena and each village household grew its own coffee on small holdings.

The only significant form of paid employment for people in Ontena was unskilled agricultural labor on local plantations. Those who worked on plantations were most likely to work for Noya on the Ontena plantation. They also occasionally sought work on the other plantations included

in the area of my study, and a few also reported working on two plantations which were outside the Kosa Area Community and which I did not cover in my survey. Both of these plantations were near Aiyura where Ontena people had many social ties. They were far enough away from Ontena so that workers usually had to stay away overnight when working there.

Nearly 60% of Ontena residents over age 16 reported that they worked on plantations at least occasionally. The plantation work force included both men and women and all age categories. Men reported more variation in the kinds of jobs they performed. In addition to picking coffee, they worked as house builders, sprayers, security guards, and drivers, while women only reported weeding or picking coffee.

Table 7-2 PAID EMPLOYMENT OF ONTENA ADULTS (over age 15)

	Coffee Plantations	Government or Other	None	Total	% Employed in Coffee	
Males						
10s	14	2	13	29	48	Males 63.33%
20s	20	3	2	25	80	
30s	24	3	8	33	73	
40s	19	2	6	27	70	
50s	12	2	6	20	60	
60s	5	1	6	12	42	
70s	1	0	3	4	25	
Females						
10s	18	0	8	26	69	Females 56.07%
20s	20	0	6	26	77	
30s	28	0	11	39	72	
40s	17	1	15	33	52	
50s	11	0	8	19	58	
60s	2	0	11	13	15	
70s+	1	0	16	17	6	
Total	192	12	119	323	59.44%	

Plantations of Coffee						Total	in Coffee	
Males			None					
10s	14	2	13	29	48	Males 63.33%		
20s	20	3	2	25	80			
30s	24	3	8	33	73			
40s	19	2	6	27	70			
50s	12	2	6	20	60			
60s	5	1	6	12	42			
70s	1	0	3	4	25			
Females								
10s	18	0	8	26	69	Females 56.07%		
20s	20	0	6	26	77			
30s	28	0	11	39	72			
40s	17	1	15	33	52			
50s	11	0	8	19	58			
60s	2	0	11	13	15			
70s+	1	0	16	17	6			
Total	192	12	119	323	59.44%			

*(figures exclude public servants stationed in Ontena)

Young people in their twenties were the most likely of any category to work on the local plantations, but a significant number of people in this age group have left the village, often to find jobs in towns. Women in their thirties were the category that provided the largest number of plantation workers, but the percentage of women working on plantations dropped off among older women. Men also were less likely to work for plantations as they grow older, but the percentage dropped off less quickly than for women. Older villagers usually had larger smallholdings, and often their cash needs were less, thus their lower rates of participation in wage labor. Young unmarried women participated disproportionately in plantation labor because they had fewer opportunities than young men for jobs in towns and because the virilocal marriage system discouraged them from planting coffee trees which would only come into productivity after their marriage and possible departure from the village.

The new plantations established near Ontena have led villagers to become increasingly dependent on wage labor. While the proximity of plantations to villages allowed people to continue to work on their smallholdings and subsistence farms, frequent work on plantations also reduced people's commitment to these activities. Plantations competed against the village economy for labor, and the

strong village economy produced relatively high rural wages. A World Bank study noted that in spite of the high rural wages, Papua New Guinea's "rural minimum wages appear just sufficient to attract the necessary labor" (The World Bank 1988: Vol. 2, p. 6).

Small plantations with informal labor arrangements do not normally honor the official rural minimum wage. No one on Noya's plantation had a contract. Coffee pickers were paid a piece work rate of five toea per kilogram. Workers could pick up to 80 kg. a day. At a rate of five toea a kilogram a worker could make four kina a day. Noya employed a semi permanent staff which varied from about twelve to twenty people throughout the year. During the height of the coffee flush he employed about 200 coffee pickers of whom approximately 80% were Ontena people.

C. Migrant laborers in Ontena village.

Noya's workers were mostly local people but he also recruited workers from more remote parts of the province. One place he went to recruit was Anumaga, Ontena's former partner in the Area Community. Anumaga was too high in the mountains for its own coffee to bear well, but Noya sought them out for social, not economic reasons. He explained:

"I get [workers] from Anumaga. They are a good group for helping me. I go there to recruit them, because back during war time my father took refuge on this side. These people were our allies. My father told me about them, and I tell them, "you should come to help me because of my father," and they come. Some of them are also my in laws, [because of his second wife] which is another reason why they help me.

In 1987, many of his non-local workers came from Obura, about twenty miles to the south. Noya drove to their villages to recruit them, but after the conclusion of their work period they only expected to be driven to Kainantu. They were paid at the same rate as local people, but because they had to pay part of their transportation costs their net earnings were less. Obura people expected to earn as much as thirty to forty kina a fortnight, but had to pay three kina to get home from Kainantu. They reported that coffee grew well in their home village but it was more seasonal than in Ontena. One man asserted, "In the coffee season we don't go to pick coffee for anyone else. We pick our own."

In addition to the cost of transportation, migrant workers had to provide their own food. This was also a significant drain on their earnings. They tried to minimize these costs by provisioning themselves as cheaply as possible:

"We take food with us, when "Company" [Noya] picks us up at our village. We eat it here. The food we bring lasts about a week, and then we borrow from "Company"'s store to buy food to eat while we work. We buy food to eat until payday, when we go to Kainantu. We buy food in town and bring it back here to eat while we are working....

"We buy sweet potato, flour, rice, fish, betel nut, and tobacco."

Another significant motivation for migrating was a resurgence of tribal fighting. One worker complained that there was too much sorcery at home, too many people dying,

so he intended to stay in Ontena for several months.

A number of Noya's workers came from one village near Obura, Kokombira. Two of these families have been in Ontena since 1980, and have settled there permanently. That there was still an abundance of land in Ontena is shown by the fact that these migrant workers became, not landless proletarians, but significant planters of smallholder coffee.

The first Kokombira man to move to Ontena was Siwaito. He came to Kainantu looking for work on plantations and Noya recruited him there. He began as a laborer with a shovel, and impressed Noya with his hard work. By 1987, he was in charge of running Noya's wet factory (see Chapter 5). When he started working Noya paid him five kina a fortnight. His rate of payment increased to forty-one kina, but in 1987, just before I interviewed him, Noya cut it to thirty-five kina. He was unhappy, but unable to do anything to about the reduction.

Siwaito had assimilated into Ontena, and had no plans to return to Kokombira. All of his five children were born in Ontena. Noya gave him land near the plantation to plant coffee. He had planted over one thousand trees. The trees were mostly immature in 1987, but a few had already started bearing, and he had already sold some coffee for ten kina.

Misin was Siwaito's brother-in-law. He explained his move to Ontena: "I came to Ontena in 1980. I have lived

here for eight years. I came here because they fought in my home village and shot me in the leg with an arrow. I am afraid to go home."

Five people including Misin's uncle died in the fighting in Kokombira. Both Siwaito and Misin gave up good coffee land when they immigrated to Ontena. Misin said "My life in Ontena is good. I am not afraid of sorcery. I am not afraid of arrows. I am not afraid of people. It is quiet here."

Misin also began by working with a shovel for seven kina a fortnight. In 1987, his jobs included spraying herbicides and supervising other workers. He was paid thirty-five kina a fortnight. He also owned a thousand coffee trees planted on land given to him by Noya. The two settled families served as a link between Kokombira and Ontena, and several other Kokombira people had moved to Ontena to work on the plantation. These recent migrants had not been there long enough to receive any land.

Notes

1. McConaghy estimates that as much as 10% of Papua New Guinea's total crop is stolen from plantations and marketed as smallholder production (1985: 63).
2. In a newspaper article entitled Act on crime - or tell us when to get out, Dick Hagon of Waghi Mek Plantations complained, "Highlanders are well aware they can attack, rob and frame and kill foreigners with little risk of capture, charge or compensation payment" (Post-Courier August 28, 1987).
3. Labelling themselves as "grass roots," implies a greater town orientation than many of these men had, so it was not a label they used for themselves. Businessmen in my intermediate category described themselves as "grass roots" to emphasize the difference between themselves and their more commercially sophisticated competitors.
4. I never had any trouble getting information from project owners, but I sometimes found the officials at the N.P.M.A. office unwilling to provide me with specific information. When I tried get harvest figures for the projects whose owners did not have the information at their plantations, one official began reading the harvest figures for one plantation, and then refused to tell me the rest, claiming that the figures were confidential. He said that he would only give them to me in the presence of the owner. Since the owners only came into town on days when the office was busy, it was impossible to get any more figures.
5. Kembris was named after a popular brand of cigarette.
6. At the organizational meeting of K.D.C. each owner paid K2,000 and received a share certificate and a loan guarantee. The share certificate was for one of 10,000 shares in K.D.C. The loan receipt for K2,000 read as follows:

"We acknowledge receipt of an amount of K2,000.00 as a loan towards the initial set up costs of the company. The acceptance of the loan is at the discretion of the directors. The loan will receive a guaranteed annual interest of 7% on the principle loan outstanding at year end.

In addition, a bonus percentage will be paid at the discretion of the directors. This amount will be determined after assessment of the companies annual performance.

Please be advised that the acceptance of the loan does not entitle the lender to any benefits other than interest on the loan. Should the directors decide to

offer any additional benefit to the lender this will be notified from time to time. The repayment of the loan will be at the discretion of the Directors of the company and in accordance with a resolution of a board meeting.

All interest up to date of repayment accrued and due will also be paid."

Signed Chairman - K.D.C. P/L

Signed Director/shareholder

Dated: this 25th day February, 1988"

7. I did not have a chance to interview Lennie Aparima, who was the Member of Parliament for Obura-Wonenara for most of my most recent stay.

8. Shares of Taiga were sold to villagers for K10 each in 1982.

9. The medical orderly came from a Kamano-speaking village a few miles away. After he moved to Ontena he became a significant smallholder coffee grower, and many villagers objected to his growing coffee on Ontena land. The marriage between Noya and Iyeriko enhanced his control over his coffee gardens.

10. The fee for secondary school in 1988 was K290, which is the same as the most recent figures for province's annual per capita income (World Bank 1988).

CHAPTER VIII. CONCLUSION

In the past sixty years the societies of the Papua New Guinea Highlands have been absorbed into the global economy. While Highlanders had no part in initiating the process that resulted in their incorporation in the World System, they have actively responded to the changed circumstances in which they found themselves. The coffee economy is largely the result of local initiative rather than government policy, and in fact became firmly established during a period when the colonial administration was trying to limit the spread of coffee cultivation.

The people of Ontena village are now peasant coffee growers, enmeshed in a cash economy, but smallholder coffee production is organized according to local characteristics. Smallholders use land held under traditional forms of land tenure, and labor arrangements based on established local practices. The local ideology of equality has been important in distributing the income from coffee growing evenly among villagers. Inequities in the distribution of land make coffee growing easier for some individuals than others, but no one is excluded. In spite of differences in levels of production, households do not have significantly different standards of living (cf. Grossman 1984: 238). Individuals with large coffee holdings wear the same kinds of clothing, live in the same kinds of houses and eat the

same foods as other villagers. Although, as Bernstein contends for African peasantries, the presence of "differences in standards of consumption" (1979:430) may mean little, the absence of such differences is important to the examination of the process of the differentiation of the peasantry. There is an ideology of equivalence in Ontena that forces the redistribution of wealth. Villagers maintain a sense of solidarity reinforced by sharing similar living conditions.

As "direct producers within a variety of modes of production" (Roseberry 1983: 195), Ontena people are involved in a variety of relationships concerning production and exchange (see table 8-1). They produce food crops primarily for their own households, but also for local (non-capitalist) exchange. They produce pigs primarily for local (non-capitalist) exchange. As smallholders, they produce coffee for the world market, but with full control over the means of production. As plantation laborers, they produce coffee for the world market, selling their labor to the owner of capital. The use of money allows a degree of convertibility between these categories. Various factors affect the relative importance of each activity. All households produce food crops, but most of those who have become Seventh Day Adventists do not raise domestic animals, and substitute purchased food (either imported frozen meat, or local cattle) for pork in feasts. Nearly all households

engage in smallholder cultivation of coffee, but owners of large holdings are less likely to work on plantations.

Table 8-1 ORGANIZATION OF VILLAGE PRODUCTION

for use and kin-based exchange	- food crops	- own means
for kin-based exchange	- domestic animals	- own means
for commodity exchange	- smallholder coffee	- own means
for commodity exchange	- plantation coffee	- capitalist owned means

One cannot assume that a "pre-capitalist" mode of production is destroyed by the introduction of capitalism, as for example Bernstein does in his discussion of African peasantries (1979). In the Papua New Guinea Highlands, it has continued to provide the basic framework within which most production takes place, although it has been altered, displaced and subordinated. So long as commodities are produced, details of local organization need not be important to the capitalists trading in them. The colonial state in Papua New Guinea sought to govern cheaply, and did not attempt the formidable task of eradicating indigenous modes of production. Instead, a market in labor and commodities was introduced gradually to indigenous groups who were forced to change only those aspects of social behavior that conflicted with efficient administration.

Although colonial rule introduced previously unknown exploitative relationships of production, it brought enhanced material prosperity. Such labor as was diverted to

build the colonial infrastructure or work on plantations, consisted of young men who had not been a productive part of the traditional agricultural system. Enforced pacification released the labor of adult men from military uses and allowed people to farm land that had been vulnerable to attack. New crops and new tools improved productivity, and it became possible to utilize resources, such as swamps and forests, which had previously been unavailable.

Although, since all Ontena adults are direct producers, class divisions do not exist within the village, there are substantial differences in the amount of resources controlled by different households. There are three components to this inequality among households. The first is an aspect of the developmental cycle and relates household production to household needs and the second is a Big Man system based on long established values which rewards overproducing households with prestige and requires that they redirect their production to social ends. The third, and thus far the least important, component of village inequality is the limited penetration of the village by capitalist relationships based on a market in labor and property.

Much of the variation in size of coffee holdings is directly connected to the size of the household. Not only do larger households plant and maintain larger coffee gardens, but household composition is fluid and children

move to wealthier households. Most villagers grow coffee to meet their increasing needs for cash, but the quantity grown suggests a relationship to the reproduction of the household rather than accumulation. Younger people generally do not have extensive coffee gardens because they have small households.

I have used Chayanov's model to describe households which grow food crops for use and commodities as if they were for use: i.e. to meet the food and cash needs required to reproduce the household. Raikes questions the applicability of Chayanov's model to contexts where "many of the implicit underlying assumptions are unfulfilled" (1978:290). In Ontena, as in Tanzania, "There is no landlord class to obstruct or pre-empt opportunities for rich peasant development" (ibid), but equivalent barriers exist, since uneducated villagers are generally unable to move into the "state class" or "bureaucratic bourgeoisie." They do, however, have the option to convert wealth into status by participating in traditional exchanges as Big Men.

Another objection raised by Raikes, that household size is not independent of wealth (ibid 291), does not pose a problem to the model. The model only claims an association between number of producers in a household and levels of production, one need not "cause" the other. In Ontena, the productive workers are recruited into wealthy households as adoptive children as well as wives and biological children,

but whatever inequality that results from this is incompatible with class formation. A wealthy household must spread its wealth among a large number of members and disburse it through inheritance.

The households of village leaders produce more coffee than is required for their own immediate cash needs so that they can invest their surplus production in gift exchange. Most of the labor used to plant, maintain and harvest large coffee holdings comes from the smallholder's own household, although some owners of large coffee gardens occasionally hire workers. The difficulty of meeting the labor requirements of extremely large holdings limits the size of coffee holdings. No household properly maintains more than a few thousand trees, and none owns more than five thousand trees.

Large scale coffee growers sometimes encroach on other people's land claims, but cannot be too predatory without damaging the reputations for generosity they are trying to build. They therefore seek unused land away from the old settlements, and found new settlements with their followers. Some inequality results from the uneven division of suitable coffee growing land among the different clans. Members of certain clans are able to become large scale coffee growers more easily than others.

Large cash incomes are not used to increase the consumption levels of few individuals, but are distributed

in kinship transactions or absorbed in conspicuous investments, such as passenger trucks or the sawmill, which generally lose money. Much of the income generated by coffee sales is redistributed in kinship transactions. Brideprices, menarche ceremonies and deaths all require gifts of money to be distributed among many people. The feasts held on these occasions also involve large expenditures of money and spread consumption widely among those without great wealth.

Young adults in Ontena have received more education than their elders, and are able to find employment in towns at wages that enable them to save significant sums of money.¹ When they return to the village, they bring back substantial savings and different economic attitudes. They are more likely to run their enterprises successfully and are willing to hire fellow villagers on a regular basis. Young men have paid cash to acquire sites for village shops and set up fences to exclude others from their property.

The most successful young men do not yet produce much coffee. Their wealth derives from sources outside the village, and they have not possessed it for very long. It is too soon to describe the handful of young, single or newly married men who have assembled significant wealth as constituting a capitalist class in the village, but when and if such a class develops, it is likely to consist of people like them.

Large tracts of undeveloped land still exist in the vicinity of Ontena, but the land varies in its suitability for agriculture, and the most desirable portions are already in use. The population is increasing, and finding land suitable for growing food crops is becoming more difficult. Coffee production is gradually displacing subsistence gardening near Ontena's main settlements and forcing the use of more distant, less productive land.

Village coffee gardens require little expenditure of labor to establish, but the productivity of mature gardens depends on their level of maintenance. Harvests can be increased by proper fencing, pruning, drainage, and weeding. The competing interests of food crops and livestock prevent villagers from maintaining their coffee gardens at plantation standards. Village coffee trees are generally much less productive than plantation trees, even though many villagers have experience working on plantations.

Coffee growing increases the labor requirements of subsistence farming. More labor is needed to obtain the same crop yields from marginal land, and to transport food crops longer distances between gardens and settlements. The coffee harvest also interferes with food production because large amounts of labor are required to pick and process cherry coffee. The presence of cash from coffee sales encourages villagers buy imported rice to substitute for the crops that they were unable to harvest.

Large scale coffee growers produce more than is needed for subsistence because they need to act as Big Men and participate in lavish gift giving. Although bank accounts and investment possibilities permit more individual accumulation of wealth than was possible in the past, their impact on village society is limited because wealth is mainly used to finance feasts rather than to purchase consumer goods. The factors that A. J. Strathern notes as "slowing down the rate of emergence" (1984: 188) of a rich peasant class in Mt. Hagen, also retard its development in Ontena. Access to land is mostly controlled by kin groups, inheritance pattern that would maintain concentrations of wealth are lacking, and the importance of gift exchange disbursts accumulated wealth. The traditional emphasis on "equivalence" promotes equality within the village. Generosity continues to be demanded of village leaders, and their contributions to marriage and funerary payments represent significant redistributions of wealth.

When land was alienated from Highlanders to start coffee plantations in the 1950s, villagers perceived a surfeit of land and did not oppose them. Coffee plantations introduced social forms, organized according to principles alien to local culture. The first plantations were owned and run by foreigners. With decolonization in the 1970s, Papua New Guineans were recruited and trained to fill positions in the bureaucracy and commerce left vacant

by departing Australians. A "bureaucratic bourgeoisie" (Good 1986) or state class came into being, modeled on the class system that had existed under colonial rule. Members of this elite class have not entirely severed their ties to local kin groups, nor have they entirely supplanted the Australians who continue to occupy significant roles in business and the bureaucracy, however, entry into this elite class depends largely on completing secondary or tertiary education, a goal that few rural villagers can attain.

Coffee plantations were also decolonized, with Papua New Guineans taking over ownership of nearly all plantations by 1981 (Mitio 1981:182).² Development projects sponsored by the government in the 1980s increased the number of plantations. Government sponsorship created "grassroots" plantation owners: men with little education who could not have acquired large enterprises without outside assistance. While they own plantations many times the size of the largest smallholding, they also have substantial bank debts and rely on small salaries paid by management agencies. "Grassroots" plantation owners are actually in a weak position. They seem rich by local standards, but decisions are made for them by management agencies, and they have no access to their apparent wealth.

Without formal education, a person cannot easily join the commercial or bureaucratic bourgeoisie. Ontena's only plantation owner tried, at first, to act the part of an

Australian colonist, but was unable to deal effectively with the institutions that supported capitalist farmers. By 1987, as a self described "grassroots" plantation owner, he had adopted a style more like a Big Man, and exhibited the conspicuous generosity expected in this role. His factory opening party demonstrated both his commitment to a Big Man role and outsider status vis-a-vis the bureaucratic class. He incurred significant expenses to host several hundred guests, but officials from the management agencies and the banks did not attend. Only two owners of plantations near Ontena are successful capitalist entrepreneurs. Each has an office in town, is a director of a management agency, and owns more than one plantation. Both of these men have had formal education, and have the sophistication to deal with banks, accountants and auditors.

Although plantations only account for 30% of Papua New Guinea coffee production, they account for more than half the production in the vicinity of Ontena. Plantations cover more land, and their trees are better maintained and more productive than smallholders' trees. Wage labor for these new and recently expanded plantations is becoming increasingly important, and is diminishing people's commitment to other economic activities, especially subsistence farming. Land is still available in the village for subsistence farming, and no one in Ontena becomes a plantation worker because he/she lacks options for earning

money, although the other options require advance planning and investment. Several families who moved to Ontena in order to work on the plantation have settled there permanently, and planted food crops and coffee gardens.

Rural Eastern Highlanders have not become a landless proletariat. Their traditional values remain a force for village equity. However, they are dependent on world market fluctuations over which they have no control. Their vulnerability can be seen in a letter that I received from Ontena in February 1990.

"The coffee price has really collapsed in Papua New Guinea. In the Highlands, there is no business besides coffee, and we are lost. The coffee price in Kainantu is 40 toea a kilogram, and we are at a loss for money. The value of the kina went down, and the things in the stores went up and we are suffering (mipela kisim taim stret).... We not longer eat fish and rice and good food ... our only food now is garden produce."

Declining terms of trade affect everyone involved in coffee growing. The state's effort to promote economic development by establishing local plantation owners was also undercut by the collapsing prices. The letter continued:

"All the plantations you saw in Tairora have been abandoned, and weeds have taken over. Noya has also abandoned his plantation and weeds have taken over there too. We left the plantation in November 1989 and no longer work there."

Notes

1. Remittances play a surprisingly small role in Ontena's economy. Young people without family responsibilities make up most of the migrants. They prefer to spend their money to have a good time, or save for their own purposes, and only rarely send money home to parents or other relatives.

2. The model of African decolonization influenced Papua New Guinea's elite, and metropolitan advisers with African experience came to Papua New Guinea (see Somare 1975:108).

Appendix A: The Eight Aims

1. A rapid increase in the proportion of the economy under the control of Papua New Guinean individuals and groups, and in the proportion of personal and property incomes that goes to Papua New Guineans.
2. More equal distribution of economic benefits, including movement toward equalization of incomes among people and toward equalization of services among different areas of the country."
3. Decentralization of economic activity, planning, and government spending, with emphasis on agricultural development, village industry, better internal trade, and more spending channeled to local and area bodies.
4. An emphasis on small scale artisan, service and business activity, relying where possible on typically Papua New Guinean forms of economic activity.
5. A more self-reliant economy. less dependent for its needs on imported goods and services and better able to meet the needs of its people through local production.
6. An increasing capacity for meeting government spending needs from locally raised revenue.
7. A rapid increase in the active and equal participation of women in all forms of economic and social activity.
8. Government control and involvement in those sectors of the economy where control is necessary to achieve the desired kind of development.

Appendix B: Notes on a Menarche Ceremony

In December 1987 a menarche ceremony was held for two young women. Both were from the same clan, and the ceremony was sponsored by the adoptive father of one of the women. The ceremony took place in the house where one of them lived - a large round house with an dirt floor, a central fireplace, and a raised sleeping platform around the wall. The house was emptied of the usual household equipment in order to accommodate the guests at the ceremony. The central fire was larger than usual, and the house was very hot. At 8:00 on the first night, there were already more than fifty people in the house, almost all of them teenaged girls. A senior man and I were the only adult males. People ate large quantities of sugar cane and covered the floor with chewed debris. Five large saucepans cooked on a wire grate over the fire, and a dish of cooked meat was on the floor. Two men arrived in the next thirty minutes, one with a bow and arrow. Spectators came and went throughout the proceedings. A senior men began to lecture the young women, criticizing them for their bad behavior and laziness. He described the skills women needed to make gardens and take care of pigs. He told the young women that they must know about the leaves, bark and vines useful as pig medicines or magic, and explained the division of labor between men and women: "Men have five things to do: digging ditches, making fences, planting sugar cane,

building pig houses, and repairing fences. Women's tasks include planting pitpit, planting leaf vegetables planting sweet potato, tending pigs, and looking after men."

He lectured the young women on the dangers of sexual immorality. "In the past," he said "people lived longer. They only died from arrows, they never got sick.... Now people ignore the rules and they age quickly." He told them that nowadays women have babies too soon after marriage, and that giving birth is more painful because pregnant women continue to sleep with their husbands. He mocked the screams of a woman in childbirth. Everyone, including the girls, laughed at this but I found it horrifying.

Later, a senior man brought a carton of beer into the house. Although girls and young women in Ontena never drink alcohol, men drink at many gatherings including the menarche ceremonies. Big dishes of food were brought into the house at 10:30. Several drunken men, including the ceremony's sponsor, arrived at 10:45, and were disruptive during the short time they were there. The lecturing of the young women continued for several more hours, and the senior men also beat some of them. One man accused a teenaged girl of having "a bad attitude" and hit her across the palm of her hand with a switch. Another young woman was bitten several times by her father's sister's husband. The skin was broken, but she did not regard the injuries as serious. She told me that the girls never fight back, lest they be beaten

more severely.

Fewer elders showed up for the second night of the "fire house" which otherwise was similar to the first night. The lecture stressed same themes as the night before, and again made fun of pregnant women who wanted to sleep with their husbands. The girls, exhausted from the previous night, were trying to sleep.

On the third night, the house was crowded. There were about 90 people including twelve men, more than on other nights. There were ten married women, and the rest were unmarried women and girls. The lecturing continued. One man warned the girls about writing letters to men. He cited his own daughter as an example of "these little girls itching for a man." At 9:30 food cooked outside in an earth oven was distributed by the ceremony's sponsor and his family - sweet potatoes, green vegetables, chicken, plus cooked rice, sliced bread, and lots of sugar cane. Packaged biscuits and coffee were given to the parents of one of the two young women.

An elder warned the young women that if they touched men's food while they were menstruating it would sicken them. The lecturing became loud and aggressive. The oldest woman present was praised for possessing the virtues of the past. A young woman who braided her hair was ridiculed as a "Papuan woman," and a "show off." A senior man hit her and pulled on her hair. I asked a young woman with braided hair

sitting next to me if she was afraid of being hit, and she explained that because the man administering the beating was her own mother's brother, he would not hit her.

Then two senior men began to punish individual girls for specific transgressions, such as, making fun of elders, not obeying parents, and stealing sugar cane. They hit young girls (about ten to fourteen years old) on their heads with their fists or with lengths of sugar cane. Most of the girls were crying. Another man suddenly threw a large piece of firewood across the room. This could have caused serious injury if it had hit anyone, but his shouting warned the girls to move before the log hit the place where they had been sitting.

After the beatings the young women had retaliated by performing skits about male shortcomings. The women played both female and male roles in these skits, indicating the latter by donning items of male clothing such as pants and hats, which they never wore in non-ritual contexts. The skits began at 10:45 and finished at 12:00. In the first skit, women worked in gardens while "men" sat around drinking beer. The "men" ended up fighting and chasing each other amongst the spectators. The next skit depicted a man abandoning his wife and two children in order to marry a younger woman. Everyone laughed during the skits, but afterwards one of the senior men admitted to me that he felt ashamed as he watched this skit, because this was what he

had done about 20 years before. The third skit was about a drunken man trying to "sleep with" his pregnant wife. The fourth skit was about young people drinking and dancing and getting into fights. The girls borrowed my tape recorder to play background music.

After the skits ended, an old woman instructed girls in pig tending. The senior men present murmured their agreement and added a few comments. Then it was time for young men to perform their skits. The boys started to enact a mock card game but did nothing else. They simply gave up. The elders declared that the women had won and everyone left to go home.

The girls' sponsor provided a steer for the feast concluding the ceremony. The men had difficulty slaughtering the steer, so the feast had to be postponed for a day. The feast was eventually held and the beef was distributed among the girls' relatives.

Appendix C. The Assassination of Sinakure

In July 1969, Sinakure, the local government councilor from Oyana, was killed by men from his own village. My information about the killing comes from a newspaper account (Post-Courier Nov. 26, 1969) and from two informants, both of whom were sympathetic to his killers. My Ontena informant (now deceased) lived in an Ontena hamlet near Oyana; my other informant was an Oyana man. According to both informants, Sinakure was a sorcerer who specialized in sutim nil. His alleged victims included many people in Oyana, in Ontena and in other villages.

He was really like a masalai, who would destroy every village. Wherever a man died or a child died and the villagers heated their ovens to divine the identity of the sorcerer, all of the vegetables from the ovens indicated him (Ontena Informant 1974).

The newspaper account adds that the death of the brother of one of his killers "was attributed to the sorcery of Sinakure" (Post-Courier Nov. 26, 1969). My informants agreed that Sinakure was lured to his death by an invitation to raid a neighboring village. My Ontena informant described the execution in considerable detail.

Two men flattered him and tricked him in order to kill him. They said, "We shall go and perform sutim nil against the Anumaga." They tricked Sinakure into going with them.

When they were ready to kill him they said, "You have secretly killed many people, but we have seen what you do. We talked you into coming here because we are going to kill you. I am holding your arm, and you cannot escape."

The two men who held Sinakure said, "We, Aporo and Amana have trapped you. You cannot get away. You will be destroyed."

Aporo said, "My father is Iyorako. I am Iyorako's son. I want to kill you Sinakure."

Amana said, "I am Morake's son. I want to kill you Sinakure."

They took a hammer and broke his skull and his jaw. Then they took a four inch nail and hammered it into his brain. They put it in this spot where a baby's head is soft, and hammered it into his brain. Then they put four nails into his side, the side where his liver was, and four more nails into his other side. When they had done this and killed him, they carried him away and dumped him beside a tree.

Early the next morning, about 5:00 A.M., they carried him away to a small stream. The stream flowed over rocks to a waterfall, and they put him under the waterfall. They covered him up with stones and leaves. Then they took his hat and his council badge and put these in a nearby tree and left (Ontena Informant 1974).

The newspaper account does not say how Sinakure was lured into the forest where he was killed, but it basically confirms my informants' descriptions of the killing. The story became only slightly more sensational over time. The newspaper reported that the killers "drove a 3in nail into the skull" (Post-Courier Nov. 26, 1969), in 1974, my Ontena informant said it was a four inch nail, and in 1987, my Oyana informant alleged that a six inch nail had been used. An important omission from the 1974 account was the fact that five men rather than two had been involved in the actual killing. The three additional men were "hired assassins" (Post-Courier Nov. 26, 1969) from Okapa, and all five were tried and convicted for the murder. My Ontena informant also did not make it clear whether the killing of Sinakure was itself sorcery, although the men seem to have used sutim nil techniques.

The newspaper account quotes a witness at the trial who stated "that the act of driving a nail into the head of a body indicated sorcery influence" (ibid). My Oyana informant was more forthcoming than my Ontena informant about the sorcery aspects of the killing. He described the attack as a sutim nil attack which went wrong: The killers had intended Sinakure to "return to die in the village, but instead he died at the place where he was attacked" (ibid). He also added, "They wanted to kill Sinakure so they pooled their money to hire a man who could seize this man" (Oyana Informant 1987). The man they hired was Wariamuta, a reputed sorcerer from Okapa. He was paid \$150 and one pig.

The killing of Sinakure attracted even more attention because the body was hidden, and a large-scale search was mounted to find him. His body was not found for several weeks, and his kinsmen had to bury a rotting corpse.

Sinakure's two principal killers were both men of considerable standing in Oyana, and according to my informants they were proud of the killing. Although they hid the corpse, they did not conceal their guilt. They were caught because they composed a song boasting of the killing. They sang this when they were being taken to jail for refusal to participate in the roadwork that the Administration required people to do as a form of taxation. My Ontena informant knew the song, and, after singing it, he explained:

The song is about a kind of possum which lives only in the forest between Oyana and Ontena. We call it banafum. Whenever a man catches any other kind of possum it tries to bite the man's hand, so it is hard to capture. But the banafum does not run away or bite. The song that they sang said "Sinakure was like a banafum. He used to bite everyone, but we killed him easily."

My Ontena informant added a peculiar detail about the interval between the arrest and the trial. According to him:

The policemen brought Aporo and Amana back to Oyana village and said, "These two men admit that they killed Sinakure. If Sinakure's kinsmen are here, kill these two and it will be finished." They did not kill them, so the police said, "We brought them here for you to kill, but you did not revenge yourselves. All right, we will take them back to jail."

Competing ideological imperatives are brought together in this scene, which, if it ever happened, was a highly irregular departure from Administration legal procedure. Traditional notions of reciprocity mandated that the killers be killed, but the decisive action taken by Aporo and Amana inspired fear and respect. Furthermore, a sorcerer might be deserving of execution. My Ontena informant included this incident to illustrate that the depravity of Sinakure's crimes had earned universal condemnation, or that Aporo and Amana's strength commanded fear and respect, or both. It is hard to see what the police could have expected to gain from such an act, unless it was a bluff intended to quieten the village. The policemen, however, came from rural backgrounds and might have considered giving the dead man's

kin an opportunity for revenge preferable to allowing the killers to get a light jail sentence.

Aporo and Amana and the three Okapa men were tried and sentenced to jail terms. The two Oyana men returned home in 1974. My informants alleged that after Sinakure's death, his brother took over his role as a sutim nil sorcerer. The overt conflict within Oyana died down, however, and Sinakure's clan and those who killed him were living together, apparently harmoniously, in 1987.

Appendix D. An Ontena Land Dispute

On February 9th 1981 a small item headed "Death in EHP," appeared on page 13 of the Post-Courier, Papua New Guinea's leading newspaper. It presented a garbled, but recognizable account of the killing of Memeka Oaino by Aroako Kamana in Ontena village. One week before the item appeared, Aroako, the Councilor of Ontena village, had been playing cards with friends near the village schoolyard. Another villager came to tell him that Memeka was plowing land where Aroako had already planted coffee trees.

This piece of land was near the hamlet of Yantuna where both Aroako and Memeka lived, near the border of Ontena. Aroako claimed the land and had already planted it with coffee, but Memeka disputed Aroako's claim. On February 2nd he and some friends hired a tractor to come to plow the land for his own coffee development. A villager saw them and came to the village to tell Aroako, who went to confront them with some of his close kinsmen from Abukuna clan (Marefako, Sa'ake and Ferotna).

Before they reached the disputed land, they stopped at Aroako's house at Yantuna and put away the coffee that Aroako was drying. Aroako got his bow and arrow from the house and gave Marefako a bush knife, and the four men ran up to the place where the others were working. Memeka was sitting on the tractor. Aroako challenged the men, "Who asked you to come and work here? Who told you you could

plow this land?"

They did not answer, and Aroako shot Memeka's brother, U'wayo, with an arrow. Memeka jumped off the tractor and ran toward Aroako with a bush knife and Aroako also shot him. Memeka swung his bush knife and cut off Aroako's left hand which was holding his bow. They both fell down. Aroako was underneath and Memeka on top. Sa'ake and Marefako hacked Memeka to death with their bush knives. Sa'ake chopped Memeka "into pieces."

In the fight, U'wayo wounded Sa'ake with an arrow and more seriously with an axe. U'wayo also shot Marefako with an arrow, but did not seriously wound him. Marefako pulled the arrow out and threw it away, and he helped to carry Aroako to the road. Other people from the village heard what was happening and came to help and they carried Aroako up the hill and back to the village. They waited for the police to come to take them down to Kainantu. A police vehicle took away the Abukuna men, and an ambulance took away the dead man. Aroako and Sa'ake were taken to hospital, and Ferotna and Marefako were taken to jail to be questioned by the police. Ferotna was released and Marefako was held in jail.

At the Kainantu hospital, the staff examined Aroako and decided that his injuries were too serious to treat there, so they sent him to the hospital in the provincial capital of Goroka. Aroako spent four weeks in Goroka hospital where

doctors treated his injury and amputated more of his arm. When Aroako and Sa'ake had recovered they joined Marefako in jail. The three men were charged with manslaughter. The case went to trial in national court on October 13, 1981, and they were convicted. Aroako was sentenced to two years imprisonment, Marefako one year and Sa'ake two years.

Marefako was the first to be released. He was a young bachelor, so while he was in prison his kinsmen paid his brideprice for him. Sa'ake was older but he too was unmarried so his kinsmen also bought a wife for him.

Memeka's grandfather was an Ontena refugee who long ago fled north to the Agarabi village of Kainoa. In 1932 the Australian colonial administration established a patrol post at Kainantu in Agarabi territory. From this base the administration gradually established control over the surrounding countryside, and Kainantu developed into a town and a regional center. The growth of the town is probably the reason why Memeka's kin who fled north decided to stay there, while Aroako's kin who fled south to Asempa in Auyana territory returned to Ontena as soon as it was safe to do so.

Memeka moved to Ontena with his elderly father and older brother in the late 1960s and, with Aroako, they founded the hamlet of Yantuna on Ontena land that had been occupied by Tairora groups before pacification. At the time when Ontena recovered this territory, Aroako and another

leader paid compensation to the Tairora for the bamboo and pandanus trees that grew on the land. Yantuna was considered to belong to the Ka' Nanti clan but, apart from Memeka and U'wayo, there were only two men left in Ontena who were identified as Ka' Nanti. Because Ka' Nanti did not have enough members to act as an organized group, these men usually described themselves as Abukuna clansmen.

Aroako's paternal grandmother was a Ka' Nanti woman giving him some claim to the land through her. He also had close personal ties with Memeka's family. Memeka and his older brother, U'wayo, had helped Aroako arrange his marriage to his current wife. U'wayo had no children of his own but he adopted several, including one of Aroako's daughters, Alenati. After the fight, U'wayo and his family left Ontena and went to live in Kainantu. Since U'wayo left, none of Memeka's close kinsmen have remained in Ontena.

Memeka's funeral was held at Yantuna. Mourners came from Kainoa and Kainantu. While they were at the funeral the angry mourners burned all of Aroako's property, including three houses, a trade store, and a truck. They killed pigs, dogs, and chickens, cut down coffee trees and dug up food gardens. Afterwards they buried Memeka in his house. The house is still standing, abandoned, with the grave inside.

Memeka's kinsmen in Kainoa made several attempts to

avenge his death by killing an Abukuna man. Abukuna clansmen had to avoid travelling to Kainantu, until a compensation payment was made. The payment was eventually made about a year after the killing, while Aroako was still in jail. It consisted of ten pigs, two cows, K2,000, and K500 worth of food. After Aroako was released, the people of Memeka's clan told him, "You only served a short time, make another compensation payment," and he made a second compensation payment of K1,000.

The compensation payments ended the open hostility between Aroako and Memeka's kinsmen, but they did not resolve the land dispute which had led to the killing. Memeka was dead. U'wayo had left Ontena, apparently for good. After Aroako was released from jail in 1983, he did not return to Yantuna but lived with his sister in the main village. The coffee that U'wayo, Memeka, and Aroako planted was left untended, and still no one dares to pick it.

The possibility of rekindling the dispute discourages use of any part of the disputed territory. An example how problems arise occurred during my 1987-88 fieldwork. Aroako and I cut several bamboo poles from the area near Aroako's old house for the new house we were building. U'wayo heard about this from friends in Ontena, and threatened to file suit against me in the village court.

In the years following the fight, there were two attempts to sell land in the disputed area for coffee

development. In 1985, U'wayo and two other men (one from Ontena and one from Tairora) tried to sell a parcel of land for K15,000 to John Giheno, MP from Henganofi. The land was surveyed, and a land tenure conversion order was filed, however, the tenure conversion was not completed, and the land was never planted. The sale had been opposed both by Aroako and by Memeka's kinsmen in Kainoa. A second parcel adjoining the first was sold in 1987 for K18,000 to another outsider. This sale was apparently initiated by the Tairora, but both Aroako and U'wayo are named among the seven landowners on the sales contract. Memeka's kinsmen reported that they received the principal share, but I am uncertain how the money was divided. By 1989 the land had been planted in coffee (Westermarck pers. com.).

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