

## AN ECOLOGICAL STUDY ON LAND USAGE OF THE NYAKYUSA PEOPLE IN SOUTHERN TANZANIA: CONTINUITY AND CHANGES FROM THE TRADITIONAL SOCIETY

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**ABSTRACT** Land usage of the Nyakyusa people in the 1980s is described and compared with that of the 19th century. Foregoing anthropologists paid much attention on the Nyakyusa's unique social systems, age village and chieftainship. I respected smaller social units, household and individual. This viewpoint was effective to conduct the following conclusions. (1) Despite foregoing reports of land shortage and actual historical tendency toward shortage, land is found not scarce quantitatively to live on agriculture. (2) Household composition and frequent moves in residence are constant since the 19th century, while rights in land changed much.

**Key Words:** The Nyakyusa; Changing society; Land usage; Method of field obtainment; Rights in land; Household composition.

### INTRODUCTION

#### I. Purpose

This paper is on the land usage of the Nyakyusa people of southwestern Tanzania in the 1980s, illustrating historical changes in their society since the 19th century.

G. Wilson (1936, 1951, 1968a, 1968b) and M. Wilson (1950, 1959, 1963) conducted their field research from 1934 through 1938 in the Nyakyusa land. They were the first anthropologists to work in this area. M. Wilson (1976; 1977) continued her research and issued reports on changes of the society. G. Wilson and M. Wilson reconstructed the Nyakyusa livelihood in the 19th century by interviews, and described the formation of the unique Nyakusa age village (see p. 200) for the first time. They also reported on the Nyakyusa marriage, ritual, kinship and values in the 1930s.

Gulliver (1958) carried out field research on land shortage in the 1950s. Hekken & Velzen (1972) performed research in 1966–68 and reported on the patron-client relationship in the Nyakyusa land. Charsley (1969) examined the reports of the Berlin Society Missionaries and reconstructed the Nyakyusa's traditional society in the 19th century.

In Ivory Coast, lineage-oriented land tenure led by the elders of the lineage changed in the 1960s abruptly to individual-oriented land tenure (Hecht, 1985).

Hecht concluded that the individualization of land ownership was widely observed in sub-Saharan region of Africa.

A profound historical change, like the case reported by Hecht in West Africa, is also found in the Nyakyusa land. The Tanzanians have experienced colonization by Germany and Britain, the Independence of Tanganyika, nation building under socialism, and the introduction of the Ujamaa Village (Hayashi, 1973). The Ujamaa Village was a social experiment in which wealth was jointly owned and managed by villagers, although individualization of land ownership was wide spread in Tanzania. There were some studies in the 1970s on the traditional Nyakyusa society (Mckenny, 1973; Wright, 1976), but field research has been scarce since the mid-1970s to follow these changes. This study is on land usage in the 1980s. Land usage is examined in this paper from the viewpoint of not only large social system such as traditional age village and contemporary village, but smaller unit such as individual or household.

The Nyakyusa people had chieftainship and lived in a unique "age village" in the 19th century. Although these systems had remained little by the 1980s, there instituted other large social systems. In the 1970s, the Tanzanian government introduced a new administrative hierarchy; Ten Households-Kitongoji-Village-Ward-Division-District-Region. Several administrative activities were performed through these systems.

If we paid attention only to such kinds of large social system in order to determine the continuity and historical changes of the Nyakyusa society, we will fail. The traditional social systems and the contemporary ones have little in common. I, instead, focused on the individual and the household as the unit that has been the constant since the 19th century.

## II. Method of Research

Field research for this paper was conducted during the following four periods; from December 1983 through January 1984, from September through October 1984, from October 1987 through February 1988, and from September through October 1989. Data on household composition and animal husbandry were gathered from September 1984. Data on the kinds of cultivated plants, the amount of harvest, area of fields, and migration were gathered from October 1987.

Some family members leave the village for business, labor, or school. The period of their absence from the village varies greatly, from several months to more than ten years. Excluding those who have been absent from their homestead for more than two months, a group of persons who lived together within one homestead are called a "household" in this paper. Members of the household are called "household members."

Members of 64 households along the road that passed through the study village were recorded. In many cases, there was one married man in each household. He is referred to as the "householder" in this paper. When the householder moves out of the village to work, his household members followed him. Thus, households without the householder were few. An unmarried young man sometimes had his own hut and lived by himself. Such a young man is also referred to as a house-

holder. In addition to the above households, there were some households headed by widows. These widows are referred to as householders.

I collected data from a broad age range of householders, especially on the cultivated fields and migration. I classified the householders into six brackets by age; those in their teens and twenties, thirties, forties, fifties, sixties, and seventies. For example, the people in the thirties age bracket were aged thirty through thirty-nine years old at the end of 1988. Five to six householders in each age brackets were sampled at random as I walked along the road through the studied village. When I encountered a householder in the age bracket from which I had already obtained six samples, I ignored him. Though some young men married in their twenties, the householders in their teens and twenties were all single in this study.

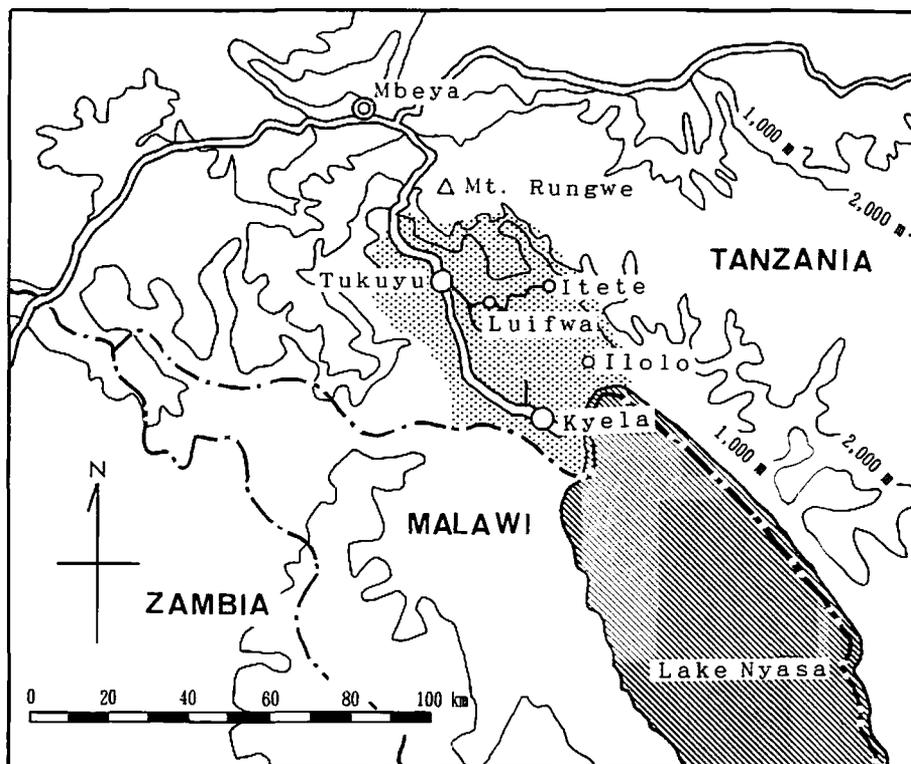
It is difficult to determine the rights to land and the legal ownership of each field in the Nyakyusa land. After the independence of Tanganyika in 1961, personal land ownership was formally denied (Nyerere, 1966), and the President could order any person to offer his land to the Nation (Lwoga, 1985). However, there are reports on personal land ownership by many farmers after the independence (Omari, 1980). Individualization of land tenure had begun at several places after the Independence in Tanzania, such as the coast regions, the Chaga land, and the Sukuma land (Meek, 1968; Knight, 1974). Presently, residential plots are arranged and sold by the local administration, Municipal Council, in the cities. Although individual land tenure has never been permitted in Tanzania by the government, land is actually bought and sold in the 1980s among farmers. The conflict in the ideas of land ownership between the administration and farmers becomes most pronounced in a legal case. After a long dispute in court, the administration took exception and changed its plan of constructing a residential plot, a school, and a factory to preserve contemporary fields near Morogoro (Fig. 6) (Lwoga, 1985). However, such a law case is rare.

In Nyakyusa land, the purchase of cultivated fields has been observed since the 1970s. The Nyakyusa farmers have bought or sold fields to transfer ownership, but not the right for land use. A Nyakyusa householder may use several fields at the same time; some fields allotted by the Village Council (p. 201 to p. 203), some transferred by his kinsmen, some purchased, and some temporarily borrowed. Therefore, I identified the actual user of each cultivated field. When a field lay in fallow, I identified the former user. In Nyakyusa, the field lies fallow for only a short period. The former user actually regards the fallow as his. In the polygamous household, a piece of field would be divided among husband and plural wives. As the field is divided for convenience and not for transference of ownership, the household can still be regarded as one unit to use fields. All fields used by members of one household belong to one householder in this paper.

Former anthropological researches were conducted mainly in the plains of the southern part of Nyakyusa land. M. Wilson carried out her research in various parts of Nyakyusa land. Gulliver had many study areas located less than 5 km from the shores of Lake Nyasa; the most distant place was 20 km from the lake. Hekken & Velzen (1972) had a field site at Ilolo in the south (Fig. 1). My field site was in the central part of Nyakyusa land, in the more hilly area.

### III. Nyakyusa Land and People

Nyakyusa land is located in the southwestern part of Tanzania (Fig. 1), and has an area of about 5,500 km<sup>2</sup>. The Nyakyusa people live mainly in the Rungwe



 : Nyakyusa land.



Fig. 1. The study area.

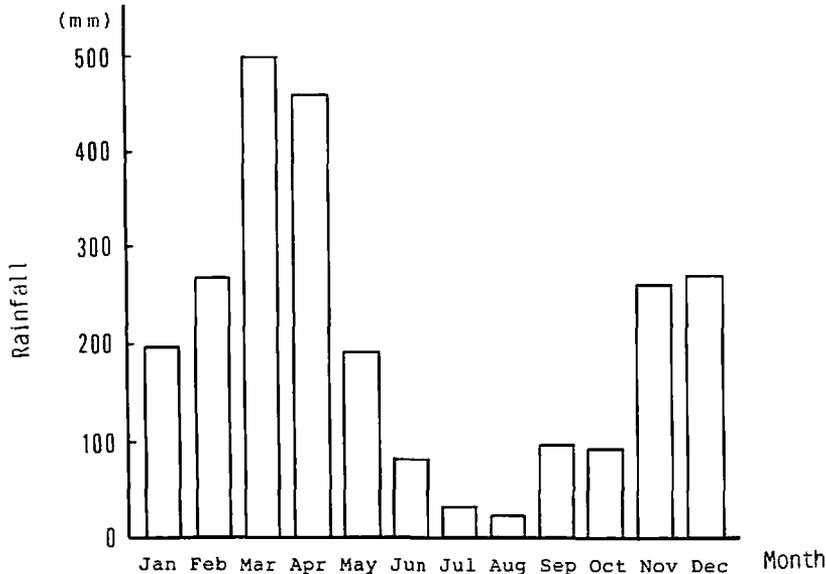


Fig. 2. Monthly rainfall at Tukuya.

Average from 1979 through 1983.

Annual average is 2,511 mm (from the data of Rungwe District Office).

District and the Kyela District. Only in Tukuyu and Kyela, the capital cities of these two Districts, are there post offices, lodgings, permanent markets, and electricity.

Nyakyusa land is one of the most blessed area for rainfall in East Africa. The rainy season is once a year. It begins in November and ends in May of the following year (Fig. 2). It rained 2,511 mm as an average from 1979 through 1983 at Tukuyu.

Lake Nyasa lies to the south of Nyakyusa land, at an altitude of 475 m. The southern Nyakyusa land is a plain with irrigated paddy fields at an altitude of about 500 m. The farmers grow plantain, oil palm, and mango near their homestead. In the rainy season, rivers flowing into Lake Nyasa sometimes flood the irrigated rice fields, and water occasionally reaches one meter above ground in the homestead. In the dry season, the people raise cattle in the paddy fields. The farmers dig deep drains along the road which becomes dusty in the dry season.

The plain zone begins at the shore of Lake Nyasa, rises gradually to the north and ends at an altitude of 600 to 700 m, and runs into the hilly zone linked to Mount Rungwe (alt. 2,961 m). In this northern part, the Nyakyusa live as far as half way up Mount Rungwe, at an altitude of approximately 2,000 m. Above 600 or 700 m, many small ridges and valleys form a hilly landscape. This hilly zone spreads to the central and northern parts of Nyakyusa land.

In the hills, the farmers cultivate permanent fields, mostly without irrigation. As rain water runs off rapidly in the hills, few roads are close off even in the rainy season. Most homesteads are situated on the gentle ridges. Each homestead is sur-

rounded by banana fields. Looking at a nearby ridge from the next ridge separated by a valley, the top of the ridge looks dark green, because of the banana trees. Banana trees are densely planted on both sides of the road on the ridge. Homesteads are located every one hundred meters or more. In the homestead of the polygamous family, each wife has her own house facing the courtyard, which is swept every morning and kept clean. Moss grows in the rainy season on the mounds for house foundation. Villagers sit under trees and enjoy chatting in the afternoon. There are streams that supply water several hundred meters descending from the ridge.

The Nyakyusa is an ethnic group which belongs to the Tanganyika Bantu (Murdock, 1959), with patrilineal descent (G. Wilson, 1968a) and polygamous marriage. The population of the Nyakyusa was approximately 307,000 in 1967 (Ominde, 1975).<sup>(1)</sup> The estimated national population of Tanzania increased 1.83 times from 1967 through 1986 (Ominde, 1975; United Nations, 1986). If the Nyakyusa population had increased at this same rate, it would have reached approximately 560,000 in 1986.

The Safwa people live above 2,000 m on Mount Rungwe and the Proto Mountains which range to the east from the vicinity of Mount Rungwe. Both the Nyakyusa and the Safwa are famous for their bamboo (*Arundinaria alpina*) usage in constructing houses (Kurita, 1985a; 1985b; 1987). The Nyakyusa houses attracted foreign travelers because of their beauty and neatness (M. Wilson, 1963). There are bamboo forests in the higher parts of Nyakyusa land, and in Safwa land. Some Nyakyusa plant bamboo near their homesteads for repairing houses. The Nkonde people, an ethnic group close to the Nyakyusa, live to the south of the Nyakyusa. The social structure of the Nkonde was similar to that of the Nyakyusa. Both used to have the chieftainship and age village. The difference in the two languages was only a difference of dialects (M. Wilson, 1963). The national boundary of Tanzania and Malawi roughly corresponds to the boundary of the homelands of the Nyakyusa and the Nkonde. On the eastern end of Nyakyusa land, the Livingstone Mountains rise sharply. The Kinga people live on this slope. Their earthenware is carried to the Nyakyusa land and used as daily utensils.

#### IV. Luifwa Village

The study village, Luifwa (Kijiji cha Luifwa, in Swahili), is located in the center of the Nyakyusa land. It is in the hilly zone at an altitude of ca. 900 m. and 40 km in a straight line from the north shore of Lake Nyasa. Luifwa Village, with the homesteads, fields, and fallows, has an area of about 14 km<sup>2</sup>. There is, in the village, a volcanic lake, whose diameter is ca. 500 m. Villagers enjoy bathing in it. This village had a population of 2,100 when the latest census was carried out in 1989, according to the District Office. Luifwa belongs to the administrative unit of the Kisiba Ward (Kata cha Kisiba), Pakati Division (Tarafa ya Pakati), Rungwe District (Wilaya ya Rungwe), and Mbeya Region (Mkoa wa Mbeya). Luifwa is further divided into three units called Kitongoji in Swahili. Each Kitongoji covers a short ridge, whose length is about two kilometers, and is separated by a small valley.

As the altitude decreases, more rainfall is expected in the Nyakyusa land (The African Climatology Unit, 1961). The study area (alt. 900 m) is considered to be blessed with more rainfall than that of Tukuyu (alt. 1,470 m), at 2,511 mm. Though the natural vegetation of the study area was woodland (Philip & Son Limited, 1985), scarcely any forest remains at present. Almost all of the land is used as cultivated fields in the study area. The remaining land is fallow with sparse bushes or steep slopes which are not suitable for fields.

Luifwa Village is located along the road that runs from Itete to Tukuyu (Fig. 1). At Itete, there are a church and a hospital. A branch of this road, wide enough for a truck, runs into one of the ridges of Luifwa Village. Trucks come through this branch road to collect bananas for the city market, or firewood for a secondary school located at Tukuyu.

Only Nyakyusa people live in Luifwa, except for one Kinga household. The Kinga household sells boards; they purchase tall, standing trees from the Nyakyusa owners and saw them into boards. Most villagers are Christians, while there are a few Islamic families. There are two primary schools. As Luifwa Village is the center of the Kisiba Ward, there is an office of Ward Secretary (Kative Kata). There was a German administrative office in the colonial days. A court and a hospital now occupy that office.

Weekly market has been held since 1986 nearby, just beyond a small valley from Luifwa. Many Luifwa villagers attend there. About 20 simple bamboo framed huts with benches inside had been constructed for drinking local beer. The villagers enjoy drinking, chatting and shopping at the market.

## SUBSISTENCE ACTIVITIES

### I. Agriculture

The Nyakyusa people live mainly by farming. They open cultivated fields in slopes in the hill zone. Most slopes are used as cultivated fields or fallow with one to two meter high bushes. The hill zone is seldom irrigated. There are some maize or cassava fields on the ridges. The farmers purchase the iron hoe heads, but make their own shafts. They never cultivate the field with machines or animals, as most of their fields are on slopes. There are agricultural instructors assigned to every Ward. They teach how to grow cocoa seedlings, make drains, etc. Around the study area, the instruction emphasized the spacing of maize, thinning weak seedlings, and manuring.

The Nyakyusa farmers plant bananas around their homesteads. Among the banana trees or close to the homesteads, they plant cash crops (coffee, cardamon, cacao), and fruits (lemons, pineapples, avocado). Outside of the banana fields, they plant maize. Outside of the maize field, rice is grown. Slopes are sometimes very steep in the rice field (Fig. 3).

Forty kinds of crops are cultivated in the study area (Table 1). The main crops are maize, banana, rice, and kidney beans.

In the plains close to Lake Nyasa, the farmers' choice crop is rice. They eat



Fig. 3. Rice fields on steep slope.

more rice than those who live in the hills. In the plains, banana, oil palm, pineapple and other fruits are planted around homestead, and rice fields are cultivated beyond. Moist-land rice is cultivated in the plain zone, while dry land rice is planted in the hill zone.

An agricultural calendar of five crops is illustrated in Figure 4. When the rainy season sets in, farmers sow fields with maize and rice. They usually harvest maize once a year, though it is possible to harvest twice a year. As the second harvest is expected to be only 40% of the first, farmers plant maize twice a year only if the first harvest had failed. Groundnuts are usually harvested twice a year.

The decrease in soil fertility caused by repeated cultivation is well recognized by the farmers. Maize and finger millet fields are occasionally left uncultivated or

Crops	Rainy season											
	10	11	12	1	2	3	4	5	6	7	8	9 (Month)
maize							○	—————	☆			
kidney beans										○	—————	☆
rice				○	—————							☆
ground nuts				○	—	☆				○	—	☆
finger millet							○	—————				☆

○: Planting  
☆: Harvesting

Fig. 4. Agricultural calendar of main cultivated crops.

**Table 1.** Cultivated crops and frequency of appearance in the study area.

English name	Nyakyusa	Swahili	Scientific name	Frequency
banana	<i>matoki</i>	mgonba	<i>Musa</i> spp.	CCC
maize	filonbe	mahindi	<i>Zea mays</i>	CCC
rice	<i>punga</i>	mpunga	<i>Oryza sativa</i>	CCC
finger millet	<i>amalesi</i>	ulezi	<i>Eleusine coracana</i>	CCC
taro	<i>masinbi</i>	myugwa	<i>Colocasia esculenta</i>	CCC
mangoes	<i>mienbe</i>	mwenbe	<i>Mangifera indica</i>	CCC
cardamon*	<i>iliki</i>	iliki	<i>Elettaria cardamomum</i>	CCC
coffee*	<i>kahawa</i>	kahawa	<i>Coffea</i> spp.	CC
red pepper	<i>mbilipili</i>	pilipili	<i>Capsicum annum</i>	CC
kidney bean	<i>indima</i>	maharagwe	<i>Phaseolus vulgaris</i>	CC
pumpkin	<i>iliyanyungu</i>	mboga	<i>Cucurbita maxima</i>	CC
guava	<i>gwajabi</i>	mpera	<i>Psidium guajava</i>	CC
lemon	<i>malalanji</i>	mlimau	<i>Citrus limon</i>	CC
lime	<i>ndimu</i>	ndimu	<i>Citrus aurantifolia</i>	CC
pawpaw	<i>mapapajwa</i>	papai	<i>Carica papaya</i>	CC
avocado pear	<i>katapera</i>	kasokera	<i>Persea americana</i>	CC
pigeon pea	<i>imbange</i>	mbaazi	<i>Cajanus cajan</i>	CC
pineapple	<i>vinanasi</i>	nanasi	<i>Ananas comosus</i>	C
tomato*	<i>inyanya</i>	nyanya	<i>Lycopersicum esculentum</i>	C
tea*	<i>chai</i>	chai	<i>Camellia sinensis</i>	C
groundnut	<i>amasyabala</i>	karanga	<i>Arachis hypogaea</i>	C
cassava	<i>majabu</i>	muhogo	<i>Manihot esculenta</i>	C
onion	<i>ifitungulu</i>	kitungun	<i>Allium cepa</i>	C
sugarcane	<i>myuba</i>	muwa	<i>Saccharum officinarum</i>	C
turmeric	<i>akajinja</i>	bizari	<i>Curcuma domestica</i>	C
bambara groundnut	<i>injugu</i>	njugu mawe	<i>Voandzeia subterranea</i>	C
cacao*	<i>mikokola</i>	mcacao	<i>Theobroma cacao</i>	R
cashew nuts*	<i>imikorosho</i>	korosho	<i>Anacardium occidentale</i>	R
oil palm*	<i>mawese</i>	mchikichi	<i>Elaeis guineensis</i>	R
english potato	<i>indofanya</i>	viasi ulaya	<i>Solanum tuberosum</i>	R
sweet potato	<i>imbatata</i>	viasi vitamu	<i>Ipomoea batatas</i>	R
sunflower	<i>pangajeje</i>	alizeti	<i>Helianthus annuus</i>	R
orange	<i>luki</i>	chungwa	<i>Citrus sinensis</i>	R
sesame	<i>bununya</i>	ufuta	<i>Sesamum indicum</i>	R
tobacco	<i>ngambo</i>	tumbako	<i>Nicotiana tabacum</i>	R
ginger	<i>enbuiga</i>	tangawizi	<i>Zingiber officinale</i>	R
gourd	<i>mbale</i>	mbuyu	<i>Lagenaria siceraria</i>	R
cotton	<i>mitunda</i>	panba	<i>Gossypium hirsutum</i>	R
egg plant	<i>imbilingania</i>	bilingani	<i>Solanum melongena</i>	R
passion fruit	<i>imisyunguti</i>	matunda	<i>Passiflora edulis</i>	R

CCC: Cultivated in almost all households of married men; CC: Frequently observed; C: Commonly observed; R: Observed in a few households.

\*Cash crops.

alternatively converted to legume fields. The fallow lies uncultivated for several years and becomes covered with bushes one to two meters high. It is difficult to illustrate a common schedule of field cultivation and fallow, as it varies greatly depending on the condition of manuring.

Though most farmers want to use chemical fertilizer, at times they cannot purchase it for either lack of cash or shortages. Chemical fertilizer is seldom used in

an adequate quantity at the proper time. Common fertilizers are cattle droppings and weed ash. The former is mainly used for the crops around the homestead, and the latter for finger millet and maize.

The Nyakyusa farmers in the study area annually harvested 0.75 to 1.2 tons of maize per hectare. Those who had fertilized their fields well and thinned out the weak shoots annually harvested 1.2 tons of maize per ha.<sup>(2)</sup> In the National Farm located in Iringa District, Tanzania, the annual harvest was 7.0 ton/ha. Harvests of 8.0 ton/ha (Williams et al., 1980), or 9.0 ton/ha (Ngugi et al., 1978) are expected, if the improved strains are grown under good conditions.

The finger millet harvest was 0.50 tons per ha. in the study area. Acland (1971) reported that the average harvest of finger millet in East Africa was 0.45 to 0.90 ton/ha, and reported an exceptional 4.5 ton/ha in Zambia. The Nyiha, who live around Mbozi about 100 km west of the Nyakyusa land, harvested 0.56 to 1.0 ton/ha of finger millet (Knight, 1974).

The dry land rice harvest in the study area was 0.47–0.75 ton/ha. Because harvest is low, continuous plantation seldom decreased fertility in the rice fields. An average harvest of moist-land rice expected in East Africa was 5.5 ton/ha (Ngugi et al., 1978), while improved rice grown under good conditions yielded 10.1 ton/ha (Williams et al., 1980). In the National Farm supported by China in Rujewa/Mbarali Sub-District, located in central Tanzania, the harvest was 3.5 ton/ha. In Ulanga District, also in central Tanzania, the farmers with small irrigated rice fields harvested 1.2 to 1.7 ton/ha (Ruthenberg, 1968). As for dry land rice, the harvest is generally less than half of the moist-land rice (Statistics and Information Department, Ministry of Agriculture, Forestry, and Fisheries, 1988). The harvest of 0.40 to 0.75 ton/ha in the Nyakyusa land is considered low.

The data on banana yield was not collected in the study area.

In a monogamous household, the husband and wife till the same fields. In a polygamous household, the husband and wives have their own field divisions of banana, maize, and cassava. The user of each division tills it and sells or eats the harvest. Each wife usually takes a larger division than her husband. While each user tends their own division, fertility among each division does not differ much.

Few women cultivated fields with hoes in the 1970s. In the 1980s, cultivation was still work of men except for the case of some women. All the fields, even the ones allotted to women, were cultivated by men. Labor division by sex was clear for farming rice, finger millet, and kidney beans (Table 2). Woman grows rice throughout the process except for cultivation. Harvested rice is sold by the woman, and she spends the cash income on daily necessities. As men cultivate rice, a part of the harvest is sometimes shared between the man and the woman. As for finger

**Table 2.** Agricultural labor division by sex.

	Cultivation	Planting	Weeding	Harvesting
rice	♂	♀	♀	♀
kidney beans	♂	♀	♀	♀
maize	♂	♂ ♀	♂ ♀	♂ ♀
finger millet	♂	♂	♂	♂ ♀

♂: Men; ♀: Women.



Fig. 5. Rice field before (right) and after (left) weeding.

millet, men do the farming, and they dispense of the cash income. Some wives use the finger millet free of charge to brew beer. The cash crops, such as coffee or cardamon, are usually sold by men.

Labor cooperation with fixed membership and strict reciprocal obligations is not observed in the study area. Six to eight, occasionally up to thirty, young men gather and farm for the old or the handicapped. They are rewarded with boiled rice, ugali made of maize flour, cooked beans, beer, and, on rare occasions, with chicken. They spend only one to four days a year on this kind of labor. Instead of this, some groups of young men began to farm for a fee in the latter half of the 1980s.

Some farmers with adjacent rice fields weed each other's field from time to time. Weeding rice fields is hard work. They have to squat from twilight until two or three o'clock in the afternoon and sometimes until evening, while other kinds of farming labor ends around ten or eleven in the morning. Figure 5 shows the difference between weeded and unweeded parts of the rice field.

## II. Stock Raising

The Nyakyusa raise four kinds of animals; cattle, goats, pigs, and sheep. They also raise two kinds of fowl, chickens and occasionally ducks. The average number of each domestic animal per household, and the distribution of households to the number of animals, are shown in Table 3. The number of animals was investigated only in households headed by married men, because other households do not have animals.

A married man raised 3.6 cattle on average. Livestock raising is not indispensable; one-third of the studied households did not have cattle, and more than half of

**Table 3.** Distribution of household to animal number.**Table 3-1.** Cattle.

Number of animal	Number of household
0	5
1	0
2	3
3	2
4	1
5	0
6	0
7	1
8	1
9	0
10	0
11	1
12	1

Average: 3.6 head/household.

**Table 3-2.** Goat.

Number of animal	Number of household
0	7
1	1
2	2
3	2

Average: 0.9 head/household.

**Table 3-3.** Sheep.

Number of animal	Number of household
0	9
1	1
2	1
3	0
4	1

Average: 0.6 head/household.

**Table 3-4.** Pig.

Number of animal	Number of household
0	7
1	5

Average: 0.4 head/household.

the householders had no goat, pig, or sheep. However, as a bridewealth, cattle played an important role. The Nyakyusa pay one bull and one or two cows as bridewealth, while only cows for a remarried bride. Traditionally, cattle were slaughtered for funerals, but this practice was prohibited in Kisiba Ward in 1989, because of a shortage of cattle. Some traditionalists slaughtered cattle and sold a small portion at the market, and used the remaining main portion for the funeral ceremony.

Men take the cattle, goats, and sheep to graze every day. Members of some neighboring households form a group to take turns herding the animals. Herdsmen are usually boys, but elderly men sometimes work as herdsman these days when there are no boys in the households.

The number of pigs has increased. It is mainly kept by women in a hut or on a leash. They are fed on brewer's grains. Every householder, except for unmarried young men, owned 20 to 50 chickens.

### III. Foods

The Nyakyusa farmers usually eat three meals a day. Those who live in the hill

zone prefer to eat plantains. Some eat banana even after finishing a meal of maize or rice. Maize is usually cooked as ugali. Women carry maize on their head to the mill to grind it. Not every village has a mill, so some women must go to the mill in a neighboring village.

Foods of two households were recorded. From one household, record of 168 days was obtained. Seven days out of this period, meals were only twice a day. The recorder went out of the village and did not take meals in his household 38 times, so 459 meals were recorded. For another household, a record of 162 days was obtained. During this period, the recorder missed 22 meals at home. The remaining household members ate only twice a day for 11 days. Therefore, 453 meals were recorded in all. Totaling the records of these two households, the names of food or materials recorded more than ten times are shown in Table 4.

Maize, banana, rice, sweet potato, taro, cassava and *kande* (boiled kidney beans with maize and oil) were eaten by themselves or sometimes with other relishes. These foods are referred to as main foods for convenience.

Main foods excluding *kande* and kidney beans were recorded 636 times. *Kande* was sometimes eaten as a main food and sometimes as an appetizer to ugali or boiled rice. Kidney beans were also sometimes main food and sometimes appetizer. Main foods were recorded for more than two-thirds of all recorded meals, 608 times, actually eaten every noon and evening. Among the main foods, maize,

Table 4. Frequency of foods consumed.

	Morning	Noon	Evening	Total
main food				
maize	15	98	92	205
bananas	16	100	69	185
rice	9	44	105	158
kidney beans	2	34	64	100
sweet potato	3	17	23	43
taros	1	5	13	19
cassava	1	9	5	15
<i>kande</i> * <sup>○</sup>	2	3	6	11
appetizer				
vegetables	14	55	61	130
fish	5	56	42	103
meat	3	29	54	86
cabbage	2	13	18	33
egg	3	18	8	29
breakfast				
porridge*	135	1	1	137
tea	106	6	0	112
bread of wheat	24	6	0	30
others				
milk	5	33	21	59
avocado	2	14	2	18
sugar cane	3	7	1	11
miscellaneous (15 kinds)	6	29	13	48

Record of two households, 912 meals.

\* Name of foods, not of materials; <sup>○</sup> boiled kidney beans and maize.

banana, and rice were eaten 205, 185, 158 times respectively, and the total was 548 times. They were the core main foods.

Vegetable, fish, meat, cabbage, and egg were eaten as appetizers, with other foods, and never eaten alone as a meal.

Soup was made with vegetables (leaves of legumes, pumpkin or cassava), with tomato and smashed groundnuts. Usually, smoked lake fish was used in the soup. Vegetables, fish, meat, cabbage, and egg were eaten 381 times. Because two-thirds of the total meals were lunch and supper, 63% of the lunches and suppers were served with these relishes.

Porridge of finger millet or maize, tea, and bread were eaten for breakfast. The Nyakyusa eat bread usually with tea, or porridge with nothing else. Porridge or tea were eaten 241 times in the morning. Supposing that 304, one-third of the meals, are breakfast, 79% of the breakfast is porridge or tea in the recorded households. Some other household members in the morning drink coffee they had grown.

Milk was made into yogurt to be eaten after the main food. Yogurt is seldom a meal by itself; four times out of 59. Avocado, and sugarcane were sometimes eaten between meals.

## VILLAGE ORGANIZATION

### I. Traditional Society

G. Wilson and M. Wilson carried out their research in the 1930s, and reconstructed the Nyakyusa society of the 19th century before the German Catholic Mission came into this region in 1891. The "traditional society" in this paper denotes this reconstructed Nyakyusa society. In this section, I present the outline of the Nyakyusa traditional society according to the work of G. Wilson (1936).

The Nyakyusa had a chieftainship, and about 160,000 people lived in 100 or more separate small chiefdoms in 1930 (M. Wilson, 1963: 2, 3, 12). There were few alliances among chiefdoms; there was no Paramount Chief (G. Wilson, 1968a: 14). One chiefdom usually contained six to twelve age villages (mentioned below), and one age village contained about thirty households. Each household had one married man, his one or plural wives and their unmarried children.

A Chief (*malafyale*) had administrative, judicial and magical power over the members of his chiefdom and was supported by elders who were not his kinsmen (M. Wilson, 1963: 13, 29). A Chief could order members of his chiefdom to bring food for the celebration of his kinsmen and other ceremonial occasions. If the Chief wanted to use or give away occupied land, he could banish the contemporary land users to other places (G. Wilson, 1936: 269, 275, 283).

The traditional Nyakyusa village was an age village (*ikipanga*). In this village, men of approximately the same age gathered irrespective of their lineage, and formed a village with their wives and children. Boys began to work as herdsmen for their fathers around six years old. When they reached the age of ten or eleven, boys from several villages in one chiefdom gathered, constructed their own huts,

and organized a boys' village. At the beginning of formation of the boys' village, two or three boys sometimes slept in one hut. The boys would transfer their work as herdsmen to their younger brothers and began cultivating their father's fields. They would go to the fields in the morning, eat meals prepared by their mothers, and return to sleep in their own villages. When the eldest member of the village approached the age of seventeen, 10 or 11 year old new comers would be rejected. Hereby, the village composed of boys aged from 10 to 17 was closed and the members were fixed. The rejected boys would form another village and this followed the same process. The boys married in their twenties, but would continue to live in their young men's own age village, the former boy's village. Unmarried young men still cultivated their fathers' fields, but married men would obtain their own allotted by the great commoner (village headman, explained below) of their fathers' villages (G. Wilson, 1968b: 31).

When the eldest sons of the first and the second wife of a Chief reached their mid-thirties, the chiefdom was divided into two new chiefdoms and each son succeeded to the title of the Chief. The sequence of ceremonies for this process was called coming out (*ubusoka*). The two sons had their magical powers enhanced through this ceremony, after which they obtained formal wives. If the former chiefdom was not large enough, there was no division of the chiefdom. A much larger chiefdom could be divided into three chiefdoms.

The great commoner (*ifumu*),<sup>(3)</sup> was selected from among the commoners, not kinsmen of the Chief. Each young men's village would already have a leader and he was usually named by the former Chief and elders as the great commoner at the time of the coming out. This assignment of a great commoner completed the formation of the age village. Great commoners were from wealthy and respected families and were entrusted by villager, to lead in battle, to settle disputes, to use magic to protect his villagers from witches (G. Wilson, 1936: 276).

At the time of coming out, residential plots, fields and pastures were assigned for each age village. Assignment of land for the new age villages was especially important. If there was unused arable land in the chiefdom, the new age villages occupied it. If there was not, the age villages of elderly men and their households moved to less fertile or less convenient places to provide better places for the new age villages. As the former chiefdom was divided by the two new chiefdoms, the three chiefs, i.e. the former and the two new Chiefs, tried to balance interests, although this condition would soon end. The former Chief usually died immediately after coming out, which was expected by the villagers (M. Wilson, 1963: 29-30). When the old Chief died, his wives were inherited by his younger brothers or sons of co-wives. So did the wives of the commoners. Age villages of the elderly gradually disappeared.

The Nyakyusa men entered an age village as boys, married, gained authority from the older generation, grew old and transferred authority to their sons, and died. Throughout almost the entire life span, they lived among men of approximately the same age in the same village as norm.

According to the oral tradition, ancestors of the Chiefs came from the Kinga people living to the east of Nyakyusa land (Knight, 1974: 29). They travelled to Nyakyusa land in the latter half of the 15th century or the early half of the 16th cen-

ture (M. Wilson, 1977: 9). They raised cattle, used iron, and cooked with fire, which were all unknown to the former inhabitants of Nyakyusa land (M. Wilson, 1977: 8).

The system of the age village is also attributed to the ancestors of the Chief, but there was no evidence. There is no rational explanation, either, why this system was seen only in the Nyakyusa and Nkonde societies (M. Wilson, 1963: 159).

Sexual separation between daughters-in-law and fathers-in-law is considered to be a function of the age village (M. Wilson, 1963: 159, 162). In a society with polygamous marriage, these two categories of persons can become too familiar, because the second or third wife of the father is sometimes younger than the first wife of his son. In Nyakyusa, fathers-in-law and daughters-in-law lived in geographically different villages traditionally. If they happened to come across each other somewhere in the chiefdom, it was the norm for the daughters to hide themselves behind trees or hide their faces with clothes. Even after the father-in-law died, the daughter-in-law was not permitted to enter the late father's house.

## II. Social Change from the 1890s through 1980s

Since the German Catholic Mission arrived in the Nyakyusa land in 1891, the Nyakyusa society has experienced many changes. Nyakyusa land is one of the first places in East Africa where Christianity was introduced. With the enterprising spirits of the Nyakyusa and the diffusion of education, Christianization had a large effect on the idea of economics and time of the Nyakyusa people. Even elderly persons born in the 1910s know their years of birth in the Gregorian calendar. Christianity spread through the colonial period; 16% of the Nyakyusa were Christians in 1938 (M. Wilson, 1963: 16). At the beginning of Christianization, Christians built their colony around the church independent of the traditional age village and fields transferred at the time of coming out.

Some Chiefs continued to exist through the colonial period. The British Governor classified all chiefs into several ranks, paid them salaries according to their ranks, and assigned eleven strong chiefs to hold the local courts. During the colonial period, difference in authority between stronger and the weaker Chiefs became larger. Stronger Chiefs had more wives and children than formerly, did not willingly transfer their authority to the new Chiefs of the next generation, nor divide their chiefdoms. This caused the coming out to be held less frequently. Coming out ceremonies were held in 1935 and 1953, but in 1935, those who had planted coffee trees or constructed substantial houses resisted leaving their fields and homesteads. In 1953, few villagers actually attended the ceremony (M. Wilson, 1977: 5).

After the Independence of Tanganyika in 1961, the Village as an administrative unit was constructed and a leader of the Village (Balozi) was elected among the members of TANU (Tanganyika African National Union). This leader of the village was responsible for an area as large as each area of the eleven local courts. Some Chiefs continued to work as leaders of the Village after independence, as they were members of TANU.

Ujamaa Village was planned in 1967 and was introduced into Mbeya Region

in 1975. Within the seven Districts of Mbeya Region including Mbeya Municipal, Ujamaa Village was actually introduced into three Districts where the population density was low. In Rungwe District and Kyela District, where the Nyakyusa lived, Ujamaa Village was not introduced. However, administrative units were reorganized at this time. A hierarchy of District-Division-Ward-Village-Kitongoji became complete in the 1970s, and former Villages led by Balozi were divided into ten new Villages. In the 1980s, each new Village had approximately the same population as that of a traditional chiefdom, which was several thousands of people.

In the 1970s, Village Council (Serikari ya Kijiji) was institutionalized, composed of the Chairman (Mwenyekiti wa Kijiji), Secretary (Kative wa Kijiji) and 23 Members of Council (Wajunbe wa Kijiji). The Chairman and Members of Council were elected every five years at the general meeting of the Village, while the Secretary was employed by the District Administration. Moreover, among approximately every ten households, villagers by themselves selected a leader of ten households (Balozi wa Kumi Kumi) who were to attend the meeting of Village Council as an observer, settle daily disputes, and inform the neighbors of the meeting schedules.

A primary school was built around 1977 in each Village around the study area. In the latter half of the 1970s, cooperative fields were settled in every Village. In the case of Luifwa Village, they had cooperative fields of tea. It started in 1975 and continued until 1986. Neighboring Villages also had their own fields of rice, cocoa, or bananas, and many of them continued through 1989 when this research was finished. All the adults or adult men were requested to work in the cooperative fields several times a week or month, and the harvest of the fields became the property of the Village. Management of the Village cooperative fields largely depended upon leaders of the Villages. Some Villages successfully managed the fields, obtained much cash income, and purchased even a bus or truck. The successful Villages have continued to manage the cooperative fields.

Despite the collapse of the age village, avoidance between fathers and daughters-in-law still continues. In the 1980s, a few men did not like this custom started giving money to their daughters-in-law, with which the daughters brew beer in return, and they would drink together. Among these people, in-law avoidance ceased to function and, the daughters can greet fathers-in-law without hiding themselves.

## COMPOSITION OF HOUSEHOLD

### I. Residential Pattern of Single Youths

Of the 64 households in the study, 17 young men occupied 16 households (nos. 43–58 in Table 5). The term “young men” is used for the unmarried men who had completed primary school in this paper. However, a young man aged 18 who still goes to school was included in this category (no. 58 in Table 5). Tanzanian primary schools have seven grades. The earliest pupils can complete primary school at the age of 14, but some stay longer, usually one or two years. The 18 year old boy exceptionally delayed more than five years.

Table 5. Composition of Nyakyusa Households.

no.	Husband	Wife	Preschool Child	Pupil	Young Man	Young Girl	Total
1	1	1	0	2	0	0	4
2	1	1	0	1	0	0	3
3	1	2	0	1	1	0	5
4	1	1	1	4	0	1	8
5	1	1	2	1	0	1	6
6	1	1	5	2	0	1	10
7	1	2	4	3	2	1	13
8	1	1	3	1	0	0	6
9	1	1	1	0	0	0	3
10	1	1	0	0	0	0	2
11	1	1	3	2	1	1	9
12	1	1	2	0	0	0	4
13	1	1	0	0	0	2	4
14	1	1	2	1	1	0	6
15	1	1	2	1	0	1	6
16	1	1	2	0	0	0	4
17	1	1	2	1	0	0	5
18	1	2	0	2	2	1	8
19	1	3	8	2	1	1	16
20	1	1	1	2	2	0	7
21	1	3	2	1	3	1	11
22	1	2	0	1	0	0	4
23	1	2	1	2	1	0	7
24	1	1	0	0	1	1	4
25	1	1	0	0	2	0	4
26	1	1	1	2	0	0	5
27	1	1	3	1	0	0	6
28	1	1	0	2	1	0	5
29	1	1	0	0	0	0	2
30	1	1	0	1	0	1	4
31	1	1	0	2	0	0	4
32	1	1	1	1	1	1	6
33	1	2	—	—	—	—	13 <sup>3)</sup>
34	1	1	1	0	0	0	3
35	1	1	1	0	0	0	3
36	1	1	2	0	0	0	4
37	1	1	3	1	1	1	8
38	1	1	0	0	0	0	2
39	1	2	5	1	0	0	9
40	1	1	3	0	0	1	6
41	1	2	1	3	0	2	9
42	1	1	2	1	0	0	5
43	0	0	0	0	1	0	1
44	0	0	0	0	1	0	1
45	0	0	0	0	1	0	1
46	0	0	0	0	1	0	1
47	0	0	0	0	1	0	1
48	0	0	0	0	1	0	1
49	0	0	0	0	1	0	1
50	0	0	0	0	1	0	1
51	0	0	0	0	1	0	1

(Table 5. Cont.)

52	0	0	0	0	1	0	1
53	0	0	0	0	1	0	1
54	0	0	0	0	1	0	1
55	0	0	0	0	1	0	1
56	0	0	0	0	1	0	1
57	0	0	0	0	2	0	2 <sup>b)</sup>
58	0	0	0	0	1	0	1 <sup>c)</sup>
59	0	0	0	0	0	1	2*
60	0	0	0	0	0	0	2*
61	0	0	0	0	0	0	1*
62	0	0	1	0	1	0	4*
63	0	0	1	0	0	0	2*
64	0	0	0	0	0	0	1*
Total	42	54	66	45	38	19	282*

Preschool Child: Boys and girls younger than school age at the end of 1984; Pupil: Primary school children; Young Man: Single young man finished primary school; Young Girl: Single young women finished primary school.

\* As there are some family members who are not included in the categories shown on the top of this table, the total number of the family members is more than the sum of numbers shown in each category.

a): Sum of their children is ten, though their age distribution is unknown.

b): Two cousins living together.

c): 18 year old pupil.

Table 6. Distribution of households to number of household members.

Number of household members (person/household)	Number of households
1	2
2	6
3	4
4	11
5	5
6	7
7	2
8	3
9	3
10	1
11	1
12	0
13	2
14	0
15	0
16	1

Households of single young men were excluded.

Of the 17 young men, 15 had their own hut, and two cousins shared a hut. The remaining 48 households had a total of 265 persons. The number of members for each household varied from 1 to 16. The mode was four (Table 6).

The 17 young men are called "house owner" in this paper. These house owners

still farmed their fathers' fields in the morning and ate meals cooked by their mothers, as in the traditional society of the 19th century.

However, the traditional age village has now completely disappeared. At first, less than half of all the single young men, 17 out of 38, 44.7% (Table 5) were house owners. All young men aged 11 or older had their own houses in the traditional society.

Secondly, even the house owners did not live together in the boy's village. Those who were given residential plots in their fathers' fields lived in separate places according to location of the fields.

Residential plots were obtained either from fathers or from the Village Council. The plots from the fathers' field were often big, with enough area to plant about 100 banana trees, some fruits and vegetables. Allotted land from the Council was smaller, with not enough area to plant banana trees, and the young men had to live close to each other. Only the young men who could not obtain residential plots from their fathers apply to the Village Council. The Members of the Council consult the Ten Household Leaders to allot unused lands. In the application for the land for cultivation, the process of allotment is the same as that of residential plot. The assembly of houses on allotted land from the Council reminds us of the traditional age village or the young men's village. However, there is no leader among them today as there was in the traditional age village. Further, age differs greatly: a married man over 30 and a young man who has just left primary school live next door to each other.

The number of house owners, distribution of young men's houses, and composition of assembly of young men's houses make us conclude that the traditional age village has disappeared.

## II. Composition of Older Households

Of 48 households, 42 households had one husband, his one or plural wives, and their unmarried children, and consisted of 253 persons. These households do not include households with more than one couple, widows, widowers, or some other members.

There were 42 husbands to 54 wives. On average, each husband had 1.3 wives. Of these 42 husbands, 10 husbands, 23.8%, were polygamists. M. Wilson (1976; 1977) reported that the proportion of polygamists continued to decrease; 44% in 1934, 38% in 1957, 26.1% in 1967. The result of this research confirms the trend.

There were six households without couples. Compositions of these households are presented below. The numbers correspond with those of Table 5.

(no. 59) and old widower with a daughter.

(no. 60) an old man lives with his elder sister.

(no. 61) an old man lives separately from his wife and children.

(no. 62) an old woman, a granddaughter and grandson, and a preschool child of the granddaughter. The old woman's daughter, who is the mother of the two grandchildren, ran away to Dar-es-Salaam, the largest city in Tanzania. The lover of the granddaughter lives in another village 30 km away. She and her lover have

not moved to his village because he does not agree to the amount of bride wealth. (no. 63) a widow and her preschool child.

(no. 64) a widow without children.

The households of nos. 63 and 64 were centered around an adult woman, and no. 62 around an old woman. A total of three households centered around females. This was half of the households that did not have a couple.

## AREA OF CULTIVATED FIELD

### 1. Number and Location of Field

Most fields are rectangular in shape. Some fields have small curves, and some extend along contour lines. If all portions of a field are contiguous, a field with an irregular shape is counted as one in this paper. Although one field is sometimes used separately by the husband and his wives of a polygamous household, a spatially connected field of one household is counted as one. The area of each field varies greatly, from 0.04 ha to 7.04 ha.

I chose 33 households for data on fields and migration. The actual sampling method is described in p. 189.

The number of fields owned by these 33 householders is shown in Table 7. Two households each used only one piece of field, of which householders were single youths on their age of teens or twenties. Most Nyakyusa householders used several, but not so many fields; two to four fields per householder were common.

The largest number of fields used by one household was nine. There were two households with nine fields, of which householders were in their fifties and thirties. Each field of the former householder was small. The total area of his fields was 3.26 ha including fallow (2.63 ha is used). The average area of the studied households was 3.63 ha including fallow (2.51 ha was used). This householder used nine cultivated fields, but the total of area was close to the average. This householder

Table 7. Number of fields used by one householder.

Age of householder (year old)	Number of field									Average
	1	2	3	4	5	6	7	8	9	
13-29	2	1	1	1						2.2
30-39		1	1	1		1			1	4.8
40-49		2				1	2	1		4.7
50-59			3	1	1				1	4.5
60-69		4					1			3.0
70-79		2	2	2						3.0
Total	2	10	7	5	2	3	2	0	2	

Total 123 fields, 33 householders

Each number represents a corresponding number of householders.

Age of householder is presented at the end of 1988; the following tables are in the same condition.

Table 8. Distance between homestead and fields.

	Distance between homestead and fields (km)					
	0	0.1 ~0.5	0.6 ~1.0	1.1 ~1.5	1.6 ~2.0	more than 2.1
Number of fields	35	41	20	19	7	1

had moved to Luifwa from another village located 3 km away in 1981. He was given four small fields by the Village Council, the total area of which was 0.88 ha. Next year, he obtained one field of 0.87 ha from an old kinsman. In 1985, a 0.43 ha field was gained from his friend; in 1986, another 0.62 ha from the aforementioned old kinsman; and in 1987, two fields that totaled 0.46 ha, from two acquaintances.

Another householder with nine fields in his thirties had a total area of 3.55 ha, of which he used 2.51 ha. He obtained fields, three in the 1970s; one from the Village Council, one from an elder brother, and one was purchased. He obtained four more fields in the 1980s. Two were borrowed without charge from an acquaintance, one was transferred from an acquaintance, and one from his father's younger brother. The remaining two fields were allotted by the Village Council, but the actual year of transfer was not specified.

The distance between the homesteads and fields was measured. With topographical maps of 1/50,000 scale, an altitude meter, and a compass, the homesteads and fields were located on the map. The straight line distance was then measured from point to point. If a homestead abutted on a field, the distance was regarded as zero meter. Otherwise, the distance was measured from the center of the field to the homestead. The distance between the fields and homestead is presented in Table 8. There were 76 out of 123 fields within 0.5 km of the homestead, and all the remaining fields, except for one, were located within 2.0 km from the homestead. As Luifwa Village measured 14 km<sup>2</sup> including the fields, it is 5–6 km from the boarder to the boarder. It was common for villagers to have fields in their own village. For the inhabitants of other Villages, it was difficult to use fields in Luifwa, and vice versa.

## II. Field Area per Household

Because of a decrease in soil fertility or lack of labor for cutting grass and farming, the farmers often have their fields lie fallow. The proportion of fallow to the total field area of each householder was examined (Table 9). Fallow in this paper are unused fields that were previously cultivated but the farmers have not planted crops or prepared the field for planting, such as by cutting the bushes, or cultivated it, during the period from October in 1987 through February in 1988 — the earlier two-thirds of the rainy season. The fallow is sometimes covered with grass, sometimes with bush of one or two meters high. Cultivated fields are where crops are planted or the soil is prepared for planting.

Out of 33 householders, nine had no fallow. Five householders out of the nine were in the age bracket of teens and twenties. These five householders were all

Table 9. Proportion of fallow area to total field area.

Number of household	Proportion of fallow area (%)									Total
	0	1~10	11~20	21~30	31~40	41~50	51~60	61~70	71~80	
	9	2	9	3	4	2	1	1	2	33

of the studied householders in that age bracket. Out of the 33 householders, 23 householders had fallow which was less than 30% of their total field area (cultivated field and fallow). Except for the householders of teens and twenties, the most frequent proportion of fallow was between 11 and 20%. The Nyakyusa farmers did not have a set schedule for fallow.

The field area of each household is shown in Table 10 against the age of householder. The average area owned by one householder older than thirty was 2.51 ha.<sup>(4)</sup> 3.63 ha with the fallow. As householders in their teens and twenties were all single, had no fallow, had smaller fields compared with the elders, and frequently moved around, they were excluded from the calculation of the average field area.

The Kruskal-Wallis test (Ishii, 1975) was applied to examine the relationship between the field area and the age of householders. The hypothesis was that used field area was correlated with the age of the householder, but the calculated results was  $0.05 < P < 0.10$ .<sup>(5)</sup> Thus, no strong relationship between the two factors was detected. The same test was made for the total field area with fallow against age, and it led to the same results.

The field area used by one householder varied in size from 0.47 ha to 4.75 ha (without fallow). The householder with the largest used field was in his fifties. He led a household of himself, his wife, and five children. He had two fields. One abutted his homestead, and the other was 1.7 km away. He used 70.1% of the

Table 10. Field area of each householder.

Age of householder (year old)	Field area of each household (Actually used field area) (ha)						Average (ha)
13-29	0.16 (0.16)	0.22 (0.22)	0.73 (0.73)	2.32 (2.32)	2.77 (2.77)		1.24 (1.24)
30-39	0.47 (0.47)	0.95 (0.62)	1.47 (1.08)	3.55 (2.51)	3.57 (2.92)		2.00 (1.52)
40-49	0.85 (0.47)	1.38 (1.38)	1.96 (1.60)	3.87 (3.51)	6.16 (4.15)	9.12 (3.78)	3.89 (2.48)
50-59	3.24 (2.15)	3.26 (2.63)	4.01 (3.50)	4.97 (4.05)	6.69 (4.75)	7.98 (4.33)	5.03 (3.57)
60-69	2.25 (0.64)	2.27 (2.02)	2.61 (2.15)	3.06 (0.86)	4.52 (2.79)		2.94 (1.69)
70-79	1.69 (1.69)	2.84 (2.73)	3.21 (3.21)	4.44 (3.94)	4.72 (3.91)	6.58 (2.30)	3.91 (2.96)
							3.63* (2.51)*

Each numerical value represents total area of fields (actually used fields plus fallow). Actually used area excluding area of fallow is presented in bracket, ( ).

\* Average excluding householders in the age bracket of 13 through 29.

total fields he had.

The householder with the smallest field area of 0.47 ha was in his thirties and lived with a wife and four children. He used two small fields. One had been assigned by the Village Council, and the other was borrowed from his father. He worked as Village Secretary from which he drew a salary.

### III. Field Area per Household Member

The used field area per household member also varied greatly from one household to another, 0.12 ha to 1.95 ha (Fig. 6). Households with householders younger than 30 were excluded from the investigation. In calculating the field area per household member, a primary school pupil or an elder person than this was counted as one person, while preschool children and infants were not counted.

How did members of households with small field area live? Two households used only 0.10–0.20 ha of fields per member. One was the household already described in the former section as the user of the smallest field area. This household had two adults, two school children, and two preschool children. Therefore, its area per household member is 0.12 ha. The other household used 0.17 ha per household member, of which the householder was a cabinetmaker in his fifties. Many villagers were handy enough to help neighbors in house construction, but this householder specialized in making chairs, tables, cupboards and other kinds of furniture. He had a simple studio in front of his house and worked there every day.

Villagers usually retailed daily necessities if they happened to buy the daily

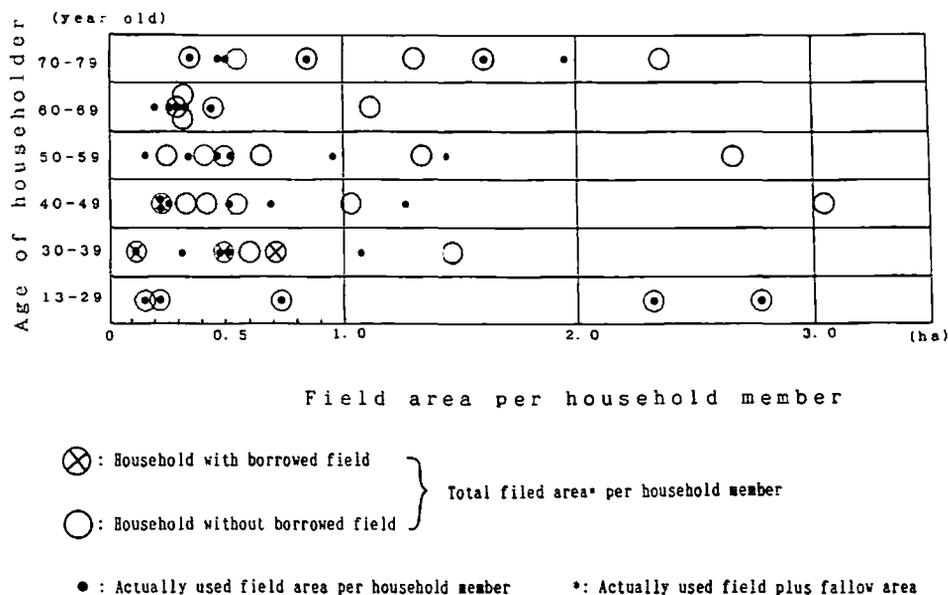


Fig. 6. Distribution of field area per household member.

necessities in town or neighboring markets. Young men liked to sell cigarettes, kerosene, and batteries. Middle-aged or older men sold dried fish or fertilizer at the market and at beer bars. Sometimes these men visited each household to sell these items. Women were engaged in brewing and selling local beer. Retailing is a daily activities of the ordinary villagers, and it does not require special training or skills. For women, brewing beer is considered rather common. On the contrary, jobs, such as the secretary and cabinetworker, are considered professions.

There were six households with used field area of 0.20–0.30 ha per household member. One, a household with six fields and 0.23 ha per member was led by a man in his forties. He was born in the village 4 km south of Luifwa, moved here, and opened tailor's shop in 1961. At that time, he had fields in his village but not in Luifwa. He abandoned his old fields in 1975 and obtained new fields in Luifwa.

The second householder of the six had been away for 15 years from Luifwa where he had been born. He rented out a house in Mbeya from which he expected a monthly income.

The third householder was in his forties. He used to fish in Lake Mtera, 500 km away from Luifwa, and sold the catch in Luifwa. At the time of my research, he no longer fished, but sold local beer, grilled and raw meat at a weekly market near Luifwa.

The remaining three householders had no conspicuous side jobs. Of the householders of 0.20–0.30 ha of field area per member, half of them dealt in some common side job of retailing of daily necessities, and half of them could expect income from a specific source, such as tailoring, a rented house, and business in market.

Twenty householders used more than 0.30 ha of field per household member. Among them, only two had a conspicuous source of income; one with 0.31 ha per member worked to make firewood, and the other with 0.50 ha per member drew a salary from the Agricultural Association.

It seems that a field area of 0.20–0.30 ha per person is the minimum size for living mainly on agriculture, although with some side work. Excluding five householders in their teens and twenties, twenty householders out of twenty-eight had larger fields. It is also noticeable that there were some householders whose field area was several times larger than this area, 0.20–0.30 ha per household member.

## MIGRATION

### I. Traditional Society

In the traditional society of the Nyakyusa, villagers moved within the chiefdom according to the rearrangement of land at the time of coming out. In addition to this, they frequently migrated at any time from village to village, or even to another chiefdom (G. Wilson, 1968a: 33). M. Wilson (1963: 36) reported that, except for the coming out, villagers migrated for fear of witchcraft more than for economic reasons such as the need for cash income or fields for cultivation.

There was a formulary procedure in order to make the migrants return to the original village. This means that such migrations were frequent besides the shift of

living place in the formation of age village. If someone suspected that he became sick from witchcraft, he often moved out of his village. In such cases, his neighbors might go to his new residence within a couple of months and persuade him to return. The neighbors would grasp his possessions and pretended to take them back to his original village. They tried to persuade him that everyone back in the village loved him and that there was no witch to fear. If a great commoner, a powerful witch doctor, or a man of a respected family left a village, the effort to bring him back would continue for a longer period; sometimes it continued for two years. The migrant would decide whether to return or to continue to stay in the new village, depending on his relationship with the new village and his physical condition.

## II. Until the 1960s

Although the traditional coming out and the according rearrangement of land no longer continues, the villagers still migrate for various reasons. In the 1930s, at least 80% of the married men, except for Christians, migrated from the chiefdom, where they had obtained their first fields, to another chiefdom (G. Wilson, 1968a: 32).

In Ilo Village (Fig. 1), 33 householders out of 109 came from other villages between 1950 and 1968 (Hekken & Velzen, 1972: 37). Out of the 33 householders, 11 came to obtain land or work, ten left their former Villages because of illness or trouble with neighbors, seven came to be supported by their kinsmen or companies of the church, and five were heirs.

Fear of witches caused many villagers to migrate. The ten householders in the above example included those who immigrated due to the fear of witches. Hekken & Velzen (1972) reported that the Ilo villagers invited witch finders to their Village in 1968. The witch finders entered the suspected persons' houses, opened every container and tried to find evidence of witchcraft.

Economical factors also promoted migration. From 1934 to 1954, 25% of the men in Rungwe District worked away from their villages as migrant laborers (M. Wilson, 1976: 402). This proportion of migrant persons was the record at the time of M. Wilson's research. As there must be many men that had already returned home from working at the time of her research, those who had migration experience should be more than 25%. The period of working away from their village in the 1950s was one year or longer, while only two to three months at one time in the 1930s (M. Wilson, 1976).

## III. 1980s

The Nyakyusa continue to migrate frequently in 1987. Some migrated more than once, and others migrated not only within Tanzania but to other countries. In this report, the term "migration" means the case a person who leaves a village and does not return for more than two months in order to work or study. Married men usually took their household members to their destinations, and obtained residences and fields for cultivation there. As their work outside of the home

village were not periodical, it was difficult to predict when they would come home.

A man, born in Luifwa Village in 1939, lived some hundred meters away from his father's homestead at the time of my research in 1987. He had been to Zambia to work in the gold mine in 1959 when he was 20 years old. After working in the mine for three years, he went to Dar-es-Salaam to retail several kinds of goods, and continued this for ten years. Since 1972, he worked at loading and unloading cargo on freight trains in Morogoro, a city in the center of Tanzania (Fig. 7). He finally returned to Luifwa Village in 1974. Although he returned to the village several times during this period, his stays in the village were only a few months long each time. Between the age of 20 through 35, he spent most of his life away from the village.

The migration experiences of 22 householders out of the 33 were as follows. Twenty had migration experience (Table 11). Eight householders had worked in other countries, and only two householders had no migratory experience.

The destinations of the Nyakyusa migrants were as follows. At the time of my research, some went to work in Zambia or Botswana, many as automobile engineers or mine laborers. In Tanzania, they worked at Mbeya, a capital city of Mbeya Region 90 km away (Fig. 7), or Dar-es-Salaam. Some went to Lake Mtera to catch and smoke fish. They made shelters on the lake shore and stayed for several months. Some went to Mbozi, a highland 70 km away from Mbeya towards Zambia, to plant maize. Some worked to maintain the railroad all over Tanzania. Others went to Chunya to work in the gold mine or sell refreshments and other necessities to the mine workers. Most of the young men in Luifwa Village had been to

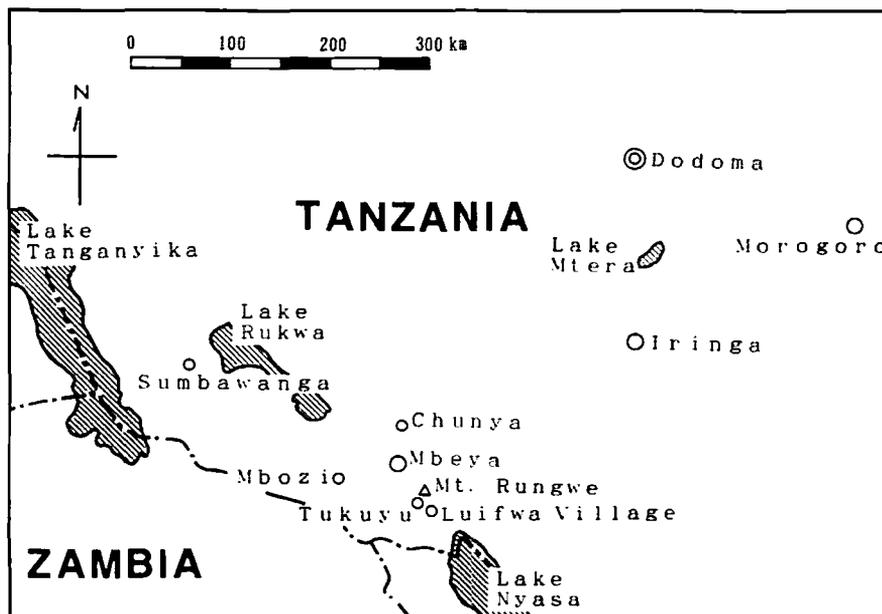


Fig. 7. Southwestern part of Tanzania.

Table 11. Migration of householders.

Migration		Never Migrated	Migrated			Unknown	Total Number of Householder (person)
			Destination				
			Within the N.L.	Tanzania	Foreign countries		
Age of householder (year old)	13-29	1	(1)	2	1	1	5
	30-39			3		2	5
	40-49		(1)	(2)	4	2	6
	50-59		3		1	2	6
	60-69	1	2	(1)	1	1	5
	70-79		2(1)	(1)	1	3	6
	Subtotal	2	7	5	8	11	33
	Total	2		20		11	33

N.L.: Nyakyusa land.

Number of householders is presented in each section.

If one householder migrated to several places, the most distant place is presented in this table. The number in bracket, ( ), represents those already listed in the more distant section.

Table 12. Immigration from other village.

Age of householder (year old)	Coming from other village (person)	Total Number of Householder (person)
13-29	2	5
30-39	1	5
40-49	1	6
50-59	1	6
60-69	3	5
70-79	2	6
Total	10	33

Householders presented in the column of "coming from other village" include both those who were born in the Nyakyusa land out side of Luifwa Village and those born out of the Nyakyusa land such as Dar-es-Salaam or Zambia.

Chunya. Within Nyakyusa land, people moved to find suitable weather for them. Under British colonial rule, the Nyakyusa men went to South Africa as mine laborers, but this was prohibited in 1963, because of diplomatic concerns (M. Wilson, 1976: 402).

The number of people who had migrated because of fear of witchcraft could not be clarified. However, many villagers still believe in witchcraft and really feared it.

There was one old man living alone in the study village in 1984. He had been suspected of being a witch and driven out from a village approximately 30 km away from Luifwa and lived in Tukuyu. He wanted to return to his native village, but was refused. He eventually moved to Luifwa. He again aroused suspicion, and around 1983, the villagers beat him until he was lame. In 1987, he died in Luifwa and his sons working in Zambia came to live on their deceased father's homestead.

Out of the studied 33 householders, 10 were born elsewhere and had immigrated

to the Village (Table 12); not only emigration from Luifwa, but immigration into Luifwa Villages was frequent.

## TRANSACTIONS OF LAND

### I. Methods and Sources for Obtaining Land

#### 1. Traditional Society

The Chief had authority over the location of each age village in the traditional society. Farmers obtained their fields within the area of age villages assigned by the Chief. Although the elders and great commoners were effective to decide the actual locations of the village and fields, farmers recognized the assignment of the fields as by the Chief.

How did latecomers to the age village obtain fields and residential plots in the traditional society? The heirs of the dead (his brothers or sons) could come and live on the homesteads, and inherit the fields and wives.<sup>(6)</sup> These inheritances of land among kinsmen were effective for a limited period, until the next coming out ceremony. After the ceremony, his fields were rearranged along with the fields of the other members of the age village. If someone who was not an heir came into an age village for another reason, residential plot and field would be allotted by the great commoner of that village, which was then reported to the Chief (G. Wilson, 1968a: 34–36).

Some fertile places were exclusively inherited among kinsmen, independent of rearrangement by the coming out. Fields located around volcanic lakes or on the riverside were regarded as fertile. If the users of these land migrated out or died, their kinsmen living in the neighborhood would continue to use the land (G. Wilson, 1968a: 42).

The planters of bamboo and *usyunguti* trees (*Trichilia roka*)<sup>(7)</sup> had the right to use them even after they migrated. The planters sometimes migrated to such distant places that they could not come back to use the trees. If such was the case, the users of fields or homesteads around the trees could use them (G. Wilson, 1968a).

Cattle were raised in the common pasture, which was actually unused for cultivation.

#### 2. 1980s

Hekken & Velzen (1972: 31) reported that there was a patron-client relationship with regards to land. The patron would have much land and were also powerful in politics of the village. They were similar in some ways to the Chiefs in the colonial days and the 1960s. However, there was no patron in my study area after Independence.

Migrants still obtained fields from Village Council, kinsmen, or acquaintances in the 1980s. Newcomers lived on borrowed fields for a while. After half a year or so, they applied for fields to the Village Council.

The fields along the rivers and around the volcanic lakes were no different from other fields in fertility and method of inheritance.

The right to utilize mango, avocado, orange, lemon, bamboo, *usyunguti* and other trees planted by a man was still respected in the 1980s even after he left the village. Although migrants retained rights to coffee and cacao trees, they usually sold these trees when they migrated.

Today, there is no common pasture for the Villagers. Herdsmen could use any fallow in and around the Village for grazing cattle.

The method and source of acquiring 110 fields out of the studied 123 fields of the 33 households were clarified (Table 13). The fields were acquired in three ways; transfer without charge, borrowing, and purchasing. The Nyakyusa farmers considered transfer and purchase as transaction of ownership, not of right to use.

There were two kinds of borrowing land. In one, the borrower asked the owner permission to use a fallow for a few years. The owner usually lived in the same village. The owner and the borrower then decided how many years this relation would continue, normally for two or three years. In the other kind, the owner, leaving the village to work, asked someone to take care of his fields. The owner seldom knew when he would return. A simple promise would be made that the land was to be returned to the owner on his return to the village. Neither kinds of land borrowing involved any payment.

Most transactions, 98 out of 110, were transfers without charge; 46 were from kinsmen, 28 from their fathers, five from paternal uncles, eight from elder brothers, one from a younger brother, three from other kinsmen, and one from his mother.<sup>(8)</sup>

Seventeen fields were obtained from acquaintances excluding kinsmen and affinities, while only three were obtained from affinities.

Twenty-two fields were obtained by applying to the Village. The present Village Council was introduced in the 1970s as the unit of administration. Since then, the Village Council has allotted the unused fields to the applicants. If fields are left uncultivated for more than four years,<sup>(9)</sup> the land will be absorbed by the Village. The Village Council will allot them to newcomers or other youths who do not have enough land.

Ten fields were recognized as having been given by Chiefs. Before the 1960s, in the colonial days, the chief still had power to allot fields. In the 1960s, major Chiefs worked as leaders of the Village (Balози) and they had the authority to decide the allotment of fields for applicants.

Land was rarely purchased: only five cases in four households. The youngest householder of the four who purchased fields was a single man in his twenties at the end of 1988. He bought the field of a neighboring old man who lived alone. This young man expected to marry the next year. The second householder bought the field in 1977; at that time he was in his twenties. The third householder was in his fifties, and bought his field in the 1980s. The fourth householder was in his seventies and had lived in the village distant from Luifwa. He bought some fields in Luifwa in 1974 and 1984 and divided his family into two. One wife and her children lived in his native village and the another wife and children in Luifwa.<sup>(10)</sup>

Seven fields were borrowed by four householders in their thirties and forties (Fig. 6, Table 13). These borrowers naturally had small field areas per household member. Borrowing and lending the land is done personally, with no involvement

**Table 13.** Method and source of obtaining field.

Obtaining method	Transference without charge					Purchase	Borrowing	Total
	Kinsman	Affinity	Acquaintance*	Village	Chief	Kinsman, Affinity and/or Acquaintance*		
Age of householder (year old)	13-29	6	1	3			1	11
	30-39	7		2	8		1	21
	40-49	10		7	6		4	27
	50-59	13	1	2	5	2	1	24
	60-69	5	1	3	1	3		13
	70-79	5			2	5	2	14
Subtotal	46	3	17	22	10	5	7	110
Total			98			5	7	110

Each number represents the number of fields.

\* Acquaintances except for kinsmen and affinities.

**Table 14.** Year in which fields were obtained.

Obtaining method	Transference without charge					Purchase	Borrowing	Total
	Kinsman	Affinity	Acquaintance*	Village	Chief	Kinsman, Affinity and/or Acquaintance*		
Obtained year	1980s	17	2	8	9		3	46
	1970s	13	1	4	11		2	31
	1960s	5		2		6		13
	1950s	4				3		7
	1940s	2				1		3
Subtotal	41	3	14	20	10	5	7	100
Total			88			5	7	100

Each number represents the number of fields.

\* Acquaintances except for kinsmen and affinities.

of the Village Council or Chief. Five fields out of seven were borrowed from those who went to work in cities or mines, and two were from those who lived nearby.

## II. Time of Obtaining Land

Within the 110 fields of which the obtaining method and source was clarified, the time of acquisition was known concerning 100 fields (Table 14). Some fields were obtained from kinsmen or Chiefs and used by the same householders since the 1940s. There were some fields from acquaintances since acquired in the 1960s, purchased in the 1970s, and borrowed in the 1980s. There were six fields transferred from a Chief and none was from Village in the 1960s (Table 14). In the 1960s, Tanganyika was independent and had an administration unit of Village. As the Village leader (Balози) was actually the former Chief in the 1960s, farmers recognized that their fields had been obtained from the Chief instead of the Village.

Many transactions of fields were recorded in the 1980s, 46 out of 100, nearly half of all in Table 14. This does not mean that transactions of fields were few before the 1980s, because the table presents only the latest transaction of each field, not the preceding transactions. Because the transactions of field were made frequently, fields used by the same person since the 1940s or 1950s until present were few.

According to my study, the purchase of fields with money did not exist before the 1970s. In the 1970s, the Nyakyusa farmers sold the trees planted in the fields but not the land. These trees sold were perennials, such as coffee and cacao. The buyer and seller of these trees considered that they could transfer tree ownership with money, but they did not give consideration to land ownership where the trees were planted. Transference of trees naturally led to a change in the land user.

In the 1980s, a few Nyakyusa farmers sold fields with annual crops and fallow for money like that of perennial crops in the 1970s. They sold fields of banana, rice, and maize after the harvest. Many farmers said that they could not sell or buy fallow and they were reluctant to pay money for fallow. However, the practice has actually begun to spread in the 1980s. Five fields were found to be purchased in my research, and all of these fields contained some fallow without any crop.

A man born in 1913 had stayed in Nairobi from 1943 to 1948 for British military service. He returned to Luifwa Village and began to live on agriculture in 1948. Soon after that, in 1950, he went to Mbozi. After that, he was moving among Mbozi, Sumbawanga (Fig. 7), and Luifwa, and finally settled down in Luifwa in 1962. In this case, he obtained enough field in Luifwa when he began to live on agriculture in 1948 at the age of 35. He abandoned these fields when he went away. He again obtained four fields when he returned to Luifwa. His present fields were all obtained when he was 49 years old.

Another man born in 1919 had two fields in 1987. One field was obtained in 1931 when he was 12 years old. It was considered one of the first of his. He obtained and transferred fields through his twenties and thirties, until 1962, when he obtained one of his present fields at age 43.

The age of householders when they obtained fields are shown in Table 15. The householders in their seventies had obtained many fields after they had reached the ages of forties, and fifties. One of them obtained the field in his sixties. Only one

Table 15. Owner's age at the time fields were obtained.

Present age of householder (year old)	Age when the present owner obtained the fields (year old)					
	13-19	20-29	30-39	40-49	50-59	60-69
13-29	7	3				
30-39	4	6	9			
40-49	0	7	8	9		
50-59	4	2	2	8	7	
60-69	1	1	5	0	4	2
70-79	1	0	1	6	3	1

Each number represents the number of fields.

The time at which 100 fields were obtained was investigated. As two abutting fields were obtained separately by one householder and were joined as one field afterwards, the total number of fields in this table becomes 101, one more than the total of Table 14.

field out of twelve used by the householders in their 70s, had been used by the same householder since it had been first obtained in his teens.

## DISCUSSION

### I. Area of Cultivated Field

The formation of age villages accompanied the rearrangement of fields (M. Wilson, 1963: 174). M. Wilson, Gulliver, and Hekken & Velzen all stressed land shortage in the Nyakyusa land. Because much land is necessary for a complete rearrangement of fields especially for younger men, land shortage might disturb the formation of age village. Moreover, land shortage could be one reason encouraging young men to move away (Gulliver, 1958: 28, 36). The acquisition of land has actually become more and more difficult since the beginning of this century. The Nyakyusa farmers pointed out that land shortage had worsened as time advanced.

However, even if the farmers complain of land shortage, they still have sufficient fields in terms of the absolute area of land as I will mention below. Matter of historical changes and matter of quantity ought to be differentiated. How many hectares of field do the farmers have? How many tons of harvest do they obtain? How many farmers have difficulty in obtaining the necessities of life in the village? These are the issues of absolute quantity, and can only be clarified by examining each household but never by following changes of large social systems. The foregoing anthropologists reported on historical tendency toward land shortage by describing the larger social systems. I shall focus on the household in this paper to quantitatively examine the land shortage.

Observing the field area and farmer side jobs, I concluded that a field area of 0.2-0.3 ha per household member was the threshold to be able to live mainly on agriculture.

The Nyakyusa farmers harvested 1.0 ton/ha of maize in one year. One hundred grams of unpolished maize supplies 354 kcal (Resources Council, Science and Technology Agency, Japan, 1978). Therefore, they can obtain 1,940-2,910 kcal per person-

day, if one person had a maize field of 0.2–0.3 ha.

The banana harvest in Nyakyusa land was not investigated. Ngugi et al. (1978) reported that the Ugandan farmers obtained 12 ton/ha -year of banana harvest in an average field, while in well-tended plantations, they obtained 50 to 60 ton/ha -year. Acland (1971) reported that the farmers commonly harvested 15 to 20 ton/ha -year of banana in East Africa, and in the case of well-tended and irrigated fields, 38 to 50 ton/ha -year. If the Nyakyusa farmers harvested 12 ton/ha -year of banana, they can expect 32.9 kg of harvest per day for every hectare of banana field. The proportion of disposed parts is 32%, and banana supplies 79.2 kcal for every 100 g (Syoko, 1983). Therefore, 0.2–0.3 ha of banana field can supply 3,547–5,320 kcal per day.

As for rice, the Nyakyusa farmers harvested 0.6 ton/ha. As 100 g of rice supplies 336 kcal (Research Council, Science and Technology Agency, Japan, 1978), 0.2–0.3 ha field of rice supplies 1,107–1,660 kcal per day.

Clark & Haswell (1966) presented the caloric requirement per day for life in several environments in the world. According to their report, in Central Africa, a man working four hours a day needs 1,792 kcal, and a man working eight hours a day needs 2,012 kcal. The Nyakyusa farmers work slightly more than four hours a day but much less than eight hours on farming ordinarily. They work close to eight hours a day only when they weed rice fields. Clark & Haswell reported that actual caloric supplies were 2,175 kcal in Tanganyika, and 2,240 kcal in Kenya.

Maize, plantain, and rice are the main foods of the Nyakyusa. They actually ate maize (205 times as ugali) and banana (185 times) more than rice (158 times), so they had enough calories from 0.2–0.3 ha of field with a combination of these foods.

I compared the field area of the Nyakyusa farmers with other ethnic groups living on agriculture. The Kikuyu lived in the mountain forest or grasslands (Philip & Son Limited 1985) in Kenya, and they grew millet, banana, maize, and legume. Taylor (1969) carried out his research in 1962 and found that the Kikuyu farmers on an average used 1.48 ha of field per household at an altitude of 1,500 to 2,000 m. A common, married Kikuyu man had two or three wives, and seldom had fields larger than 2.0 ha (Taylor, 1969: 469). Supposing a household composed of one husband, two wives, and four children, 1.48 ha per household is 0.30 ha per household member, and 2.0 ha per household is 0.40 ha per member.<sup>(11)</sup>

The Tembo lived in the mountain forest and tropical rain forest in eastern Zaire at an altitude of 1,000 to 1,700 m. They grew root crops, banana, maize, and kidney beans. Each household had fields of 0.60 ha to 1.0 ha (Suehara, 1984: 517). In the village studied by Suehara, 455 persons lived in 96 households; each household had an average of 4.7 members. If 4.7 member means 2 adults and 2.7 children (1.35 persons), they had a field area of 0.18 to 0.30 ha per person.

The Tongwe belong to the Tanganyika Bantu, the same group the Nyakyusa belong to. They lived in the woodland receiving rainfall of 1,000 to 1,500 mm per year. Kakeya (1974: 38) reported that the Tongwe, living at an altitude of 1,500 to 1,600 m, had fields of 0.27 ha per person.

Gleave & White (1969: 279) examined several agricultural groups in West Africa. They concluded that agriculturalists needed a field area of 0.2 ha per per-

son in the forest, and 0.3 ha in the savanna. Beside this, farmers needed some additional area to grow cash crops for income.

As the method of counting children and calculating areas of uncultivated field were not always specified in the referenced reports, there may be slight quantitative differences deriving from the difference of research method. However, I concluded that a field area of 0.2–0.3 ha per household member can be evaluated as enough to live on agriculture, by examining the field area of other agriculturalists in Africa, calories obtained from the harvest in the Nyakyusa land, rare patron-client relationship, and side jobs of the villagers.

In order to quantitatively examine the field shortage, I consider 0.3 ha as a criterion. For, it is safer to take larger area within the range of 0.2–0.3 ha to examine land shortage. I also looked at the total area of field, the actually used field plus the fallow, in order to examine field shortage. This is because the fallow is soon turned into cultivated field, if necessary. For total field area, 25 households out of 28 (84%) had more than 0.3 ha per person. Examining the distribution of total field area per member, there is no concentration at just over 0.3 ha. Twelve householders (47%) had more than 0.6 ha per capita of total field area, and one exceeded 3.0 ha per capita.

The acquisition method and source of fields also present us quantitative measures of field area. Gulliver (1958: 21) mentioned that, with the advancement of land shortage, field owners came to dislike to giving away their fields to nephews or brothers, but preferred to transfer the fields to their sons. In my study area, there were many fields transferred without regard to kinship. Fields transferred without purchase from the Village were 22 out of 110 (20%), and those from acquaintances other than kinsmen and affinities were 17 (15%). These account for a large proportion. Moreover, of the 46 fields transferred from kinsmen, 18 were not from father to sons.

I recorded the latest method and source of field transaction for each field. Some transactions had occurred many years ago. In order to examine the recent tendency, I focused on the transactions that occurred in the 1980s. There were 46 cases (Table 14). Out of the 46, 17 fields came from kinsmen (four from the father, four from an elder brother, one from a younger brother, five from paternal uncles, and three from other kinsmen). Many fields were transferred from kinsmen excepting the father in the 1980s. This suggests that there are still enough area of cultivated fields.

It is true that obtaining land is harder than long ago. However, this is a matter of historical tendency. In actually, I conclude there is enough land in the hill zone of the Nyakyusa land.

## II. Continuity and Changes from the Traditional Society

The behavior of the individual changes historically; some widows may not be inherited by brothers of the late husband or sons of co-wives, the widows may continue the household and become householders, some wives may cease to fear their fathers-in-law or hide themselves.

There also are some continuities in the behavior of the individual; a household is composed around one married man, the Nyakyusa frequently move their

residence, and the planter's rights to use perennial plants is respected. These features did exist in the traditional society but were not stressed by the former reports.

In the traditional society, a father and his sons or brothers all belonged to different age villages according to their age. Therefore, they did not live in one household. Even if the age of brothers were close, they avoided living in the same age village. The household was composed of one married man, his wives and young children. It excluded other elements such as grandfathers, grandmothers, uncles and aunts. If one spouse died, the remaining widower or widow did not disturb this composition of household. A man with younger and/or plural wives, seldom outlived all of his spouses. However, if a polygamous man or a monogamous man became the sole survivor, he could continue to live alone (M. Wilson, 1977: 98). This was because, his sons, now householders of their own households, were expected to help him with field cultivation. A widow would be inherited by the brother of the late husband or the son of her co-wife (M. Wilson, 1977). The widow came into the new household as a wife of the inheritor. By following these processes, the household composition centered around one married man was naturally formed and maintained in the traditional society.

The frequent change of residence was found to have continued since the traditional days. In the traditional society, the move was either by the village or individual. The whole village moved to form a new age village, while individuals moved for fear of witchcraft. There are reports of migration for fear of witchcraft and formulary performance to make migrants return. Individual migration was not considered exceptional in the traditional society. Contemporary Nyakyusa livelihood seemed uneventful compared with traditional livelihood, only from the viewpoint of the larger social system. At present, there is no migration by the entire village or other larger units, while people migrate for economic reasons, health, and witchcraft. Although frequent migration continues from the traditional society, unit of migration was changed much.

Traditional rights in land has been described well from the viewpoint of the larger social system. Land was traditionally managed by the Chief and elders, and actual allotment of land for newcomers to the village was performed by great commoners. Rights in land was traditionally vague. The individual right was respected only in the case of some fertile fields along rivers and lakes, and for trees or bamboo. In the 1980s, individual ownership expanded to ordinary fields with annual crops and fallows. On the other hand, the Chief, elders, and great commoners disappeared and new administrative officers (Village Chairman, Member of Village Council, etc.) have come to have some influence on the allotment of land. Rights in land have little to do with the large social system these days.

In Kenya, rights to the land has become more distinct and subdivided. In the Kamba land of Kenya, individualization of land tenure proceeded even in the 1940s (Ikeno, 1989: 94). The Kamba classified rights in land into several categories; the right to use, own and mortgage. In case they sold land for money, they distinguished two kinds of transfer. One was a common transference and the other was a transfer leaving right for sellers to buy back the land.

Although there is no mortgage rights or transfer that leaves the seller's right to

buy the land back in the Nyakyusa society, some cases present the recent subdivision of rights to the land. Land conflicts between father and sons were observed. The sons feared their father would sell his fields for money and they would not inherit the fields. The sons planted banana trees in their father's field to avoid this. The sons were the owners of the banana trees, while the father owned the field. This made it difficult for the father to sell the fields by himself.

If the users of the land migrated to other villages, the fields left behind were absorbed by the village and reallocated to other persons in the old days. Now, those who leave village want to maintain ownership. So, they would lend their fields to their friends and keep the ownership even if they go to foreign countries. Here, two distinct rights are found concerning the land; the rights to ownership and utilization.

The individual household is an effective unit to describe the continuity of the Nyakyusa society and the present situation of rights in land. Moreover, the research on household led me to the conclusion that field area was large enough for each household. This study is complimentary to the former reports which stressed historical changes. The analytical units of both the larger social system and the individual make it possible to fully describe the contemporary land usage and to compare it with that of the 19th century.

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#### NOTES

- (1) In Tanzania, a population census has been carried out every ten years since 1969. However, there is no breakdown of the population by ethnic group. Ominde probably speculated the population of each ethnic group.
- (2) This is the harvest of the agricultural instructor. He weighed the total harvest of his as

- well as counting the number of sacks. Ordinary farmers counted their harvest only by the number of sacks.
- (3) "Great commoner" is the English term translated from the Nyakyusa language by G. Wilson. M. Wilson sometimes adopted the term "village headman" for this.
  - (4) As stated in p. 188 to 189, I sampled the same number of householders in every age bracket. Therefore, the sampled households did not reflect the distribution of the age of householders. In order to calculate the average field area in the village, households need to be sampled irrespective of age of its householders, strictly speaking. However, as it will be stated in the following text, there was no difference of field area depending on the age of householders.
  - (5) In the Kruskal-Wallis test, the null hypothesis is  
Ho: there is no difference in distribution. The test statistics H is calculated as,

$$H = 12/N(N+1) \sum_{i=1}^k R_i^2/n_i - 3(N+1)$$

N: sample size, in this case N=28, n<sub>1</sub>=5, n<sub>2</sub>=6, and so on.

k: number of groups of the samples, in this case householders were divided into 5 age brackets.

R: rank of the samples from the smallest to the largest, we put the corresponding ranks of to each sample. R<sub>i</sub> denotes the sum of the ranks in the i th group.

In the case of Table 10, H=8.039653. This result is compared with a  $\chi^2$ -distribution with 4(k-1) degrees of freedom. We failed to reject Ho at a significance level  $\alpha=0.05$ .

- (6) These days, the inheritor of the dead seldom transferred his homestead but sometimes went and slept in the homestead of the dead.
- (7) The farmers commonly extract oil from the fruit of the *usyungui* tree for cooking. The fruit is also sold to a company and the oil is industrially extracted for soup.
- (8) After marriage, a woman belongs to both her father's and husband's lineage (M. Wilson, 1977: 7). Therefore, the mother is included among kinsmen of her sons.
- (9) This period of four years was not strictly respected. Some said it was five years.
- (10) In this paper, the householder and those who lived together depending on the purchased field in Luifwa were regarded as composing one household, to calculate field area per member. The fields and the dependents who lived outside of Luifwa Village were ignored.
- (11) As the composition of household and age distribution of children were not described in his paper, I calculated every child as 0.5 person.

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