

How Private Property Emerges in Africa:

Directed and Undirected Land Tenure Reforms
in Densely Settled Areas South of the Sahara

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Part I

INTRODUCTION

Introduction

It has become an accepted truth that individualism and collectivism are scarcely found in pure forms in African systems of property in agricultural land. Instead, there are shades of gray, oscillating in tone seasonally, for instance as family cultivation rights yield to community grazing rights and back, and changing over longer periods. The shades intermix in a given time and place: as Melville Herskovitz put it half a century ago, "the variety of forms of land tenure that can exist at a given time among a single people is seldom recognized" (1952 [1940]: 350). These complex systems are not easy for planners to transform. After sporadic colonial attempts to privatize and collectivize African farmlands since the turn of the century, and a continued history of attempts under independent governments, it is becoming clear that African capitalists and African communists are not made by fiat.

Today, however, a number of African governments are attempting, partly with international funding, to implement tenure reforms more sweeping than ever. Some, for instance those of Kenya and Ghana, are trying to privatize rural land as individual freehold property on European models, while others, notably the governments of Ethiopia and Tanzania, have tried to collectivize it using models based on nucleated villages that lack local historical foundation or ecologically adaptive potential. This study is about the former kind -- the privatization programs -- and the differences they make.

The first attempt to privatize land nationwide has been Kenya's. Debated between the world wars and formally implemented upon the publication of the Swynnerton Plan in 1954, the Kenyan land tenure reform was motivated largely by colonial political responses to Mau Mau, and shaped by "modernization" theories current in all social sciences at the time. It had several ostensible agricultural goals, including the reduction of disputes, the facilitation of credit, and the creation of "security of tenure" to heighten farmers' incentives for investment. The authors of the Swynnerton Plan in the Department of Agriculture considered privatization of land (and a resulting concentration of landholdings) to be a "natural" and inevitable process. The same arguments are heard today in Kenya as the registration of rural lands continues; and they are echoed elsewhere in the continent as other governments formulate similar plans.

With the reports of over a dozen intensive field investigations now in, a strong consensus is emerging about how a state-run tenure reform in Kenya is turning out on the ground.¹ Land tenure reform in Kenya has appeared as a difficult process for farmers. In it, social relations are strained in several ways, individuals manipulate conflicting norms for private gain, and local land dealings arise over which no one, at local levels or in the government, has control. The land registers are quickly becoming obsolete. Land appears to be getting concentrated in fewer hands, but not necessarily in more productive

hands. Most of the economic goals of the reform have remained unmet (though other simultaneous developments, like the spread of cash cropping, have helped Kenya's economy dramatically). The composite picture of Kenya's tenure reform is not an encouraging one.

The Kenyan experiment is unique in scale but not in kind. In many respects, as described later, its outcome repeats other stories in the century-long history of attempts to transform African property systems to fit foreign models.

So this study addresses some simple questions. What does a movement toward private property in land consist of? Given rapid population growth, how inevitable is it? How does privatization with government direction differ from privatization without it? These are questions without simple answers, but ones that should be asked as African rural land policies are formulated and revised. Changes in land tenure and use in places where governments are trying to "individualize" tenure -- particularly in densely settled parts of Kenya -- are compared with those in some other places of comparable densities where they are not. These are areas of diverse societies, cultures, and cropping systems. The approach is neither to posit inflexible rules nor to catalog curious local peculiarities, but to identify broad patterns in a variegated picture.

Limits of the Study

The study is about some of the most densely settled rural areas of the continent: areas leading the trends in rural crowding and competition for land. Many of these are areas of rainfed smallholder agriculture, including mixed farming and herding.² Africa has two main regions of concentrated population: one extending north and south, roughly along the highlands flanking the Rift Valley and lake complex in eastern Africa, and the other going east to west along the coastal forest belt of West Africa, now becoming de-forested in parts.

Within these regions, the most heavily settled areas include parts of western Kenya, where the Luo around Lake Victoria, the Luhya, and Gusii or Kisii people live, and some adjacent parts of the Nandi and Kipsigis highlands; and the central Kenya highlands, home of the Bantu-speaking Kikuyu, Embu, and Meru peoples. They also include parts of the peripheral highlands of Tanzania, homes of numerous Bantu-speaking ethnic groups including the Haya in the northwestern corner of the country, the Chagga in the Kilimanjaro area, and the Nyakyusa in the southwestern highlands; and the Lake Victoria islands of that country, notably Ukara, home of the Kara. The densely settled zone of central Africa, includes the highlands of Rwanda, Burundi, and eastern Zaire.³

In West Africa, the largest areas of dense settlement are found in southeastern Nigeria, in and around the Igbo country, which stretches from southern forest to northern savannah, and in parts of northern Nigeria, where Hausa and some sedentary Fulani (Fula, Peulh) peoples live, some intermixed with Hausa. Well-documented parts of southeastern Togo where densities are equally high provide comparison.⁴

Most of these are hill or savannah areas; some merge into forests. Whereas the over-all density of Africa is 20 per square kilometer, all these selected rural areas include zones where local densities (different from over-all national densities) now reach well over 200, and in some they exceed 500.⁵ The comparisons in this study give some insight into the role of population pressures, as distinct from government interventions, in movements toward private property. Of necessity, the focus is on those densely settled peoples and areas best documented by anthropologists and sociologists, economists, geographers, demographers, and agronomists. Kenya and Nigeria, the countries with by far the largest high-density areas, receive most attention in this study.

Smallholder farming in Africa is seldom an exclusive occupation of its practitioners. Many migrate daily, seasonally, or over longer periods to work in cities, mines, or large plantations.⁶ Off-farm activities relate directly to land tenure and use in their homes. But land in cities and towns is not treated in this study. Nor are the wide areas depending mainly on nomadic or transhumant pastoralism, hunting and gathering, or fishing; the zones of large farms or plantations (over about 50 hectares); major irrigated areas; or resettlement schemes. Some of the conclusions would not apply to such areas, while they might apply to many densely settled smallholder areas beyond those cited here.

Main Points

Three main points are made. First, population pressures, cash cropping, and the privatization of land rights are all inextricably related. Where densities and pressures (in the sense of competition for holdings) are high and rising, land rights tend toward forms resembling private property except where there are organized political or legal countermeasures. This is especially so where high-value, permanent cash crops are grown. The conclusion is not that all African agrarian societies and their property systems must change along parallel lines, or that there are "stages" of development through which they must pass. It is, rather, that there are broad discernible "family resemblances" in the trends over time, though there remain some exceptions, reversals, and apparently misfitting elements persisting in the aggregate picture and in some of its constituent cases. As tenure systems come closer to resembling private property, complexities persist, rights proliferate, and members of various groups re-assert their interests in subtle ways. The trends toward private property have limits.

Second, directed forms of privatization resemble undirected forms in several of their features. Not all their effects are known, and not all are comparable. But they seem to differ more in speed and degree than in kind. Directed tenure reforms are harder and slower to implement than most of their designers have assumed at the outset. Not only have they proved unable to transform agriculture by themselves, but usually they have not produced updated records of ownership.

Third, the extra changes that directed privatization brings about are largely undesirable. Registration of titles is never merely a neutral and objective recording; the process itself can radically affect the distribution

of rights. It concentrates legal rights in the hands of men and introduces new kinds of confusion about titles, transfers, and mortgages. The clamor for title deeds national and local development planners hear tends to come from advantaged young and middle-aged men in the best position to benefit personally from permanent cropping or likely to migrate to work away from their holdings. Their voices are important, but listening only to them can give a misleading impression of local needs and wants. Other groups are more likely to be hurt by titling programs.

Directed tenure reforms, the study concludes, will be inappropriate for most of the densely settled areas where they are likely to be attempted in coming decades. They may be better suited for areas in exceptional circumstances, such as re-settlement schemes where immigrants from different regions lack generally shared norms concerning land claims or disputes. For most agrarian regions of the continent, scarce resources for programs and projects can be better spent on other kinds of development initiatives more realistic, less contentious, quicker to implement, safer in their social-economic effects, or longer lasting in benefits.

Notes (I: Introduction)

1. Some of the studies, whose findings are also discussed later, are Sorrenson 1967; Wilson 1972; Brokensha and Glazier 1973; Okoth-Ogendo 1976; Pala 1977; Coldham 1978a, 1978b, 1979; Haugerud 1983, 1989; Shipton 1985, 1988; Glazier 1985; McKenzie 1987; Ciekawy 1988; Fleuret 1988. Several of the sources are briefly summarized and compared in Cohen 1978 and Green 1987.
2. A "smallholding" is somewhat arbitrarily defined as a farm with less than 20 arable hectares.
3. These latter Francophone areas are referred to only occasionally in this study, but they would merit a comparable one.
4. This study cannot attempt complete coverage of all densely settled agrarian areas south of the Sahara. Some not touched upon in detail include parts of Ethiopia and parts of Lesotho and the "Homelands" of South Africa, areas whose economic and political circumstances would require extensive separate treatment.
5. The figure of 20/sq. km. for Africa comes from Africa Insight 17(4), 1987, p. 20. This source lists populations, surface areas, and densities for all African countries. Other convenient though dated population density maps covering the regions discussed here appear in IFAN 1979, for West Africa, and Morgan 1972, for East Africa.
6. For a general introduction and bibliography on African labor migrations south of the Sahara see Stichter 1985.

Principles and Definitions

Sorting Out Systems of Land Rights: Limits of Nations as Units of Analysis

Most African nations, being delimited by more or less arbitrary nineteenth-century boundaries drawn in European capitals, encompass widely varying ecologies and modes of livelihood within them. Usually these variations are only crudely reflected in national land laws. Population densities within many countries vary enormously. The sparsest dry parts of the continent south of the Sahara tend to be inhabited by pastoralists or semi-pastoralist farmers; the sparsest wet parts by swidden farmers, commercial forest resource extractors, or occasionally still, gatherer-hunters. Densities over most of the cropped areas of Africa fall short of fifty per square kilometer, but they rise in places to over 500. The two countries with the largest zones of high density, Kenya and Nigeria, run the full gamut from dense rain forest to sparsely vegetated arid land or true desert; but high-density areas are uncommon in the drier lands. Many other things may correspond closely with density, including climate and soil fertility, field rotation systems, and infrastructural development.

Other essential frames of reference include ecological gradients like forest-savanna gradients or altitudinal clines, and the crop zones to which they correspond. Settlement patterns vary broadly. Much of agrarian West Africa lives in nucleated villages with fields surrounding, while most of agrarian eastern and southern Africa now lives in spread-out communities where scattered homesteads are separated by their fields. There are exceptions, however, such as the Kenyan and Tanzanian coast, where compactly nucleated villages are common, and, on the other hand, the Igbo country of Nigeria, where farmers have commonly moved their homes from nucleated villages out onto their fields in recent decades. All of this is a caution. It is usually futile to try to compare whole countries as though each had a single system of land use or tenure.

Kinds of Rights

Then, what kinds of land rights matter? They must be divided into at least three types, as in this partial list:

1. Rights of use, including:

Passage
Hunting
Collection of bush materials
Mineral extraction
Water use
Grazing
Cultivation of annual crops
Cultivation of permanent crops
Building and residence
Disuse: exclusive rights for fallow
Disuse: exclusive rights of reserve for future expansion or resale
Destruction of land

2. Rights of Transfer, including:

Inheritance and succession
Lending and sharing
Transfer by free gift
Encroachment (sometimes locally approved in cases of need)
Land clientage: allowances of land use, for services or political support
Share contracting: land for labor, for seeds, etc.
Rental
Pledging without time limits
Pledging with time limits, i.e. deadlined mortgaging
Barter (land for other non-monetary goods or services)
Redeemable cash sale
Cash sale with limitations on eligible buyers
Unrestricted cash sale; permanent alienability
Speculation: buying and selling not for profit without use

4. Rights of Administration, including:

Allocation of user rights
Confiscation; termination of user rights
Dispute settlement
Regulation of transfers
Regulation of grazing, planting, harvesting, building
Management of land for public use
Reversionary or "ultimate" rights
Taxation

Usually not all the three main kinds of rights are held by the same people. Some can become concentrated into fewer hands while others become dispersed (see also Berry 1988a).

Kinds of Groups Used to Justify Rights

In Africa south of the Sahara individuals may variously claim rights in rural land through many kinds of groups. The list that follows is not complete, and probably nowhere do all these kinds of groups exist simultaneously, but these are among the most usual in agrarian areas:

1. Territorially defined units:

State administrative units (nations, provinces, districts, divisions, etc.)
"Indigenous" kingdoms, chiefdoms
Villages, neighborhoods, wards
Irrigation or settlement schemes

2. Ethnic (linguistic, cultural) groups and sections

3. Kin groups, quasi-kin groups, and domestic groups:

Clans (usually patrilineal or matrilineal)
Lineages (patrilineal, matrilineal, ambilineal)
Extended families
"Compounds", multi-house homesteads
Households (variously defined as single or multi-house units)
Elementary families (of a mother and her children)

4. Gender-based associations

5. Age groups (may include formal or informal age-grades)

6. Other Associations:

Farmwork or herding groups
Water-management groups (e.g. irrigation channel associations)
Religious sects, denominations; churches, mosques
Voluntary associations (clubs, sodalities, civic lodges, secret societies)
Corporations
Co-operatives
Communes and collectives

All but about three African nations south of the Sahara (Lesotho, Swaziland, and arguably Somalia) have more than one major ethno-linguistic group dividing their rural areas.¹ In some countries these occupy fairly discrete territories (as in Kenya or Nigeria), in others not (as in The Gambia, or parts of Senegal, where members of an ethnic group they may predominate in an area but live in mixed communities within). Forms of local leadership and social organization vary vastly. In some pastoralist systems, ethnic sub-sections, clans, and age-grades are important modes of political organization. Sparsely populated agrarian areas are likely to have territorially-based chiefdoms and neighborhoods with headmen. Denser ones are more likely to have kin groups like lineages whose elders exert much influence over land affairs, though some, notably the mainly Hausa-speaking close-settled zone of northern Nigeria, do not. All these principles can overlap, however, and most societies have more than one at work.² Colonially and

nationally imposed local administrators have overlaid but seldom expunged these local modes of leadership.

Principles of grouping can overlap. For instance, in Kenya, some of the provinces and districts roughly coincide with ethnic group territories. Chiefs, headmen, and lineage heads or other elders may exert varying, overlapping claims amounting to a "hierarchy of estates" over a particular piece of land, but this may be less formal than the term suggests.³ In parts of Senegal and The Gambia, groups growing collective millet fields are formed on the bases of age, gender, and voluntary association simultaneously.

Lineages and Clans

The African rightholding groups most often misunderstood by foreigners are kin groups or quasi-kin groups, particularly lineages and clans.⁴ A lineage is a group of persons who claim descent from a common ancestor, usually through males (patrilineality) or through females (matrilineality); occasionally through either (ambilineality). A clan is somewhat similar, but by conventional definition, larger and deeper.⁵ Lineages may grow into clans; both may subdivide into new ones as they grow over generations.

Not all African societies recognize lineages and clans. Patrilineal systems are far more common than matrilineal ones in Africa. The main exceptions are in the "matrilineal belt" stretching in large patches from southern Congo People's Republic across the continent into parts of Mozambique; in matrilineal parts of southern Ghana; and in the unusual ambilineal regions of Ethiopia.⁶ Matrilineality does not imply matriarchy, and neither patrilineality or matrilineality should be assumed necessarily to help or hinder women's rights in land, though patrilineality is likely to imply that a married woman depends on her husband for land.⁷

Members of a lineage or clan may or may not live together or farm on adjacent lands. Where they do, lineages tend to provide important structure and process to land dealings. They are likely to provide a mechanism of allocation to active users, to shape land markets and non-market exchanges, and to provide some sort of security of tenure to members. Kinship systems change over time, partly as a response to population pressures. Lineage principles, particularly patrilineality, often become more important, not less, in local land matters as densities rise or as governments attempt to transform tenure.

How do kin groups and other local groups affect individuals' chances for access to arable land in Africa? By and large, the following classic statement still applies:

Certain principles will be found to be of general application: (1) Every person has the right to land for cultivation in virtue of his membership of some group; (2) he has the right to remain in undisturbed occupation of this land and to transmit it to his heirs; (3) the group, or its representatives, have the right to veto any creation of rights in favour of non-members, and in certain cases to re-allocate land which has gone out of cultivation (Mair 1969: 54-5).

Women's land rights, not specifically mentioned in the quotation, usually depend on birthright before marriage, and later on marriage itself, and thus they depend on group membership or affiliation as much as men's. But lineages and clans may sometimes be more important as ideal structures than as principles of real behavior.

Rights Deriving from Labor

"Labour creates rights" sums up another principle commonly found in landholding systems across Africa.⁸ The investment of work in clearing, land preparation, or planting gave an individual or family exclusive rights to the harvest of that land's produce. In only some societies does it give them the right to plant again in the following season. While trees are commonly conceived of as public property for firewood, they become private property when specifically planted, or when prepared for palm wine tapping. Much of the flexibility in various kinds of land allocation systems (including lineage systems and chief and village headman systems) has derived in the past from local authorities' discretionary power to allocate and re-allocate land to the tiller or planter. European-imposed or imitated systems in which capital, without labor, can buy rights to land are based on profoundly different premises. The clash or co-existence these systems where governments have tried to register land as private property allows scope for many misunderstandings.

Persistence and Resurgence of "Traditional" Allocation Principles

If the past two decades of African social science have shown anything, it is that the landholding groups once deemed "traditional" are not just disappearing and being replaced by others more "modern". Instead, groups like clans and lineages, or ethnic sections, continue to re-appear, often in adaptation to new or "modern" institutions like land adjudication committees and land control boards, or on occasions like court trials or auctions of mortgaged land. They are not archaic residues. They are ways of staying afloat or getting ahead that are constantly created, re-defined, and re-invoked. Similarly, economic activities like reciprocity, barter, and share contracting are not simply dissolving with the spread of land markets, as once assumed. They may re-appear within markets or re-appear as useful contemporary alternatives to them. Traditions are re-invented, re-negotiated, and revised under changing historical circumstances. Individuals manipulate them to gain or hold advantages over others, sometimes in the names of collectivities. Older and newer principles often interweave, and sometimes one kind transmutes the other.

Multiple Systems of Tenure Co-Exist

Multiple systems of land rights frequently obtain among the same people at the same time. Rural people may locally distinguish them

- By place: Note for instance the distinction between fadama swamplands rented and sold, and uplands not exchanged this way, in Kano, northern Nigeria (Grove 1962:125). Or this among the Kofyar, near Jos: "The same hill Kofyar who insisted on field boundaries marked by stones and took cases of theft and trespass to court did not acquire the ownership of migrant farms on the plains, where they grew yams, sorghum, and millet for sale" on shifting holdings (Netting 1982: 470). Complex combinations of principles may be most common in the intermediate zones between forests and savannas (Richards, 1983: 25).

- By time of year: Over most of the continent, where mixed field crops are grown, the land reverts to open grazing for livestock after harvest. In fallow time, too, it may be used for open hunting.

- By crop or enterprise: Trees are usually surrounded by special rules and conventions about sales, which often differ markedly from rules about selling the land they stand on. These rules vary enormously.⁹ Trees may be privately owned while the land on which they stand is not: this the case, for example, in parts of Senegal and The Gambia, in some cocoa-growing areas of Ghana, and in some palm-growing areas of the East African coast. In some parts of Africa, the rights to land, the trees on the land, and the fruit on the trees may be held by three different people or groups. In many areas, land clients or tenants-at-will have been locally forbidden to plant trees; to do so would give them a permanent foothold on the land. As discussed later, cash crop trees have often become saleable before the land they stand on, and this land before other land. Planting or working on a tree usually establishes a special claim to it.

Unit Alliances

In rural Africa as elsewhere, everyone belongs to social groups of different kinds and scales. Stronger individual rights do not necessarily imply a decline in the rights of all groups. Rather, individuals rely on some kinds or levels of groupings, often the state, to support their claims against other levels of groups, sometimes intermediary groups like lineages, clans, or communities. This is a process we may call "unit bonding"; it results in "unit alliances". What we sometimes call "individualization" or "privatization" can be just a shift in the kinds of groups to which people appeal to support transfers or claims for exclusive use.

Privatization

Further, "privatization" can mean many things. Here the term has these meanings: to increase the rights of an individual to restrict others' access to, use of, or control over land, or to transfer rights over it.¹⁰ These changes often occur together, but not necessarily. Individuals who succeed in buying land may still not prevent other relatives or neighbors from using it, and they may choose not to do so -- something many foreigners misunderstand.

Commonly rural Africans choose inclusion rather than exclusion as a strategy for gaining wealth or power.¹¹

Privatization has multiple causes. These include demographic, economic and political pressures, and cultural diffusion. This report pays particular attention to population pressure (here meaning competition for land), a variable linked to many others. In the absence of strong legislative or organized political countermeasures, it usually seems to bring arable land closer to becoming an exclusively owned and privately tradeable commodity.

Rights of Exclusion

Broadly, in agrarian sub-Saharan Africa, grazing, hunting, and gathering rights tend to be freer than cultivation rights, and passage rights more open still. Until European times, it was practically unheard of in Africa for anyone to reserve land for future use; i.e., to hold a right of disuse. To privatize land can mean restricting access for any purposes, including disuse, against the interests of other potential users.

Changes in Rights of Transfer

A move to private property can mean these changes, in behavior or norms: (a) more transactions, of more kinds, by individuals, (b) more commodities involved in them, (c) more use of money in them, (d) more people, or kinds of people, engaging in them, and (e) more freedom from others' rights of administration or ancillary rights of use or disuse.

Only a few of the many kinds of land transactions that rural Africans practice are named in English. The myriad ad hoc, unnamed, individually tailored arrangements that farmers and other rural people are constantly working out among themselves defy classification. Not only can they can change farm to farm, but also from season to season.¹²

Land Transactions: Evolutionary Sequences?

As a society becomes more densely populated, commercializes its farming, or undergoes a directed tenure reform, some kinds of transactions become more common and others less. But the order is not fixed. Sales may become widespread before mortgages, for instance, or vice versa. Nor are transactions practiced necessarily approved of. If transaction patterns evolve, they do so on multiple lines: a shift away from redeemability may or may not come with a shift from barter toward cash payments. Nor is a movement from barter toward cash irreversible, as new international barter deals remind us today. But whatever the sequence, a broader range of options (sales, loans, mortgages, etc.) give individuals more leeway to manipulate systems, spurring a rise of private property, for better or worse. ("Evolution" can mislead with implications of progress and a set direction. "Adaptation" is a better term.)

In the past, Europeans and North Americans favoring African land markets have usually chosen the colonial or independent state as protector of individual rights, assuming that other, more local kinds of groups cannot serve the purpose or impede free trade. Policy makers have often neglected to ask, what are the local groups on which individuals rely, and what kinds of individuals would benefit from tenure reform? They have made optimistic assumptions about what African colonial or national governments could achieve at local levels. Experience has shown that individuals are more deeply embedded in a variety of local associations, institutions, and networks than some assume. These mechanisms are often resilient, flexible, and adaptable, and national governments cannot take over control and authority in land matters as easily as expected. Recent field research has also challenged the assumption that local mechanisms for allocating access to land are stagnant and inefficient. Whether these fit conventional western definitions of "markets" is another matter.¹³

"Security of Tenure" and its Insecurities

The term "tenure" often causes misunderstanding. To some it means all rights of land holding, including temporary, partial, subsidiary, or dependent rights. To others it means only private property, as in freehold tenure. (In this study it is used with the broader meaning.)

The idea of "secure tenure" causes more misunderstanding still, and in important ways. Some western development planners unfamiliar with rural Africa assume that small farmers there live under the fear of dispossessed of their land by chiefs, headmen, or neighbors, and that this uncertainty reduces their propensities to invest. In some special circumstances this is probably so, for instance where members of different regions and ethnic groups meet at the frontier between agricultural and pastoral zones or in settlement schemes. But most authorities on African land systems agree that such insecurity has not been a usual or chronic condition of African smallholder economies. As even a leading proponent and architect of African land registration systems states,

the significant point is that security of tenure, that vital consideration when good land use is concerned, can be, and frequently is, enjoyed without any concrete evidence of title other than occupation.... It does not necessarily rest on statutory title or on a system of written record as overenthusiastic advocates of registration sometimes assert... there can be, and often is for all practical purposes, security of tenure without any formal record at all; and this may be so even under a system of customary law. This becomes apparent when we contemplate some of the development that has taken place in Africa. Where conditions have been favourable, there has been much good development -- development by individual farmers -- in land held under customary law despite all its shortcomings. We need only look at Chagga coffee in Tanzania, cocoa and groundnuts in West Africa, or cloves in Zanzibar. Cotton in Uganda has come as much from unregistered land as it has from mailo land where title has been registered for fifty years or more. In these areas there has clearly been security of tenure within the framework of customary law which has been quite adequate to

enable extensive development to be effected... This security has existed as a fact, whether or not there has been any evidence to prove it. (Simpson 1976: 8-9)

As seen later in the Kenyan case, the introduction of written titles in Africa seems more often ironically to reduce security of tenure by making it easier and more tempting to sell out to a wealthier buyer in hard times: an old truth still often neglected.¹⁴ "Too often has it been shown that there is no more certain way of depriving a peasant of his land than to give him secure title and make it as readily negotiable as a bank-note" (Simpson 1976: 236). Nor do the dangers disappear where governments attempt to restrict or control the transfers.¹⁵

African governments cannot easily legislate controls over transfers. In the colonial period, numerous African governments restricted land dealings deemed dangerous to Africans by passing laws prohibiting land sales or leases between members of one "race" and another. In some cases, at least, the rules were fairly strictly enforced.¹⁶ But the ethics were of course always questionable, and changing attitudes on race and ethnicity have made this kind of "safeguard" no longer politically feasible.¹⁷

"Security", Gender, and Family

Thorny issues of gender and family relations are involved in attempts to issue "security of tenure" by rule or title. In a continent where marriage does not always mean communality of property and income, and where one spouse often holds the other's transactions in check, heightening security of tenure for a man can reduce it for his wife or sons.¹⁸ Security for an individual does not necessarily mean security for a family. It may be, indeed, the contestability of a resource like land within the family that constitutes the security for individual family members: one cannot rashly sell it because others will object.

Rural people may avoid land sales and purchases for many reasons. These may variously include not only calculations of economic benefits and costs, including opportunity costs, but intra-familial checks on the allocation of money, attachment to graves or ancestral traces on the land, religious and other cultural sanctions including taboos and curses, and beliefs concerning the "tainting" of money from land sales and its unusability for certain other transactions (Shipton 1989). These cultural barriers, far from being mere "obstacles to progress", often appear to serve as safety nets by discouraging unwise sales.

Not (Yet) a Continent of Landlords and Tenants

In terms of tenure security, African small farmers differ from their counterparts in Latin American and large parts of southern and eastern Asia, who are more likely to be tenants.¹⁹ In recent decades landholdings have generally been better distributed in Africa than in either of these continents. Share contracts seem to be getting more common and tenancy might

emerge further if holdings become more concentrated into fewer hands, but in most places it is not a major problem now.²⁰ More comparative research is needed, but the apparent differences at least seem to call for separate regional policies on tenure reform. Probably the more local they are, the better.

Concentration and Decconcentration: Both Can Occur at Once.

How does land distribution change? Land concentration is any accumulation of control or ownership of land or its resources, or any increase in access to these, for one group or category of persons at the expense of another or others less privileged.²¹ More than just a simple statistical shift, it can be a many-sided process: it can mean changes in the relations between genders, between ages, between city and countryside, or between farmers and herders. In a single country, as in Kenya, re-settlement schemes may de-concentrate holdings in one place while other processes are apparently concentrating them in another. Moreover, processes of concentration and deconcentration can both occur in the same time and place, depending on what kinds of rights are changing hands (see also Berry 1988a). Rights of administration can be concentrated within a government bureau while rights of use are disseminated to new settlers and their land clients or heirs.

Vicious Circles in Land Concentration

Some kinds of land concentration, once underway, may worsen by subtle but familiar processes, which may involve non-agricultural as well as agricultural wealth.²² Land degradation on holdings too small to allow crop and field rotation weakens the economic positions of the holders. It makes them more likely to need to sell land (while lowering the land's price or value for buyers). Poorer landholders may be forced to pledge or sell parts of their land to richer ones in seasons of poor harvests or periods of falling producer prices, and thus to borrow again. The "debt ratchet" is paralleled by other "ratchets" in commodity markets. Larger farmers across the continent commonly take advantage of price fluctuations, buying at harvest and re-selling at higher prices in the scarce season, often to the same farmers, thus providing a seasonal "food pawnbroker" service to their neighbors. To sellers who lack withholding power, the process can be both useful in the short term and impoverishing in the long term. It may speed land loss to more solvent neighbors. A caveat is that landholding size does not always correspond neatly with income or wealth more generally.²³

While observed and reported upon by many, land concentration is hard to measure statistically. There are few reliable numbers on its speed from anywhere in Africa, and more research is needed.

Subdivision and Fragmentation: Not Necessarily Bad Things

Subdivision and fragmentation are not to be confused. Subdivision means holdings are repeatedly divided, whether the resulting smaller ones remain together or become separated. Fragmentation means the splitting apart of holdings (the opposite of consolidation). Either can occur by devolution, swapping, sales, or other transfers.

In much of eastern Africa at least, splitting in land succession or inheritance ("diverging devolution") appears especially common in areas of dense population, whereas single-heir devolution is more common in more sparsely settled areas (Shipton 1984a, 1984b).²⁴ One reason is that subdivision in dense zones helps absorb labor, since rural crowding tends to deny easy alternative fields for young adults without inherited land. Governments' attempts to regulate subdivision by imposing legal minimum holding sizes have usually failed. Even where state authorities have stipulated vaguer guidelines about avoiding "sub-economic" holding sizes, as in the guidelines given to the Kenya land control boards in 1956, subdivisions have continued apace.²⁵ Under such policies, in Kenya and elsewhere, farmers usually just refuse to inform the authorities about their real subdivisions.

For over half a century, foreign-designed development programs in Africa have been fairly consistently biased toward and consolidating fragmented holdings. The penchant has now been inculcated into some government land and agriculture departments. It is based on optimistic assessments of the potential for growth, rather than on concerns for risk-avoidance and distribution. Research in the last two decades has shown that fragmented holdings often make more sense than once assumed, and open to serious question whether expensive consolidation programs have been justified.

Fragmentation has pros and cons.²⁶ Its main economic disadvantages are that it may hurt chances for economies of scale in input supply, crop marketing, and transport; it may hinder mechanization; it adds travel time to farming; and it may make it harder to control losses to birds, other animal pests, or crop thieves. It requires complex adjustments of inputs and strains to obtain maximum yields. It means that extra space is taken up by boundaries and corners. A social disadvantage is that with fragmented holdings, there are more, and more complex, boundaries between farmers' fields, and thus probably more potential for boundary disputes. But these considerations are only a piece of the picture.

The economic advantages of fragmentation are greatest where climates or soil conditions vary quite locally, as in hilly or mountainous ground. For an individual, family, or other small production unit, spreading a holding over several parcels in different can allow a greater variety of crops and varieties. It also spreads scarce labor and cash inputs over a season or year, and smooths out the flow of income. Even more importantly, it also spreads out the risks of crop or market failure: if the maize is flooded by the river, or if monkeys eat the groundnuts by the forest edge, the potatoes on the hillside or the cassava in the drained soil may still yield a crop. If a neighbor lets his cows wander into the maize field, there is the finger millet in the other plot down the hill. Tropical African rain and hailstorms can be both very heavy and highly localized: they make farming in one place extra risky. The phenotypic homogeneity of hybrids can make it important, if one wishes always to get some harvest, to plant the seeds in a variety of growing conditions, sacrificing maximum yields for security. Fragmentating stands of a particular

crop can hinder the spread of plagues.²⁷ In these several respects fragmentation can be a sensible adaptation to poverty and uncertainty.

Fragmented holdings may also be preferred for social advantages they offer farmers. One is that they help conceal from neighbors and relatives (not to mention creditors or tax collectors) the amount one's harvest, and sometimes the number of one's livestock: valued functions in most parts of Africa, where ostentatious wealth brings demands for sharing. Where competition for land grows keen, elders deciding on shares of land to be devolved to juniors sometimes find that giving each part of two parcels reduces jealousies and suspicions (Whisson 1964: 86-7). Separated parcels also allow members of the group the opportunity to get away from each other when they wish -- no trifling social concern where home compounds or villages are tightly arranged. A study of Meru District, Kenya, showed that consolidation of holdings meant that families became specialized into particular agro-ecological zones. This this changed their access to co-operatives that handled particular crops, and thus to political power (Almy 1979).

What are the limits of fragmentation? Among the Taita of Kenya, individual men were found to own up to 37 plots in 1987 (Fleuret 1988). Some of the problems consolidating fragmented holdings can cause are surmountable in other ways. Where unified holdings are arranged in long, thin strips running vertically on a hillside -- a common pattern in densely settled parts of eastern Africa, for instance among the Kikuyu or Gusii of Kenya or northern Sukuma of Tanzania -- they can take advantage of a catena of agro-ecological zones or soil types, minimizing risks without fragmentation.

Consolidation can sometimes "spontaneously" occur by swappings or sales, but to be implemented in whole communities it usually needs some involvement by local or national government. A recurring problem that government consolidation officials encounter is in negotiating equivalencies of farmers' new and old holdings, particularly in balancing quality with quantity. Here they must rely on the deeper familiarity of locals who know the histories of the pieces of land concerned.

What guidelines can be set out on fragmentation? A reviewer of the literature on the subject worldwide offers the following as hypotheses noting the absence of cost-benefit analyses of land consolidation in the literature and calling for quantitative research (Bentley 1987: 61-3):

1. "Areas should be left fragmented that have dramatic microenvironmental contrasts, where risk is high, or where the farm population is growing."
2. "Areas with important ecological microzones should be left fragmented. Fragmentation is most pronounced and most beneficial in mountains".
3. "High-risk areas, either fragmented or not, should be left fragmented."
4. "Where the rural population is dense (often growing), so that there is a large (and increasing) supply of labor and a high demand for land, land should not be consolidated."

He concludes, however, that

Land fragmentation may be a problem at the national policy level when technical and social changes have reduced risk substantially (through irrigation, pest control, high-yield crops, insurance, pensions and other social welfare programs for rural people, etc.); when the agricultural labor force is being absorbed into off-farm employment ... and when machines are being used heavily (p. 63).

Little of Africa south of the Sahara would match these latter conditions, while a number of the more densely settled parts (where the issue of consolidation has usually arisen) would match the counter-indications.

Consolidation and Registration: Not Necessarily Conjoined

One more factor is crucial: whether farmers want consolidation. The Kenya case shows how opinion can vary locally. Generally the Kikuyu of central Kenya have accepted consolidation while the Luo of western Kenya have rejected it.²⁸ Consolidation is extremely hard to implement without public approval and cooperation.

Though consolidation and registration have sometimes been planned and implemented together, neither necessitates the other. The Meru case in central Kenya (Bernard 1972) suggests that many farmers who had coffee trees in the 1950s and 60s wanted private titles, but that these were the farmers who slowed down the process of consolidation that came with title registration, because they did not wish to lose their trees. The Luo case southwestern Kenya (Sytek 1965, 1966; Shipton 1988) shows that consolidation can grind to halt while registration continues steadily along.

Notes (Chapter 2: Principles and Definitions)

1. The Somali case is debatable in this regard, depending on border definition among other things.
2. See Goody 1977, Shipton 1984a, Shipton 1984b, and other sources cited there for some West and East African regional comparisons anchored in local ethnography.
3. Gluckman coined the term and his classic works explore its meanings.
4. This extremely simplified discussion of lineages and clans gives only some rudiments necessary for policy and project purposes concerning land. Fuller discussion appears in almost all introductory anthropology texts; for more sophisticated treatments see Fortes and Evans-Pritchard 1940, Forde and Radcliffe-Brown 1950, Downs and Reyna 1988. Scholars of Africa have analysed and debated these topics for generations.
5. Whereas lineage members can trace links between themselves and the original ancestor, clan members cannot. Definitions vary, however.
6. On land tenure systems among the ambilineal Amhara of Ethiopia, see Hoben 1973. Many African societies pass inherited land rights along a different line from other property.
7. A rule of descent does not necessarily imply a rule of postmarital residence. There are many matrilineal societies where husbands join their wives' families upon marriage, but a few others (like the Ndembu of Zambia and Zaire) where women move upon marriage to their husbands' family homes.
8. Meek 1946: 27. The principle resembles the labor theory of value as set out in John Locke's Second Treatise of Government.
9. See Fortmann and Riddell 1985, Fortmann and Bruce 1988, and Berry 1988 for surveys for general statements, comparisons, and bibliographies on African tree tenure systems.
10. "Individualization" usually means the same: more exclusivity or transferability.
11. A main theme of work in progress by Sara Berry.
12. Robertson 1987 provides the best available discussion of African share contracting as an almost infinitely variable and flexible institution. And these are only one class of local exchanges.
13. See Robertson 1987 and sources reviewed in Peters 1988, Jones 1988, Berry 1988a, 1988b. Collier 1983 provides a contrasting interpretation.

14. Liversage 1945: 109; Hailey 1957: 807; Mair 1969: 48; Simpson 1976: 236; Shipton 1988; and Peters 1988 make the observation.

15. American history embarrassingly illustrates the dangers of too fast a transition to a private title system among non-literate people accustomed to other forms of security: the General Allotment Act (the "Dawes Act") of 1887 for American Indians created eventually saleable individual and group allotments. Even though a restriction was placed on sales for twenty-five years, about two thirds of Indian lands were alienated within forty years. India and Burma offer some comparable historical cases (Simpson 1976: 236).

16. Distinctions between "Africans" or "Natives", "Asians" (or "Indians" and "Arabs") and "Europeans" were the most common. Meek 1946 and Hailey 1957 summarize the histories. See, for example, Meek's chapter on Zanzibar (72-5). South Africa is of course the most dramatic case remaining.

17. Of course, broader colonial policies were not so single-sidedly beneficent to Africans as some of these rules might appear on the surface.

18. Two decades of feminist-inspired research on African households suggest that marriages tend not to be as "communalistic" as in Europe or North America, and that other kin ties (father-son, mother-daughter) are often more. Mook 1986 includes several representative articles.

19. Recent research by Gershon Feder and Tangroj Onchan reported in the American Journal of Agricultural Economics, The World Bank Research Observer, and elsewhere supports the theory that security of title (and tenure) stimulates investment in Thailand and perhaps elsewhere in eastern Asia. By contrast, Mair generalized on Africa that insecurity of tenure tends or tended to be tied to subjects' political disloyalty to chiefs or headman; "here, and only here, can we speak of insecurity; and it is worth noting that it is not the insecurity of the tenant in relation to a landlord" (1969: 55). Mair's statement remains broadly true in Africa today.

20. The statement on distributions is based on broad-based comparative research in progress by agricultural economists Bruce Johnston and Thomas Tomich. See Lott 1979 for the most comprehensive collection of country-by-country statistical breakdowns of land concentration on Third World countries. In a different vein, Robertson 1987 describes widespread African share contracting arrangements, distinct from tenancies.

21. Concentration should not be confused with "consolidation". The latter usually refers not to a concentration of holdings into fewer hands, but to a unification of fragmented holdings.

22. Some of the "vicious circles" in poverty, including debt ratchets, are well described in Parkin 1972, on coastal Kenya, Haswell 1975, on The Gambia, and various writings of Polly Hill on Ghana and Nigeria, among many other sources. Chambers 1983, ch. 5 is a popular but useful general statement.

23. In Embu District in Kenya, Haugerud has found that "Although the surplus [food] producers do own more land on average than do other small farmers, land ownership in Embu is highly skewed and has no statistically significant relationship with surplus production" (1988: 176). The Kendall's Tau

correlation coefficient between "land ownership" and "wealth score" (a weighted additive scale of 14 kinds of assets) was .09; the correlation was not significant at the .05 level (page 176). See also recent writings by Sara Berry.

24. In many sparsely settled areas, however, including some with swidden systems, field rotations and mobility have made inheritance unimportant in the past.

25. The policy on "un-economic subdivisions" was stated most clearly in the Ministry of Land and Settlement's "The Land Control Act, 1967: A Handbook for the Guidance of Land Control Boards", published 1969. The policy (on this point only) was reversed in the Kenya national Development Plan of 1974-8, vol. 2, 216-7.

26. Bentley 1987 reviews the literature on land fragmentation worldwide. Several of the following pros and cons are discussed more fully there.

27. This is not, of course, a necessary advantage of fragmentation, since two farmers can always plant the same crop in parcels side by side.

28. The reasons for this difference would be worth a separate study. Among them are that the Luo in the crucial periods have been generally less integrated into the market economy and more suspicious of government interventions in agriculture.

Part II

**WITHOUT TITLING PROGRAMS:
ADAPTIVE CHANGES IN LAND USE AND TENURE
UNDER HIGH POPULATION DENSITIES**

Population Pressures on Land:
Meanings, Likely Correspondences, and Caveats

The following pages describe "secular" or long-term changes occurring in African systems of land use, control, and allocation as rural population densities rise to high levels. If Africa's population continues growing at its annual rate of about 3.0 percent -- the highest rate of any continent -- it will double in about 23 years. Several of the countries that already include the largest areas of high-density settlement, including Kenya and Nigeria, have among the highest population growth rates on the continent; the highest documented is Kenya's at approximately 4.0 percent.¹ These countries, and a few others with comparable densities, provide some indications of changes likely to occur elsewhere on the continent in future decades.

Some Causes of Rapid Population Growth

The causes of rapid population growth in African agrarian societies are so numerous and complex that they cannot be treated in detail here. They have variously included:

(a) The effects of exogenous medicine in raising birth rates and lowering death rates. Other contributing causes may include and improvements in regional, national, and international food redistributions during shortages and famines.²

(b) Familial strategies of rural people adapting to poverty. Having many children can be a sensible adaptation for a family, in some ways, if harmful in other ways for a population in the aggregate.

(c) Territorial confinements. In colonial times these resulted from the imposition of national, provincial, and district boundaries with controls on migrations, and from large-scale land alienations by European and Asian settlers. Land alienations were far more significant in eastern and southern than in western Africa.

(d) Migrations and re-settlements. These include directed and spontaneous movements into zones cleared of trypanosomiasis or onchocerciasis, or new irrigated areas; and, since African nations have attained independence, into areas formerly held by alien settlers.

(e) Intensification of land use. This can allow higher densities but may not necessarily otherwise cause them. The adoption of exogenous high-yielding food crops like cassava and hybrid maize has also helped sustain high densities, while allowing some diet deficiencies.

Population Densities and Pressures: Some Simple Distinctions

Population density is a number of persons per unit of land, a simple numerical ratio. Population pressure, on the other hand, can mean at least two things. One is the competition or demand for resources: a pressure on farmers.³ This is function of many factors, including resource endowments, density, and technology, attitudes toward land, and sometimes other factors like markets. The other meaning is environmental degradation: a pressure on the land itself. Studies failing to distinguish the two kinds of population pressure have caused much confusion. The two often coincide, and one can contribute to the other, but they are not the same.

Problems in Assessing Carrying Capacities

How much population densities contribute to population pressures of either kind depends on the carrying capacity of the land: the number of persons who can subsist on it.⁴ Population pressures and carrying capacities are much harder to estimate than raw population densities, the measures still being very crude. An important factor is whether the local people grow mainly tubers or grains. Tubers like cassava or yams, often used as staples in African forest agriculture, tend to produce higher yields, by weight or volume per unit of land, than do grains, which are more likely to be staples in savannah zones (where, however, tubers are frequently also grown and consumed). Bananas and plantains also produce higher yields than grains, though, like cassava and some other tubers, they lack vital nutrients. Local preferences for maximizing livestock holdings frequently clash with project planners' assumptions about optimal herd sizes.⁵

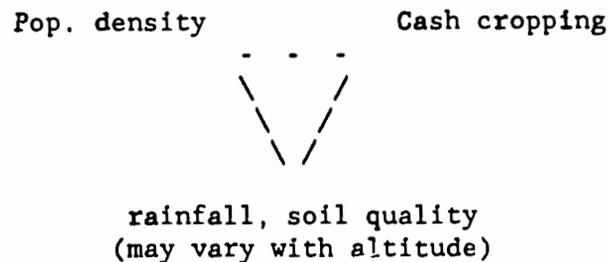
Cash cropping, labor migrations, and local off-farm activities to generate income confound measurements of real carrying capacities. Fluctuating market prices, among other things, make their contributions to subsistence hard to assess. In the most densely populated parts of rural Africa, for instance southern Kakamega District in western Kenya, it is clearly off-farm earnings that are allowing the population to subsist at its present densities of over 500 per square kilometer in places. Still, high densities correspond broadly with high soil fertility and rainfall (and apparently therefore carrying capacity) in the western Kenyan region of which this area forms a part.

Correspondence between altitude, rainfall, and population density in some areas

In much of eastern Africa rainfall tends to vary directly with altitude. In some areas, including Kenya and Tanzania, rural population density tends to vary with both, at least up to the altitudes (generally over about 2,500 meters above sea level) where cold temperatures begin to stifle agriculture in most important crops, though still allowing grazing. Below that point, carrying capacity seems to correspond fairly closely with altitude (Ominde

1963; 1984, ch. 1), though off-farm incomes have been an important part of livelihoods in most densely settled areas.

In central and western Kenya, and elsewhere in eastern and central Africa, both the ecological conditions of the highlands and the heavy population densities sustained have induced farmers to grow high-value cash crops, notably coffee, tea, and pyrethrum. High-value cash crops can allow a higher density of settlement than food cropping alone would allow.



Where ecological conditions allow both high population densities and cash cropping, these two may spur each other. How density and cash cropping both affect soil quality over time cannot be discussed here, but the correspondences are not simple. Much of the worst soil degradation in Kenya, as in some other parts of Africa, appears not in the zones with the highest densities, but in middle density zones. The relationships suggested above might be curvilinear. The main point is that ecological conditions, population densities, and the rise of cash cropping are all related. Though similar interlinkages appear in some other parts of Africa with long altitude gradients, not enough comparative research on the topic has been done.

Hypothetical Links between Population Pressure, Cash Cropping, and the Emergence of Private Property in Land: A Systems Approach

As the social and cultural dimensions of land use are factored into the picture with the ecological and agronomic ones, a systems approach will be necessary to test some complex interactions. Though based on observation and comparisons, these are not all systematically tested yet. This is the central theory: that trends toward high density, cash cropping, and strong individual rights in land are all likely to feed into each other.

"Privatization"
of land rights



Pop. pressure

Cash cropping

To summarize how each appears to contribute to each other:

Population pressure contributes to cash cropping when cash cropping can produce higher values of farm produce per unit of land than food cropping or herding can. This condition characterizes nearly all the fertile highland areas of Africa below the zones too cold for farming.

Population pressure contributes to privatization when competition for land arises, and when buffer zones of uncultivated land between arable holdings get used up by gradual encroachments. Competition for land contributes to disputes, which lead to elaboration and sharpening of rules, in "formal" or "informal" legislative and judicial systems. But the individual is not necessarily the only unit that emerges as an important and legitimate right-holder. This depends on what kinds of families or other units are already valued in society. The rules may be locally devised, or borrowed, e.g. from western European or Islamic traditions favoring free transfer.

Cash cropping contributes to privatization when

(a) Long-term investments in tree crops require some special assurance that the individual will not lose the rights. This is most often felt to be so in densely settled areas.

(b) New cash from the crops gives some individuals or groups substantially greater purchasing power than their neighbors, and gives them reason to prefer to play by rules of private property. A trend toward individualism usually affects some before others.

(c) State or local restrictions on private transfer are absent or ineffective. Sometimes they are ineffective because they mismatch, allowing manipulation.

Cash cropping contributes to population pressure (as competition) when:

(a) The cash crops give land a new or higher monetary value and this contributes to a land grab. Rises in land values may induce landholders to try to hold land in reserve for their heirs.

(b) The cash crops (or associated inputs or cultivation techniques) impoverish

the soil, limiting arable areas left.

(c) Infrastructure like new feeder roads takes up arable land.

Privatization contributes to cash cropping when it gives holders the assurance or illusion of secure tenure. Planting tree or bush crops requires more confidence in tenure security than planting annual crops, because of the time they take to mature and the opportunity costs of the land in the interim.

Privatization contributes to population pressure when a land grab squeezes poorer or weaker rural people onto fixed or confined holdings.

Rising population densities, movements toward cash cropping, and the emergence of private property are all closely related, but the links between them are conditional ones.

Comparisons, Causes, and Effects: Caveats

The following pages outline changes in agriculture and rural economy that correspond with rises in population density and pressure. Some are changes observed over time in longitudinal (i.e., diachronic) studies, observed from material evidence, or consistently reported by locals. Some are changes over space, observed by moving from place to place. Inferring one from the other is risky. To ignore either kind of change, however, is to miss valuable clues about the other. More and better longitudinal studies are needed; so are better geographical comparisons. The evidence available now connecting demographic trends with changes in land use and tenure is mostly just indicative, not conclusive.

Second, causes and effects seldom come cut and dried.⁶ Population growth occurring across the continent is a "given", in a sense, but among its apparent effects, perhaps none is inevitable or universally true, and some affect it in turn. They are regularities, general tendencies observed in the field and in the most reliable literature. Population growth is not the only variable contributing to the changes described here. It merely seems to connect with them in ways that are becoming predictable. Much remains to be done in systematically testing the connections.

Third, population growth influences land rights not only by requiring new modes of land use, but also by raising competition between persons not using the land but claiming it for their future use, for devolution to their heirs, or for speculation.

Notes (Chapter 3: Population Pressures on Land)

1. According to Kenya's 1986 Statistical Abstract (p.11), even the figure of 4.0 is likely to under-represent the true growth between the 1969 and 1979 surveys, as the latter survey was suspected to have under-enumerated by about 814,000 persons in its total of 15,327,061.

2. The halting of European, Arab, and African slave raiding and of local warfare under colonial authority also contributed to population growth.

3. Population pressure implies more than mere competition, however; for two farmers with heavy machines might compete viciously for a tract of a thousand hectares.

4. Strictly speaking, this capacity means the number of people who could survive on the land by growing the highest-yielding crops (those greatest in bulk, carbohydrates, and other nutrients) and/or animals in the most efficient but sustainable ways. We may call this hypothetical carrying capacity. This capacity is determined by a combination of factors. These include soil fertility and drainage; the amount and reliability of rain or other water, and thus the number of crops possible per year; and the nature of the crops and animals that can survive in the local conditions. Since humans will never and nowhere achieve such perfection in farming, it is more realistic to think in terms of what we may call real carrying capacity, as the number who can derive from it that part of their livelihoods which local people are inclined to derive under crowded rural conditions, growing locally preferred crops and/or animals, with locally available technology.

5. This is so particularly in savannah societies of eastern Africa, where marriage payments and ceremonies commonly involve cattle and these stock are surrounded by deeply rooted cultural values. Assessments of carrying capacities should take into account the unlikelihood of stock thinnings.

6. Causes and effects may be circular, of course, and correlation need not imply causation. If phenomenon X correlates with phenomenon Y, it may be because X contributes to Y, because Y contributes to X, because they contribute circularly to each other, because some independent variable Z contributes to both of them, or just because of co-incidence. X may help cause Y only when some Z is present. X may contribute to Y up to a point, then eliminate it. X may have many causes. Moreover, it may be that the kind of observer who perceives X is also likely to perceive Y.

As Densities Rise: Changes in Land Use and Tenure

What do we know, then, about how African systems of land use and property change without privatization programs as population densities rise? The following few sections describe some short- and long-term changes observed in areas without direct government attempts to establish private property. In a few areas they occurred before such programs were introduced, or after short-lived programs failed.¹ In a sense the changes are "spontaneous"; more accurately, they are adaptive.

Sharpening of Individual and Group Claims

As densities rise, land boundaries are sharpened, and the land rights of groups and individuals are clarified. New rules may be elaborated where none existed. Population pressure often contributes to the division of open community land rights (for instance grazing rights) into lineage rights, where lineages are already recognized as social entities. Boundary markers are likely to arise, and sometimes fences.² This is not necessarily a process of "individualization", since groups like lineages or villages may also assert clearer claims. On balance, however, the sharpening and elaboration of new rules appears most often to favor individual claims against competing kin group or community claims.³ In some contexts, individuals may seek or accept state protection in pursuing these personal interests.

Access to land, and particularly to the best land, tends to become more restricted. Individuals, kin groups, or other groups may seek to extend their rights over unused bush land: they start prohibiting outsiders to use this land.⁴ Farmers are likely to begin "lending" land to kin when traveling or living away temporarily, partly to safeguard their own interests.⁵

The control of chiefs, headmen, or other local administrators over land transactions tends to erode.⁶ These authorities may, however, begin exacting new payments (fees, bribes, etc.) for land allocations (Gulliver 1961: 19, on Nyakyusa of Tanzania).

Effects on Inheritance and Lineage Formation

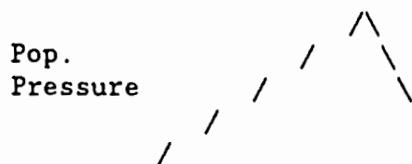
Demographic pressure can contribute to some profound changes in local social organization, as follow. These principles are noted here to suggest what changes are occurring in the indigenous social systems that provide access to land and security of tenure.

Inheritance and devolution of land inter vivos become more common practice. Young married sons become less likely to move away to new lands, since open lands are harder to find, and more likely to stay on a portion of the land farmed by their mothers or fathers.⁷ This change can occur even in some matrilineal systems where young married men have tended in the past to move to their wives' parents' places of residence (uxorilocality); and the process has sometimes weakened matrilineal systems and converted them into patrilineal ones over time. In some basically patrilineal societies in which land has been passed to brothers of the elderly or dead, a new tendency arises to pass it to sons instead.

Holdings are more likely to be subdivided in inheritance or devolution inter vivos. As Moore observes among the Chagga of Tanzania (1986: 318), for instance, an increase in coffee cultivation since the 1920s has brought about an increase in the practice of divided inheritance, a change of practice not reflect by a change in rules. This tendency can overpower countervailing tendencies to consolidate and enlarge holdings. Increasing subdivision has been observed in other densely settled parts of the continent.⁸

The authority of fathers over sons may rise or change, as inheritance and devolution gain importance as ways of acquiring land; tensions may arise as sons begin to expect devolution while fathers wish to retain control over lands (Gulliver 1961: 17-19 on Nyakyusa of Tanzania).

Where patrilineages already exist as a principle of social organization, lineal relatives tend increasingly to live together. Hence, unilineal descent becomes more important still, and it can gain new functions. This change obtains only up to a point, however. Then, as the land becomes too crowded for its occupants to earn a living and labor migrations rise, lineage ties may become attenuated and lineal kinship may begin to lose some of its practical and symbolic significance. These changes are discussed further below.



Spatial solidarity of lineages

In some densely settled parts of Africa, lineages are not an important mode of social organization. This appears true in parts of the Kano close-settled zone in Nigeria. One might speculate that the Hausa, farming Fulani, and others living in this exceptionally crowded areas have passed a stage where lineages meant more in settlement patterns and land rights, but evidence is scarce.

Rural people tend increasingly to use graves, abandoned homesteads, or other ancestral traces as reference points in justifying land claims.

Rising population pressures encourage labor migrations away to cities and towns, plantations, mines, etc. Where there are lineages, and population pressures rise very high, genealogical links among lineage members who remain in the homeland may become attenuated. Thus, among the Sukha Luhya of western

Kenya, the "lineage as such continues to stay in the shape of a skeleton" (Nakabayashi 1981: 27). As brothers of men remaining home migrate away, lineages continue to deepen, but do not broaden. Kinship links within them may be increasingly forgotten.

Effects on the Frequency of Disputes

Under rising densities and competition, land disputes become more common, and increase in bitterness.⁹ These are some usual changes:

Disputes penetrate into tighter circles of family, sometimes occurring between full siblings.¹⁰ In the cases of those patrilineal societies where land once passed to brothers of the dead and is increasingly passed to sons, new tensions are likely to arise between these potential recipients, at least until the new system is established as common practice.¹¹

Tensions rise between land patrons and land clients. An increasing tendency of patrons to try to squeeze "tenants" or land clients off the land, or onto the worst parts of it.¹²

Boundary markings change character. Trenches, furrows, tree-blazings may yield to stones, or sisal or other plants; these may yield to trees or fences. (Prothero 1972a: 59, on demarcation in Kano, Nigeria.)

A Rise in Individualism?

As lineages begin to lose meaning, in a highly crowded homeland, the nuclear family may gain importance in agriculture and related activities (Netting 1974: 32; 1982: 476). But so may other forms of organization not based on kinship: these often include voluntary associations cross-cutting kin groups. In crowded parts of western Kenya, voluntary associations have taken on multiple functions including personal emergency aid and funeral financing; and churches and clubs have become important means of mobilizing farm labor.¹³ The rise of voluntary associations beside waning lineages shows that kin group collapse does not necessarily mean a rise of individualism.

Moreover, patterns of lineages and kinship networks may be replicated in new home areas of migrants, as new ones follow early re-settled kin to their new rural communities.¹⁴

Where the nuclear family or the individual gains importance under resource scarcity, it may do so in alliance the state, so the growth of "individualism" may be at the same time, ironically, a process of state consolidation.

Effects on Labor Migrations

Rural peoples undergoing crowding commonly experience rising labor

migrations, temporary or permanent, away from farms.¹⁵ This is a topic too large for detailed treatment here, but a few points must be noted. Male labor migration can diminish investment, not just of labor but also of capital, in agriculture (see Mook 1976): urban migrants have other things to spend their money on as well as home remittances. It may also diminish migrants' security of land tenure on their farms. But not necessarily, as Ross shows in his study of the Kano close-settled zone in Nigeria (198[5]). Farmers from various African societies who live away from their farms delegate the responsibility to various kinds of k'n to look after their land interests in their absence: these may be parents, spouses, real or classificatory siblings, or children. Where lineages exist, lineage elders often serve as witnesses helping to guarantee security of tenure. Migrants who can use off-farm earnings to hire labor or to help maintain social ties around their farms (for instance, by contributions to funerals or other ceremonies) may find migration helps as well as hinders their chances to perpetuate their land claims.

Effects on Spatial Patterns of Holdings and Fields

As densities rise, farmers' mobility within rural localities becomes constrained.¹⁶ Buffer zones of no-man's-land between farms or group settlements gradually disappear (Shipton 1979).

Holdings become fragmented. This process involves subdivision, but may not be a necessary consequence of it.¹⁷ Fragmentation may not necessarily be a bad thing, as it helps cut a farmers' agricultural risks.

Average holding sizes decrease (see Mortimore 1971: 7, on Kano, Nigeria). Field sizes (distinct from holding sizes) are reduced.¹⁸

There is a tendency to change to more regularized, rectilinear fields.¹⁹ In many African societies, parallel strips correspond to lineages or lineage segments.²⁰ A pattern of cultivation in parallel strips appears more often characteristic of patrilineal systems than of matrilineal ones.²¹ And where there are lineages, parallel strips of land tend to correspond roughly, though probably never precisely, with lineage membership (in turn based on either real or putative descent).²²

Nucleated settlements, where they exist, sometimes break up under population pressure; families may begin moving their houses to their own farmland, giving rise to a pattern of scattered households. Where such residential spreading out occurs, competition for land is not its only cause.²³

Where nucleated settlements remain, population growth can lead to extension -- spreading fields farther from villages -- as well as intensification (Manshard 1986: 306).

Effects on Land Use:

Under increasing population densities, a closer relationship arises

between land use and soil conditions. Grove (1962: 125-6) notes, on the Kano region of Nigeria, that

Where population densities are lower.. land use is commonly unspecialized; land is not used for different purposes according to its inherent ability, but any particular patch may be under woodland at one time, rough grazing at another, cropped for a few years and then abandoned. In more heavily settled areas, there is a closer relation of the land-use pattern to soil conditions.

Noronha notes that "tenurial principles are likely to be more strictly enforced with regard to land of better than inferior quality." (Noronha 1985: 80; see also Shipton 1984b).

Farmers increase labor per unit of land, and may also raise yields per unit of land, but the proportion of produce or profit per unit of labor appear likely to fall in the process.²⁴ Farming thus becomes more efficient in one sense while less in another. Hectarage cultivated per square kilometer is likely to rise.²⁵ As these findings would suggest, farmers come closer to growing the maximum their holdings allow.²⁶ Infrastructure like rural roads often becomes denser.²⁷ This too may provide stimulus for more investment in agriculture, at least in terms of labor and capital per unit of land.

Effects on Fallowing, and Implications

As population densities rise, fallow periods shorten. This is the general observation of Boserup 1965. Reports from central Kenya just before the land registration began show a clear negative correspondence between population density and percentage of land under "shifting cultivation", in a district-by-district breakdown (Department of Agriculture, Annual Report, 1954, p.6). There are many other first-hand reports from densely settled areas supporting the basic Boserup hypothesis.²⁸ Reduced fallow time may mean increased labor time, and at first, increased costs per unit of yield.

According to Boserup's theory, reduced fallow times may lead eventually to accumulation of capital, and to education, which may help raise productivity. This is the most contested point in her theory.²⁹ Some have also objected that Boserup's model undertreats the effects of rising densities on environmental degradation and thus the detrimental sides of their effects on production and economy (e.g. Netting 1985: 25; Blaikie and Brookfield 1987: 29-31).

The process of fallow periods' shortening under rising densities can operate in reverse. Farmers moving from the denser Jos Plateau to sparser valley settlements have been known to choose to revert to bush fallow, apparently to save labor (Mortimore 1971: 7). The same has been reported among Lobi-Birifor in the Gonja region of central Ghana:

When...a peasant practising the "compound system" [permanent cultivation] moves into the empty areas... he ceases, invariably, to rely solely on "compound farming" and quickly returns to a fairly extensive land-rotation... It is significant that wherever there is

abundant land these African farmers go straight back to field shifting (Mansard 1972a: 148).

Similar reversions from continual farming to fallow systems have been observed among inhabitants of the extremely crowded Ukara Island of Tanzania, who migrate to less the densely settled Sukuma area of the mainland (Ruthenberg 1980: 160). The reversibility of the process as seen in all these cases reconfirms the correspondence between high densities and short fallows.

A shortening of fallow periods diminishes marginal returns to labor, while increasing production per unit of land (Boserup 1965: ch. 5). This is a rule farmers may recognize themselves (Mortimore 1971: 7, on Nigeria). It holds, however, only if technology is held constant; and frequently this is not so in reality.

The length of fallow affects the nature and amount of the weeds and tree roots in the ground, and thus affects what tools are usable for land preparation. Digging sticks remain more practical under bush fallow systems; whereas ploughs become more practical for more constant cultivation (Boserup 1965: 24).

Shortening fallow periods may require manure or new fertilizers, herbicides, and pesticides for production to remain constant. Not only may soils become exhausted faster, but crop-specific pest populations can survive flourish more easily.

Conversely, increasing use of manure and chemical fertilizers cuts down the needs for fallow. By allowing more constant cultivation of a piece of land, it reduces the land's accessibility to squatters or invaders, or weakens the possible claims these might make (Riviere 1973: 65). So fertilizer use contributes to privatization in the sense of exclusivity of land use. Fertilizers and labor-saving machines like the plough can contribute together to this trend: the machines allow bigger fields to be cultivated, and the fertilizers can keep them usable year after year. But fertilizers are not widely applied in Africa in such measures as to maintain soil fertility at constant levels.

To observe fallow periods shortening takes time. In some systems, fields are cultivated annually until they are exhausted, then left to bush fallow for many years (see e.g. Mbagwu 1978, on Igbo in Nigeria). Simple averages compiled over a short time cannot capture the picture. Fallow periods do not usually shorten on all fields at once; different cultivation systems can be seen in practice on neighboring fields simultaneously (Boserup 1965: 58-9).

As agricultural cycles may seem to quicken in terms of shortened fallow periods, they slow down in another sense. Farmers conceive of their personal attachment to particular pieces of land as longer-term, or as permanent. As agriculture intensifies under population growth, "permanent improvements such as economic trees, irrigation facilities, fencing, and buildings will... fix use rights over longer periods of time" (Netting 1985:6).

Replacement of Open Grazing with Fodder Systems

Land available for common grazing becomes scarcer as population densities grow.³⁰ Grazing may be deliberately restricted; this is likely to occur well after the public right to clear forest land has disappeared (see also Boserup 1965: 86) but before rights of through-passage are restricted. As a response to land shortage, farmers may stable animals and find or produce fodder for them, and in at least some of the most crowded parts of Africa they appear to have done so more or less of their own initiative rather than as a result of extension programs.³¹ Fodder may be specially grown, cut from trees, or saved from crop residues or food consumable by humans. While giving a given number of animals stall fodder from fields takes less land than giving them permanent grazing land, it takes more work. The opportunity cost of land must usually rise very high, and animals may suffer poor diets, before farmers are motivated to invest the labor. They are likely to turn to fodder gathering before fodder cultivation.³²

Herd Reduction and Restructuring

As human and animal population densities rise, herd owners restructure their herds. Because of deeply entrenched values, beliefs, and practices concerning livestock, the simple and deliberate thinning of herds is rare in Africa south of the Sahara. But subtle and gradual adjustments do occur. As grazing lands become scarce, herd owners try to optimize herd structure by improving the ratio of productive to unproductive animals.

Livestock owners can adjust herd structures by sale, exchange, loan, gift-giving, or slaughter. The genders and ages of stock they prefer vary from place to place, depending on whether the plough is used, among other things. Usually adult male animals are preferred for ploughing. In parts of western Kenya and northern Tanzania where the densely settled agrarian Luo live within trading distance from the sparsely settled pastoralist Maasai, they commonly exchange their younger and female cattle for adult male stock to obtain draft animals. The Maasai, who do not use ox-ploughs, prefer female stock for their milk and calving potential. Having more abundant grazing land, they are happy to acquire young cattle, which add to their prestige and reduce risks of losing whole herds in times of drought or disease.

In Africa south of the Sahara herd reductions are almost never effected by simple culling. Efforts by governments and by outside agencies to introduce such programs have consistently failed for half a century. But stock reduction is effected in more subtle ways by local initiative: by trading off animals for which there is little room left, by lending animals out for the short or long term, or by adjusting the ratios of livestock to other goods in marriage payments in a way that sends livestock to areas of more abundant land.³³

Livestock holders may also shift the balance between species in their herds. Goats can usually graze and browse in rougher conditions than cattle. As densities rise, farmers may gradually replace cattle with goats where, or to the extent that, cattle are not necessary for tillage. In the Great Lakes Highlands of Burundi, Rwanda, and Zaire, they have been observed to do so despite higher prestige attached to cattle, though the prestige factor might slow the shift (Jones and Egli 1984: 91; cf. Ferguson 1985).

Farmers sometimes replace cattle with goats, despite high cultural values on cattle, because goats can eat vegetation that cattle cannot (Jones and Egli 1984: 54, 91, on the Great Lakes highlands of Zaire, Rwanda, and Burundi).

Whether local power-holders are heavily involved in livestock rearing can affect whether croppers feel free to enclose plots (see Turay 1988: 17-20, on Sierra Leone). Intense competition for land between farmers and herders (or people who do both) can sometimes lead locals to formulate requirements like muzzling (Ludwig 1968: 102, 130, on mixed farming on Ukara Island, Tanzania).

As densities rise, fenced or specially fodder-cropped pasture and "crop residues" increase as a proportion of forage area. "Natural" vegetation decreases as a proportion of forage area.³⁴ More stall feeding is practiced.³⁵

Whereas livestock have been in parts of agrarian Africa a form of investment that men can keep relatively safe from female relatives (or sometimes vice versa), rising densities may make them harder for men or women to hold. Land may replace livestock as a favorite male investment.

How people make a living is not always how they say they make a living, and rising densities are likely to widen the difference. Settled cattle-keeping people sometimes like to continue to think of themselves as something like pastoralists when their livelihoods derive from mixtures of herding, farming, trade or other enterprise, and migrant wage work. Examples include the Luo and Kalenjin peoples of East Africa, or some of the farming Fula (Fulani, Peulh) peoples of West Africa.

Persistence of Seasonal Grazing Rights

Even in many of the most densely populated areas in the continent, grasslands over which individuals hold rights approaching "ownership" have often been opened for "communal" or wide-group grazing for a few months of the year. One of these areas is Ukara Island, Tanzania (Ludwig 1968: 114-5). Even where demographic pressure has pushed individualization along substantially, this does not become a permanent and fixed stage of "development". Principles of private and public property continue to interweave in such a way that few places in Africa south of the Sahara, if any, can be said to exemplify one extreme or the other.

Possible Effects on Inequality

How rising population pressure might affect the distribution of landholdings, or other wealth or income, or inequalities in social status, is unclear. Research in Nigeria has offered conflicting reports on whether high density even corresponds to local inequalities in holdings or wealth (summarized in Netting 1980: 18-19). Netting has argued, partly on the basis

of evidence from El Salvador, that "population growth in a money economy with high food and land prices and low wages may further consolidation of large properties and the growth of a sector of landless laborers" (Netting 1982: 492; see also p. 451). Others have supposed that the unusually high rate of population growth in Kenya has similarly contributed to the concentration of wealth into fewer hands; and the argument has been made elsewhere.³⁶

The supposition is that under crowding, the poorest, unable to find farm land for themselves, are forced into laboring for those who still have more than enough land to farm by themselves. Often, however, many of the land-poor continue part-time farming while going to work for their neighbors, and this appears to be true in various parts of the continent. In some of the most crowded parts of Nigeria and Kenya, farmers who have willingly sold off parts of their holdings have finally proved reluctant to let their diminished farms or homestead sites go completely. This possessive hardening is discussed in the section on land sales.

If population growth causes a concentration of wealth, the processes are probably variable and only indirect.³⁷ By Netting's argument, for instance, population growth may lead to rising prices of food and land, and to low wages; and these may contribute to the concentration of holdings into fewer hands. It is questionable whether, or how fast, rising population densities can by itself create a labor surplus. By one report, even as farms in Kano, Nigeria become very small, farmers still need more labor than their farms can provide (Mortimore 1972: 67). Concentration of landholdings and rights of access into fewer hands is likely to lead to a concentration of wealth more generally, but this is not a foregone conclusion.

To the extent that demographic pressure encourages agricultural innovation, it may indirectly speed class differentiation. But this presumes the innovations are non-divisible, or "preclusive", such that when some farmers adopt them, others cannot. One profitable innovation of the "preclusive" kind is coffee grown under an quota system. An innovation of the non-preclusive kind is hybrid maize: one farmer's adopting it need not affect a neighbor's.

Numbers, Wealth, and Power

Rising densities affect the relations between family or kin group size, wealth, and political power. The case of the Luo of Kenya exemplifies a common pattern of change. In colonial times when land was not yet scarce in most of the Luo country in western Kenya, having many members gave a family wealth because it meant many hands to hoe, and this wealth was transformable into political power, for instance through patronage distributed at funerals, weddings, and beer drinks. But as land became scarce, marginal returns to labor shrank, so a group's numbers no longer conferred access to wealth or power so easily, though large families have remained prestigious (Whisson 1961: 7). As vacant and fallow land vanish, land shortage might tie wealth and status more closely to land inheritance and to purchasing power, to a point. But as a rural population grows extremely dense, as in parts of western Kenya, increasing reliance on off-farm incomes confounds such relationships.

Notes (Chapter 4: As Densities Rise: Changes in Land Use and Tenure)

1. Government policies and programs are never, of course, wholly irrelevant -- colonial authorities and independent states have tried for a century to regulate, codify, and adjust tenure systems -- but some changes seem often to occur irrespective of government policy. While most of the examples in this section come from areas where governments have not tried to register land, some are drawn from parts of Kenya that have undergone registration. These examples are used where they clearly illustrate changes not dependent on registration itself -- some were apparent well before the registration -- and where they appear to provide the best available evidence on them. These instances are cited in the notes, usually alongside parallel examples from unregistered areas. The reader who insists on a strict separation of cases with and without tenure reforms may discount the Kenyan evidence in this section; the conclusions remain similar.

2. See, for instance, G. Wilson 1938: 30-1, on the Nyakyusa of southern Tanzania; Cory 1947: 70, on Kuria of northern Tanzania; Cory 1954: 50, on Sukuma; Barclay 1977: 113 ff., on Wanga of western Kenya; Uchendu 1970: 485, on incipient enclosure movement in Geita District, Tanzania; Lloyd 1972: 97, on the Igbo of Nigeria; Prothero 1972a: 59, on demarcation in Kano, Nigeria; Riviere 1973: 79-80, on Guinea; Netting 1982: 480 describes similar processes in 16th century England.)

3. Ludwig 1968: 127, finds this happening on Ukara Island, Tanzania; Cory 1953, on Sukuma of Tanzania; Dobson 1954, and Ault and Rutman 1979: 174 on Tanzania generally; Shipton 1984a, on some Tanzanian and Kenyan cases; Lloyd 1972: 96-7 and Netting 1982: 465, 468, on the Igbo of Nigeria; Netting 1980: 11, and Noronha 1985: 184, on Africa south of the Sahara generally. Cf. Brown and Podolefsky 1976 on New Guinea. Boserup (1965: 78-9) argues that to say population pressure gives rise to private property is an oversimplification.

4. See Owen 1934: 2191, on clans' claiming unused tracts in newly settled areas of South Kavirondo, now South Nyanza, Kenya; Wagner 1949: 88, on Maragoli of western Kenya.

5. Examples: Wilson 1938: 42, on volcano craters in Nyakyusa country, southern Tanzania; cf. Mair 1957b: 58, on Keiskammahoek, South Africa.

6. Shipton 1979, on the Sukuma and Nyamwezi of northern Tanzania; Brock 1969: 6, on the Nyiha, in Mbozi, southwestern Tanzania, reports on chiefs' authority becoming only nominal.

7. See Ludwig 1968: 102, 127 on Ukara Island, Tanzania; Gulliver 1961: p. 17, on Nyakyusa shift toward land inheritance by sons, and p. 22, on Arusha of Mt. Meru, Tanzania, shift to system of eldest and youngest sons' taking over father's land rather than pioneering; Shipton 1984a, 1984b, on western Kenya; Cheater 1987: 175, on Zimbabwe.

8. Mortimore 1971: 4 and 1972: 66; on Kano, Nigeria, between 1934 and 1964; cf. Grove 1962: 132, 134, also on Kano: "divisions are probably balanced by mergers". See also Riviere 1973: 68-9, 79-80 on the change from promogeniture to equally divided inheritance among the Timbi of Guinea during the colonial period; Le Bris 1979b: 117, on disappearance of undivided inheritance in southeastern Togo.
9. Phillips 1945 and LeVine and LeVine 1966: 10, on parts of Kisii, where population tripled in 50 years; Shipton 1979, on Kenya and Tanzania; Glazier 1985, on Mbeere of central Kenya; Meek 1946: 186-92, on the Gold Coast, now Ghana; Riviere 1973: 79-80 on Guinea; Netting 1982: 466-7; cf. Moore 1986, ch. 5, especially pp. 142, 175-9, 192 on Chagga of Tanzania.
10. On Kenyan cases, see LeVine and LeVine 1966: 10, on Kisii District; Glazier 1985, on Mbeere of Embu District; Okoth-Ogendo, 1978 and some of his other works. Moore 1986, on Chagga of northern Tanzania.
11. Gulliver 1961: 18, on the Nyakyusa of southern Tanzania; M. Goheen, personal communication, on Nso, Cameroon.
12. On western Kenyan cases: see Mayer and Mayer 1965: 75, on the Gusii; Wagner 1949: 81, on the Maragoli Luhya; Shipton 1984a, 1984b, on the Luo, Luhya, and Gusii. See also Noronha 1985: 182-3.
13. Johnson 1979; Nakabayashi 1981: 30-35; Shipton 1985: 17-18, all on western Kenya; Almy 1979: 68, on Meru, central Kenya; cf. Kerri 1976: 24 and March and Taqqu 1985 on voluntary associations and kinship in general; and Smelser 1963 and Eisenstadt 1966 on crisis and restructuring of social relations.
14. For western Kenyan examples, see Shipton 1984b: 627-8, on Maragoli migrants to Luo areas of South Nyanza; cf. Parkin 1978, on Luo migrants' kin-group formation to Nairobi; and Nakabayashi 1981: 27, on Sukha Luhya emigrating as individuals.
15. See Stichter 1985 for a more general treatment of labor migrations in Africa. A high incidence of labor migration has been a feature of all the densely populated western Kenyan societies, Luhya, Gusii, and Luo, since early colonial times. Roughly a third of all working-age males are now counted as absent at any time, and have been for about fifty years (see Whisson 1964 and Stichter 1985, on labor migrations in the region, in the latter especially pp. 66-8 on the Luo). It is also an important fact of life among the major Nigerian peoples often mentioned in this study: Igbo, Hausa, and Yoruba.
16. For Kenyan cases, see Ogot 1967, on the Luo; LeVine and LeVine 1966: 10, 12, on the Gusii; Oboler 1985: 196-7, on the Nandi; Glazier 1985: 109, on the Mbeere of Embu District.
17. See Mortimore 1972: 66, on Kano, Nigeria between 1934 and 1964; Lagemann 1977, Netting 1980: 9, 14-5 on the Igbo country of Nigeria, and elsewhere. Le Bris 1979: 107, on Togo, notes extreme fragmentation in a zone of average density 150 per square km. Moore 1986, ch. 5, especially p. 117, says responses to population pressure among the Chagga of Tanzania include a fragmentation of holdings by richer landholders.

18. The Integrated Land Use Survey of the Lake Basin of Kenya shows that population density correlates negatively with field sizes, both in food crops and in cash crops (EcoSystems 1985: 4.24). See also Mortimore 1971: 7, on Kano, Nigeria. In Lesotho, holding size is found to correspond positively with field size (Hamnett 1973: 42).

19. See, for instance, Prothero 1972a: 59 and Mortimore 1972: 64 on Kano; Morgan 1972: 78 on Aba Ngwa County of the Igbo country in Nigeria.

20. Shipton 1984b, on the Luo and their Bantu-speaking neighbors in Kenya; Ludwig 1968: 107-8, on subdivision in strips in inheritance on Ukara Island, Tanzania; Le Bris 1979: 110, on the Fiata area of southeastern Togo. Examples of densely populated societies with parallel strip cultivation are the Luo, Gusii, and southern Luhya groups of Kenya, the Chagga of Tanzania (Moore 1986: 113-115), the some of the Igbo of Nigeria (Morgan 1972: 79).

21. See the comparisons in Hunter 1972: 96, on the Densu Valley of the Suhum region, near Accra, Ghana.

22. For Kenyan and Tanzanian cases, compare the maps showing correspondences between land rights and lineages in Nakabayashi 1981: 16, on the Sukha Luhya; Paterson 1984: 130-1, on the Nyore Luhya; and Moore 1986: 113-115.

23. Grove 1962: 127 discusses homestead dispersion in North Katsina, in Kano, Nigeria. Udo 1965, Kjekshus 1977: 49-50 and Netting 1982: 465, on the Igbo of Nigeria, where nuclear or small polygynous families move house to the middle of their farms, demonstrating clear rights over the land; Netting 1980: 9-10. For examples of very high density areas with dispersed settlements, see J.M. Hunter 1972b: 152-5, on Nangodi (a small former state of Northeast Ghana, where densities averaged 366 per sq. mile in the settled areas settled but rose locally to over 1,000 per square mile); Ludwig 1968: 104 of Ukara Island, Tanzania. Cf. Noronha 1985: 95-6, on Africa generally. Much of agrarian eastern Africa, including western Kenya and northern Tanzania, had nucleated settlements until the late nineteenth century; The dispersal of family homesteads on to their respective farmlands is widely attributed to colonial peace-making. It appears to have happened fairly quickly in the late nineteenth and early twentieth century as colonial authority was established in the countryside.

24. The theory is set out in Boserup 1965, chs. 4, 7, and Pingali and Binswanger 1987. For examples giving quantitative data see Ludwig 1968, Thornton and Rounce 1963, or Ruthenberg 1980: 158-160, on the Wakara of Ukara Island, Tanzania. For comparable quantitative findings on parts of Nigeria see Lagemann 1977: 6 et passim, on the Igbo of Nigeria; Norman et al. 1982, on Hausa near Zaria; Netting summarizes a few of these Nigerian findings (1980: 21-2; 1985: 7-12, Table 2).

25. For example, EcoSystems 1985: 4.24, on the Lake Basin of Kenya, shows consistent correlation between density and hectarage cultivated per square kilometer.

26. EcoSystems 1985: 4.24, on the Lake Basin of Kenya, shows a consistent correlation between "Percentage saturation of potential smallholder land" and density.

27. EcoSystems 1985: 4.24, on the Lake Basin of Kenya, shows consistent correlation between density of population and of infrastructure like rural roads.

28. Including Almy 1979: 68, on Meru, Kenya; Ludwig 1968: 89, 104-5, on Ukara Island, Tanzania; Jones and Egli 1984: 18-19, on the highlands of Rwanda, Burundi, and eastern Zaire; Hunter 1972b: 156, on the Nangodi chiefdom in northeastern Ghana; Morgan 1972: 78 on Igboland, Nigeria; and Mortimore 1971: 7-8; 1972: 69; and Grove 1962: 125 on Kano, Nigeria; Gleave and White 1969 and Netting 1987: 4 on West Africa. (Mortimore notes, however, that in some sparsely settled Hausa areas, annual cropping does occur around dispersed compounds surrounded by woodland.) See also Pingali and Binswanger 1987: 30-4 for some Africa-wide generalizations supporting the Boserup hypothesis.

29. Almy 1979: 68 supports Boserup on this point.

30. See e.g. Mayer and Mayer 1965: 61-3 on the Gusii of Kenya before land registration; Grove 1962: 132, on Kano, Nigeria.

31. Ludwig 1968: 89, on Ukara Island, Tanzania; cf. Jones and Egli 1984: 92, on the Great Lakes Highlands of Zaire, Rwanda, and Burundi.

32. See Jones and Egli 1984: 91, on the Great Lakes highlands of Rwanda, Burundi, and Zaire; Boserup 1965: 36-9 and passim. One interpretation of European historical evidence suggests that increasing population and urbanization contribute to higher food prices, which contribute in turn to the conversion of free-grazing systems to fodder-production systems by making the extra labor worthwhile. See Mortimore 1971: 8. Whether a similar process is occurring in Africa through market forces remains to be demonstrated.

33. Evidence from western Kenya suggests a non-linear relation between human population density and livestock density. The Integrated Land Use Survey of EcoSystems Ltd. in the Lake Victoria Basin concludes, on the basis of aerial photographic counts, "Converting the livestock densities into livestock units shows a build up in the mid population densities and then a fall off at higher densities. Available forage shows the same trends, but effective livestock unit densities (livestock units per available forage) demonstrate a monotonic increase along the population gradient." (EcoSystems section 4.4.3, p. 4.09) As the denser areas in the region had been registered under the tenure reform by the time of the aerial survey in 1983-4, the "fall off at higher densities" might be related to privatization as well as to density.

34. EcoSystems 1985: 4.24, on the Lake Basin of Kenya, shows consistent correlations between population density and "managed pasture" as a proportion of forage area, and between population density and "crop residue" as proportion of forage area. See also Netting 1982.

35. See, for instance, Gulliver 1961: 21, on Arusha of Mt. Meru, Tanzania.

36. Carlsen says this on western Kenya, where tenure reform appears to have accelerated the land market: "Rich households are accumulating capital based upon investment and hired labour in agriculture and in non-agricultural business, while poor households are turned into a landless proletariat, which do not own their means of production, and have to sell their labour power in

order to subsist... The speed of this process is being accelerated by the very high population growth rate in Kenya... 3.9% per annum" (Carlsen 1980: 222) The line of argument is old; it dates at least back to Turgot at the end of the 18th century: "But the land begins to people, and to be cleared more and more. The best lands are in success of time fully occupied... But, at last, every spot has found a master, and those who cannot gain a property therein have no other resource but to exchange the labor of their hands... the proprietor... is enabled... to pay other men to cultivate his land... The proprietor, therefore, might then be eased of the labor of culture, and he soon was so" (1801, paras. 10 and 11, quoted in Boserup 1965: 78n).

37. Netting (1985: 19) reviews three studies' quantitative and qualitative findings on densities and inequalities in parts of Nigeria (Lagemann 1977, Norman et al. 1982; and Stone et al. 1984.

As Densities Rise:
Agricultural Innovation and Questions of Resource Exhaustion

As densities rise and holdings shrink, farmers are likely to have to innovate to stay even, at the same time as they may look increasingly to off-farm sources of livelihood. They adopt and adapt new local methods and techniques, as well as newly imported ones. Much literature concentrates on the latter kind with misplaced emphasis.¹ Not only is there much local innovation in African farming under changing conditions, but imported techniques are unlikely to be accepted without some short or long term adaptive value. Moreover, technology is not free floating; and access to it is not always evenly spread.² While population pressure can provide incentives to innovate, it does not in itself provide all the conditions for innovation.

Rising densities may induce farmers to devise or adopt irrigation; and this in turn allows higher densities to subsist on the land. Comparative research suggests that irrigated areas of Africa tend to have densities over about 100 per square kilometer, as in Ukara Island, Tanzania; parts of Rwanda and Burundi; the Kabre country in Togo; and parts of Nigeria.³

Whether population growth contributes to adoption of the plough is a matter of some uncertainty. The plough appears on casual observation to be more common in high-density areas of Africa than in lower density areas. As rising densities lead to change from shifting cultivation to shorter-fallow systems, and grasses take over from forest and bush between cropping years or seasons, it becomes easier and perhaps more necessary to use the plough for land preparation.⁴ But whatever the density of an area, and whatever its fallow system, usually only some rural people have financial or logistical access to ploughs or similar machines, (see Mosley 1983: 73 ff. on Kenya and Zimbabwe; Noronha 1985: 91-4). Areas with high densities but without extensive use of the plough through much of the twentieth century have included the Kano close-settled zone, an area nonetheless exposed to much trans-Saharan trade; some have argued that densities have been so high here as to render the plough impracticable because holdings are very small and pasture insufficient (Mortimore 1972: 67; see also Grove 1962: 112). Adoption of the plough allows farmers to cultivate more land (Goody 1971), provided their weeding can keep up -- and this is another major constraint. But plough adoption does not necessarily raise yields per unit of land and may under some conditions render the land more susceptible to wind or water erosion.

Plough adoption saves human labor per unit of land worked, but it may increase human labor per unit of production. Maintaining draft animals and tools may add substantially to the labor expended in the actual preparation of land (Boserup 1985; Pingali and Binswanger 1987: 50).

Though population pressures appear often to contribute to agricultural innovation, it would be wrong to say that neither can occur without the other. Machines for swamp rice cultivation have been adopted in a region of only about 33 persons per square mile at the time, among the Yalunka of Sierra Leone in the 1960s (Noronha 1985: 94; cf. Leland Donald 1970: 186-7, 191). Nor do rising pressures necessarily result in innovation of the kinds discussed above. There are cases where very high rural densities appear not to have been accompanied by substantial manuring or cash cropping, for instance Sokoto, Nigeria, which had some local densities of about 275 per square kilometer in some places in the late 1960s and early 1970s (Mortimore 1971: 11). In some of these cases, seasonal or longer-term labor migrations are a preferred way of coping with rural poverty.

Crop Changes

Experimentation and flux are normal conditions of agrarian life in Africa south of the Sahara. There are few smallholders on the continent, it seems, who grow only a single crop, and the mixtures in which they plant them depend on many things, including labor availabilities, land qualities, seed availabilities, tastes, access markets, and prices. Usually there is some room for choice. With rising densities, the following changes are to be expected:

Intercropping can gain importance.⁵ The adaptive advantages of intercropping in some contexts are becoming better recognized in international agricultural research (see e.g. D. Belshaw 1980; Richards 1985: 63-72; Jones and Egli 1984: 85-6), but in most African countries intercropping is not yet commonly part of government extension advice.

Farmers are likely to switch emphasis from food crops yielding less volume per unit of land, to others yielding more. This often means more of the bulky root and tuber crops (such as yams and cassava), or more hybrids.⁶ "The greater the population density and the smaller the farms, the higher is the percentage of crops like manioc and sweet potatoes and the lower the percentage of maize in the subsistence food" (Ruthenberg 1980: 164). While the bulky tubers like cassava are excellent sources of calories, heavy reliance on them can lead to severe vitamin or protein deficiencies.

More high-value cash crops are likely to be cultivated.⁷ Their labor demands may encourage other shifts between food crops. For instance, more cassava or sweet potatoes may be grown because they free labor for the cotton or coffee.

At very high densities, however, a throw-back from cash cropping to food cropping may occur. Whether this is a general tendency is uncertain. Jones and Egli 1984: 54-5 report observing a process whereby "food crops for home consumption crowd out cash crops" in the densely settled hilly highlands of Rwanda, Burundi, and eastern Zaire. But Mortimore (1972: 67), writing on Kano, Nigeria, reported this was not happening. The Integrated Land Use Survey, on the Lake Basin of Kenya, a partly registered area, shows a clear positive correlation between density and hectareage per square kilometer devoted to staple food crops. There is also a negative correlation between density and "percentage of crops as cash crops". The data show no correlation, however,

between population density and hectareage per square kilometer devoted to cash crops (EcoSystems 1985: 4.24).

An increase in cash cropping, like the use of new machinery like the plough, leads farmers to think of land more in terms of money, or to raise its price. Demand for land rises as local supplies of cash increase. Both factors raise land's monetary value.

Effects on Soil Management and Conservation

Soil conservation is not a new idea in Africa. Many ways of carrying it out, some quite subtle, have evolved, some with little or no help from outside the continent. Their choice and application vary appear to regularly with population density, though they often seem to take decades or longer to become common practice and may not keep up with densities. These changes accompany demographic pressure on the land:

As fallows or field rotations shorten and disappear under population pressure, more attention may be paid to crop rotation on a given field.⁸ Where there is only single cash crop, however, cultivation year after year has sometimes led to serious soil exhaustion, as in the case of groundnuts in Senegal (Ruthenberg 1980: 154) and The Gambia.

More manuring occurs, with animal waste and composted green manure.⁹ At lower densities, clearance of woodland can reduce tsetse hazard to animals; increasing animal populations mean increasing supplies of manure (Mortimore 1971: 10). At higher densities, it is likely to be the need and demand, rather than the supply, that make manuring more common. Deliberate use of "night soil" as a fertilizer is not common practice in Africa, as it is for instance in China. It appears only in some areas with long-standing land shortages.¹⁰

Mulching may become common practice. In the crowded great lakes highlands of Rwanda, Burundi, and eastern Zaire, mulching became nearly universal on coffee in colonial times. However, the proportion of farmers who do not mulch has been growing since independence, apparently as a result of falling coffee prices and because of intercropping, which can make mulching less necessary (Jones and Egli 1984: 58-9).

Erosion control measures may be adopted. These may include drainage control, bunding, ridge and mound cultivation, and terracing.¹¹ Manuring and stabling can also be considered erosion control measures.

Questions of Overgrazing, Overcultivation, and Erosion

Population growth often leads to overgrazing, over-cultivation, or erosion, but not always. There are two major theories on the subject, often considered contradictory. One derives from the work of Thomas Malthus (1959 [1798]). Its essence is that human population tends to increase to the point where it exhausts and destroys the resources sustaining it, and is thus

eventually checked. The second is argued best by Ester Boserup (1965). It is that increasing population pressure on resources stimulates humans to devise or adopt more intensive farming methods and to improve methods of conservation, and thus eventually raises production and economic growth.¹²

What many fail to perceive is that the Malthus and Boserup theories need not conflict. Humans undergoing population growth do sometimes invent, adapt, or borrow intensive farming techniques and conservation methods just as they exhaust some of their resources. Whether they will keep up, stay even, or fall behind depends on the context. The mistake is to assume that technological and economic responses must occur in direct measure with population changes. Information about new technology is unevenly available. Faced with ecological dangers, real people may over- or under-react, react rightly or wrongly, or wait too late. Sometimes a main response to crowding is to turn gradually away from farming, as in the case of the people of southern Kakamega District in Kenya.

Land degradation is not necessarily a linear function of population growth. As the authors of a worldwide literature survey have recently noted, "While there are many cases where 'population pressure' has contributed to land degradation, in others a marked decrease in population densities has led to the same result" (Blaikie and Brookfield 1987: 4), and "very severe land degradation can occur in the total absence of population pressure on resources" (p. 28).

In sub-Saharan Africa specifically, population densities do not always correspond directly with land overuse and erosion. Casual observations in the Lake Victoria Basin of western Kenya suggest that overgrazing, deforestation, desiccation, and gully erosion are most serious not in the crowded highlands, where local densities reach over 500 per square kilometer, but in less densely settled lands nearer the lake. Writing on the Kamba of central-eastern Kenya, Porter has likewise reported erosion was worst in their medium-density, medium altitude, medium-potential zone (the zone with a population of 150-300 per square mile; the Kamba ranged from under 25 to about 1,600 per square mile, patches of local high densities arising roughly east to west). He wrote,

This part of the district has some of the worst mangalata, or devastated land, in Africa -- the result of overgrazing and planting row crops (maize) on easily gullied slopes. Grazing beyond the carrying capacity of the land denudes it of vegetation, prevents the annual grass firing to keep back the bush, and this allows rain to etch out gullies, which in turn lowers the water table and makes the re-establishment of a grass cover difficult. (Porter 1972: 35).

A similarly endangered middle-density zone has been reported in northern Nigeria. Prothero concludes an article on the region,

The evidence indicates that farmers in Northern Nigeria and elsewhere in tropical Africa will intensify their methods of cultivation and adopt measures of conservation only when they are forced to by extreme population pressure on the land. These improved methods are in use on the intensively farmed lands in Kano Province where there are population densities which range from 200 to 400 per square km. (c. 500 to 1,000 per square mile). The real dangers of land deterioration seem to be

greatest where the population densities are between 80 to 100 per square km. (c. 200 and 250 per square mile), as in the areas which have been discussed. These figures indicate a critical transition stage between lower densities which allow cultivation under a system of land rotation and higher densities which demand the permanent cultivation of a large proportion of the cultivable land. In this transition stage, in lands where the rainfall is low and uncertain, processes of desiccation, which are essentially induced by human activities, will develop... (Prothero 1972b: 47, emphasis added).

The effects of rising population on soils are likely to vary by altitude and agroclimatic zone, slope, and the quality of the soil to begin with. By one line of argument (Pingali and Binswanger 1987: 35-8), the risks of degradation are highest where the incentives to invest in erosion control are lowest. In areas with a long altitude gradient, the upper slopes of arid and semi-arid areas, and the midslopes of arid areas, often have thin cover, are particularly vulnerable. Here the payoffs of erosion control measures like controlled drainage, bunding, and terracing are too small to encourage farmers to invest in them. In the humid and subhumid tropics, however, the returns on investment even in the upper slopes are high enough to encourage local erosion control investments.¹³ Here, however, deforestation is a major risk.

Tragedy of the Commons?

Many have found that rising densities and communal land use (in Africa, specifically grazing) together result in resource degradation, as individual users try to get the most use for themselves before the resource is exhausted -- the widely perceived "tragedy of the commons".¹⁴ Others, however, suggest from plains and savanna evidence in Africa that this result is not inevitable (Gilles and Jamtgaard 1981, Peters 1987). It is necessary to distinguish between commons, in which a group or set of users share equal rights to use a resource, sometimes with restrictions; and open-access or free-for-all systems in which no one is excluded or there are no restrictions on use (Peters 1987: 175). African grazing systems seem often to be of the former kind: to be delicately hedged with rules about group membership and conventions of fair use.

Recent surveys of pastoralist ecologies in Africa show more sophisticated indigenous conservation mechanisms than outsiders have recognized (e.g. Anderson and Grove 1987); the same may be true of densely settled agrarians who keep herds, though there is far less evidence on the issues among these people. The concept of "overgrazing" is used in confused ways and manipulated for political purposes (Homewood and Rodgers 1987). It must not be assumed a priori that local people are unable to regulate their grazing on commons.¹⁵ "Tragedies" of overgrazing and soil erosion appear as likely to result from changes in rules, and from resulting disagreements and competition, as from inadequacies in local custom. But with or without state or agency intervention, rules of access are likely to become more restrictive under crowding.

Less importantly, an end of shifting cultivation leads to fixed paths; these can contribute somewhat to gullying (W.B. Morgan 1972: 80, on Igbo of Aba Ngwa County, Nigeria).

Effects on Forests and Other Trees

Rising densities appear to correspond with reduction of "natural" forest in much of Africa, but not necessarily with a reduction of planted trees. In the Lake Victoria Basin of western Kenya, analysis of synchronic aerial photographic data, linked to census data, by EcoSystems Limited reveals that as densities rise, total tree cover falls as "natural" forests are cut but then rises as more trees are planted on farms. The EcoSystems report is worth citing at length:

The cover of the natural vegetation falls from around 80% at very low population densities to some 30% at very high population densities [in the areas surveyed they range from under 10 to well over 250 per square kilometer]. The herbaceous cover shows a very drastic decline which is not echoed in the woody vegetation cover. Although the cover of the woody vegetation falls from around 50% to 20% at population densities averaging 77/km², it subsequently stabilizes at between 18-19%. This stabilisation is even more remarkable in light of Table 4.2 [not reproduced] which shows that the areas currently supporting 18-19% woody cover AND very high population densities have had those high population densities for 15-25 years.

The effective woody canopy cover can be expressed as the woody canopy within the areas of natural vegetation. Effective cover is high at low population densities but then falls quickly as human densities increase. However, effective cover increases again at high densities where it almost attains the same levels as in undisturbed natural vegetation.

This is easily explained by an analysis of the ownership of the woody canopy cover. At low population densities, woody resources are primarily owned by the Government and by large commercial plantations. Private woody cover is minimal, while common usage is modest. At the mid range of human population densities conditions have changed. Government/commercial ownership has decreased and the majority of the cover is in common usage. Private ownership of woody resources has, however, more than doubled. These trends continue at the highest densities of the population. Now, the majority of the woody resources are privately owned, in the sense that they consist of trees, hedgerows, bushes, woodlots and suchlike around the individual houses and farms of the smallholders. Common usage is still important but government/commercial usage is minimal.

Although these trends are obvious once they are set out, they have extremely interesting implications. Essentially they highlight the dynamic processes whereby people make use of the natural vegetative resources. Initially there is a period of exploitation. Resources are taken over, herbaceous cover is converted to crop cover, woody resources are removed under common usage, and effective woody cover decreases

markedly. This is followed by a period of consolidation and more importantly, by a period of conservation and replacement. Woody resources are both conserved within the individual holdings, and are replaced by selective planting.¹⁶

As this was an area partially registered under the tenure reform, and as the registration began in the areas of densest settlement, the effects of population growth are hard to distinguish from the effects of the tenure reform. An added complication is that the areas of densest population in the region tend to be those with most fertile lands and best growing climates. It remains to be seen whether aerial photographic data from other unregistered areas of Africa, and from areas where population densities do not correspond so clearly with agronomic conditions, show a similar stabilization of woody cover at very high densities.

Population growth is likely to cause an encroachment of savannah into forest area, but not necessarily. A study on forest-savannah boundaries in western Nigeria determined that these remained stable, both in general and in detail, despite an increase in population over a ten-year period (Morgan and Moss 1972: 26).¹⁷

Vicious Circles in Soil Depletion

Farming ecosystems may involve feedback loops of different kinds that are as yet poorly understood. Rising population pressures may lead to deforestation, which contributes in turn to erosion and run-off. These lead to falling productivity, which contributes to reduction of fallows or to less selective grazing, and these lead to further erosion and falling productivity. Or pressure and erosion may lead to a rise in land values and to exclusivity, and this in turn to overgrazing and erosion on remaining lands.

Other Effects:

As densities rise, so usually does reliance on non-farm incomes. The change can occur as an increase in subsidiary local earning activities or in labor migration.¹⁸ A number of the African peoples best known for their entrepreneurial strivings and achievements -- for instance the Kikuyu and Gusii (Kisii) of Kenya, the Chagga of Tanzania, and the Igbo and the Ijebu Yoruba of Nigeria -- are from among the most crowded rural areas in the continent. They are groups whose homelands have become too densely settled to support them without added, non-agricultural production and trade.

Farmers squeezed off their holdings commonly move their plots, places of residence, or both onto inferior lands. In hilly or mountainous areas these may be those of lower-potential high altitude slopes where soils are thin, but where the short-term benefits of soil conservation measures like terracing are too low to induce farmers to practice them. This is dangerous trend. In Nyanza Province, Kenya, population growth in the past fifty years has pushed farmers both uphill, onto the steeper slopes of Kisii District, and downhill, onto the drier lands of central and western South Nyanza and southern Siaya Districts.

Similar processes have been observed in elsewhere in eastern and central Africa.¹⁹

While the new soils to which farmers move their fields under crowding may be less fertile than the old, they are not necessarily so. Some may begin to cultivate valley bottoms with heavy clay soils that are merely hard to work, or swamps that require drainage (see Ruthenberg 1980; Pingali and Binswanger 1987: 32-4).

As densities rise, distinctions between "gardens" "kitchen gardens", or "yards", and other fields within holdings may disappear; and these may be cultivated in similar crops.²⁰ Farming and grazing are carried out closer to roads.

Reversal of Intensification where Populations Thin Out

Where migrations reduce population densities, several of the agricultural changes observed to correspond with rising densities may reverse. An East African example was the Ukara Islanders of the Tanzanian part of Lake Victoria as they moved away from their extremely crowded island.

after the colonial powers had gradually succeeded in controlling East Africa, many of the Wakara migrated to the island of Ukerewe and to the regions bordering the southeastern part of Lake Victoria. There they settled down as farmers... They then abandoned their advanced husbandry methods [which included irrigation, manuring and green manuring, stabling and fodder growing, and erosion control measures including terracing and ridge cultivation] and changed again to shifting cultivation which seemed more economic wherever sufficient land is available (Ludwig 1968: 89,94).²¹

A comparable recent West African example is provided by Netting among the Kofyar of Nigeria (1988). Under keen population pressures, farmers had developed by the twentieth century a dense sedentary farming pattern with minimized fallow, and had elaborated soil conservation techniques including intercropping, crop rotation, composting, animal manuring, cross-ridging, and bench terracing. In the 1960s, a trickling migration accelerated out from their intensive farming homesteads on the edge of the Jos Plateau to frontier lands in the Benue valley.

When the Kofyar began to enter the bush lands to the south of their homeland, they used only the extensive methods of their traditional repertoire... Because initially land was plentiful, no efforts were made to fertilize the crops... Poor soils and overworked land... [were] merely abandoned" (Netting 1988: 26, 27).

Recently, as the new frontier lands have filled up to densities of about 99 per square kilometer, comparable with those of their old homelands, intensification and conservation have been stepped up again, with shortened fallow, intercropping, and crop rotation, among other restored techniques. The Kofyar thus illustrate a pattern where intensification rose, fell, and rose again along with population densities.²²

The system of land rights appears to have changed correspondingly, that is, in a recurved pattern. A system of "continuing, valuable, heritable rights" in the initial homelands yielded to a looser arrangement in the "bush" settlement lands, but when competition rose under rising densities and new market opportunities for food crops, the pattern tightened up again:

Those bush lands first occupied by means of a token payment to the chief of Namu and an annual tribute in millet and chickens are now held individually. Whereas no firm claim remained when shifting agriculturalists left exhausted land, intensively tilled fields are now transferred outside the family for a substantial sum in cash (Netting 1988: 51).

In General.

Taken broadly, evidence from the more densely settled parts of Africa south of the Sahara suggests that rising densities correspond with various changes in agriculture and herding, and with changes in systems of property rights. These are some of the apparent tendencies: agricultural innovation is stimulated; crop compositions are altered to raise yields or profits; fields are more sharply delineated and made geometrically more regular; fallows are reduced; herds are re-structured; and farmers are forced to seek alternative livelihoods on or off their farms. Rules about property rights are tested, sharpened, and elaborated, whether in favor of individuals, groups, or both. New forms of transfer and pledging become acceptable, and land markets become more active, at least up to a point. Kin group compositions are altered. Wide structures like lineages are likely to arise and perhaps eventually decline again as densities rise; and where they lose importance in crowded areas, their functions may be locally replaced by other kinds of organization not based on kinship. Disputes over land become more common and more important in closer and closer family circles, while relations between autochthons and immigrants often become strained.

Technologically, economically, and socially, rural Africans south of the Sahara respond to rising population growth with active adjustments. Whether demographic pressure helps or harms them has no simple answer, for this always involves trade-offs between short-term standards of living, long-term ecological care, and social harmony. Some adjustments that seem to contribute to economic growth, like plough adoption and some cash cropping, challenge farmers' adjustments to their habitats and their neighbors, while others, like manuring or tree-planting, may not. While the continent's rapid population growth is clearly a cause for concern, any action upon property systems should take into account the continent's variety, complexity, and fluidity in land matters.

Possible Causes and Effects?

The evident ties between rising population densities and many other changes in agricultural life raise questions about what causes what, and how.

Notes (Chapter 5. As Densities Rise: Agricultural Innovation)

1. For a useful corrective emphasizing indigenous innovations in Sierra Leone and other parts of West Africa, see Richards 1985. The example of Ukara Island, Tanzania, cited frequently in this section, shows how far agricultural systems can "evolve" (in one direction or another, and for better or worse) as population densities rise. Probably none of the changes described herein on that island are attributable mainly to outside influence.

2. A point illustrated in Shipton 1985 and Mascarenhas 1986.

3. See e.g. Ludwig 1968: 89, 108-9, on river damming, canals, and terraces on Ukara Island, Tanzania; Grove 1962: 132, on Kano, Nigeria. Ludwig's table (pp. 92-3) on farming systems and population densities in some 50 tropical African localities indicates that areas with irrigation tend to have populations over 100 per square kilometer. See also Pingali and Binswanger 1987: 35 for a generalization on Africa.

4. See Boserup 1965: 24-7; 1980; Pingali et al. 1985, and Pingali and Binswanger 1987: 29, 41-50 for theory and generalization on the effects of rising densities on farm tool mechanization. The series they find corresponds with rising densities is: digging stick - hoe - animal plough - tractor. The correspondence is not perfect, however, since technologies may overlap. The plough, for instance, is found often at the highest densities, whether or not tractors are present. Pingali, Binswanger, and their collaborators find that the plough does not begin to appear in African farming systems until the "grass fallow stage", corresponding with middling densities. The switch to tractors is not well explained by changes in densities.

5. The Integrated Land Use Survey, on the Lake Basin of Kenya, shows that population density correlates consistently and positively with intercropping, both with food crops and with cash crops. (EcoSystems 1985: 4.24). Mortimore (1972: 67) gives details on heavy intercropping in the Kano close settled zone, diagramming the patterns; see also Mortimore 1971: 5 and Grove 1962: 132 on the same area. Ludwig 1968: 111-2 details intercroppings on Ukara Island, Tanzania. Moore (1986: Ch. 5, esp. p. 117), on Chagga of Tanzania, says they have increasingly intercropped old banana plots with coffee.) See Jones and Egli 1984: 86 on coffee, banana, and bean intercropping spreading in the great lakes highlands of Rwanda, Burundi, and eastern Zaire. They point out that this intercropping is not normally destructive to coffee as officials fear.

6. Jones and Egli (1984: 54) report farmers' switching from higher-quality food grains to still higher-yielding tubers in the crowded highlands of Rwanda, Burundi, and eastern Zaire, where population densities averaged 70-400 per square kilometer; see also W.B. Morgan 1972: 80, on Igbo of Aba Ngwa County, Nigeria. Middleton and Greenland (1972: 170) say that in the West Nile District of Uganda, home of the Lugbara and others, the counties with the densest populations are those with the smallest proportions of land in cassava; but this may be because cassava can grow on drier, inferior lands.

7. This correspondence is clearly demonstrated by the EcoSystems 1985 data from western Kenya. See also, for example, Gulliver 1961: 21, on Arusha of Mt. Meru, Tanzania; Moore 1986: 110-117 on the Chagga of Mt. Kilimanjaro, Tanzania; Massing 1979: 86-7, on the Kru of West Africa; Mortimore 1972: 67 on increasing groundnut production and food purchases in the close settled zone of Kano, Nigeria.

8. See Ludwig 1968: 104-5, 111-2 on the careful three-year crop cycles found on crowded Ukara Island, Tanzania, as early as the 1930s.

9. Ludwig 1968: 89, on Ukara Island, Tanzania; Mosley 1983: 73-90; Grove 1962: 132, Mortimore 1971: 5, 12, and 1972: 66, on the Kano close-settled zone, Nigeria; and 1971: 9 on Nigeria as a whole. Ludwig's table (1968: pp. 92-3) associates manuring and stabling with population densities in some 50 tropical African societies. It indicates that areas with densities over 100 per square mile tend to be the only places where stabling occurs. (The table is also reproduced in Ruthenberg 1980: 130.) See also Boserup 1965 and Pingali and Binswanger 1987: 29, 40 for Africa-wide and worldwide generalizations.

10. Ruthenberg 1980: 138. He cites references on Ethiopia and Mali.

11. See also Ludwig 1968: 89, on Ukara Island, Tanzania and other parts of Africa. Ludwig's chart on "Permanent Farming Systems with Soil Conserving Practices in the African Tropics" (pp. 92-3, also reproduced in Ruthenberg 1980: 130.) indicates that societies with irrigation tend to have densities over 100 per square kilometer. Pingali and Binswanger 1987: 32-8 discuss the matter in worldwide terms. Porter 1972: 33-6 shows terracing corresponds to densities over Kamba-speaking country of Eastern Province in central and eastern Kenya. Riddell and Dickerman 1986: 202 suggest the same for the Kabiye of Togo: "in the more densely populated areas of good soils there are terraces held in near-permanent cultivation".

12. These are, of course, simplifications. The Malthus and Boserup theories both have many social, political, and moral implications.

13. In discussing the effects of rising densities on soils, Pingali and Binswanger (1987: 36-8) combine interesting arguments about ecological conditions with conventional and rather simplistic arguments about property systems (that "common property" leads to conservation initiatives and "privatization" to conservation).

14. Hardin 1968; Hardin and Freeman 1977; Blaikie 1981: 73; Jones and Egli 1984: 94.

15. Remarking on Toerbel, in the Swiss Alps, Netting states that the tragedy of the commons is avoidable where locals understand the limits of their environment and carefully regulate and restricted their grazing on communal lands (Netting 1982: 472).

16. EcoSystems 1985: section 4.4.4, pages 4.09-4.10; see also pages 3.108-3.110, tables 3.76-3.78.

17. Hopkins 1981 compares and contrasts forest and savannah ecosystems in West Africa, describing changes along the borders.

18. Paterson 1984, on southern Kakamega District, Kenya; ILO 1972, on Kenya as a whole; Mortimore 1972: 67-8 on Kano, Nigeria.

19. For examples, see Moore 1986, ch. 5, p. 117, on Chagga movements down-mountain; Jones and Egli 1984, 19, 59 on movements onto leached and eroded steep upland slopes, and into swamps and other, relatively infertile lower lands in the great lake highlands of Rwanda, Burundi, and eastern Zaire.

20. Hamnett 1973: 44, on Lesotho, says holdings of over eight acres more often have "gardens" than those with less; and holdings of over 10 acres tend more often to have "yards" than those with less.

21. Ludwig does not specify, however, which of the "advanced husbandry methods" they abandoned in the move to shifting cultivation in their new homelands.

22. According to Netting, new market demands for food crops have also sped the reintensification in the newly settled lands (1988: 43).

Population Pressure and Land Markets

Sales: Changes in Rules and Practices

In recent decades, international agencies have not generally felt free to intervene openly in land tenure matters in African countries. In most countries the issues are too sensitive politically. Insofar as the USAID and World Bank have been involved, however, a major thrust of their current policies in Africa south of the Sahara is to try to promote land markets, that is, to make land more freely transferable by sale and other forms of exchange. To assess what kinds of difference such a policy might make, we must first ask, how freely exchangeable can land become without direct agency or state intervention as tenure reform?

Evidence from many parts of the continent suggests that as densities and competition for holdings rise, rural people (and urbanites with rural ties) come to regard land more as a saleable commodity. It is likely to acquire monetary prices, and land already priced rises in value under population pressure (see e.g. Hill 1982: 50, 289 and passim; Noronha 1985: 184). In a way, sales epitomize private property, and there is evidence that practices like rentals and pledging can evolve in time into a practice of outright sale.¹ There are limits, however, on the exclusiveness of individual rights in land before and after a sale.

Although there are parts of sub-Saharan Africa where land sales have been acknowledged and accepted as common practice for over a century, these are few and far between. Over most of the continent, the best sources up to the mid twentieth-century usually agree that the idea of selling land was a foreign one, locally uncountenanced; and many in densely settled areas noted rules against sales. In many sparsely populated agrarian regions (as well as in many pastoralist regions), sales are still rare. As population pressures rise, an increase in sales often gives rise to rules against them.² Rules often arise only after they are broken. The action and reaction may occur before it is openly acknowledged that sales are going on.

The countries in Africa with the largest areas of high density are among those where market principles have established themselves most strongly in rural economy. These include the central and western Kenyan highlands, Rwanda, and large parts of Nigeria, Ghana, and Ivory Coast. Other smaller areas illustrating the principle include the Chagga highlands of Kilimanjaro. Cash cropping is part of the connection between land scarcity and a pro-market orientation.

Disguised Sales and the Erosion of Controls

Until well into the colonial years, locally adapted rules to control sales usually designated chiefs or headmen (where these existed) as the authorities whose permission was required for a sale, or such dealings were prohibited outright. This control was an aspect of "tradition" -- often assumed timeless, rightly or wrongly -- that colonial rulers seized upon and tried to perpetuate. It was part of British "indirect rule" in Kenya, Nigeria, and various other African colonies to try to limit sales through the local authorities, who in some areas were artificially implanted as chiefs or paramount chiefs. Broadly speaking, the restrictions lasted into the 1950s, when a wave of legal codification efforts were commissioned in these colonies, freezing local traditions as reported by selected elders, usually men. (In Kenya, the Swynnerton Plan of 1954 dramatically reversed the restrictions.) But where land became scarce, individuals had often begun selling land without asking permission of kin or any authority; and some disguised their sales as loans, rentals, or pledges.³ Literature of the later colonial decades is full of such occurrences in areas becoming crowded or areas with cash crops. The many possible ruses for disguising a sale make emergent land markets hard for local authorities to control. The same remains true today where governments try to regulate sales.

Land becomes more saleable in various ways: by a broadening of the categories of possible sellers, possible buyers, saleable land, or forms of compensation for land transfers. These are cognitive changes as well as economic ones. Sales of farmland are often not instantaneous exchanges, but gradual processes with payments in installments. In some contemporary traditions, no land changes hands until fully paid for. Where written records are not used, sales are often re-negotiable. This is a crucial difference between literate and non-literate legal systems, and an area where they sometimes clash.⁴

What Lands Become Saleable First

As sales become more accepted, some land becomes saleable before, and more easily than, other land. The rules frequently depend on how the landholder initially acquired the land. In societies with lineages, the critical distinction is usually that inherited land is not saleable without consent of lineage members, whereas non-inherited land is more freely saleable.⁵ Inherited land may be subject to ancillary and residual rights of kin; and in some societies they may be entitled to first refusal at the least.

Land with cash crop trees (palms, cocoa trees, citrus fruit trees, wattle trees, etc.) has frequently been considered private property, and become saleable, before other land. But even where trees and the land around them become privately saleable, information about their upcoming sales and rights in them after purchase often continue to depend on witnesses whose loyalty cannot be taken for granted without gifts or "customary" transactions such as wedding or funeral contributions. These topics are too large to be discussed in detail here, but they are surveyed extensively elsewhere.⁶

Redeemability and Permanence

As densities and pressures rise, land sales become more permanent. In some densely settled parts of Africa, for instance in parts of Kenya and Nigeria where land has been bought and sold for many decades, it has been expected until recent years that a buyer could get back the land by refunding the purchase price.⁷ These expectations seem to fade as competition for land becomes keener or as a land market becomes more active. This is similar to a process that occurs in a land registration. Even where governments have registered land as private property, farmers may continue to expect sales to be redeemable, as they did in crowded East Bunyore, in the Kakamega District of western Kenya, in 1980, ten years after registration had been finished (Paterson 1984: 63.)

Proliferation of Claims Again after Sales

Do sales necessarily imply private property? While an individual selling land to a stranger may deny the rights of other members of a family, neighborhood, or other group, the buyer may soon lose some of what he considered his or her own, as claims on the piece of land multiply among members of the buyer's own group or groups. A seller's permanent loss of land is not necessarily a buyer's permanent gain. Just as the seller may have struggled to get the land redefined as personal property, the buyer may have to struggle to keep it that way. The "private" nature of the transaction may only prove only a fleeting phase in the history of a land parcel, as claims proliferate once again.

$$\begin{array}{ccccccc} a & \backslash & & & & & / & d \\ b & \rightarrow & a & \rightarrow & d & \rightarrow & - & e \\ c & / & & & & & \backslash & f \end{array}$$

Sometimes, too, people with old ancillary rights, for instance grazing, fruit tree harvesting, or wood collecting, will continue to press them after the sale.

But something like the reverse of this process also occurs. In the Densu Valley, near Accra, Ghana, Hunter (1972a: 99) has observed stranger-farmers (temporary share contractors) banding together to form temporary land-buying "companies", which bargain collectively for land purchases and then disband after a purchase, as members take their individual shares.

Another way claims to purchased land multiply is through migrations. Purchasers who move to cities, mines, or plantations to find work, leaving their holdings in the charge of kin, yield them partial claims in doing so.

An exclusive focus on transactions, then, may give a misleading impression of permanently private property. One must also consider who exercises rights before and after a transaction.

Sales Not Eliminating Other Forms of Exchange

Pledging, rental, and other locally acceptable African forms of land transfer can turn, in time, into customs of outright sale. But an increase in sales never fully eliminates other forms of land transactions, such as gifts, loans, share contracting, or barter. These other forms of exchange remain more convenient than sales in many situations (see e.g. Moore 1986: 150, Robertson 1987). Barter remains important where those losing land rights prefer compensation in illiquid forms to guard against inflation or claims from other family members.

Local Rules on Who May Sell and Why

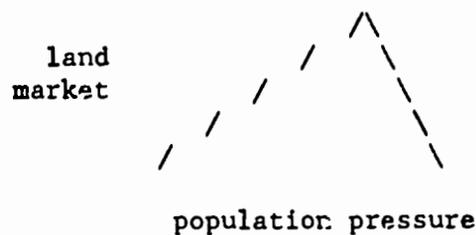
Where land sales are becoming accepted, new cultural rules may arise to determine who may sell land, and under what circumstances. Local preferences vary. Among the Fiata of southeastern Togo, reasons reported as locally acceptable in recent decades include marriage payments, legal or educational fees, or a productive investment like a maize mill; but a sale to buy a bicycle, a trip, or a new house is forbidden (Le Bris 1979: 110). Among them, as among the Luo of Kenya, money from land sales is subject to special spending taboos and occasions special ceremonies (Le Bris 1979: 110; Shipton 1989). Land sales across the continent are a politically and ethically sensitive issue, and reports on why farmers have sold land may reflect ideal more than real reasons.⁸

Rules about who may sell land may or may not include women, junior men, or adherents to certain religions. Landholders and land seekers may turn to Muslim, European, or other exogenous land law permitting sales, pledges, leasing, etc. Some individuals, noting differences between local and exogenous rules, may change their religious orientations, as observers have noted in parts of coastal Kenya and northern Nigeria touched by Islam.⁹

Land Markets Slowing Down under Extremely High Densities

On the surface, the literature offers conflicting indications on the correspondence between population densities and land markets. Many observers affirm that pledging, leasing, and sales increase with density.¹⁰ But others who have worked in some of the densest areas on the continent -- areas between about 200 and 1,000 per square kilometer in Kano and the Igbo country in northern and southeast Nigeria, respectively; southeastern Togo; and Kisii and southern Kakamega District, Kenya -- report notably quiet land markets.¹¹

Though rising population densities and pressures appear generally to correspond with the rise of a land market, there seems to be a recurve affect, such that increasing population pressure on land stimulates a land market only up to a point, at which buying and selling die down.



Why the downturn? The explanation involves social as well as economic considerations. What usually seems to happen is that rising demands and prices lead many farmers to sell off the pieces of their holdings they use least (much more seldom entire holdings). But under extreme crowding, the incidence of sales falls off because many have nothing left to sell but the land on which their homes stand. This land is qualitatively different from other land, since its sale means not just the loss of a productive resource, but total abandonment of one's social identity as a member of a kin group or community.¹² Having a home standing on a rural piece of land may be a particularly important symbol where members of lineages occupy contiguous territories. A house in one's homeland, even if unused, also remains a crucial symbol of origin, identity, and social involvement for urban migrants. Land is more than a productive resource, especially where ancestral graves and old family homestead sites are involved.¹³

All this does not mean that the people of these crowded areas necessarily stop engaging in sales, but that the land there almost stops being bought and sold. Some of the people are forced to look to other less crowded areas, and so may remain in some broader land market.¹⁴

Land markets arise partly as an adaptation to changing economic and social circumstances like rural crowding and cash cropping. Over the past few decades, there have been marked movements toward "private property" in many parts of agrarian Africa, and particularly in some that sustain dense populations. There usually remain some limits to individualism in land dealings, and through these, farmers without adequate holdings of their own may gain important access to land for cultivation or grazing. Where land markets rise and then quiet down again for social and cultural reasons, attitudes about land transfers may have been transformed in a lasting way, so as to allow possibilities of future buying and selling, for better or worse. Attempts to "free up" African land markets artificially by registering land as private property seem unlikely in the long run to achieve much more than local, natural, and adaptive changes in making saleable the rights of land use. We look next at some related kinds of land dealings: borrowing, lending, pledging, and mortgaging.

Notes (Chapter 6: Population Pressure and Land Markets)

1. See Netting 1982: 465, 475; and for an example, Le Bris 1979: 113, on the Porto Novo region of Benin and southeastern Togo.

2. For Tanzanian examples, see Shipton 1979: 110-115, on the Sukuma, among whom anti-sale rules in the late colonial years took the form of chiefs' orders, codified under British authority; and Tanzania Moore 1986: 111, on the Chagga. In western Kenya and elsewhere, local rules against land sales have taken various forms including curses and other spiritual prohibitions. Shipton 1989 describes the Luo case in some detail.

3. See, for instance, Moore 1986: 111 on the Chagga of Tanzania in the late 1920s; Perlman 1962: 7 on the Toro of Uganda; Carlsen 1980: 147, on Kenya; Netting 1982: 465 on the Kofyar of the Jos Plateau northern Nigeria; Le Bris 1979: 113, on southeastern Togo; See Saul 1988: 269-70, on disguised land sales on less densely settled lands in Burkina Faso. On other parts of Africa see Meek 1946, passim; Allen 1965, passim; Cohen 1978: 11; Noronha 1985: 100-105.

4. For case material see Moore 1986.

5. For some examples from densely settled parts of Tanzania, see Moore 1986: 273-4, 267-83, on Chagga; and Young and Fosbrooke 1960: 71, on the Luguru. Ludwig (1968: 124) reports that on Ukara Island, Tanzania, "other inhabitants of the island" are the only legitimate buyers. For western Kenyan examples, see Sangree 1966: 28-9, on the Tiriki; Nakabayashi 1981: 29, on the Sukha Luhya. Cf. Wagner 1956: 77-8, 96, 99, on Maragoli and other Luhya, for more complex rules, involving distinctions between different generations of lineal forebears. See also La Fontaine 1979: 100 on lineages' rights to prevent sales to others among the Gisu. Kikuyu before land registration variously considered selling land to lineage members, or to non-Kikuyu, tantamount to selling the ancestors (Middleton 1953; Bohannan 1964: 46; Sorrenson 1967: 10; Barber 1970); compare Glazier 1985: 148, on the nearby Mbeere. Hill 1970: 149 notes that among the Hausa of Nigeria, brothers' rights of first refusal is not connected with any concept of lineage. See Meek 1946 for various West African examples.

6. See recent comparative studies and annotated bibliographies by Louise Fortmann, John W. Bruce, James C. Riddell, and associates at the Land Tenure Center of the University of Wisconsin, including Fortmann and Riddell 1985 and Fortmann and Bruce 1988. Berry 1988 surveys some West African tree tenure systems. For some of many anthropological studies of trees and tree land in the process of becoming private property before other land in areas not yet very densely settled, see Parkin 1972, on the Giriama of coastal Kenya, and Saul 1988, on Bisa and Mossi speakers of Burkina Faso; see also Brock 1969: 6, on Njiha, in Mbozi, southwestern Tanzania. Meek 1946: 27-31 generalizes on rights generated by labor in trees, and on tree pledging.

7. For examples from Kenya before its land tenure reform, see Sorrenson 1967: 7, on the Kikuyu; and Whisson 1964: 95, on Luo. For a Nigerian case see Mbagwu 1978: 111 on the Igbo.

8. For lists of reasons why farmers sold land in Kenyan cases since the tenure reform, see Barclay 1977: 330-3, on Wanga, Kakamega, Kenya; Chambers 1983: 122; Okoth-Ogendo 1976: 179.

9. Prothero 1972a: 59, on Islam among Hausa of the close-settled zone of Kano, Nigeria; Parkin 1972, on the Giriama of coastal Kenya. Cf. Long 1968, which presents a Weberian interpretation of Christian conversions among entrepreneurial Lala in Zambia.

10. Nakabayashi 1981: 27, on the Sukha Luhya; Prothero 1972a: 59, Mortimore 1972: 69, and Grove 1962: 130, on the Kano close-settled zone, Nigeria; Netting 1982: 465 on the Igbo; Lloyd 1972: 97; Netting 1980: 22-3 and Noronha 1985: 136-8 on Africa generally.

11. Hill (1972; 1982, especially 50, 289) says rising density and rising prices have reduced the incidence of land sales in Kano, Nigeria. For other Nigerian cases see Ross n.d. on Hausa and Fulani at about 200 per square kilometer in Wudil District, Kano; Mbagwu 1978: 111, on the Igbo. Le Bris (1979: 111-2) finds a similarly reduced incidence of land sales in the denser parts of southeastern Togo. In these cases densities exceed 200 per square kilometer, very high levels by rural African standards. For the same phenomenon in equally densely settled Kenyan areas that have undergone state land registration, see Carlsen 1980: 147, on Kisii, where rentals are being substituted for purchases; or Paterson (1980a: 12, and table 6; 1984) writing on the crowded Luhya of Bunyore, in Kakamega District; here few parcels are ever offered for sale, even if uncultivated year after year. Of course, observers' theoretical assumptions might also have colored their observations about long-term trends in land transactions. More longitudinal studies are needed.

12. Farmers who sell may follow kin to other less crowded areas. In western Kenya, Luhya who have left their home areas to settle among Luo in South Nyanza District have begun forming territorial lineages in the new lands, just as they had at home.

13. Is the quieting of the land market under extreme density reflected by a shift in cultural values towards disapproval of sale? The answer is unclear. In parts of western Kenya where land sales have been superficially accepted practice for decades, subtle cultural stigmas continue to surround them (see Shipton 1989).

14. In the western Kenyan case, substantial numbers of southern Luhya unable to buy land near their homes have bought it in the South Nyanza District near the Tanzanian border; others have moved to government settlement schemes. See Migot-Adholla 1977, Shipton 1988 on the "spontaneous" migrants, and Leo 1984 on Kenyan settlement schemes.

"Informal" Pledges and Mortgages

Land pledging against loans is believed to have existed in pre-colonial times in only some parts of Africa south of the Sahara. By the mid-twentieth century, ethnographers and district officers most often reported such practices as "forbidden" in local law and custom. As with sales, prohibitions usually suggest that pledges did sometimes occur or were attempted. Where not forbidden under local rules, they were often forbidden by later colonial times under new government regulations or codifications of perceived local laws. Colonial governments sometimes created anti-individualistic "customary" rules where they had not existed in explicit forms before.¹ In Kenya in the late 1950s, the government's plans to register lands included a complex provision to keep private moneylenders from gaining access to defaulters' lands, and especially to prevent their taking over the lands without cancelling the debts.² At the same time, interestingly, the Government was setting up its own credit schemes for African farmers on the principle of land mortgage with a possibility of permanent alienation. The issue, then, was not whether pledges or mortgages would occur, but who would ostensibly control them.

The "informal" mortgaging or pledging of land against loans has been most commonly reported in parts of Africa with exceptionally high population densities and pressures. In these areas, pledges appear sometimes to have arisen from older practices of land loans unconnected to other credit. They are sometimes a disguised form of sale, where sales are more strictly prohibited.³ The Bandial subgroup of Diola in southern Senegal, who in the past permitted land pledges only for loans in kind, now also permit them for loans in cash (Snyder 1977: 144-5).

Cash-cropping tends to raise the incidence of land pledging (see e.g. Meek 1946: 259-62, on Sierra Leone and Ghana). Land pledging has been observed in areas without high population densities, but with high-value cash crops or tree crops grown in plantations (e.g. the Giriama of coastal Kenya -- Parkin 1972). Here the productive high potential of the land is the main root of competition for it, and thus in a sense substitutes for high densities.

The English terms "pledge" and "mortgage" (terms with overlapping meanings⁴) do not fully reflect the variety of transactions that Africans enter into where loans are made against security of rights in land or moveable property.⁵ Particularly where agreements are made verbally and are re-negotiable after a lapse of time, European legal terminology can straightjacket the analyst with an inappropriate rigidity of categories.⁶ The terms of agreement about loan repayments sometimes depend on whether and how a pledgee uses the land or other property pledged.⁷ In much of West Africa it is deemed normal for a pledgee or mortgagee to take over use rights of the land during the period of the loan; in Tanzania at least in East Africa it tends not to be acceptable. These systems both have pros and cons for adaptation or emulation.⁸

How Pledging and Mortgaging can Contribute to Land Concentration: The Time Factor and Foreclosures

Pledging land is a gamble. Pledges and mortgages are most dangerous for borrowers, and most attractive for lenders, when they include limits on the time over which repayment can be made. In 1946, the land tenure authority C.K. Meek generalized that in the British colonies, a "feature of native systems of land-holding" was "the absence from native customary law of any limitation of time within which claims over land -- or indeed anything else -- can be enforced" (Meek 1946: 24). He discerned no right of foreclosure. In some parts of Africa, as shown below, pledges then were considered redeemable for generations.

But over the twentieth century the principle has been increasingly tried and strained, and this has been one of the critical respects in which private property has gained hold in different parts of the continent.

In 1927 the British colonial government of the Gold Coast, now Ghana, attempted to introduce a "statute of limitations" in "native" courts, permitting land pledgees to take possession of land after loans went unrepaid for six years. A council of chiefs vetoed the change, objecting that time limits would be contrary to local custom (Meek 1946, pages 24, 257).

But elsewhere, the change seems to have occurred without statutory fiat. The palm-growing Giriama of coastal Kenya, during a period of transition from a palm-wine economy to a copra cash-crop economy from the 1940s to 1960s, developed the custom of the "limited mortgage". Up to this period, mortgagors had been able to redeem their pledged land or palm trees at any time by repaying their loans. Then, as land and trees acquired new value, local loan agreements began to include repayment deadlines, beyond which times pledged land or trees became the permanent property of the mortgagee. According to Parkin, the change from unlimited to limited mortgages was a key mechanism allowing a marked concentration of land and trees in the hands of a minority of Giriama men over the period (Parkin 1972: 53-5).

Among the coffee-growing Chagga of Mt. Kilimanjaro, in Tanzania, debts were indefinitely redeemable until recently. In a court case tried among the Chagga of Tanzania in 1946, a plaintiff successfully recovered land his ancestors had mortgaged for a cow and a calf "three generations" earlier.⁹ More recently, in this same area, Moore has documented strategies of lenders to take over the land of poorer borrowers, similar to the Giriama strategies above, but with an added dimension of triangular debt brokerage. She recounts the case of rich man's assuming a poor cousin's debt to a moneylender, with the requirement that the poor cousin repay him his entire coffee crop. The lender knew the poor cousin would never be able to pay him off this way -- the man would have other expenses to cover when he harvested his coffee -- and that he, the richer cousin, would become the preferred buyer of the land (Moore 1986: 189, 279). That such a deal was countenanced between kin reflects the extremely crowded condition of Chagga farmland, and the intensity of competition for it, by the time of Moore's first field research in 1968.

The time factor can enter into pledges or mortgages when high-value cash crops come along, when the land otherwise acquires a cash value, or when there

is a question of the land's being "developed" by a pledgee's or mortgagee's investments of labor, materials, trees, etc. over the period of the loan. The greater the production or use value of the land, the stronger will be pressures on borrowers to accept time limits on repayments, and the greater the risks of their losing land through this device. Doubtless, in many parts of Africa, the partially accepted exogenous notion that "time is money" is influencing farmers' thinking about what constitutes a fair loan agreement. This is a change with profound implications, both economic and ideational.¹⁰

Pledging and Land Concentration: The Igbo Case

The case of the eastern central Igbo, of southeastern Nigeria, who are some of the most densely settled agrarians in Africa, illustrates how important pledges and mortgages can become under increasingly crowded conditions. Mbagwu has studied pledging and its effects on land concentration. In one village -- apparently an extreme case among several sample villages -- he found that 65 per cent of negotiable land, and 71 per cent of negotiable palms, were held on pledge or mortgage. He found that those who held mortgaged, pledged, or leased land in a village of 200 male adults were only 10 men, and that most of these came from outside the village (Mbagwu 1978: 108; cf. W. B. Morgan 1972: 76, also on the Igbo; Meek 1946: 260 for a similar case in Sierra Leone).

Mbagwu reports that many poorer Igbo farmers lose their land by joining rotating savings and credit associations whose organizers require land as security (1978: 103-4). Haggblade reported in the same year that some urban rotating savings and credit associations in Cameroon also required land collaterals (Haggblade 1978: 46). Little has been written, however, about connections between such associations and land pledging elsewhere in the continent.

Igbo use pledges in several other ways to amass land from their kin and neighbors. Citing passages of some early 1960s observers, Mbagwu writes (Mbagwu 1978: 104),

A...widespread and effective process by which land is concentrated is the redemption from pledge of portions of land which a custodian of the family estate may have given out at times of financial stress, of course with the group's approval. The pledger himself may have become unable or be unwilling to redeem the land. When this is the case, any member of the family is then free to redeem it and to retain it as his personal property until the custodian or his successor(s) reimburses him. When this reimbursement is made the land reverts to family property... In very many instances such reimbursement is never made". Rather, the custodian may borrow additional money from the redeemer with that same piece of land as security. The reimbursement price on the land may then become so high that succeeding custodians let their claim rest and the redeemer retains the land indefinitely... A related practice is that some families borrow money as a group from one of their prosperous members, and in security pledge some portions of the family land to him. A period is usually set for the redemption of the pledge. It is also usual to state in the agreement that if payment is not made by the date

stipulated, the land shall become the sole property of the pledgee... Some people have in this way obtained large areas of personal land which was formerly the family estate.

This passage shows both triangular debt brokerage, as seen in the Chagga case above, and the imposition of time limits, as seen in the Chagga and Giriama cases. As Mbagwu concludes, "cash has supplanted rights of birth as the operative medium by which ownership or holding of land is established" (p. 105). Loans become pledges, and pledges become deadlined mortgages or disguised sales. This is a land market, but it appears to be one advantageous mainly to richer rural people.

Allocative Advantages and Production Incentives: Remaining Questions

How necessary is pledging? Little is known about demands for loans in rural Africa. Nor does the presence or absence of specialized moneylenders provide much clue, since in many parts of the continent, these are absent but shopkeepers and other traders, rich farmers, and others do lend money or goods in kind to neighbors or trading partners. Rural land seems to be pledged and mortgaged in Africa more frequently to meet emergency cash or food needs, or for combinations of farming and non-farming needs, than simply to start or build up directly productive ventures.¹¹

In some local arrangements, the fruits of the land goes to the pledgee until the loan is repaid. The utility of usufruct adds to any interest on the loan. Whereas the loan itself is usually a fixed quantity, both the usufruct and the interest may be limited only by the borrower's promptness in repayment, though there are areas where forgiveness is expected after a year or two.¹² Future researchers may ask: is it that the poorer the borrower, the more exploitative and permanent the transfer is likely to be?

In neo-classical economic theory, pledging and mortgaging can help to ensure that land and other productive assets are kept in use: they "allocate scarce resources by matching demand with supply or by adjusting changing demographic factors to the relatively fixed amount of... land available" (Snyder 1977: 125; cf. Robertson 1987 on African share contracting). Whether lenders tend indeed to be more able or willing than their pledging borrowers to use the land appears not to be conclusively demonstrated yet anywhere in rural Africa.

Pledging and mortgaging involve some insecurities of tenure, both for borrowers and for lenders. Not only is it often uncertain whether a borrower will be able to repay the debt to redeem the land or other good mortgaged, but it is also uncertain whether, in the case that he or she does not, the lender will be able to take possession of it in practice. These latter uncertainties are considerable in societies with strongly unilineal kinship systems, where affinal kin of the borrower are likely to live near any land pledged or mortgaged. And this is a kinship pattern that obtains in many of the more densely populated parts of the continent.

The insecurity of tenure inherent in pledges or mortgages would seem, on the surface, to reduce incentives to develop or transform the land with

permanent crops, fences, etc. But on the other hand, the uncertainty about future rights may provide incentives for either borrowers or lenders to invest in the land, precisely to give their claims added legitimacy against each other. So there is a trade-off. Unfortunately field observations on the issue are scarce.¹³

The Social Functions of Pledging?

Some observers have construed pledging as a mechanism promoting social solidarity in rural communities. The argument has been applied to serial pledging (A pledges a land to B for the loan of a goat, B pledges the same good to C for a loan of cloth, and so on), as observed among the Bandial subgroup of Diola in Senegal (Snyder 1977: 126-7, 145) and elsewhere. It is not a particularly strong argument, since the pledge is in a sense an expression of lender's distrust in their borrowers, and a way for borrowers to negate in large part their indebtedness. As Snyder observes, a trend of switching from prestations and counter-prestations in kind, over time, to pledges against cash loans, has placed increasing emphasis on exchange-value rather than use-value, and further diminished the social functions of pledging (p. 145).

Risks to Borrowers

Whatever its advantages in borrowing for emergencies or production, and for maintaining social contacts, a functioning pledge or mortgage system is a long-term risk to the borrower, and often just a way of postponing problems. Liversage has put the problem succinctly:

When capital is borrowed, however, the trouble arises out of the rigidity of the debt compared with the returns which are always fluctuating... Sooner or later returns fall below the level at which the obligations were contracted, the debtor's working capital becomes reduced and his economic efficiency is impaired. The farmer is thereby placed in a vulnerable situation in which he runs the risk of being dispossessed with the loss of the greater part of his equity in the farm (Liversage 1945, quoted in Chango-Machyo 1969: 104).

With less flexibility than most "informal" loans, institutional credit tied to land can only add to the borrower's risks.

Whether local pledging and mortgaging help or hurt a society, or members of it, they are extremely difficult for governments to abolish or regulate by order, let alone to tax. The policy issue, then, becomes whether to compound the opportunities and risks of local pledging and mortgaging, with those of formal, institutional mortgages.

How Easy a Step from "Informal" African Systems of Pledging and Mortgaging to "Formal Institutional Mortgages?"

Whether indigenous African patterns of pledging and mortgaging, or the new patterns to which Africans have adjusted in this century, provide an adequate basis for accepting formal, institutional mortgaging is a hard but most important question. To start with, many African peoples still do not widely practice land pledges or mortgages. On the other hand, the areas that are coming under government land registration programs and being opened to institutional, land-tied credit do tend to be the kinds of areas where some forms of pledging and mortgaging are already widespread. Both are the areas with higher population densities and pressures. These are also the areas with the highest rates of circular rural-urban labor migration, and thus, perhaps, the greatest previous exposures to European-style contracts.

The differences to consider between "informal" and new, "formal" institutional pledges or mortgages are several. (1) In local, "informal" credit systems, it is often poorer farmers who pledge their land, whereas in "formal" institutional systems, it tends to be richer ones who have access to the lending officials and to other sources of income. (2) In "formal" mortgages there is more social distance separating borrower and lender. (3) The newer contracts are not embedded in broader social relationships, and they rely on politically risky measures of expropriation. (4) Usufructuary rights in pledged land lose importance, since institutions usually cannot use the land themselves. (5) The new "formal" contracts are written, and thus not easily re-negotiable in time as the needs and capabilities of borrowers change. Where borrowers' abilities to repay depend heavily on risky, rainfed agriculture, the loss of flexibility can be critical. (6) Since government institutions and banks can advertise nationally, there is a greater likelihood that land of defaulting borrowers will end up in the hands of total strangers to a community, who may include land speculators. (7) Linguistic difficulties compound possibilities for misunderstandings. Since most African countries are multi-lingual, a centralization of lending automatically means enormous problems of interpretation. This is all the more true where the authors of loan agreements are trained in foreign law schools and foreign-run financial institutions.

To sum up, local African conventions concerning land pledging have changed over time where populations have grown dense, where cash cropping has appeared, and where competition for land has risen. In imposing new deadlines on pledges, in some crowded areas, lenders have created new customs with superficial resemblances to the mortgages of western-style banks and other institutional lenders. But while pledging and deadlined mortgaging systems may already be familiar ideas where new institutional lending systems are set up, there are many differences between the "formal" and "informal" types of pledging or mortgaging. Existing local customs can scarcely be considered a firm and natural base on which to build land-mortgage institutions. We return in the next two chapters to consider some such institutional lenders in more detail in the Kenya case. Their role in agricultural "development" for smallholders there appears very small: too small to justify major changes like land tenure reform.

Notes (Chapter 7: "Informal" Pledges and Mortgages)

1. See Glazier 1985 on Kenya; Moore 1986 on Tanganyika; Chanock 1985 on what are now Malawi and Zambia.
2. Report of the Working Party on African Land Tenure, 1957-8: 26-7; Sorrenson 1967:191.
3. E.g. among the Igbo of Nigeria -- Meek 1946: 264; Morgan 1972: 76 -- or the Kikuyu of Kenya during the 1920s -- Meek 1946: 259; Snyder 1977: 147 on the Bandial sub-group of the Diola, in southern Senegal.
4. By some definitions, "mortgage" is more restricted than "pledge" in that it implies a right of the pledgee to foreclose after a specified period. By others, a mortgage is only a conditional pledge, the mortgagee taking over the good only in the case of a default, whereas in a pledge the pledgee has rights of use before the expected loan repayment.
5. Robertson (1987) discusses local variability and innovation in African share contracting agreements; the same principles apply to African agrarian credit arrangements in general. Snyder (1977: 117-8) breaks down Bandial Diola terms for different kinds of land pledging contracts.
6. Moore 1986 notes with emphasis the re-negotiability of oral contracts among the Chagga up to colonial times, and the great differences that the innovation of written, and thus permanent, court records makes in local legal thought.
7. Report of the Committee on Native Land Tenure in Kikuyu Province, 1929, cited in Meek 1946: 237, on the Kikuyu of Kenya.
8. James 1971:340. The pros and cons are worth quoting at length. "The mortgage transaction in Tanzania has two advantages over the West African pledge because of the absence of transfer of possession: (i) apart from serving the important economic end of providing the mortgagor with ready cash for investment, it ensures continuity of development of the land by allowing him to retain possession of his property; (ii) it is a more suitable transaction for loans by co-operatives and governmental agencies which would not want to enter into possession of the land. The absence of possession of the pledged property by the mortgagee, however, makes it easy for the mortgagor to attempt to dispose of the property to a third party without first disclosing the rights of the mortgagee in the property. This was not a problem in former times due to the requirement of a sufficient number of witnesses to the transaction so as to make it a notorious or public affair and also due to the fact that such transactions were invariably between persons from the same area. The requirement of a large number of witnesses to evidence land transactions is now becoming obsolete. This fact plus that of increased mobility of persons would tend to encourage such transactions between strangers and militate the publicity normally given to a pledge. These factors

seem to call for new ways of achieving notoriety of dealings in land in general..." (James 1971: 341).

9. The case was *Melishoni bin Maimbi v. Mzee bin Rombo*, reported in James 1971: 343. Emphasis is added. The Haya of northwestern Tanzania have had in the past a similar tradition: "Haya law allows the redemption of mortgaged property [subject to compensation for improvements] notwithstanding that the stipulated redemption date has passed. Redemption may be two or more generations from the date of the transaction and it is by repayment of the loan and interest as agreed upon by the parties. However, the maxim "a thing which is pledged is never lost" is not an element of Haya law if the transaction contains a clause of defeasance. In this case the pledgor's title to his property may pass to the mortgagee with the aid of the court and his right of redemption may be destroyed" (James 1971: 343-4, emphasis added; see also Cory and Hartnoll 1945: 1179, 1180, 1181, which he cites).

10. Shipton 1987 discusses cross-cultural misunderstandings about the perceived relation of time to money in formal and informal credit in The Gambia.

11. See e.g. Liversage 1945: 93, on Tanga Province, Tanganyika; Mbagwu 1978: 108, on the Igbo of Nigeria.

12. Among farmers who are at least nominally Muslims in The Gambia, shopkeepers and others who lend money are expected to forgive seasonal loans unrepaid after about two seasons (Shipton 1987). They are, of course, wary of lending to the same borrowers again. Meek noted, "In Muhammedan areas [of African and other British colonies] the practice of pledging provides a profit for the moneylender, without infringing the Islamic law against usury" (Meek 1946: 256).

13. The Report of the Committee on Native Land Tenure in Kikuyu Province, Kenya, in 1929, noted cases where pledgees had tried to gain permanent rights both by planting permanent crops and by building permanent houses (cited in Meek 1946: 259).

Part III

**EFFECTS OF TITLING LAND
AS INDIVIDUAL PROPERTY**

Land Tenure Reforms in Africa

Land reform and land tenure reform can mean many things. Whereas in Latin America and parts of Asia, land reform has tended to mean an organized redistribution of holdings or rights, in Africa south of the Sahara it has usually meant reform of systems of rights underlying holdings, whatever the distribution of these holdings. Reforms of this kind are usually called land tenure reforms. They may not necessarily affect the distribution of holdings predictably.

Tenure reforms in Africa have been inspired by widely varying philosophies and goals. Most have been conceived as attempts to strengthen either the rights of some specified collectivity, such as a state or some kind of "community" (as in the Tanzanian and Ethiopian experiments in state-imposed, "village"-based socialism, or the Nigerian nationalization of rights in the 1978 Land Use Decree) or the relative rights of individuals (as in the Kenyan privatization program). This study is concerned with the latter kind. Whether the interests of collectivities and individuals need to conflict is a question to which we return.

Reforms for Privatization

Current attempts to privatize African rural lands are part of a century-long history of roughly similar interventions. Land registration had an early start in Liberia. By the time of the country's independence in 1847, three cadastres and general adjudication programs had been set up in the settler areas (Riddell and Dickerman 1986: 100). After the Belgians in the then Belgian Congo first tried to register land in 1886, Germans in Togo began to register lands with a grundbuch in about 1888, the French introduced a Torrens system of registration in Madagascar in 1897, and the British introduced the famous mailo system in Uganda in 1900. Since then, numerous colonial and independent governments in Africa south of the Sahara have attempted to transform various rural tenure systems often called "traditional" into private property on European models. They have done so with roughly similar and usually rather unhappy results.

Registration of lands as private property has often occurred first in urban and town lands, areas settled by expatriates, areas with major tree crop plantations, and irrigation and re-settlement schemes -- areas not specifically treated in this study. Many of the registration histories are summarized, in several easily obtainable general and comparative works.¹

Several governments of independent countries formerly British colonies and protectorates (or others influenced by British law) have recently been pushing toward registration of freehold or leasehold title in parts or all of their rural territories. These include Kenya, Uganda, Ghana, Nigeria, and Lesotho, Somalia, Tanzania, and Anglo-Francophone Cameroon.² Malawi has attempted a system of group registration using lineage groups as units, but has at least temporarily abandoned it. Some countries, notably Kenya and Zimbabwe, have variously tried to re-allocate freehold lands formerly held by European- and African-born whites to newly re-settled residents, with or without trying to maintain the registers as such. Numerous governments have officially nationalized all land, some apparently as a stepping-stone to privatization. But so far only Kenya has set into operation a nationwide registration program.

A number of Francophone countries in western and central Africa have not only nationalized land, but further passed laws declaring unregistered lands, "vacant and ownerless" lands ("terres vacantes et sans maitres") or both as property of the state liable to expropriation for more profitable use. The new rules about "terres vacantes et sans maitres" often seem to give senior politicians and civil servants effective control over lands heretofore not simply vacant and without masters, but used in seasonal grazing or in long- or medium-term fallow rotation systems.³ Nor are cursory interviews with a few locals likely to ascertain all the parties that may hold dormant rights in apparently "idle" land.

Some Usual Effects of Registration of Individual Titles

While systems of land title registration have varied, depending mainly on which colonial power left its legal stamp on a country, several regularities are observable in the outcomes of the programs across the continent:

1. Titles and deeds have been registered almost exclusively in the names of males. In most of the areas where registration has been attempted, men are commonly considered the senior right-holders in domestic groups before registrations, but women's rights have overlapped and interlocked with theirs in ways that land registers have not reflected.

2. Wealthier and more powerful rural people, often those with offices or close family ties to office-holders, have been able to use their special knowledge and influence to gain significantly larger and better holdings than others, and to expand their holdings in the process. These may or may not be the most able, enterprising, or energetic farmers.

3. Land registers have gone out of date within ten or twenty years, as initial registered holders have died off, and as farmers and other rural people have refused to inform government authorities about real land transfers, successions, subdivisions, or plot shifts. Sometimes their refusal seems not to be an active, organized resistance, but the aggregate response of individuals or families acting in their own perceived interests, preferring to trust known witnesses, and refusing to comply with immediately costly or time-consuming procedures.

Notes (Chapter 8: Tenure Reforms in Africa)

1. Meek 1946, esp. 277-288; Hailey 1957; Simpson 1976, 1978; Noronha 1985; Bruce 1986; Riddell and Dickerman 1986.
2. The most recent and comprehensive summary of country policies is Riddell and Dickerman 1986.
3. These initiatives and some of their effects are broadly summarized in case studies van Rouveroy van Nieuwaal 1979 and Le Bris et al. 1982.

The Kenya Tenure Reform

Aims of the Kenya Tenure Reform

Debates about land tenure reform since the Kenya experiment began have usually been pitched in terms of several program goals, most made explicit in the language of the 1954 Swynnerton plan. The most important were these: (1) to facilitate credit by providing titles usable as collateral, (2) to raise security of tenure or ownership, (3) to strengthen incentives for investment and conservation, (4) to heighten the efficiency of a land market, and thus place more land into the hands of richer and more energetic farmers, and (5) to reduce disputes. (6) To consolidate fragmented holdings into "economic-sized" holdings, and control subdivision and fragmentation, were parallel and closely related goals initially built into the reform. Another explicit goal, later much criticized, was (7) to speed the formation of landed and landless classes: colonial agricultural officers of the time deemed this an appropriate way to control political unrest such as they were perceiving in the Mau Mau emergency. (8) Agricultural and livestock officers hoped that an enclosure movement would contain herds and so help contain epizootics. A further possible objective of the Government's, though one not so commonly discussed, is (9) to create a record for levying rural land taxes.

The literature from field observation on the effects of the Kenyan reform has grown quickly since about 1975.¹ Conclusions from first-hand observations are striking in their broad consistency, and it is possible to summarize them briefly here, signalling in the process a few areas of uncertainty or disagreement.

1. Facilitation of credit? This topic is dealt with in the next section. Briefly, the tenure reform has failed to place institutional credit within the reach of a much broader segment of the population than had it to begin with, or to render credit more useful. Most Kenyan smallholders have not collected or used their title deeds. Titles have become merely one prerequisite for certain loan schemes, not a sufficient condition. Government credit schemes have shown enormous problems, regardless of whether they have required land titles as collateral for loans.

Commercial bank credit for smallholders has been scarce. Private channels have performed hardly more impressively than public ones, with a few exceptions (notably smallholder tobacco, a crop with a high enough market value to sustain strictly controlled extension systems). The relative importance of credit in rural development strategies is being widely re-considered now, in Kenya as elsewhere.

2. Security of Tenure? The reform has ironically appeared to lower rather than raise security of tenure.² Planners of the reform appear to have underestimated the degree of security provided by older systems of kinship and neighborhood organization. While the registration has provided government guarantees to some, mostly to males variously defined as family heads, it has effectively disenfranchised dependents. Although, in theory, land registration allows women to acquire and dispose of land independently of men, researchers have found consistently that only seven percent or less of the registered holders in various parts of Kenya were female.³ By some reports, the positions of unmarried women and widows have been worsened under the reform (Oboler 1985: 275). Other evidence suggests the positions of some widows may have improved, because titles help protect their rights from being taken over by male in-laws on their spouses' death, but widows with titles registered in their own names remain few -- 3 per cent of registered landholders in a sampled area of the Luo country in 1982 (Shipton 1988).

Where land has been registered, new uncertainties arise on whether the courts will uphold rights considered "customary": sometimes they do, sometimes not (Onalo 1986: 184-214; see also Glazier 1985).

Even farmers with new titles have more temptations to sell now than before registration, and it is the poorer farmers who are doing most of the selling. This is a de facto insecurity. Ambiguities and confusion in the application of newer and older systems of rules have further heightened insecurity of possession.

The exception to the general finding of reduced security is that land clients (tenants-at-will who pay no rent, for instance jodak among Luo, or ahoi among Kikuyu) in some large areas have been registered onto the lands where they were at the time the tenure reform came. The outcome of reform has varied in this respect; in the Luo country, land clients have received titles, but in parts of the Kikuyu country they are reported not to have received them.⁴ Land clients who receive titles may enjoy some enhancement of their claims as against those of their erstwhile hosts. Of course, this strengthening of their rights may prove illusory if title-holders among them are eventually to be tempted into selling what have become family lands.

3. Incentives for investment and conservation? There is little reliable evidence comparing levels of investment before and after the reform, or in similar areas with and without it. New data show correlations between cash cropping and registration, but it is usually hard to distinguish between the causes and effects of the reform in particular localities -- cash cropping may be either -- or to separate the effects of the reform from those of other social, political, and economic changes occurring simultaneously.

Kenyan agriculture is notable for both the land tenure reform and the heavy investments farmers have made in cash cropping. Are these related, and if so, how closely? Which came first, the tenure reform or the cash cropping?

High-value cash cropping among Kenyan smallholders took off in Kenya in the 1950s and 60s, after the restrictions on coffee and other high-value cash crops were gradually lifted under the Ten Year Plan of 1946. Nationwide, by the end of 1951, three years before the Swynnerton Plan was hatched, "8,208

Africans were growing high quality Arabica coffee on a total of 1,735 acres (702 ha.)", and "a high standard of cultivation, and good yields and quality, are being achieved" (Kenya Colony and Protectorate 1952: 13). Smallholder coffee-growing spread from about 1,600 to about 53,000 ha. from 1953 to 1963 (Acland 1971: 60). Kenya's smallholder tea, the second largest export crop, began in 1950 with the crop's spread from large tea plantations into a few acres of smallholdings in Nyeri District, in Central Province. Its production on smallholdings rose sharply from about 0 to about 14,500 ha. by 1969 (Acland 1971: 208). The land consolidation and registration program launched under the 1954 Swynnerton Plan began in parts of central Kenya in 1956 and shortly thereafter in the western provinces. Cash cropping predated the tenure reform, although its incidence continued to rise as the reform was implemented.

Let us look more closely where the coffee-growing and the reform happened first. In Meru District, in central Kenya, about 1,822 acres (737 ha.) of coffee were reported being grown by about 6,400 farmers by 1952, and 6,889 acres (2,789 ha.), over a threefold increase, by 22,718 farmers in 1958. Over the next decade the figures rose to 28,632 acres (11,592 ha.) and 51,895 growers, by which time an international coffee agreement and consequent quotas had caused expansion to plateau (Bernard 1972: 121-2). Meanwhile, it was not until 1957 that the decision to consolidate and register lands spread through the district. The first adjudication sections in the district were completed in 1962-3, the process taking at about five years in most (Bernard 1972: 102-5). The coffee growing parts of the district were the ones where the tenure reform was accepted first, but it was the coffee growing that came first. "We know that in Meru District [in central Kenya] smallholder arabica coffee growing became widespread (under the administration's aegis) before the process of consolidation and registration of land was even begun." (Kitching 1980: 326)⁵

Similarly, in western Kenya, "Smallholder coffee enterprises in Gusiland... predated the Swynnerton Plan" (Uchendu and Anthony 1975: 38). The first Luo to submit to the reform in the early 1960s were in Nyabondo, in the coffee-growing uplands of northeastern South Nyanza (Sytek 1966: 4). Government land officers have been able to proceed with registration only where there has been public co-operation, and the farmers most willing to co-operate appear to have been those with permanent cash crops.

For policy purposes, the link between cash cropping and privatization calls for special attention. The direction of causation, however, is still hard to determine with the information available. In Kenya, at least, cash cropping areas have tended to be those most positively inclined toward titling to begin with. Farmers who already have slow-maturing cash crops like coffee in the ground like to protect their time investments by seeking government land titles for their localities. This is one of the main reasons why some Kenyan smallholders who grew cash crops had clamored for private titles sporadically since the interwar years or earlier, and why the first signs of acquiescence to the official tenure reform (and even enthusiasm about it) in the late 1950s came from patches of the highlands of central Kenya, and of Kisii and Kakamega Districts in western Kenya.⁶ These were districts where farmers had already begun growing coffee.

Although cash cropping spread dramatically on Kenyan smallholdings just as the land titling began, it would be wrong to attribute its rise simply

to the titling program.⁷ Other factors, probably more important, included the government's lifting restrictions on African cash cropping and starting to encourage it positively with extension agents from about 1949 on, and a severalfold price rise after a world coffee shortage (the average Kenyan coffee producer price rose from about L100 in 1946 to L580 per ton in 1954 -- Acland 1971: 60).⁸

The critical about-face in cash-cropping policy occurred with the Swynnerton Plan of 1954, but among the plan's elements it appears to have been the de-regulation of the crops, and not the land titling sub-plan, that provided the main boost to cash cropping. Moreover, the government strictly controlled access to the high-value cash crops, and biases in government extension services were such that usually only farmers who had consolidated their holdings could get access to these crops in the first place (L.D. Smith 1976: 129; Kitching 1980: 326).

Whether registration contributes to cash cropping, cash cropping contributes to pressures to register land, or both, proponents of privatization are likely to seek here some economic justification for registering land. But forms of land rights resembling private property were arising anyway in the areas where registration came first. Population densities, cash cropping, and land privatization are all closely interlinked, with government intervention or not. This is true even within particular eco-zones as these are commonly distinguished.

As the tenure reform has not raised real security of tenure but possibly lowered it, it remains doubtful whether registration has heightened incentives to invest in land and conserve it. Other major objections to registration remain. The biggest concerns the categories of people tenure reformers hear least: women, elders, children. We return to this important topic below.

4. The Promotion of a Land Market? Evidence is divided on the extent to which the reform has stimulated a land market, and on how long the effects may tend to last. But several points have become clear by general consensus. Transfers including borrowing and lending were generally possible before the reform. Rentals and sales, too, were becoming common in the more densely settled areas. Much of the buying and selling connected with the reform have occurred as adjudication and registration have approached an area, but before actual registration, and thus outside the control of local authorities. Even after registration, very few of the sales that occur are reported to government land registrars. The land market thus remains unmonitored and uncontrolled.

Much of the buying and selling of land since registration has occurred at local levels only. Ethnic, linguistic, and informational barriers have militated against a "free" nationwide land market such as some planners have envisaged. Some of the long-distance purchases appears to be for speculative purposes only.

Registration of property has not caused sales to replace all other transactions in land. Where land has been officially privatized and where it has not, multiple systems of tenure co-exist. In a sub-sample of 107 farmers in a Luo location of South Nyanza District, Kenya, more farmers reported having lent land than sold it (31 percent as against 21 percent) in seven

years after the registration; more had borrowed land than bought it (21 percent as opposed to 12 percent). Others had continued to engage in share-contracting and other reciprocal arrangements.

Nor have all sales been considered final and absolute. By one report, some unregistered sales still included buy-back provisions as late as 1980 in crowded East Bunyore, in the Kakamega District of western Kenya, ten years after registration of private titles had been completed (Paterson 1984: 63).

The view that freeing up or stimulating trade in land would put the biggest holdings in the hands of the most able and energetic farmers appears in retrospect rather simplistic and short-sighted. As recent research on the Kenyan case shows, land purchasers after tenure reform tend to be wealthier individuals or families, with substantial off-farm incomes. They frequently purchase for speculative purposes, instead of or in addition to immediate production. Sellers represent a broader range of socio-economic strata (see Haugerud 1989). Moreover, even if the purchasers were the most able or energetic farmers, there would be no guarantee that their heirs would be.

The land market remains untracked and uncontrolled by the government. Only a fraction of the farmers who had sold or bought land since registration in a Luo area sampled in South Nyanza District had reported the sales to the government as expected (see Appendix 1 and Shipton 1988: 109-112).

5. The Reduction of Disputes? Rather than falling, disputes appear generally to have risen sharply in incidence as adjudication and registration approached, though rising population pressure had been causing some secular rise anyway. The adjudication process has intensified some tensions between elders and juniors, and re-kindled old local disagreements between labor migrants and home-stayers, and between autochthons and immigrants. The extra rise in disputes as registration approaches may be only temporary; and reports are mixed on whether the net effect of the registration process in the longer term is to stimulate disputes or reduce them.⁹ Registration has tended to change the character of land disputes: after it there are fewer disputes about boundaries and more about rights to whole plots and about histories of their sale or transfer. Good statistical evidence on the changing incidence of disputes is lacking, partly because changes in systems of jurisdiction, court procedures, and ladders of appeal have precluded direct numerical comparison between periods, and because disputes have sometimes been referred to different authorities before and after registration.

6. Consolidation and the Prevention of Fragmentation? The reform has not stopped subdivision and fragmentation, though it has temporarily set it back in some areas. To begin with, stiff public resistance to the consolidation of fragmented holdings in some parts of Kenya forced the Government to change its strategy: to drop the consolidation attempt and proceed with the registration of fragmented holdings in these areas. It has since been increasingly recognized, in academic and planning circles, that fragmented holdings, while they may increase walking distances and make supervision harder, serve important functions of spreading agricultural risks for individuals or families, and help spreading out labor demands and harvest rewards through the year. As often, farmers turn out to have understood better what they were doing than some tenure reformers assumed.

Where holdings were consolidated under government direction, the holders are continuing to subdivide them in succession and inheritance, and to exchange sub-parcels with neighbors. So even here fragmentation continues, for better or worse (and some locals think for better). Inheritance patterns are strongly interlinked with other aspects of kinship, social life, and economy. They are well beyond the control of the governments or international agencies. The notion of "economic-sized" holdings has come under increasing scrutiny. Most of the fertile areas of Kenya are hilly and not easily mechanized. More broadly, it has become clearer that in densely settled parts of Kenya, landholdings have many functions in life beyond the purely economic. They define social and political identities; they fix personal places in lineages, clans, and other groups. Junior sons will not easily relinquish the rights to having houses on a piece of land, no matter how "uneconomic" the sizes of their holdings might seem to be.

7. The Concentration of Land into Fewer Hands? This objective, heavily criticized since it was made explicit in the Swynnerton Plan, seems the likeliest of the program's stated goals to be achieved through it. Countless observers have attested its occurrence, though there is still very little statistical evidence to demonstrate how fast it is happening. Several cautions are in order. One is that holdings never were equally distributed anywhere in Kenya, and distributions appear have always to have been changing. There are, too, some reverse processes occurring, local de-concentrations, whereby unused pieces of large holdings are being sold off during or after the reform. But the apparent balance is that the reform has speeded up the concentration of holdings into fewer hands.

8. Livestock enclosure? By the early 1980s, in the Luo country in western Kenya, some farmers had begun to fence out their neighbors' livestock from their lands. Fences were appearing only in patchy areas across the landscape, not in all registered areas. Farmers were not consistently confining their herds to their own holdings, but were grazing their cattle around their neighborhoods where they could, and making up their own minds whether to let their lands continue to be freely grazed. In most of the Luo country, crop stubble was still considered open for free grazing within a neighborhood.

9. Taxation of Rural Property? This aim was not made explicit in the Swynnerton Plan, and it has not been widely publicized to rural people. But it has appeared in more recent government publications, including national development plans. Kenya does not yet have any significant land tax outside the towns.¹⁰

It is generally supposed that taxation of landholdings cannot start until all land in the country is registered; otherwise the public would quickly stop cooperating with the tenure reform.

The possibilities of land taxation raise questions of ethics in the tenure reform. The reform is advertized to farmers as something that will bring them credit, not new taxes. This is a main reason why they have been allowing it to happen.

Some Interests of Women, Elders, and Children

Before registration has reached their areas, only some kinds of farmers have tended to clamor for title deeds, usually young and middle-aged men.¹¹ Sometimes they have done so for reasons unconnected with agriculture, for instance to gain access to loans for housing, trade, or consumption. Some wish to safeguard their claims for the future as they move away for temporary or permanent employment.

In the tenure reform, women are seeing their partial rights to the control and disposal of land diminished. In a survey of a locality in South Nyanza District, only 7 percent of 246 registered land parcels had women as joint or exclusive owners by September 1982, seven years after land registration was completed. Only 4 percent had women listed as exclusive owners (Shipton 1988). Others have reached comparable findings elsewhere in western and central Kenya (Okoth-Ogendo 1976: 177; Pala 1976: 177; and Coldham 1978b: 100).

Elder men are losing grazing rights. Children's future rights to land are being jeopardized by new temptations on their fathers to sell land (Shipton 1988). Since women, children, and some male elders have only indirect access to the rewards of major cash crops, and since tenure reforms are based largely on the supposed effects on cash cropping, the objection that the "benefits" of tenure reform do not spread around evenly is a major one.

Just as a switch to cash crops can place the rewards of family labor into the hands of an individual, and shield its user from family scrutiny in using those rewards, so does a switch to freehold title allow individuals unprecedented liberty to dispose of their families' and communities' land without the knowledge or consent of other members of those groups.

While it remains undemonstrated that private titles in Kenya raise incentives to invest in land, a converse tendency is clear. Investment gives individuals incentives to pursue registration to safeguard their personal stakes. Those in position to clamor effectively for registration are usually middle-aged men advantaged with contacts, wealth, schooling, and knowledge of European languages or *linguae francae*. Women, elders, and children, the groups whose rights are most likely to be immediately threatened by registration, are less likely to be heard.

As men's incentives to invest in land may rise with registration of titles in their names, may women's incentives diminish? Much remains to be learned on this topic.

After Land Registrations: Divergences between Records and Real Practice

"Directed" privatization is not really wholly directed. It slips out of government control, as farmers refuse to register their subdivisions and transfers with their Governments after land registration.

Across the continent, where land registrations for freehold or similar titles have been attempted, land registers have tended to become obsolete

within a decade or two as farmers have refused to record their inheritances and successions, subdivisions, and transfers -- often for quite sensible reasons -- and as government authorities have proved unable to keep up.

The reports in the Appendix suggest the great disparities that arise between official and unofficial tenures in registered lands. As they suggest, there are several reasons why land registers tend to become obsolete quickly, and these can combine. Public suspicions about government have brought about active political resistance to registration in some cases, including the case of Togo, where local people burned land registers in 1914; the Luo case in western Kenya in the 1960s, where senior politicians stiffened public resistance to reform (Sytek 1966); and the cases of the Ankole, Kigezi, and Bugisu schemes in Uganda at the same time (Okec n.d.: 262-3).¹² Political resistance to African land registration schemes seems, however, generally to have lessened since the new nations reached independence.

Across the continent, where titling has been attempted, registering transactions with government offices is usually expensive and time-consuming for farmers. In addition to official fees it may involve expenses for transport, accommodation, and food, and bribes and gifts to officials and witnesses. Land sellers, at least, have little reason to do turn over their titles, since if the transactions remain unregistered they may still have some hope of being able to use title-deeds for loans (a fairly common form of double deal in parts of Kenya -- see Shipton 1988) or to reclaim the lands in the future. Farmers may also fear their sales will be blocked. Some may not trust unfamiliar officials to register the transfers squarely. Language and literacy problems and ignorance of the official procedures compound the worries.

Probably only a land tax would systematically encourage sellers to part with their deeds. But a tax is hard to enforce in a country before all lands are registered, otherwise the public would stop cooperating with registration. And by the time a nationwide land registration were completed, the parts of the register completed early would likely be long out of date (as they will be Kenya), so taxation would still be problematic.

We look next in more detail at one particular argument commonly made in favor of tenure reforms, perhaps the most common: that land titles are necessary to give farmers access to credit.

Notes (Chapter 9: The Kenya Tenure Reform)

1. These are a few of the main sources on the Kenyan reform and its consequences: Brokensha and Glazier 1973; Ciekawy 1988; Coldham 1978a, 1978b, 1979; Glazier 1985; Haugerud 1983, 1989; Hunt 1984; Mkangi 1983; Odenyo 1972-3; Okoth-Ogendo 1976, 1978a, 1978b, 1981, and other writings; Pala 1980, 1983; Paterson 1984; Shipton 1985, 1988; Sorrenson 1967; Swynnerton 1954; Tyeke 1966; Wilson 1972a, 1972b. See also Barclay 1977. Green 1987 reviews and compares a few of these sources. Maini 1969, and Simpson 1976, are standard guides to the technicalities of title registration in Kenya, and Onalo 1986, to those of Kenya's land law in general.
2. See Shipton 1988 on the Luo; Haugerud 1989 on the Embu.
3. Okoth-Ogendo 1976: 177; Pala 1977: 117, 120; Coldham 1978b: 100; Shipton 1988. Exceptional in this regard, according to Okoth-Ogendo, were some matrilineal groups in the Coast Province. Pala's writings on the Luo, and Oboler's (1985: 255, 275-7 and passim), on the Nandi, devote particular attention to the effects of registration on women's land rights. See also Hay 1982, on the Luo; Glazier 1985: 136 and Haugerud 1989, on the Embu; Staudt 1976, 1985, on the Luhya; Davison 1988.
4. For Kenyan cases, see, for instance, De Wilde 1967a: 151 Ocholla-Ayayo 1976: 127, Coldham 1979: 618, and Shipton 1988, on the Luo and immigrants in Luoland. Here land clients have been registered onto the holdings where they lived. See also De Wolf 1977: 21-22, on the nearby Bukusu Luhya. For cases that turned out otherwise in Kenya see Sorrenson 1967: 213, on the parts of the Kikuyu country where land clients (ahoi) received titles in the registration and others where they were denied them. For a Kisii case where land clients were reported squeezed off their holdings by their erstwhile hosts during a period of crowding in the 1920s, see Mayer and Mayer 1965: 75. For Senegalese cases of land clients' receiving titles see Diao 1982: 237, on the Diola of Basse Casamance; and Van der Klei 1979: 6 on Senegal generally.
5. Kitching adds that in Meru, coffee growing even slowed down consolidation and registration for some time, as farmers feared losing their coffee in land exchanges (1980: 326). This point underscores the necessary conceptual distinction between consolidation and registration, as the same kinds of farmers may have wanted titles to preserve their rights to the cash crops while fearing that consolidation would take them away.
6. Sorrenson 1967: 219 and passim, de Wilde 1967, vol. I: 136; cf. Kitching 1980: 326.
7. These hectareage figures come from Acland 1971: 60.

8. British colonial authorities had forbidden Africans to grow high-value cash crops ostensibly so that they would not spread diseases to settler estates, but also arguably to prevent competition with settlers in the market. Once the ban was lifted, Kenyan smallholders growing coffee rose in number from about 5,000 in 1950 to about 250,000 in 1963. Average coffee producer prices fell to about L300 per ton by the early 1960s because of a world over-supply (Acland 1971: 60). The first international coffee agreement was signed in 1962, limiting exports and forcing the Kenya government to ban coffee planting in late 1963 (Sorrenson 1967: 229).

9. On the apparently rising incidence of land disputes with adjudication and registration came see Barclay 1977: 245-359 on Luhya of Mumias, in Kakamega District; Glazier 1985: on Mbeere of Embu District, where registration brought about "a surge of litigation"... "a proliferation of suits and countersuits which have engulfed the area since 1968, when Mbeere was formally declared a land adjudication area" (p. 221), and where informants said, "now even brothers are fighting over land".. (p. 259); Haugerud 1989 (on growing conflict and continued insecurity among the Embu); and de Wilde 1967: 151 and Shipton 1988, on the Luo of Nyanza Province. The reports are far from uniform, however. Okoth-Ogendo 1981: 176 suggests that, in the sugar belt of western Kenya, the areas that were registered first had the lowest incidence of land disputes; this may imply that the tenure reform helps prevent them. Sorrenson 1967: 219 suggests on the basis of written records that consolidation and registration in the Kikuyu country "stopped expensive litigation" at least in the early years of the reform; see also p. 243.

10. Kenya's Estimates of Revenue for 1965-6 list 2.7 million pounds as the total figure for land revenue; this was less than 0.3 percent of all total recurrent revenue. Nearly all land revenue came from land rentals and stand premia on town plots (Kenya 1985: 5, 8)

11. See also Wagner 1956, vol. II: 81, on the Luhya of Maragoli, Kakamega District; Sorrenson 1967, on Kikuyu; compare Riviere 1973: 79-80 on Guinea; Malawi Land Development Programme 1974: Introduction.

12. S. Okec, the Commissioner for Lands and Surveys, Uganda, described the three recent registration attempts this way in about 1969: The Ankole pilot scheme begun in 1959 "later provoked hostile political reactions"; in Bugisu "as in Ankole... there was considerable political dissention over the introduction of a system of registration" in 1960; and in Kigezi, in 1959, "there was again a lot of political trouble and most unfortunately... the scheme was a fiasco" (Okec n.d.: 262-3).

The Collateral Argument Reconsidered: Evidence from Kenya

For over three decades, a central justification invoked for Kenya's land titling program has been the theory that farmers need credit to adopt new crops and inputs, and that they need land titles to secure credit. When the report of the Ingham Committee on Agricultural Credit for Africans recommended, in 1950, issuing private land titles to some African farmers in Kenya, and when the Swynnerton Plan recommended in 1954 the nationwide registration of land on a freehold basis, the authors cited easier access to credit as a main benefit of private property for smallholders (p.9).

Kenyan smallholders who have allowed the government to register their land in their communities as private property have done so largely in the hope of obtaining loans on land title security. The promise has been broadly advertised to farmers and has been an important part of the popular lore surrounding the tenure reform.¹ This section briefly discusses the main credit schemes that have required this kind of security.² Land titling appears scarcely to have made credit more accessible to smallholders. Nor does the credit seem to have helped its recipients much.

Early Land-Secured Lending

Lending to African farmers on land security began on a small scale in 1945, as the Land Bank, as it was then called, began to extend its normal facilities for European settlers to Africans in settlement schemes, the only ones who could pledge land. Credit and land title collateral had been a mixed blessing for European settler farmers; while some had benefited credit, others had been bankrupted by it during the Great Depression (Anderson and Throup 1985: 334). The expansion started slowly. In its first ten years of service to the Africans in the "Native Reserves", the Bank lent a total of less than L6,000 to fewer than 70 African farmers (Yudelman 1964: 158).

The Agricultural Finance Corporation

Public lending for farming on collateral security has been the task of a long series of organizations, frequently reshuffled and renamed.³ Now nearly all government farm credit secured with land titles in Kenya is issued by the Agricultural Finance Corporation (AFC), a state-owned statutory board established at Independence in 1963, under the Minister of Agriculture and Livestock.⁴ Since its start the AFC has lent to large and small farmers, on the long, medium and short terms, at interest rates a few percentage points below those of commercial banks and below the rate of inflation: negative real interest. Generating negligible if any profit, and paying lower salaries than

private banks or other corporations, the AFC, like other public organizations, has a hard time retaining highly qualified staff.

By 1988 the AFC had 50 branch and sub-branch offices in Kenya, less than the number of districts, most of the offices being in cities and towns. The time and expense of what can be multiple trips for loan applications, as well as for subsequent dealings, can be difficult for farmers; the distances also discourage AFC visits to borrowers' farms. AFC loan decisions are highly centralized in Nairobi; they must emphasize formal requirements like landholding size and attachable salaries rather than farmer character. In all, communications between borrowers and lenders are few.

The main land-secured loan schemes administered under the AFC to date for small farmers have been the series of World Bank-funded Smallholder Agricultural Credit Projects (known in Nairobi as "Credit I, II, III, and IV"), beginning in 1967. The AFC expanded its lending greatly in the 1970s and 80s. Between 1974 and 1983 its loan portfolio rose from K. Sh. 263 million to 926 million, or about 15 percent per annum in real terms (source: World Bank). By July, 1983, the AFC had about 100,000 loans outstanding from all its schemes, or about 600 for each of its loan officers (source: World Bank).⁵ This represented a heavy work burden on the officers.

Distribution of AFC Loans

Lending under the AFC and its predecessors has been strongly biased towards the districts of highest agricultural potential, and, particularly during the Kenyatta years, towards the Central Province (Shipton 1985: 87-8).

In the first three Smallholder Agricultural Credit Projects, about 45,000 loans were issued for the country of over 16 million people (AFC, World Bank). About one in every 355 people could have received one if each borrower had received only one loan (many of the borrowers received multiple loans). In South Nyanza District, less than 0.4 percent of the population had borrowed under any of the AFC's land-secured loan schemes by 1982, when the more fertile parts of the district had been registered for a decade or more (source: AFC).

There are no reliable official data on the types and locations of the recipients within particular districts, or the effects of the credit on the farms. The most thorough study of the AFC to date found it "has been plagued with operating inefficiencies and financial mismanagement and has a weak administrative framework" (Paulson 1984: 109; see also Marende 1978). The absence of any official farm-level monitoring or evaluation for AFC credit is perhaps symptomatic of the general strain on the organization.

The AFC is an institution with high public visibility and political sensitivity, being closely followed by the newspapers. Like other government farm lenders, it is also one subject to heavy political manipulation (see Paulson 1984: 178-9).

Whether they have political connections or not, AFC borrowers nationwide tend to be wealthy. As of 1983, about 70 percent of AFC loan funds had been advanced in "large-scale" loans, i.e. loans of over 20,000 sh. (sources: AFC, World Bank). "While small-scale loans do not only go to small farmers, practically all large-scale loans go to larger farmers" (Paulson 1984: 111). A 10 per cent sample of loans issued from by five AFC offices in Kenya, from 1976 to 1982, revealed that the borrowers' farms averaged 89 acres, or 36 hectares.⁶ Even those who borrowed less than 20,000 shs. held an average of 38 acres, or 15.4 hectares (p. 111).

The concentration of AFC credit in the hands of richer borrowers is demonstrated further by multiple borrowings. The average AFC borrower in 1985 had three to four outstanding loan accounts (source: World Bank).

Because the AFC does not write off "bad" debts, default rates are hard to calculate. But Paulson calculated that by 1983, for all AFC schemes, 68 percent of the loans with installments due were in arrears (1984: 130). Available evidence suggests that richer borrowers tend to have no better repayment records than poorer ones; the reverse seems to be the case (Paulson 1984: 161, see also Von Pischke 1974).

There is little evidence that the credit schemes administered by the AFC have led to a net increase in agricultural production. A study by the AFC itself found that 47 per cent of its loans contributed minimally or not at all to farm production (cited in Paulson 1984: 121-2; see also Marende 1978).

Borrowers divert much of their AFC agricultural credit to non-agricultural purposes. The 1978 AFC Credit Review Department's Annual Report showed that of 652 loans made in 1976 and 1977, farmers diverted 51 percent of small-scale loans (below 20,000 shs.) and 28 percent of the large-scale loans to purposes other than agriculture (cited in Paulson 1984: 122). Of course, these diversions may be sensible responses to agricultural risks and to interest rate differentials between "agricultural" and "non-agricultural" loans, and some of the money is probably used in other economically productive ways.

Paulson's study compared secured (usually land mortgage) loans and unsecured loans within the AFC portfolio. Her discriminant analysis of 381 loans from 1977 to 1981, of which 72 percent were secured with the borrowers' property, found that

the accounts that are secured with the land titles of the clients have lower arrears but this relationship is not statistically significant... the discriminant analysis does not show a strong relationship between secured lending and repayment. (Paulson 1984: 152).

The record of the AFC gives little hope that the institution will provide loans to a major part of the small farm population in western Kenya or in the country as a whole. As the main arm of the government's land-secured lending, it has not covered the countryside.

The Commercial Banks

The most important remaining sources of land-secured farm loans in Kenya are the commercial banks; normally they lend only with some form of collateral. Like the AFC, the banks began lending significantly to African farmers only when these had begun to receive land titles after the 1950s. Of nineteen open in the early 1980s, the most active in the countryside were the three largest, the multi-national Barclay's and Standard Banks, and the state-owned Kenya Commercial Bank. These handled nearly all loans to medium- and small-scale farmers. As of June, 1983, the commercial banks had about 87 lending branches outside Nairobi and Mombasa.⁷

The banks take far more in deposits than they lend. The government has consistently pressed them to expand lending for small farmers, but they are reluctant to do so because of perceived default risks and administration costs. The rules are prohibitive for many small farmers: borrowers must have savings records, and forms must be filled out in English. In several surveys, farmers who were asked what sources of credit were open to them almost never mentioned commercial banks.⁸

Those who have borrowed from commercial banks tend to have been among the wealthier farmers of their areas before borrowing. Most have also had wage incomes or other steady off-farm incomes at the time. A 1978 study found that 70 percent of the people in five Kenyan provinces who had borrowed from Kenya Commercial Bank (ostensibly) for farming received income from wage employment, while the first Integrated Rural Survey showed that only about 9.7 percent of all "household heads" in the same provinces had income from wage employment.⁹

Land-Secured Credit: How Important among Smallholders?

Research in a sub-location of Kanyamkago Location, South Nyanza District, revealed that by September, 1982, over seven years since land registration in the sampled sub-location of Kanyamkago had been completed, only 25 of the 896 registered parcels -- fewer than 3 per cent -- had been mortgaged for loans from the AFC, commercial banks, or any other source.¹⁰ Only two had been mortgaged in the last two years of this period. All the borrowers were male, which is not surprising, since well over 90 percent of the land title deeds were in men's hands. The credit was available, and appropriately scaled, to only a small and wealthy elite.¹¹

Even where land titles are required, having one does not by itself entitle farmer to obtain a loan. It is only a pre-requisite. "In order to receive a loan, what appears to count is the social status of the applicant and his liquidity in the monetary system" (Okoth-Ogendo 1976: 175; see also Gershenberg 1971: 57-8). The assumption in Kenya that registering land would make institutional credit widely accessible to smallholders has proved unfounded, as elsewhere in Africa.¹² The carrot long held out to farmers to induce them to register their lands has been illusory.

Responses to Land-Secured Loans

Efforts of lenders and court brokers to foreclose on land mortgages have been fraught with difficulties. District administrators and farmers tell of auction boycotts in which relatives and neighbours of loan defaulters showed up with machetes and throwing-clubs to threaten any likely buyers. In recent years, police security at land auctions has been tight. But this does not solve all the problems. Dispossessed farmers and their supporters have sometimes simply waited and settled their scores afterwards, violently, in their home neighbourhoods. It has become clear to officials of the AFC and other Kenyan lending bodies that land auctions are potentially explosive.

Kenyans' acute sensitivities about land confiscations must be understood in terms of both kinship and politics. Among the largest ethnic groups of Kenya, including the Kikuyu, Luhya, and Luo, as among most other peoples with localized lineages, parental landholdings are subdivided in inheritance. Sons tend to establish their homes and farms on adjacent or nearby holdings; patrilineal cousins also live nearby. Farmers identify a place on the ground with a place in the social order. Land is considered a permanent family asset, essential to lineage survival, and never to be let go lightly.¹³ The attachment of a man to his land, particularly ancestral land, is conceived as something greater than his attachment to his word, his signature, or (as on the "signature" blanks of many loan agreement forms) his thumbprint. In local eyes, then, any confiscation of land by an unrelated authority is fundamentally unfair; it is something close to an act of war.

Local resistance to land confiscation is heightened by political sensitivities common to all farming peoples of Kenya: feelings generated by a history of colonial land expropriations and the hardships of the Mau Mau uprising (1952-5) and other briefer, more local emergencies. In Kenyan minds, land alienation and bloodshed are closely tied.

Misunderstandings in Land-Secured Credit

Though seemingly every Luo has heard of land auctions, there is much room for misunderstandings in the lending and foreclosing procedures of the AFC and other issuers of land-tied loans. Titles submitted as collateral have not always belonged to the borrowers, or pertain to land that the borrowers have sold unofficially. Then there are problems of language. Local lending officers are rotated among branch offices and are unlikely to know the local languages. Borrowers must therefore know Swahili or English, or use an interpreter. Foreclosure notices are served in legalistic English hard for even most literate rural people to understand.

Further problems arise from cost-covering measures of the lenders.¹⁴ It has been AFC policy to lend only up to two thirds the market value of the property used as collateral. But in land auctions, tied holdings are sold in their entirety, any balance being returned to the farmers in cash. Such conversions of land to cash put family wealth into individual (usually male) hands, in a particularly volatile form.

But there may be no balances. Farmers must pay a part (K.Sh. 60 in South Nyanza in 1982) of the expenses of farm inspections when in arrears. As

there is only one AFC office per district in western Kenya, the travelling distances for inspections can be long.¹⁵ Only dimly aware of the great expenses involved in running Land-Rovers in Kenya, farmers do not perceive that these visits are partially subsidized. They are charged all other costs incurred in foreclosure, including advertising and auctioneers' fees. These charges may come as a surprise, either because the conditions were inadequately explained at the outset or because of the time elapsed since the initial agreement was made. The charges are heavy and out of the farmers' control. In the pressured time of a land auction, they are unwelcome, to say the least.

It appears that threatened farmers have usually succeeded in repaying enough at least to postpone land auctions. Where they have not, the lenders have sometimes cancelled the auctions anyway for fear of violence or political repercussions.¹⁶

The impracticality of foreclosing on land mortgages was well known to the government as early as the mid-1960s (Lawrance 1966: 126, 130-1; see also Leys 1975: 71-2). The individualization-for-credit argument, deeply embedded in government policy, rests solely on the threat that lenders wish to wield over their borrowers. But where land is concerned, the threat is fairly hollow.

Credit With and Without Land Title Collateral

Generally, Kenyan food crop credit schemes for small farmers have had big problems, for borrowers and lenders, whether they have used land titles or not. The Agricultural Finance Corporation schemes and the commercial bank schemes, requiring titles, have in their general outcomes resembled the schemes that have not: the Guaranteed Minimum Returns Scheme, the Special Rural Development Programme, the Smallholder Production Services and Credit Project, the Integrated Agricultural Development Project, and the New Seasonal Credit Scheme. It was noted above that within AFC schemes, land-tied schemes and other schemes for food crops show comparable recovery rates. More broadly, the AFC and other institutions providing land-tied credit have so far achieved somewhat higher rates of loan repayment than most of those providing other kinds of credit for food crops.¹⁷ But all the major food crop schemes, regardless of security, have been beset with major problems of other kinds: (a) selection biases toward richer or more powerful farmers, often involving political patronage (which only some consider a problem); (b) delays and inconsistencies in input deliveries; (c) expensive and inappropriate inputs packages, inadequately tailored to local needs, tastes, and agronomic conditions; (d) lack of coordination between credit and extension services; (e) inefficiencies in marketing channels used for collection; and consequent slow payments to farmers who market their crops through appointed buyers, consequent diversions of crops into more efficient market channels, and defaults. The lending authorities have typically had major accounting difficulties.¹⁸ Credit resources "targetted" for agriculture are commonly being used outside it, thwarting agency and government attempts to control their use. (Many project administrators consider this matter of inter-sectoral "leakages" a problem, while from another perspective it can be a locally reasoned and sometimes beneficial system of "linkages".)

On the other hand, schemes for high-value cash crops like coffee, tea, and tobacco have quite successfully promoted their crops in Kenya without the use of land title collateral.¹⁹ Tobacco's value is high enough to support much more thorough extension services than other crops grown in Kenya; the attention has been close enough to effect profitable loan recovery.²⁰ The "permanant" tree or bush crops like coffee and tea carry a decided advantage over seasonal crops for credit programs. Borrowers who are expected to sell to appointed monopsony buyers fear losing that important market if they are caught selling to others. Because the trees and bushes last for years, it is easier for extension agents to track how many they have, and how much they should be harvesting, than in the case of annual crops. For farmers, having invested several years' wait in the maturation of the crops -- at a substantial opportunity cost in land use -- gives a heavy incentive to safeguard that market by observing the rules. The permanency of these crops seems to work rather better than land liens in assuring repayment.

More basically, credit is not always an advantage to farmers. The most basic fact about it is, strangely, the one most often neglected: credit indebts. Borrowing dulls incentives to produce. After borrowing, one is working no longer for oneself but for someone else. Some borrowing will from local sources or elsewhere will always be necessary to help farmers try new inputs, even out farm resource imbalances, or tide over seasonal production shortfalls, but too much credit cannot help any economy or society.

Rethinking Credit: Recognizing Existing Local Systems

Smallholders in Kenya and elsewhere in Africa have access to many more kinds of loans than many farm project planners imagine.²¹ Farmers borrow locally in both cash and kind, and over durations ranging from a few hours to several generations. They make ad hoc and almost infinitely flexible share contracting arrangements (land for labor, land for seeds and draft animals, labor for livestock and land, etc.) seasonally tailored to suit their families' varying resource availabilities and needs. They take cash loans from relatives, neighbors, and shopkeepers. They make investments in relatives' schooling or travels to find work, in the expectation of later remittances. They make long-term livestock loans, delayed marriage payments, and generalized redistributive transactions revolving around weddings, funerals, and other ceremonies spread out over time. They arrange their own local rotating savings and credit associations and other contribution clubs -- particularly important ways for women to mobilize savings.

Many of these mechanisms rely on multi-stranded social ties and on peer pressures for repayments. Their sanctions may be immediate and may take multiple forms. In this respect "informal" local credit systems often have advantages over institutional loan schemes that rely on confidence or threats between near strangers who may live many miles apart. Small farmers normally have multiple debt obligations at all times, as well as obligations owed to them; and some of their debts involve deep, complex, and long-term moral obligations. In view of the network of credits and debts that constitute at the same time the life blood and the curse of small farmers' economic existence, it is not surprising that "institutional" loans are often

diverted to purposes other than those intended, and repaid on postponed schedules, in desperation.

"Informal" credit does not cover all farming activities agricultural planners recommend. Only rarely do smallholders in Kenya (or elsewhere in south of the Sahara, apparently) take synthetic fertilizers on loan from informal lending channels. But the lack of such supply is also evidence of low demand: it may be another piece of the mounting evidence that fertilizers are not economically viable for many African smallholders, given rainfall uncertainties and other environmental hazards, and irregular supplies of other complementary inputs. That smallholders do devise ways of lending and sharing land, labor, livestock, and heavy tools like ploughs testifies to their ability to adapt their own credit systems to the inputs and activities they deem essential.

Conclusion

The real or illusory sense of security that land collateral gives governmental lenders and international funders induces these to keep promoting land-tied loan schemes for smallholders. But in Kenya, the country where the collateral system is most highly developed, the land-secured loans issued so far have been few. The problems in their use and administration have been great. The experience of cash crop credit shows that land titles are not necessary for these crops. More broadly, farmers have access to many more kinds of loans from local sources than project planners may recognize. Institutional credit is a smaller part of rural financial life than urban-based planners realize. And it is not just an asset, but also a liability. Land-tied loans improve the availability of credit for only a few, but land titling affect everyone. The collateral system hardly helps justify the risks and hard adjustments involved for farmers in the land tenure reform.

This concludes the discussion of the Kenyan reform as an example of directed privatization in African land. It remains to compare in summary how tenure systems in densely settled areas change with and without such attempts.

Notes (Chapter 10: The Collateral Argument Reconsidered)

1. Lawrance 1966: 24, 126; Kenya Development Plan 1974-8, vol. II: 216; see Shipton 1985: 10-11 and passim for more references.
2. See Shipton 1985 for detailed treatment on some Kenyan credit schemes that have not required land titles as collateral, particularly the Integrated Agricultural Development Project.
3. The main channel opened in the 1940s as the African Land Utilization and Settlement Board, was re-named the African Land Development Board (ALDEV) in 1953, the Land Development Board (Non-Scheduled Areas) in 1957, and then the Board of Agriculture (Non-Scheduled Areas) in 1960.
4. The AFC was established under the Agricultural Finance Corporation Act of 1963 (Laws of Kenya, Cap. 323). The AFC also does some lending unsecured with collateral, in addition to its usual secured lending.
5. Because of borrowers with multiple loans, the ratio of borrowers to loan officers was closer to 200 to one (World Bank).
6. The sampled districts were Nakuru, Uasin Gishu, Kakamega, Machakos and Kitui (two covered by one AFC office), and Embu.
7. Paulson 1984: 55; World Bank. The commercial banks also had 53 further sub-branches outside Nairobi and Mombasa for deposits, and some additional mobile branches (usually land-rovers with a driver, a banker, and an armed guard).
8. E.g. Marco Surveys 1965; Shipton 1985; Gerhart 1975: 38. In the latter survey of 360 western Kenyan smallholders, zero mentioned commercial banks when asked about possible sources of credit open to them.
9. David and Wyeth 1978: 12 and passim, and Collier 1984: 1015; both on Nyanza, Western, Rift, Valley Eastern, and Central Provinces combined. See also Lawrance 1966: 125 for an earlier report.
10. Shipton 1985: 90. The count was made in the South Nyanza District Land Registry records. 15 of the 25 were from commercial banks, eight from the AFC, and two from the South Nyanza Trade Development Joint Board.
11. Compare Staudt 1985: xiv, on part of Kakamega District in 1974-5: there, while only 2 percent of those in jointly managed farms received loans, another 12 percent applied for them or could describe the application process accurately, as opposed to only 1 percent of female farm managers who could do so.
12. In the Lilongwe Land Development Project in Malawi, only about four of 102 title holders claimed they had used titles for loans after two years of registration (Lilongwe Land Development Programme 1974). The registration scheme was suspended shortly thereafter. A system of land leases has failed to make credit widely available in Zambia (Bruce and Dorner 1982: 35). In the

most densely populated areas of the continent, the smallness of holdings makes it unlikely that farmers will borrow against their holdings (Riddell and Dickerman 1986: 28, on Burundi). These are also the areas where land will be hardest to take away from defaulters.

13. On the Luo, for instance, see Evans-Pritchard 1949; Southall 1952; Wilson 1961; Whisson 1964; Shipton 1979, 1984a, 1984b for discussions and bibliographies. Livestock in these societies is similarly considered a permanent family asset belonging at once to the dead, the living, and the unborn.

14. AFC interest rates have been partly subsidized. For seasonal credit, they ranged from 9 to 11 per cent from 1977 to 1980, and up to 14 per cent in 1983. Top commercial bank rates by 1983 were about 16 per cent. Sources: AFC, World Bank RMEA. Farm loans are cheaper than industrial and other kinds of credit, hence an out-flow of resources from agriculture into other "sectors" of the economy (cf. Okoth-Ogendo 1976: 175-6).

15. Of course, the distances between farms and AFC offices influence who applies for loans in the first place. They favor richer farmers who can afford travel.

16. Of 652 parcels of land that the AFC advertised for sale in 1979, only 36 (6 per cent) were sold by public auction. 69 (11 per cent) of them were bought or kept by the AFC itself for lack of bidders at auctions. In the remaining 547 cases (84 per cent) the auctionings would appear to have been postponed or called off. (Sources: AFC, World Bank RMEA.) In September 1980, a time of national food shortage and general political uncertainty, AFC land auctions were called off nationwide; they did not recommence until the next year's main harvest was in.

17. Available evidence on repayment rates is slim. As seen earlier, within the AFC, land security was not found to correspond strongly with repayment. Reports on AFC repayment rates differ, but it appears that AFC land-tied schemes for small-scale farms had repayment rates of about 70 to 80 per cent by the end of 1982 (source: World Bank RMEA). The Integrated Agricultural Development Program, using no land collateral, achieved rates of only 20 to 25 per cent without land security. But in areas where IADP loans were tied to permanent crops like coffee the rates were much higher, often well into the 90-100 percent range. Government tea schemes and private tobacco schemes have also achieved similarly high rates without land titles as collateral.

18. See, for instance, the detailed studies of the Institute of Development Studies 1972, 1975 on the Special Rural Development Program; Paulson 1984 on AFC-affiliated and commercial bank schemes, and Shipton 1985 on the Integrated Agricultural Development Project and Smallholder Production Services and Credit Project. Raikes 1988 provides more recent information on a variety of schemes in Kisii.

19. See Shipton 1985, ch. 13, and forthcoming work by Suzette Heald (University of Lancaster, U.K.) on the British-American Tobacco Company projects in western Kenya. Paul 1982, ch. 4 describes the "success story" of the Kenya Tea Development Authority program based on unsecured credit.

20. This does not imply, of course, that tobacco is a good crop generally. Shipton 1985, ch. 13 discusses some of its pros and cons for western Kenyan smallholders.

21. See Shipton 1985, on the Luo of Kenya, and 1987, on The Gambia. The latter surveys Gambian farmers' options of borrowing various kinds of farming inputs, foods, money, and other resources from formal and informal sources. (A similar survey by P. Alila and P. Shipton is under way in western Kenya). See also recent research by Carlos Cuevas of Ohio State University on several other West African countries.

PART IV

COMPARISONS AND CONCLUSIONS

Comparing Directed and Undirected Tenure Reforms

What difference, then, do privatization programs make? Summarizing information from Parts II and III on densely settled agrarian areas, this section briefly compares changes that occur with and without directed reforms as population pressures rise. It is worth remembering here that "directed" and "undirected" are heuristic rather than watertight analytical concepts, since governments or international agencies have sometimes sought to influence privatization processes indirectly, without titling schemes, and since rural people are always involved to some degree in directing their own affairs. The terms refer here to titling programs.

Restriction of Access

Access to land becomes increasingly restricted with or without directed tenure reforms. Boundaries are formed between lands of groups and/or individuals, and rules about rights are sharpened or elaborated.

Titling may lead to fenced enclosures in some areas and stimulate competition that whittles away common property. But it does not necessarily eliminate shared grazing and browsing rights quickly. Farmers continue to decide locally whose livestock to allow onto their lands.

Land clientage

A pattern of undirected change under high densities has been that land clients, people who have been accorded temporary and conditional rights of land use in settled areas away from their original homes, find their erstwhile hosts trying to squeeze them off the lands again.

Under state-run privatization programs, too, the rights of land hosts and land clients come into conflict, as hosts begin to fear that clients will be registered onto the land. The hosts may try to squeeze them off. In official tenure reforms, land clients have commonly but not always been given titles like those of their erstwhile hosts around them.

Land disputes

Rising densities lead to increased disputes with or without tenure reforms. Disputes become more common among closer kin. Without registration, disputes commonly focus on boundaries between holdings or plots. Where land

has been registered, they focus instead on rights to whole plots (Was this plot sold or not? Why was the plot sold but the title not transferred? Why did the seller mortgage the title deed after selling the land?).

A tenure reform brings a wave of disputes as registration approaches a particular area and farmers perceive that claims will become permanent. Some of these seem to subside after registration as disputes change character.

Rise (and Fall) of a Land Market

Lending gradually gives rise to rental, pledging, mortgaging, and sale. Though some of these have been practiced in many areas for long, they usually become more common under population pressure, and objections fade. Local authorities' control over transfers erodes. The rise in the land market may be only temporary. With or without registration, where land is very densely settled, the land market often seems to rise and fall again. The whole process appears to happen more quickly where land is registered as private property than where it is not.

Available eyewitness reports suggest that land registration is speeding the formation of landed and land-poor or landless classes.

Land sales become more permanent, with or without registration. But even in registered areas, some rural people may continue to expect for some time that their sales will be redeemable or re-negotiable. This is an important issue on which cultures often clash, to the severe detriment of land sellers.

Where a land market arises, claims on purchased lands can proliferate to the point where "private" property is not very "private". This can happen with or without a land registration system. Whether directed or not, privatization everywhere has limits. "Customary" transactions in land, such as loans, gifts, and share contracting arrangements, do not simply disappear when land becomes registered as private property.

With or without directed tenure reforms, it is parts of holdings and not entire holdings that tend to be sold at first. In some areas with dispersed homesteads, land sales appear to slow down as holdings shrink to the land immediately around houses or compounds. At this point the cultural meanings of land as a sign of kin group and neighborhood membership, especially in societies with lineages, can overpower purely economic temptations to sell.

Land markets arising under registered systems are as uncontrolled as others.

Security of Tenure

Registration does not normally improve security of tenure for smallholders in Africa, as it does in parts of Asia where landlord-tenant systems prevail. On the contrary, it presents new temptations to individuals to sell to absentees and speculators, and thus produces a new, de facto insecurity of tenure. Where extremely dense populations and heavy cash-

cropping have raised the incidence of disputes to high levels, registration may produce some temporary assurance of security. It is likely to be most beneficial or least harmful in these crowded areas. Even here, however, land registers quickly become obsolete, as discussed below.

Information and Control

After registration, government records and controls erode quickly. Because people living in registered areas tend not to inform government officials about successions, inheritances, subdivisions, and other transfers, land registers quickly become obsolete. With or without land registration, the authority for settling claims and resolving disputes remains largely in the hands of locals, often elders who serve as councillors to local customary or non-customary authorities, or as "informal" witnesses to transactions.

Pledges and Mortgages

Do local pledging customs serve as a basis for accepting new, institutional land mortgaging when land is registered as private? Until now the practices have served different kinds of people. Poorer people have mortgaged land locally when forced by circumstances; where land is registered, richer people mortgage it with institutions out of special opportunity. The "formal" and "informal" mortgages have also served ostensible purposes. Customary local forms are more often for immediate consumption; institutional mortgages are often intended for directly productive investment. The distinction is of limited use, however, since those who cannot consume cannot produce, and since loans are not always used for their stated purposes. In western Kenya Farmers borrowing from banks and government lenders commonly do use their "agricultural" loans for emergency cash needs, school fees, and other non-agricultural purposes. Institutional mortgages open land to nationwide speculation as informal ones do not.

New Deadlines in Pledges and Mortgages

In most of rural Africa where farmers pledge land for loans, it appears, they do so without deadlines for loan repayments, and foreclosure on this basis is not an issue. In this respect, new institutional forms of mortgages seem to be a novelty. But in parts of rural Africa with especially high densities or heavy cash cropping, one does commonly see local pledges turning into deadlined mortgages without governmental action.

Though the time factor in institutional mortgages may not require radical adjustment, spatial separation is still a source of misunderstandings. The "modern" mortgagees live far away, are less known, and usually have only single-stranded bonds with mortgagors. Language and literacy problems separate them further. Rural families have less influence over the decisions of institutional lenders than local ones. But community members can still make

land distraint and re-sale impossible in institutional mortgages, as the Kenyan case has shown.

In all, land registration does not help make credit significantly more accessible for small farmers or easier to administer for lenders.

Fragmentation and Consolidation

As densities rise, holdings tend to become fragmented wherever inheritance is subdivided; and it is subdivided in most of the densely settled areas. Holdings can be (and are) consolidated with or without land registration, and land registration can (and is) carried out with or without consolidation. Registration does not stop or slow down fragmentation.

New Technology

As population densities rise, technological changes in farming follow similar lines whether land has been registered as private property or not. What Gluckman observed on southern Africa as early as 1943 (p. 59) still appears true today: "the conferring of individual land title alone does not often seem to achieve necessary improvements in agricultural techniques".

Incentives to Invest in Land and Conserve it: Some Knowns and Unknowns

How do tenure reforms affect incentives for farm investment? It is clear that rising densities tend to induce farmers into high-value cash cropping with or without private titles. Titles may make a farmer feel more secure in planting a bush crops like coffee or tea, or tree crops like citrus fruits or palms. But on the other hand, farmers without titles sometimes plant such crops in part precisely because they solidify rights to land. In this way permanent crops can serve the same purpose as private titles.

Titles give absentees landowners and speculators new protection against locals who wish to move onto land and farm it. Do they thus slow down investment in some land while perhaps helping to speed the exploitation of other land? Directed reforms have generally titled men, not women. If men's incentives for investment are heightened, are women's also heightened or cut down? More research is needed.

Evidence lacks on whether individual titles stimulate farmers to implement conservation measures. With or without titles, rising population pressures on land may spur farmers to adopt new conservation measures while bringing new threats of over-exploitation. Whether rising densities help or harm the land's fertility on balance is unclear, but future research should consider that the contrary tendencies may be at work simultaneously.

Speed of Holding Concentration: More Unknowns

There are strong indications that registering land as private property speeds up the concentration of holdings into fewer hands. But no one knows how much faster the process occurs. Without government backing, usually, speculators and absentee landlords cannot easily gain or enforce exclusive land rights. How quickly do they appear when lands are registered? Here too, more research is badly needed.

Conclusion

Some kinds of privatization are occurring without government assistance. The further changes that governments and international agencies can promote in tenure reform are mostly not helpful, some are dangerous, and much about them remains unknown.

State-run tenure reform is most popular, and probably least disruptive, in the most crowded areas, where competition is most intense and tenure is likely to be most highly individualized already. But only special kinds of rural people -- in gender, age, and wealth -- tend to seek it and clamor for it. The interests of the others should not be overlooked.

Population pressure, cash cropping, and privatization all tend to occur together, whether the last is directed by governments or not. Movements toward private property are not inescapable, simple, unidirectional, or irrevocable, and it is usually unclear that they are desirable; but over the past half-century they have been usual. Governments or international agencies would be optimistic to suppose that they can advance or reverse the changes while keeping them under control.

Policy Implications

Geographical Specificity in Analysis

African land tenure systems cannot be understood simply on a country-by-country basis, nor should policy for them normally be formulated on this basis alone. It helps also to divide the continent for policy purposes by other criteria, such as ecological zone, population density, and mode of livelihood, which may be interrelated.

Recasting Terms

The complex arrangements with which different social groups lay claim to overlapping land rights in any specific place defy simplistic notions of private or public "ownership" or "property". Similarly, the many conventional forms of exchange may not correspond to foreign conceptions of "markets" but may perform similar functions. "Security of tenure" may not necessarily be enhanced in the long term by official certification, and in any case one must also ask, for whom?

Population Densities and Pressures, and What They Imply

Population density, competition for land, and ecological pressure on it often correspond, but not always. The areas most troubled by disputes and litigation seem to be those with highest densities; whereas the areas most ecologically endangered by overuse, and most in need of attention, seem more often to be areas of medium population density. Since population densities do not correspond neatly with soil erosion, areas for conservation program efforts should probably be chosen by other criteria like observable evidence of erosion or public willingness to cooperate.

Although high population densities contribute to intensified land use, this does not make high densities a worthwhile policy goal in themselves. While rising densities may raise production and productivity per unit of land, at least in the short run, they may lower productivity per person or per unit of labor, and the rises in productivity per unit of land may not keep up with the rate of land exhaustion and degradation in the long run. Research on these issues is still in its infancy.

It is in the most densely settled areas that farmers tend to be most strongly attached to particular pieces of land. In more sparsely settled areas, residential mobility over longer or shorter periods, and long or short-term fallow rotations, are often a necessary part of subsistence strategy as

well as an accepted pattern of social and political life. Individual land titling schemes are likely to be most unrealistic and unnecessary in sparsely settled areas.

Reconceiving of Land "Markets"

Land in Africa changes hands in many ways. Only a few of these ways involve cash sales or leases. Local lending, swapping, bartering, and share contracting arrangements now appear more complex, pervasive, and sophisticated than superficial observations in the past have suggested.

So are some local systems tacitly allowing land encroachments by larger families based on relative needs, and mechanisms of yearly or other periodic redistributions. Share contracting or sharecropping may not be as inequitable in Africa as it has often been portrayed in southern Asia and some other parts of the world. Official attempts to restrict its practice directly are likely to be unsuccessful and unproductive. To assume that African land markets are "stagnant" or malfunctioning where land is not easily bought and sold with cash is to apply culturally skewed standards.

The assumption that land should be made more freely saleable makes less sense where farmers are not accustomed to handling large amounts of cash, or do not have convenient, tested, and trusted ways of saving it, than it does in areas with well established cash saving mechanisms. In most of the continent, cash in individual hands tends to be a more volatile form of wealth than land or other more visible, tangible resources in family hands. This principle seems to be a source of frequent misunderstandings in foreign development initiatives in Africa. Programs introducing individual land titles are likely to make it easier for the better-off to buy the land of the less well-off. This is probably their most important effect.

Tenure and Intensification

Evidence from the densely settled parts of Africa suggests that official tenure reform for private property is not a prerequisite for agricultural intensification, or for conservation. As population densities rise, and as cash crops and money spread, rural Africans adapt their own tenure systems with strengthened individual rights in land, with or without government or international agency help. Some of the areas with the most sophisticated land management and conservation practices, for instance among the Kofyar of Nigeria or the Kara Islanders of Tanzania, have evolved them or borrowed them from elsewhere without the intervention of national land titling programs.

Fragmentation and Consolidation

Fragmentation of holdings does not necessarily mean "inefficiency": it gains some kinds while losing others. As a measure to reduce fragmentation, legislation against subdivided inheritance is unlikely to succeed anywhere in Africa. Inheritance customs are too deeply embedded in local cultures for

governments to be able to change. Moreover, single-heir inheritance in densely settled areas (it is fairly uncommon in these areas) would more quickly polarize a society into landed and landless classes than divided inheritance.

Technology and new crops requiring mechanization may call for consolidation of holdings, e.g. for wheat or barley production. But hybrids may, in another sense, make fragmented holdings more adaptive than ever. Hybrids produce homogeneous phenotypes, which respond similarly to environmental changes, heightening a farmer's risks of total crop loss. Fragmented holdings in a varied landscape reduce this risk, though they may also lessen maximum yields in the best seasons.

Consolidation and registration can be carried out independently of each other.

Tenure Reform and Political Ideology

African rights in rural land must not be mistaken as "communal" or as purely "individualistic". They fluctuate seasonally between the principles, seldom or never reaching the extremes. Land tenure reforms as an instrument of political influence, for pro-market or for socialist ideology, appear generally unsuccessful. African farmers tend not to behave or think just as told when approached in these ways by governments or agencies. In densely settled agrarian areas, land is closely tied to sensitive issues of family life, and to deeply held cultural convictions about the living and the dead, that the basic premises of property organization cannot be transformed by government mandate. In "individualization" campaigns, lineages and other groups of kinds once thought "traditional" keep re-asserting their rights. In "socialization" campaigns, individuals keep re-asserting theirs. Moreover, some of the unintended consequences of directed reforms are uncontrollable.

Titling programs in Africa are less likely to mean providing "land to the tiller" than in Latin America or southern Asia, where holdings tend to be more inequitably distributed and landlord-tenant systems more widespread to begin with. In Africa, they are as likely to mean temptations for the titled.

Some Policy Options

Land policy-makers are doubtless damned to criticism whatever they do. If they decide to register lands as individual private property, they will be accused of fueling capitalism and worsening class splits in places where avoiding starvation means sharing some of the rights in critical resources. If they stymie registration programs, they will be charged of withholding "progress" from dynamic rural achievers and denying jobs to civil servants. If they opt for a middle ground, registering rights on some group basis, they will be accused of preparing a future of wishy-washy indeterminacy, ridden with struggles over definitions and gerrymanderings of groups and territories.

Whether for themselves or for rural people, policy-makers are wise to use flexibility and to consider context, and to recognize whatever merits are in systems already in place. As John Bruce writes, "those who wish to change the tenure of the land for a particular purpose should look first to the varied tenures in the system before resorting to tenure arrangements which are strange to the project beneficiaries" (1984: 9).

In countries where central governments themselves are publicly seen as only semi-legitimate, property rights may be less controllable than many outsiders assume. "Land policies which aim at greater economic productivity should control use, in relation to ecological zones as far as these can be defined, rather than ownership or negotiation" (Apthorpe 1969: 120). But use may be just as hard to regulate.

The following are some of the possible options among which policy-makers have chosen in the past. They are offered not as a menu for top-down planning, but as prompts for planners' discussions with rural people to learn their preferences, and to serve as a reminder that more possibilities exist than just "communal" or "individual" tenure. The ideal is to allow local communities or districts to decide for themselves, by some democratic means, whether to participate in tenure codifications or reforms.¹

1. Recognition of Existing Rights

- No directed reform: allowing full scope to local rules and institutions as they are adapted to fit local circumstances, but without attempts at codifying laws.

- Recognition of existing rights (including so-called "traditional" rights) as binding under "modern" law. This process may be less likely than "dualistic" systems to cause confusion or allow manipulation of multiple systems of rights. But it may involve codification, which may eliminate some flexibility in local legal interpretation and practice. Codification of "traditional" or "customary" rights in colonial times produced manuals that have variously been used as courtroom reference guides. Colonially produced manuals have sometimes been criticized for incorporating local rules selectively, and for embodying mainly the viewpoints of elder men and of privileged European social strata.² They may need to be redone to be fair and useful. They have also sometimes been cited as tools for various kinds of expropriations. Whether they will be more politically acceptable to local people if done under independent government authority than under colonial authority is unclear. The problems of codification involve choosing which knowledgeable local people to serve as authorities (e.g., just elders? Just the people most respected locally, who may only be propertied people?). They also involve allowing for secular adaptive changes. Incorporating so-called "traditional" rights into "modern" law may be impracticable where members of different ethnic groups with radically different traditions share a common territory.

- Consolidating holdings without attempting to create a permanent register.

- Registering persons as rightholders within particular territories, without attempting to specify the plots to which they are entitled; and allowing local

authorities to supervise the allocations. Unfortunately registration of persons within territories has been used as a device of racial or ethnic discrimination in some countries, the worst extreme being the hated South African "pass" system.

2. Limited Registrations

- Registering leasehold rather than freehold. As Bruce observes (1986: 93), "A very long-term lease [e.g. 99-year] is a legally mortgageable interest and -- at least in the first years -- has a cash value virtually equivalent to freehold". (Such leases have been used in Zambia and Tanzania.) But leasehold may engender many of the same problems as private title, as the histories of some of the South African quitrent systems or Somali farm leasehold systems have demonstrated (see Appendix).

- Registering private rights in trees, houses, cattle dips, and other developments, without registering rights in the land around them. Some co-operatives, marketing boards, etc. already register particular kinds of trees under the names of their planters. Such a system may enhance security of tenure while leaving the land open for multiple uses. Of course, rights in densely planted trees become de facto rights in the land around them.

- Registering private or group rights as seasonal, i.e., in rainfed areas, to correspond to the growing season of the major crops. A problem with such a system, designed to protect cultivation rights while allowing seasonal grazing, would be that different crops have different growing seasons.

- Registering some parcels of land in a rural community as private property and others as group or communal property (grazing lands, for instance). Even where blanket programs of "individualization" apply, some land must be left public, purposes, for instance for schools or roads; the question is how far to extend it.

- Registering only selected kinds of rights in private property. Western law makes provisions for "easements" or other overlapping rights of various parties to private property. The principle may be extended to grazing rights, water or thatch-collecting rights, etc., so as to delimit the kinds of uses to which private rights apply.

- Registering encumbrances (or charges) only. Under such a system, only land subjected to charges such as mortgages would need to be registered.

- Registering land while restricting permissible transactions. Under such a system, restrictions on sales, rentals, or pledges are likely to be leaky in practice.

- Requiring specified tenurial arrangements for participation in development projects.

- Establishing tenure reforms for only particular areas, such as settlement schemes.

3. Group Registrations

- Vesting land in the hands of the state -- or some other superior body -- and granting conditional use rights to "productive" users. This process tends to pave the way for land expropriation by powerful members of society and those with access to bureaucracy, at the expense of sometime users or ancillary rightholders. The problem here is to not just to determine who is using the land, but who has residual rights in it (during long or short-term fallow, for instance). The term "productive" becomes a field of contention. Programs and legislation allowing the classification of rural land as "vacant and ownerless lands" (*terres vacantes et sans maitres*), common in francophone western Africa, often distort the realities of partial rights and occasional use in long-term fallow systems, including swidden (shifting cultivation) systems, or in transhumant pastoralism. They often appear to be designed to facilitate land accumulation by governments, and by their officials and other well-connected persons.

- Registering lands in the names of villages or large kin groups. This approach is likely to involve problems of group definition, and in the case of kin groups, to leave uncertain the rights of resident land clients, in-laws, etc. Appropriate units for titling may vary from one cultural area to another. Schemes to entitle individuals, lineages, villages, corporations, co-operatives, and large sections of ethnic groups have all been attempted in Africa, but as yet there are too few experiences to allow generalized comparison. This is an important topic for future research.

- Registering titles jointly in the names of husbands and wives. While registration systems like Kenya's allow such joint ownership, it is not standard practice.³ By this system, title would need to be altered upon each marriage, remarriage, or divorce. The trade-off for the accuracy and fairness of this system, as against individual registration, would be the added administrative burden on both landholders and registrars. If split title deeds were issued to represent joint claims, so that neither party could register a sale without the other's consent, the system would rely more heavily on rural peoples' abilities to read the wording on the certificates.

4. Registration of Absolute Individual Titles

- Registering titles or deeds in individual names, chosen according to local preference within families. Individual titling is likely to discriminate in favor of men at the expense of women, elders, and children, and in favor of richer and better connected farmers at the expense of others less fortunate. Even freehold tenure is, of course, subject to over-riding rights of states or local authorities for some purposes of public use. The details of existing systems of individual land registration are exhaustively documented in Simpson 1976.

- Registering titles in individual names, randomly chosen within marriages. A way to address the gender problem might be to register titles in the names of husbands or wives, by random selection. This system does not appear to have been tried. To many it may seem seem unnatural at first, and it could not guarantee that men will would not find ways of co-opting the titles of their women relatives and neighbors.

Central Problems in Registration

Programs issuing individual titles usually solidify the official rights of men at the expense of women. To what degree this change will affect women's real access to farmland, agricultural income, and food, given slippage between official and unofficial systems of rights, is not yet known. Land registration in the names of individuals affects the balance of rights between elders and juniors, as well as between the genders. Elders often stand to lose some open grazing rights.

Problems with land registration systems include their tendencies to downplay the rights of "dependent" kin; to neglect ancillary rights, such as rights to graze cattle, collect thatch, collect wood, or pass through; and to ignore residual rights of sometime users, as in long- or medium-term fallow systems. Homogenizing the right-holding systems of a nation discounts adaptations to local environments and factor scarcities. Land registrations oversimplify.⁴

Programs and projects should usually be based on existing tenure systems rather than seeking to introduce entirely new or alien arrangements. More attention be given to options that encourage legitimating existing tenurial thought and practice within the national legal codes that are emerging. In many instances this may involve a degree of legal pluralism, as, for instance, in loosely worded national legal codes that allow for local interpretation. Needed is more realism. Tenure law can be imposed by fiat from capital cities, but real behavior cannot.

Public Amenability to Registration

Registration cannot be implemented where local power-holders and the public do not welcome it. (This was the lesson of the British administration in western Kenya in the 1950s and 60s.) That registration has proceeded does not necessarily mean that it is welcome to the public, but perhaps only that it is welcome to some men: those who would be able to make some kind of trouble otherwise. The depth of public support may be illusory, since the kinds of persons with easiest access to policy-makers and program administrators are likely to be those with the greatest vested interests in tenure reforms.

Shifting Policies Hurt

Shifts in policy -- whatever their direction -- themselves generate ambiguities and uncertainties, allowing and encouraging land-grabbing by richer or better-informed persons. The dangers are particularly great in African countries, where central governments are often publicly perceived as only semi-legitimate entities, and where communications between the capital and provincial people can be especially dicey.

The Need for Cautious Experimentalism

Projects should be implemented on a pilot basis first, and conceived as experiments (see also Bruce 1986: 145). Tenure reforms are slow to implement, taking decades, and to observe the results can take longer still. One of the reasons why the Kenyan tenure reform has not provided lessons as valuable as it might is that it has not left "control areas" unregistered for comparison when registering particular altitude zones, moving from highlands to lowlands. While one can now compare registered, fertile highlands with unregistered, infertile lowlands, it is hard (for instance) to compare registered with unregistered areas of fertile highlands. Any future tenure reforms should allow such controlled comparisons. More longitudinal research is needed on distributional changes in tenure reforms.

Since tenure reforms can take many decades to implement, it is not unrealistic to try to compare their effects with the effects of long-term adaptive or "evolutionary" changes. This is the only way to understand what difference they make.

"Security of Tenure"

"Security of tenure" can be a deceptive idea. Farmers with new individual titles may be tempted to sell land in times of adversity, or to mortgage it; and whether their doing so helps or harms them, this is not secure tenure. The dangers of new land markets are likely to be greatest where farmers do not have long traditions of handling large sums of money. Individualization may work against security of tenure, not just for it. This is a very common misunderstanding.

The African landholding picture differs from the Latin American and south Asian pictures in that (a) distribution is generally better to begin with, and (b) there is often more overlap and interlocking between group and individual rights, such that individual rights may depend on group rights and be protected by them. Africa's specialness in these regards makes initiatives to title land less likely to succeed there than elsewhere.

However, titling may make more sense in some exceptional African contexts. These may include areas where extremely high local densities have led to locally unacceptable levels of litigation; this is debatable. They might also include settlement schemes with culturally heterogeneous populations in which no "customary" rules govern land rights; and schemes in areas without pre-existing rights, as in some areas cleared of diseases like onchocerciasis or trypanosomiasis; and large farm areas characterized by absentee landlords, and squatters or tenants, where a policy of "land to the tiller" would increase genuine security of tenure for farmers doing the work of agriculture. Other contexts include those where threatened minority groups (notably pastoralists or hunters and gatherers) may need special protection. Most of these contexts lie outside the scope of this study and require separate treatment.

Land and Credit

The logic of "titles for collateral, for loans, for farm intensification" should be re-considered for appropriateness. In rural Africa there are problems in it at every step, and these take economic, political, and socio-cultural forms.

Many more forms of "informal" credit are available to rural Africans than outsiders usually acknowledge. The local financial systems are based on local institutions with multiplex, overlapping loyalties and sanctions, and they are likely to take precedence over "institutional" loans for repayment. For many inputs and resources, locally devised systems have decided advantages over western-imported ones.

Where land has been registered as private property, titles have not automatically made credit accessible to smallholders. They have only been a prerequisite.

Less emphasis should be placed on institutional credit (and thus on debt) in land development strategies than hitherto. The links between land and credit should be conceived of not just in optimistic terms like "credit" and "investment", but also in equally realistic negative terms like "debt" and "dispossession". Credit is debt. Involving land in credit and debt deepens the risks of these dealings for farmers.

As far as financial interventions are concerned, more emphasis ought to be put on savings (which should normally accompany credit), and possibly also on small grants in some contexts where savings and credit are hard or costly to administer. Where an aim of intervention is to reduce livestock numbers for land conservation, an alternative to immediate individual titling or destocking campaigns is to encourage the establishment of better saving institutions and terms for rural people. Farmers who have better options in banks or other savings institutions may be less inclined to concentrate wealth in livestock, and thus to risk over-exploiting land resources. Infrastructure like marketing and storage facilities are other more promising sorts of interventions.

Land-collateral loan systems are more likely to fail where relatives live in close proximity -- as in societies with lineages -- than where they live spread out. Since many of the denser African societies have localized lineages, land-tied credit may be inappropriate for them.

Since capital is not the only critical factor of production in rural Africa -- usually labor is at least as central, and as scarce -- "investment" or intensification should not be conceived of simply in terms of capital. Protecting rights of investors must mean protecting those who work land, not just those who spend money on it. Who works the land is something of which only local residents can keep track. These issues, with gender at their core, are sources of frequent cross-cultural misunderstanding.

Longevity of Land Registers

Government land registers usually become obsolete quickly, as farmers refuse or neglect to register their transfers, subdivisions, and inheritances with the authorities. The more centralized government land registers are, the more quickly they are likely to become obsolete, because of the time and expense needed for rural people to travel to registry offices.

Where land registration is deemed necessary, simplicity of conveyance procedures is essential.

Although it seems likely that land taxation might induce farmers to inform governments of their land dealings more regularly, this is not yet known. The presence of most African governments in rural areas is shaky enough that rural land taxation is likely to be politically troublesome, perhaps even explosive.

Fee Charges for Transfers, Subdivisions, etc.

Where land must be registered for whatever reason, the procedure for registering subsequent successions, transfers, and subdivisions should be kept to its absolute simplest, taking farmer incentives into account. Attempting to cover costs by charging fees for registering transactions will be a false economy in the long run, since, by providing a disincentive to co-operate, it will make it necessary to repeat sooner the costly processes of adjudication, demarcation, and registration. Land registrars, however, must be provided with adequate incentives to do their jobs without needing to rely on informal fees or bribes to make a living. All this means that a land register may be more costly to maintain than many governments seem to expect.

Charging farmers fees to transfer or subdivide land is probably a false economy, since it discourages reporting, renders the register obsolete more quickly, and hastens the day when the whole long and expensive process of demarcation, adjudication, and registration will need to be repeated.

Land Control Boards

If land is to be registered, it should be registered in ways that legitimize female rights: leaving women's claims to be upheld in an ad-hoc fashion by male land control boards is unlikely to safeguard them very systematically.

Land control boards, where they must exist, should be so constituted as to represent a cross-section of local populations. This should mean not only by gender, but also by age, ethnic group, and socio-economic status, at the least. Powerful vested interests have usually defied such representation. The notion of an impartial, apolitical land control board may be a fantasy. To entrust the future land rights of women, children, and the poor to new bureaux, whose foundations in local social order and process may be most shaky, does not leave them home free.

Notes (Chapter 12: Policy Implications)

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1. Bruce (1986: 136-7) describes some pros and cons of "community legislation" as a decentralized approach to African land matters.

2. Examples of colonially-produced "customary law" manuals include Schapera 1938 on the Tswana, Cory and Hartnoll 1945 on the Haya of Tanzania, Cory 1953 on the Sukuma of Tanzania, Wilson 1961 on the Luo of Kenya, Lloyd 1962 on the Yoruba of Nigeria.

3. In a survey of part of Kanyamkago Location, South Nyanza District, Kenya, 91.5 percent of land parcels were registered in the names of only one owner.

4. Grayzel (1988: 329-30) summarizes some of the dangers of oversimplification and reduction in tenure reform. His discussion of Mauritania in this light contains principles broadly applicable to Africa south of the Sahara.

APPENDIX

Problems of Maintaining Land Registers

The quotations in this appendix indicate how well land registers in Africa south of the Sahara have kept track of smallholder land rights. Over a century of history from various countries suggests that the task is invariably harder than expected. Recurring themes are the slowness of registrations; reasoned unwillingness of rural people to register their subdivisions, inheritances, and transfers; and the resulting divergence of official records from real landholding and use. Fragmentation commonly continues, unreported, despite official attempts to control it. A common finding is that land registers soon become registers of dead persons rather than current users.

Kenya:

There are now a wealth of reports to show that in registered areas, only some of the real sales and only a small fraction of the real successions and subdivisions and transfers have been reported to the government land authorities. The quotations illustrate the consequent divergence between registered and real landholdings. Before the nationwide registration began, early land registration schemes on the Coast produced this result:

Experience has shown that there is a very serious danger... for the Land Register to be ignored and for transfers to be carried out without any notification, very much to the disadvantage of the transferee who may be completely ignorant of a register... Unbelievable chaos and hardships have occurred in the Lamu district as a result of such happenings (Ingham Committee on Agricultural Credit for Africans, Report, 1950: p. 15).

After the nationwide registration, a similar story:

"The system [for controlling land subdivisions] turned out to be absurd, for its administration depended for success on the willingness of potential heirs to cooperate on the transmission of all relevant information relating to the land at issue on the death intestate of the registered owner. Heirs were, for example, expected to report the death of the intestate to the chief who was required to transmit it to the local court for the issuance of a certificate of succession to the land registrar.... derivation of title by way of succession appears suspiciously scant in most land registers even today. This of course means that refragmentation or multiple use of land continues unabated." (Okoth-Ogendo 1976: 182)

The Kikuyu, Luo, and Luhya are the three largest ethnic groups in Kenya. Coldham says this on the Kikuyu and Luo, the two peoples he studied:

APPENDIX

customary law continues to determine the way in which a father or other household-head divides his land among his family. Thus, for both the Kikuyu and the Luo... As transactions of this kind are almost never either submitted to the Land Control Board for its consent or registered, the sons will have no legal title to 'their' plots... [The] number of sales that have taken place 'off' the Land Register in any given area... is by no means insignificant... Thus, in East Kadianga [a Luo sub-location] during 1966-73, at least 30 per cent of all sales of land (13 out of 42) were unregistered, while in Gathinja [a Kikuyu sub-location] during 1963-74, the equivalent figure was 15 per cent (2 out of 13)...and to this extent the Register fails to reflect what is happening on the ground... This divergence becomes even more striking when successions to registered land are considered... in East Kadianga during 1966-73, not more than 3.4 per cent of successions (1 out of 29) had been registered... and in Gathinja during 1963-74, not more than 21.4 per cent (9 out of 42)... very few deaths are ever reported to the Land Registrar... the number of deaths reported represents only a small fraction of those that have occurred... The large number of unregistered sub-divisions, sales, and successions should give cause for considerable concern. (Coldham 1979: 617-20)

Later research on the Luo of South Nyanza District found this:

Though land sales appear to have become more common as a result of registration, few buyers or sellers have informed the government about them as expected. Only 11 (4 per cent) of 246 registered landholdings in the valley sampled in Kanyamkago had been listed as sold, in whole or part, by September 1982, seven years after the registration was completed. Interviews revealed that substantially more than these had been sold in fact. Only seven (3 per cent) of the 246 holdings had been listed as subdivided or transferred in succession; all but two of these enterings were just preparatory to sales of portions outside the families. Again, many more had been subdivided or passed in succession in reality. Since many of the landholders who received titles in the first place were elders, the record now shows titles belonging to people of whom a quickly increasing number are dead. (Shipton 1988: 109)

The most obvious reason why many sales went unregistered was the high costs of registering them for farmers. The fees varied on a graduated scale according to the size of the holding and the price declared, but the total costs in South Nyanza District in 1982 could easily exceed 1,000 Kenya shillings (about U.S. \$100). The minimum fee to register a sale was Shs. 325 (300 being the survey fee), for a parcel of between 0.1 and 1.4 hectares sold for up to Shs. 500. For over 5 hectares and over Shs. 500, the minimum fee was Shs. 610. To these amounts could be added payments to local land control board representatives (about Shs. 200), formal or informal payments to local elders as witnesses (Shs. 100 divided between witnesses of two sides was a common arrangement), and fees for a register or map inspection (Shs. 25 each). On top were the expenses of transport, food, and accommodation on the trips to the district headquarters. To illustrate what these expenses could mean to

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farmers, the minimum sale registration fee of Shs. 325 alone was the equivalent of the cash wages of 65 days' casual farm labor!

Barclay found this on unregistered sales in the Wang'a Luhya area:

"I analyzed all known transactions occurring in two sub-locations [of the Wang'a-speaking Luhya area of Kakamega District] between 1969 and July 1975... The data... include 148 recorded sales and 84 'submerged' sales which I identified, but which did not appear in any records at the District Land Registry." (Barclay 1977: 325-6)

On part of East Bunyore Location, another Luhya area in Kakamega District, Douglas Paterson reports,

"One of the first problems encountered while in the field was the numerous unofficial and, therefore, unregistered parcel subdivisions in the village. In some instances, two or three separate households were found to be using segments of a single parcel of land. In all, [out of 255 registered parcels] 41 parcels had been subdivided in this way as of 1980... Additionally, not all village parcels are registered to members of Litala's [the studied village's] households. Nineteen parcels were registered to formal inhabitants of the village who have permanently migrated to other areas (i.e., representing external households). Some of these individuals' parcels have been informally allocated to village residents while others lie in fallow. Finally, at the time of my fieldwork, 23 parcels were officially registered to men who had died." (Paterson 1984: 69).

On Embu District, Angelique Haugerud writes:

Twenty years after land demarcation in upper Embu, a period during which population density has nearly doubled, subdivisions recorded in the land registry are a mere fraction of those that must have occurred on the ground. Among 1,200 titles covering all of one circumscribed area of the coffee zone... only 8 percent (84 of 1,031) of the original titles have registered subdivisions. Just 16 percent (165 of 1,012) of the currently valid titles on the register are subdivisions of previous titles. In the cotton zone... among 345 contiguous titles, 12 percent (31 of 265) of the original titles have registered subdivisions, and 25 percent (76 of 310) of the existing titles are subdivisions of previous titles (Haugerud 1982: 73).

Upon restudying the area five years later, she found much the same:

"Today kin group rights are reasserted as lineage descendants of the individual in whose name the title was first registered later place their own competing claims on his land. A few families settle such claims by formally registering transfers, and many others resolve claims informally... officially unrecorded land transactions multiply in the post-reform era... In short, one of the consequences of land

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adjudication and tenure reform may be the necessity for readjudication." (Haugerud 1989).

Rodney Wilson observed in Kisii, another densely populated area of western Kenya:

At present there is virtually no control over successions... In Kisii, the file on successions is a very thin one, with just 30 successions registered to date, representing less than 1% of the probable deaths of registered landowners since registration was first started in the District in 1965... This failure to notify successions threatens to undermine the whole land reform unless a solution is found (Wilson 1972: 133).

No solution has yet been found.¹

Liberia:

"By the time Liberia declared its independence in 1847, there had already been three cadastres and general adjudication programs in the settler areas. A system of deeds registration was early introduced, but the deed recording system is in such disarray that it is impossible to estimate accurately the amount of land held in freehold... Whole decades of records have been lost... Much property is handled as though it were freehold when in fact what people call a 'deed' is no more than the first form to be filled out when seeking a deed". (Riddell and Dickerman 1986: 100)... "Deeds often do not match the actual pieces of land being transferred" (p. 102)

Madagascar:

"In the central highlands in the areas around the capital of Antananarivo, all land was surveyed and registered beginning in 1929. Unfortunately, registration has not been kept up to date, and most of the records still list the person in possession of the property at the time of the original survey as the current property holder". (Riddell and Dickerman 1968: 105)

Mali:

"Although it is theoretically possible to obtain legal title, very few rural inhabitants have done so. Indeed, it is the people of means, the military and the civil servants, who have tended to acquire title by taking advantage of the vacuum in land tenure administration". (Riddell and Dickerman 1986: 117)

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Sao Tome e Principe

"Although the parcels of land known as glebas [11,000 freehold native parcels] are described and in fact are registered as freehold properties, the names that frequently appear on the state registry of rural property holders are the names of dead persons. Descendants with rights to these properties often make little effort to transfer title to a living descendant within the extended family group. Such a determination of title might provoke conflict and division within the family estate and a corresponding reduction in the status of members of the group... Persons have potential claims to land in several groups and can exercise several concurrently, or they may be excluded from one set of claims on the land of their patrilineal family group to exercise claims in their matrilineal group. (Eyzaguirre 1988: 348)

Sierra Leone:

To effect land sales, "Land owners deal directly with interested buyers", quietly excluding the District Officer, or disguise land sales as gifts (Turay 1988: 7).

Somalia:

The Agricultural Land Law (no. 73) of 1975 , amended by later decrees including Law no 23 of 1976, established a system of heritable but unsaleable leaseholds for periods of up to 50 years, subject to continuous use.

The process established for land registration is complex, time-consuming, expensive, and subject to manipulation by elites. Registration requires up to five steps that take from a few months to several years to complete...

In practice there have been many problems with registration. Not only are registration procedures unrealistically cumbersome, but officials have little training or experience in public administration. Moreover, like all government officials in Somalia, they are forced by low salaries to seek gratuities and to moonlight in order to supplement their income. Applicants must make repeated trips to various administrative centers and bear the associated expenses. Delays are inevitable, and for the ordinary farmer the registration process can drag on for up to four years, even in accessible areas like Shalambod... In addition, the law does not permit farmers to hold or register more than one parcel of land, despite the fact that many do. As a result, a majority of smallholders had not registered their land more than a decade after land reform.

Government officials report that that manipulation of the registration process by traditional community leaders and merchants is commonplace. Land of families and larger groups is often registered under the name of an individual member who understands the procedure or has the right connection. "Ghost" cooperatives are registered by individuals or groups in hopes of obtaining government assistance in clearing and cultivating the land...

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Farmers, for their part, allege that applicants with influence and connections are able to "bypass" parts of the procedure to obtain a lease on the basis of a "desk survey," instead of a thorough investigation. (Hoben 1988: 209)

Sudan:

"in the Sudan, there was land in the Gezira which had been adjudicated in the first decade of this century but which was not taken into the cotton-growing scheme until some forty years later. By that time the registers consisted mainly of the names of proprietors long since dead, and the law of prescription had also affected title in the intervening years. A process of re-adjudication was required to bring the registers up to date." (Simpson 1976: 637)

Uganda:

The mailo registration system, set up by the British under the Uganda Agreement of 1900,

"was rather... complex to implement and required surveying and registration work that took over thirty years to carry out -- by which time, of course, many of the original allottees had died or otherwise passed on their lands, and so the process became yet more complicated." (Riddell and Dickerman 1986: 207)

The history of Ganda mailo registration reveals problems of misunderstanding of local practice on the part of planners, and further problems of accident.

For instance, names were not stabilized. The same individual might be known by slightly different names in different parts of the country. Or a man might acquire additional names (and therefore a different signature) if he should succeed to a clan office or become the father of twins. Or the musika [heir] of a deceased mailo-owner might in good faith sign transfers using the name of the deceased, or there might be similar behaviour by the representative of a sick relative. (West 1972: 172).

The situation simply worsened:

... the Protectorate Government had unwittingly undertaken a sisyphian task... So unrecorded title mutations proliferated and the record of land rights became less and less reliable... By 1925 this backlog was estimated at 8,000 mutations... By 1946 it was estimated that no less than 150,000 transactions in mailo land were awaiting attention. Clearly no ordinance could be expected to operate smoothly under such intolerable conditions, even if it were well conceived and completely understood. In Buganda an inept ordinance was linked with totally inadequate survey facilities. (West 1972: 173-4)

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In the Ruzhumbura Pilot Scheme [begun in 1958 in Kigezi District, about the most densely populated district in Uganda], by the late 1960s the Commissioner of Lands and Surveys for Uganda wrote,

"The whole of the 6,400 titles have now been available for issue to the Public for well over 5 years, but to April 1968 only some 1,800 or 28% have been paid for and taken by the proprietors. There are several probable reasons for this apparent indifference... There is little incentive to them [owners] to pay for a sheet of paper giving details of what they already know... Titles... for security reasons... have all been moved to Kabale Office, which is too far for many owners to bother to travel... plots are too small to enable a worthwhile mortgage being obtained" (Okec n.d. 261) ... "In Kigezi against the 1800 titles issued, only 319 transfers of whole plots have been registered, but what is more frightening is that only 30 odd successions have been registered against an estimated minimum of 300 deaths that must have taken place." (Okec n.d. 264)

"In Ankole the figures are even more depressing with only 23 transfers registered against 374 titles issued, and no successions registered at all." (Okec n.d.: 264)

On the whole, in the registered areas of the two districts,

"only a small proportion of the actual transfers and successions on death are registered. This is much the case in the remoter parts of Mailo land in Buganda." (Okec n.d.: 264)

These are far from the only such cases. Most of the French and Belgian colonies tried to register lands as private property in the first three decades of the twentieth century, but abandoned or severely cut back the attempts as the registers soon became obsolete.

Union of South Africa:

While the unfortunate extremity of the apartheid systems of South Africa would deserve separate treatment, some aspects of land tenure reforms attempted there bear strong parallels with others described above. South Africa experimented with the granting of quitrent (15-year renewable rental) and freehold titles to African farmers in the Cape Colony (later the Cape Province) early on, under the Smith-Calderwood Location Scheme of 1849 in Victoria East in the Ciskei. The Native Locations Act in 1879 enabled the Governor to grant individual quitrent holdings, and the Glen Grey Act of 1894 extended individual tenure in the Glen Grey District in the Ciskei, and much of the Transkei (see Davenport and Hunt 1974: Section 3). The 1922 Report on Native Location Surveys [Cape Province], by M.C. Vos, former Secretary for Native Affairs, is instructive despite its now unacceptable language:

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the system of under which native allotments have been surveyed for individual tenure... has not been such a success as must have been anticipated.

The failure of the system in the early days was largely due, as far as the natives were concerned, to (1) the preference to tribal or common tenure, due in great measure to the deep-seated aversion of the chiefs to individual tenure, as it would gradually and surely sap their control over the people; (2) to the dislike of the native to being tied down to definite and permanent sites for dwelling or gardens; (3) reluctance to pay the cost of survey and title; (4) unsuitability of allotment caused by surveyors not consulting the interests of the future occupants so much as their own convenience in the survey, and to this cause must be assigned the reason of the unwillingness to take up title and to the large numbers which had to be cancelled owing to the lots being utterly unsuitable for tillage...

[In 1855] village lots were occupied by the grantees ... but as in the case of the Kat River grants the law of transfer was not observed...

In 1858, when the Mission Location of Durban and Newtondale in the Peddie Division were surveyed, and this was followed in 1860 by the survey of four native locations; but in the latter case although the titles were prepared not one was taken up, so that the locations are still held communally...

In 1863 [at Harmesfontein] the natives were granted lots in the village with the rights of grazing over the outer commonage... These rights were inseparable... Before long... the natives sold undivided shares in the village lots to Europeans, retaining the grazing rights on the outer commonage... This sale of undivided portions was found to be illegal...

In 1877 the Oukraal and Kamastone Locations in the Queenstown division were surveyed into 1,901 garden lots and 1,879 building or village lots, and I will take this location as typical of the areas subdivided for individual tenure... the boundaries of the granted lots were not respected and cultivation of commonage land, if suitable, was usual. Transfers of land were rare... The Magistrate... has found that 40 percent. of all allotments were in the possession of the wrong people... (M.C. Vos, quoted in Davenport and Hunt 1974: 49-50).

In 1949, a survey of Keiskammahok, a district in the Ciskei divided between communal, freehold, quitrent, and Trust tenures, found this:

With all the types of tenure there is a tendency towards greater and greater sub-division of holdings...

There are no appreciable differences in productivity with the differences in tenure, nor are there marked differences in the crops grown or the techniques of cultivation. There is no evidence of greater investment on long term improvements such as fencing, irrigation, and planting of fruit trees, on freehold and quitrent, than on communal land. Only in the housing is there an appreciable difference, freeholders and quitrent owners generally having more... substantial homesteads than the squatters, Trust holders, and members of communal villages...

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Neither the freehold nor the quitrent system has worked as it was supposed to do, for legal transfer of property is commonly not effected when the holder dies. This is partly on account of the cost of transfer, partly because of ignorance of the law, and for freehold land, partly because joint heirs often do not want the land transferred to any one of them; they can not afford a legal sub-division and may not know of the possibility of legal transfer in undivided shares... (Monica Wilson and M.E. Elton Mills, quoted in Davenport and Hunt 1974: 52).

The authors found, however, that the area's many labor migrants valued the sense of secure tenure and the freedom from headmen's possible reallocations that freehold offered. They reported that class differences were clearly developing in the freehold and quitrent areas but not the "communal" areas.

In 1955, the Tomlinson Commission for the Socio-Economic Development of the Bantu Areas within the Union of South Africa found much the same:

Apart from the fact that under the individual tenure system the land is held under title... the deed is subject to so many conditions and forfeiture clauses that there is no great measure of security of tenure... Moreover, there is virtually no difference in the way of cultivation or the effecting of improvements or any other methods of betterment in the individual tenure allotments (except in many cases the construction of better homes on building allotments) than is the case on allotments under the communal tenure system... (Tomlinson Commission, quoted in Davenport and Hunt 1974: 53).

In November, 1986, reporters on the Rhodes University Workshop on Land Tenure and Rural Development concluded that

In the Ciskei freehold tenure has been practiced for over 100 years in some areas, with very little land consolidation having taken place. In those areas, yields have been no higher than in non-freehold areas. (C. de Wet and P. McAllister, Rhodes University, press release)

Of course, more research and commentary on the subject by Black South African scholars is to be welcomed when it is possible.

Zimbabwe:

The Msengezi African Purchase settlement area, where immigrants from other parts of the country were given individual titles from 1934 to 1949,

is in the process of fragmenting its title rights to freehold land, in practice if not in law. During the 1972-3 season, half of the farms accommodated one or more people, in addition to the title-holder, who were growing crops. Eight years later this proportion had risen to nearly three-quarters... [Of the arrangements of exchange] A few rest on the payment of rent... A somewhat larger number involve labor tenancy. All the rest reflect the discharge of economic obligations by landowners

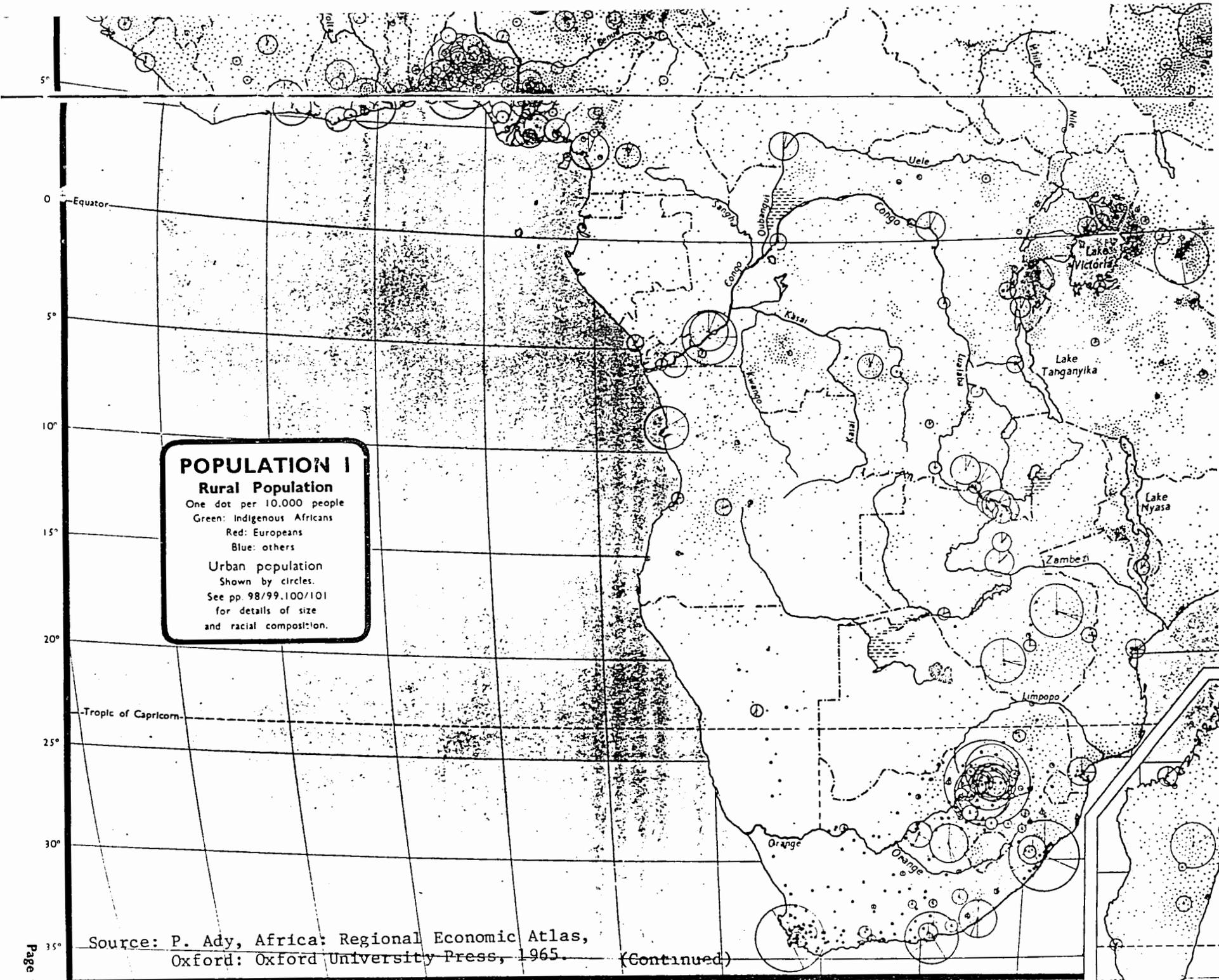
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to their dependent kin, generally in return for labor. The vast majority are illegal in the eyes of the central government of Zimbabwe, and perhaps not all are approved by those landowners who actually make them" (Cheater 1983: 81-2, quoted in Noronha 1985: 140).

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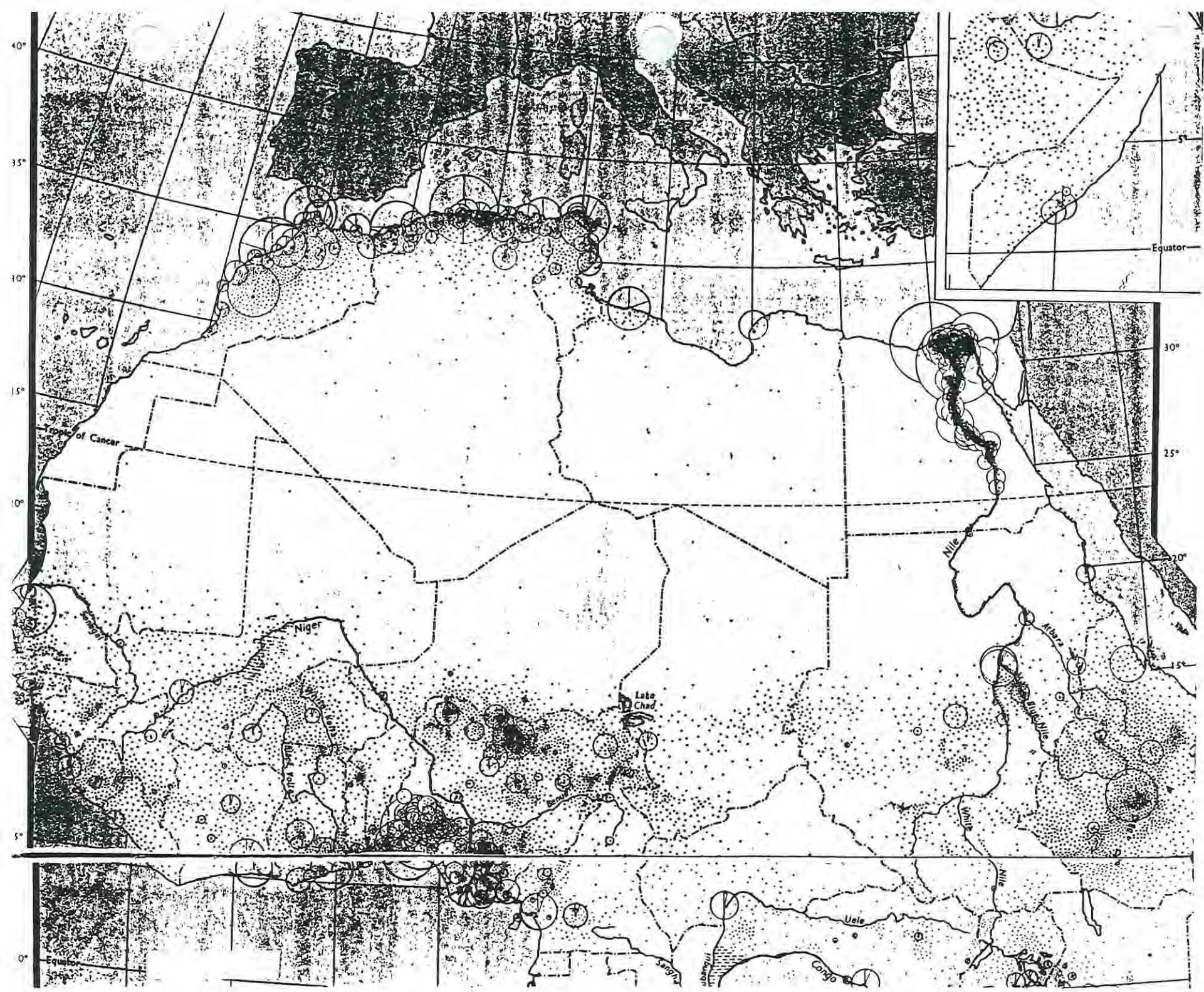
Notes (Appendix)

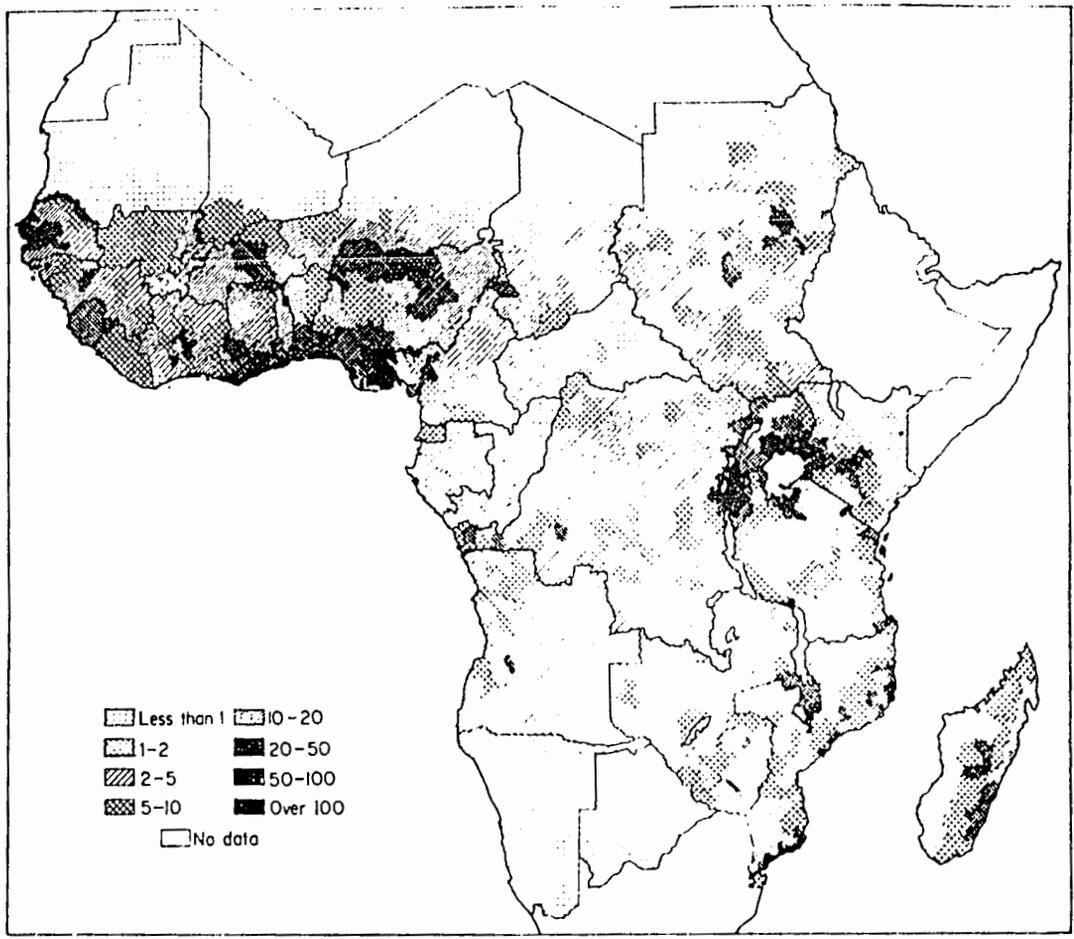
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1. For further reports on the disparities between the land register, on the one hand, and the reality of land use and locally recognized rights in Kenya, on the other, see Bezzabeh 1981: 22; Davison 1986, on the Kikuyu; Haugerud 1989, on Embu; Okoth-Ogendo 1978, passim; Paterson 1980a: 12, Sorrenson 1967: 215, 218, on the Kikuyu; Shipton 1985, 1988, on the Luo; Wilson 1972: 139, on Kenya generally.



POPULATION I
Rural Population
 One dot per 10,000 people
 Green: Indigenous Africans
 Red: Europeans
 Blue: others
Urban population
 Shown by circles.
 See pp. 98/99, 100/101
 for details of size
 and racial composition.

Source: P. Ady, Africa: Regional Economic Atlas,
 Oxford: Oxford University Press, 1965. (Continued)





Map 4 Tropical Africa: settlement density of indigenous population exclusive of towns of 20,000 or more inhabitants. (Persons per square mile)

Source: A. J. Coale, ch. 17; data as shown on Table 1.

Source: Caldwell, J.C. and Okonjo, C. (1969), p. 180.

KENYA
POPULATION CENSUS, 1979

POPULATION

Population, Area and Density by Provinces and Districts

Province/District	Population	Land Area Sq. Km.	Density*	Province/District	Population	Land Area Sq. Km.	Density*
Nairobi	827,775	684	1,210	Baringo	203,792	9,885	20
Kilifi	430,986	12,414	34	Elgeyo Marakwet	148,868	2,279	65
Kwale	288,363	8,257	34	Kajiado	149,005	19,605	7
Lamu	42,299	6,506	6	Kericho	633,348	3,931	161
Mombasa	341,148	210	1,622	Laikipia	134,534	9,718	13
Taita Taveta	147,597	16,959	8	Nakuru	522,709	5,769	90
Tana River	92,410	38,694	2	Nandi	299,319	2,745	109
Coast Province	1,343,803	83,040	16	Narok	210,306	16,115	13
Garissa	128,867	43,931	2	Samburu	76,908	17,521	4
Mandera	105,601	26,470	3	Trans-Nzoia	259,503	2,078	124
Wajir	139,319	56,501	2	Turkana	142,702	61,768	2
North Eastern Province	373,787	126,902	2	Uasin Gishu	300,766	3,378	89
Embu	263,173	2,714	96	West Pokot	158,652	9,090	17
Isiolo	43,478	25,605	1	Rift Valley	3,240,412	163,882	19
Kitui	464,283	29,388	15	Kisii	869,512	2,196	395
Machakos	1,022,522	14,178	72	Kisumu	482,327	2,093	230
Marsabit	96,216	73,952	1	Siaya	474,516	2,522	188
Meru	830,179	9,922	83	South Nyanza	817,601	5,714	143
Eastern Province	2,719,851	155,759	17	Nyanza Province	2,643,956	12,525	211
Kiambu	686,290	2,448	280	Bungoma	503,935	3,074	163
Kirinyaga	291,431	1,437	202	Busia	297,841	1,626	183
Murang'a	648,333	2,476	261	Kakamega	1,030,887	3,495	294
Nyandarua	233,302	3,528	66	Western Province	1,832,663	8,195	223
Nyeri	486,477	3,284	148	Total Kenya	15,327,061	564,161	27
Central Province	2,345,833	13,173	178	Adjusted Total	16,141,061	564,162	27

Source: Central Bureau of Statistics.

*Persons per square kilometre.

NB: Population projections by district to the year 2000 are published in "Population projections for Kenya 1980-2000," Central Bureau of Statistics, March, 1983.

Source: Kenya Statistical Abstract, 1986.

Kenya
REGISTRATION OF LAND* 1956/74-1985

LAND

'000 Hectares

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	Total to 31-12-85**
Nyanza Province												
Kisumu ..	9.2	8.9	0.9	1.1	3.7	3.1	1.4	1.4	2.0	—	—	55.3
Kisii ..	13.0	2.8	—	—	—	—	—	—	—	—	—	217.9
South Nyanza	15.4	17.2	9.3	23.3	10.4	—	17.1	1.7	8.5	10.1	—	333.4
Siaya ..	24.3	20.2	2.6	13.8	—	—	3.0	—	5.9	—	4.3	179.9
TOTAL	61.9	49.1	12.8	38.2	14.1	3.1	21.5	3.1	16.4	10.1	4.3	786.3
Western Province												
Kakamega ..	8.0	7.8	—	—	—	—	—	—	—	—	—	309.2
Bungoma ..	—	4.7	—	4.5	—	—	—	—	—	—	—	228.0
Busia ..	—	2.5	—	4.9	4.3	—	—	—	—	—	5.3	175.1
Total ..	8.0	15.0	—	9.4	4.3	—	—	—	—	—	5.3	712.3
Rift Valley												
Kericho ..	21.9	33.8	20.2	11.1	—	—	10.9	9.4	—	—	—	256.7
Nakuru ..	—	—	12.0	—	3.6	—	—	6.4	—	—	—	22.0
Nandi ..	11.8	22.3	2.9	1.4	1.6	—	1.7	5.4	3.0	—	—	142.1
Elgeyo	—	6.3	—	—	—	—	—	3.8	—	—	—	83.9
Marakwet	—	—	—	—	—	—	—	—	—	—	—	—
Baringo ..	5.1	3.0	12.2	8.8	5.5	—	1.7	1.1	1.3	1.4	—	120.1
Narok ..	11.7	—	79.8	89.4	56.3	95.5	14.6	—	19.0	—	—	709.8
Kajiado ..	202.3	34.4	88.1	35.0	82.2	209.0	—	26.7	109.7	—	—	1,754.3
West Pokot	42.8	161.7	7.5	4.6	12.5	10.0	5.4	36.4	8.0	17.0	—	305.9
Samburu ..	65.7	10.6	235.2	—	100.3	—	—	57.5	1.6	—	—	470.9
Laikipia ..	—	—	—	7.5	—	19.5	—	—	—	8.9	8.7	44.6
Total	361.3	272.1	457.9	160.8	262.0	334.0	34.3	146.7	142.8	27.3	8.7	3,901.3
Central Province												
Nyeri ..	—	—	—	—	—	0.4	—	—	—	—	—	77.0
Murang'a ..	—	—	—	—	—	—	—	—	—	—	—	153.9
Kiambu ..	—	—	—	—	—	—	—	—	—	—	—	96.4
Kirinyaga ..	4.2	—	—	—	—	—	—	—	—	—	—	89.1
Total ..	4.2	—	—	—	—	0.4	—	—	—	—	—	416.4
Coast Province												
Kilifi ..	7.4	77.0	23.3	2.2	1.7	2.7	3.6	—	4.6	0.8	—	129.4
Kwale ..	2.3	81.0	3.0	30.6	2.6	1.8	7.3	11.8	6.3	0.6	—	189.7
Taita ..	2.5	0.6	1.5	—	2.3	12.6	13.3	—	6.0	6.9	—	54.8
Total ..	12.2	158.6	27.8	32.8	6.6	17.1	24.2	11.8	16.9	8.3	—	373.9
Eastern Province												
Embu ..	12.7	—	14.0	—	4.4	—	4.0	7.5	—	5.1	—	112.5
Meru ..	4.9	—	—	4.3	1.0	—	1.9	1.4	2.7	—	—	133.7
Kitui ..	15.0	4.9	4.4	19.3	—	—	0.6	—	7.1	8.3	4.6	69.0
Machakos	16.6	24.2	8.3	11.3	1.5	3.2	—	8.2	7.5	9.1	—	180.4
Total ..	49.2	29.1	26.7	34.9	6.9	3.2	6.5	17.1	17.3	22.5	4.6	495.6
Total All Provinces ..	496.8	523.9	525.2	276.1	293.9	357.8	86.4	178.7	193.2	68.2	22.9	6,686.0

Source: Ministry of Lands, Settlement and Physical Planning, Land Adjudication Department.

*Land in the former Scheduled areas is not included. The area of all registered land in Kenya is much larger.

**Totals inclusive of figures of the period 1956/74.

Source: Kenya Statistical Abstract 1986.

Kenya

LAND

DISTRICT SIZES BY CATEGORIES (AS AT 31st DECEMBER, 1984)

Sq. Kilometre

(Contd.)

	TRUST LAND							AVAILABLE FOR SMALL HOLDER REGISTRATION		Total Trust Land	Total Area of Water	Total Area of Land and Water	Per Cent
	NOT AVAILABLE FOR SMALL HOLDER REGISTRATION							Already Registered	Not yet Registered				
	Forest	Govt. Reserves	Townships	Alienated Land	Game Reserves	National Parks	Total						
Western Province													
Bungoma	—	3	31	1	—	—	35	1,851	271	2,157	—	3,074	0.53
Busia	—	2	42	—	—	—	44	1,440	145	1,629	137	1,766	0.30
Kakamega	258	2	50	—	—	—	310	2,456	197	2,963	—	3,520	0.60
Total	258	7	123	1	—	—	389	5,747	613	6,749	137	8,360	1.43
Nyanza Province													
Kisii	1	—	29	—	—	—	30	1,817	101	1,948	—	2,196	0.38
Kisumu	—	5	246	15	—	—	266	538	827	1,631	567	2,660	0.46
S'aya	—	—	4	41	—	—	45	1,632	846	2,523	1,005	3,528	0.60
South Nyanza	—	—	6	121	119	—	246	2,680	2,770	5,713	2,054	7,778	1.33
Total	1	5	285	177	119	—	587	6,667	4,553	11,815	3,636	16,162	2.77
Rift Valley Province													
Baringo	325	2	3	—	107	88	525	771	8,831	10,127	163	10,790	1.85
Elgeyo-Marakwet	785	—	—	—	—	6	851	579	1,292	2,722	—	2,722	0.47
Kajiado	13	14	16	14,512	2,881	3/2	17,828	416	1,771	20,015	142	21,105	3.62
Kericho	102	—	37	1	—	—	140	2,159	322	2,621	—	4,890	0.84
Laikipia	—	5	—	785	—	—	790	—	5	795	—	9,718	1.67
Nakuru	—	—	—	—	—	—	—	130	—	130	176	7,200	1.24
Nandi	333	—	4	13	—	—	350	1,161	362	1,873	—	2,745	0.47
Narok	727	—	13	7,227	1,671	—	9,636	326	8,549	18,513	—	18,513	3.18
Samburu	3,288	—	13	4,613	—	—	7,914	—	12,895	20,809	—	20,809	3.57
Trans Nzoia	—	—	—	—	—	—	—	—	—	—	—	2,468	0.42
Turkana	—	—	65	—	—	—	65	—	61,703	61,768	2,279	64,048	11.00
Uasin Gishu	—	—	—	—	—	—	—	—	—	—	—	3,784	0.65
West Pokot	391	—	3	1,236	—	—	1,630	274	3,172	5,076	—	5,076	0.87
Total	5,964	21	154	28,387	4,659	546	39,731	5,816	98,902	144,449	2,760	173,868	29.85
Central Province													
Murang'a	9	2	29	1	—	—	41	1,482	—	1,523	—	2,476	0.42
Kiambu	—	—	57	1	—	—	58	1,012	—	1,070	3	2,451	0.42
Kirinyaga	—	159	3	100	—	—	262	821	—	1,083	—	1,437	0.25
Nyandarua	—	—	—	—	—	—	—	—	—	—	—	3,528	0.61
Nyeri	—	2	5	—	—	—	7	840	—	847	—	3,284	0.56
Total	9	163	94	102	—	—	368	4,155	—	4,523	3	13,176	2.26
Eastern Province													
Embu	—	28	8	18	68	—	122	1,085	1,313	2,520	—	2,714	0.47
Isiolo	—	170	43	—	239	—	452	—	25,153	25,605	—	25,605	4.39
Kitui	204	—	161	499	—	—	864	490	14,551	15,905	—	29,389	5.05
Machakos	93	45	115	130	—	—	383	1,755	5,671	7,809	5	14,183	2.43
Marsabit	151	—	12	—	3,896	1,614	5,673	—	68,279	73,952	4,126	78,078	13.40
Meru	341	1	207	—	—	870	1,419	751	5,748	7,918	—	9,922	1.70
Total	789	244	546	647	4,203	2,484	8,913	4,081	120,715	133,709	4,131	159,891	27.44
North-Eastern Province													
Garissa	—	—	251	—	3,142	—	3,393	—	40,538	43,931	—	43,931	7.54
Mandera	—	—	—	202	—	—	202	—	26,268	26,470	—	26,470	4.54
Wajir	—	—	145	—	—	—	145	—	56,356	56,501	—	56,501	9.70
Total	—	—	396	202	3,142	—	3,740	—	123,162	126,902	—	126,902	21.78
Coast Province													
Kilifi	—	51	140	1,819	—	—	2,010	351	4,886	7,247	107	12,523	2.15
Kwale	61	—	—	1,475	—	—	1,536	753	3,238	5,527	65	8,322	1.43
Lamu	—	—	—	—	—	—	—	—	—	—	308	6,814	1.17
Mombasa	—	—	—	—	—	—	—	—	3	3	65	275	0.05
Taita	2	1	74	557	—	—	634	159	1,225	2,018	16	16,975	2.91
Tana River	—	—	—	30	1,687	—	1,717	—	12,790	14,507	—	38,694	6.64
Total	63	52	214	3,881	1,687	—	5,897	1,263	22,142	29,302	563	83,603	14.35
Nairobi	—	—	—	—	—	—	—	—	—	—	—	684	0.12
Total	7,084	492	1,812	33,397	13,691	3,149	59,625	27,729	370,087	457,449	11,230	582,646	100.00

Source: Ministry of Lands, Settlement and Physical Planning.

Source: Kenya Statistical Abstract, 1986

Note: 1 Sq. Kilometre=100 hectares.

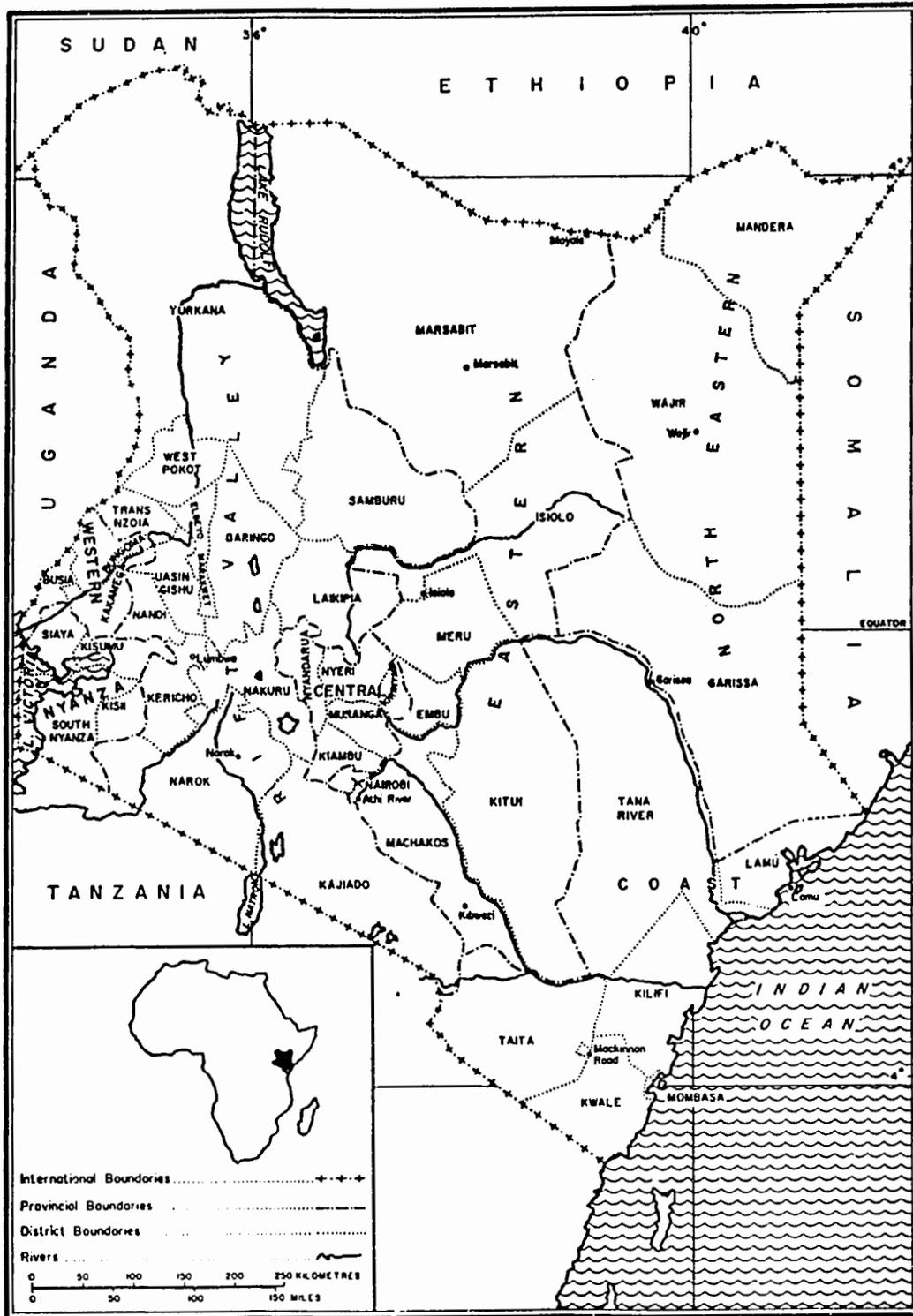
LAND

Kenya
DISTRICT SIZES BY LAND CATEGORIES (AS AT 31st DECEMBER, 1984)

Sq. Kilometres

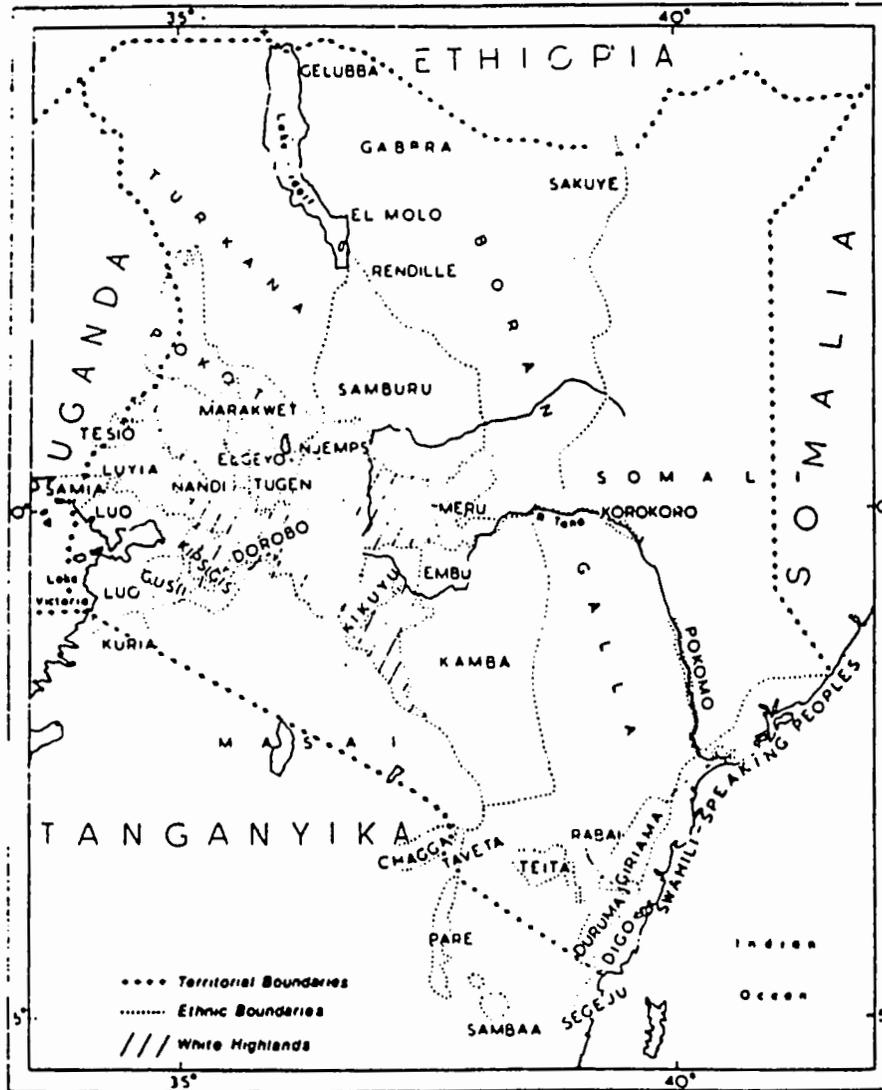
	GOVERNMENT LAND								FREEHOLD LAND		
	Forest Reserves	Other Govt. Reserves	Townships	Alienated land	Un-Alienated land	National Parks	Open Water	Total	Small-holder Schemes	Other	Total
Western Province											
Bungoma	547	—	—	—	—	2	—	549	368	—	368
Busia	—	—	—	—	—	—	137	137	—	—	—
Kakamega	69	3	—	—	—	—	—	72	482	3	485
Total	616	3	—	—	—	2	137	758	850	3	853
Nyanza Province											
Kisii	—	—	—	—	—	—	—	—	248	—	248
Kisumu	—	23	179	113	1	—	410	726	303	—	303
Siaya	—	—	—	—	—	—	1,005	1,005	—	—	—
South Nyanza	—	—	—	—	—	—	2,065	2,065	—	—	—
Total	—	23	179	113	1	—	3,480	3,796	551	—	551
Rift Valley Province											
Baringo	310	3	8	—	3	—	163	487	176	—	176
Elgeyo-Marakwet	—	—	—	948	—	—	—	—	—	—	—
Kajiado	—	—	—	948	—	—	142	1,090	—	—	—
Kericho	953	8	50	770	62	—	—	1,843	395	31	426
Laikipia	725	192	187	7,558	80	16	—	8,758	165	—	165
Nakuru	1,337	44	946	4,145	29	79	62	6,642	45	383	428
Nandi	69	13	—	643	—	—	—	725	142	5	147
Narok	—	—	—	—	—	—	—	—	—	—	—
Samburu	—	—	—	—	—	—	—	—	—	—	—
Trans-Nzoia	237	47	86	1,754	—	167	—	2,291	177	—	177
Turkana	—	—	1	—	—	—	2,279	2,280	—	—	—
Uasin-Gishu	564	97	60	2,535	3	—	—	3,259	520	5	525
West Pokot	—	—	—	—	—	—	—	—	—	—	—
Total	4,195	404	1,338	18,353	177	262	2,646	27,375	1,620	424	2,044
Central Province											
Murang'a	267	62	—	533	—	26	—	888	24	41	65
Kiambu	448	65	98	437	6	—	3	1,057	33	291	324
Kirinyaga	398	—	—	—	—	46	—	354	—	—	—
Nyandarua	560	17	3	222	16	273	—	1,091	1,575	862	2,437
Nyeri	958	11	55	313	6	555	—	1,898	521	18	539
Total	2,541	155	156	1,505	28	900	3	5,288	2,153	1,212	3,365
Eastern Province											
Embu	173	—	—	—	—	21	—	194	—	—	—
Isiolo	—	—	—	—	—	—	—	—	—	—	—
Kitui	—	—	—	—	7,115	6,369	—	13,484	—	—	—
Machakos	60	448	222	2,615	1,282	1,020	5	5,652	489	21	510
Marsabit	—	—	—	—	—	—	4,126	4,126	—	—	—
Meru	1,056	4	5	533	—	311	—	1,909	95	—	95
Total	1,289	452	227	3,148	8,397	7,721	4,131	25,365	584	21	605
Coast Province											
Kilifi	417	440	272	3,136	669	—	109	5,043	—	233	233
Kwale	37	6	135	1,828	498	192	65	2,761	—	34	34
Lamu	—	222	119	1,472	2,874	877	308	5,872	857	46	903
Mombasa	—	3	204	—	—	—	65	272	—	—	—
Taita	—	62	105	3,311	924	10,539	16	14,957	—	—	—
Tana River	—	123	3	5,455	15,014	3,457	—	24,179	—	8	8
Total	454	856	838	15,202	19,979	15,065	563	53,123	857	321	1,178
Nairobi	21	77	93	225	16	117	—	549	—	135	135
Total	9,116	1,970	2,831	38,546	28,598	24,067	10,960	116,088	6,615	2,116	8,731

Source: Kenya Statistical Abstract 1986.



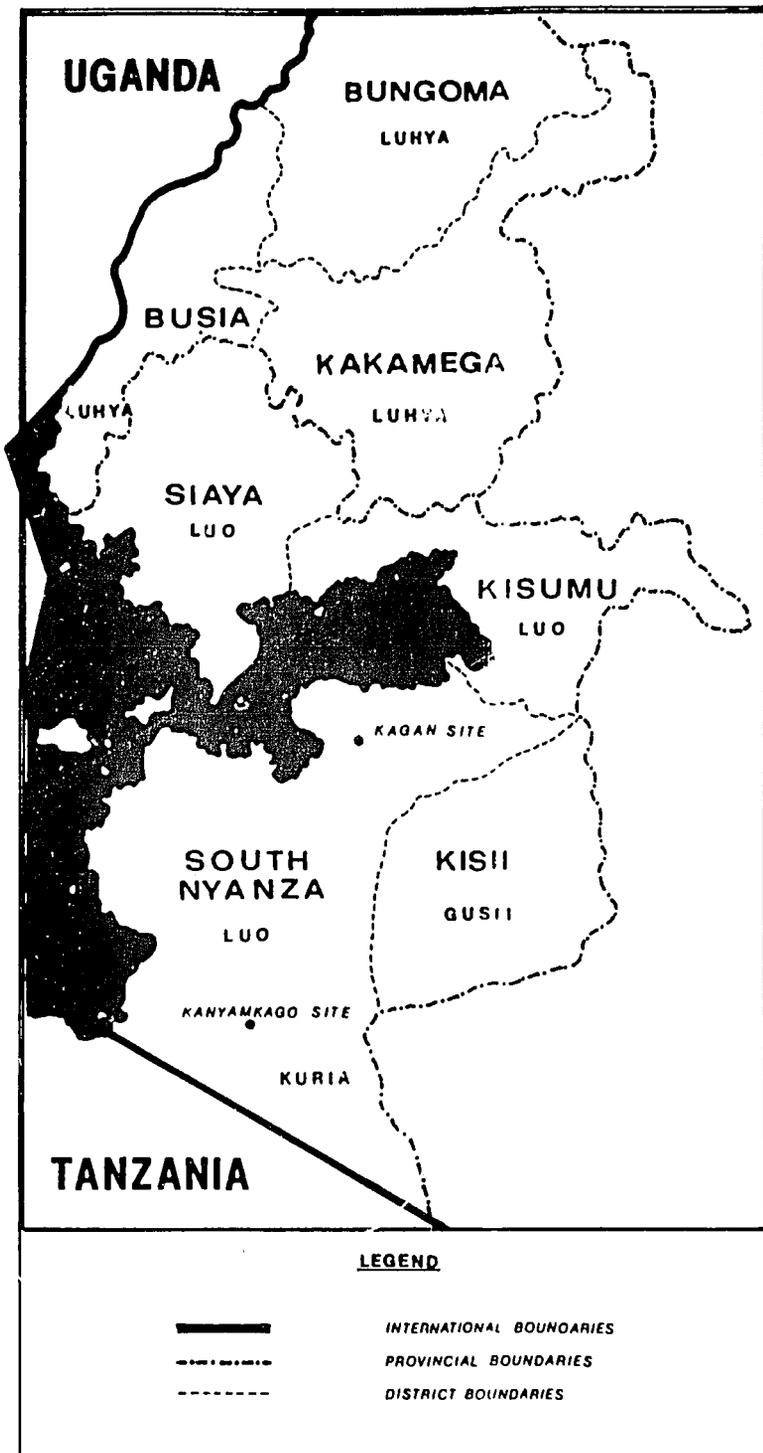
Administrative map of Kenya

Source: International Labour Office, Employment, Incomes and Equality. Geneva: ILO. 1972.



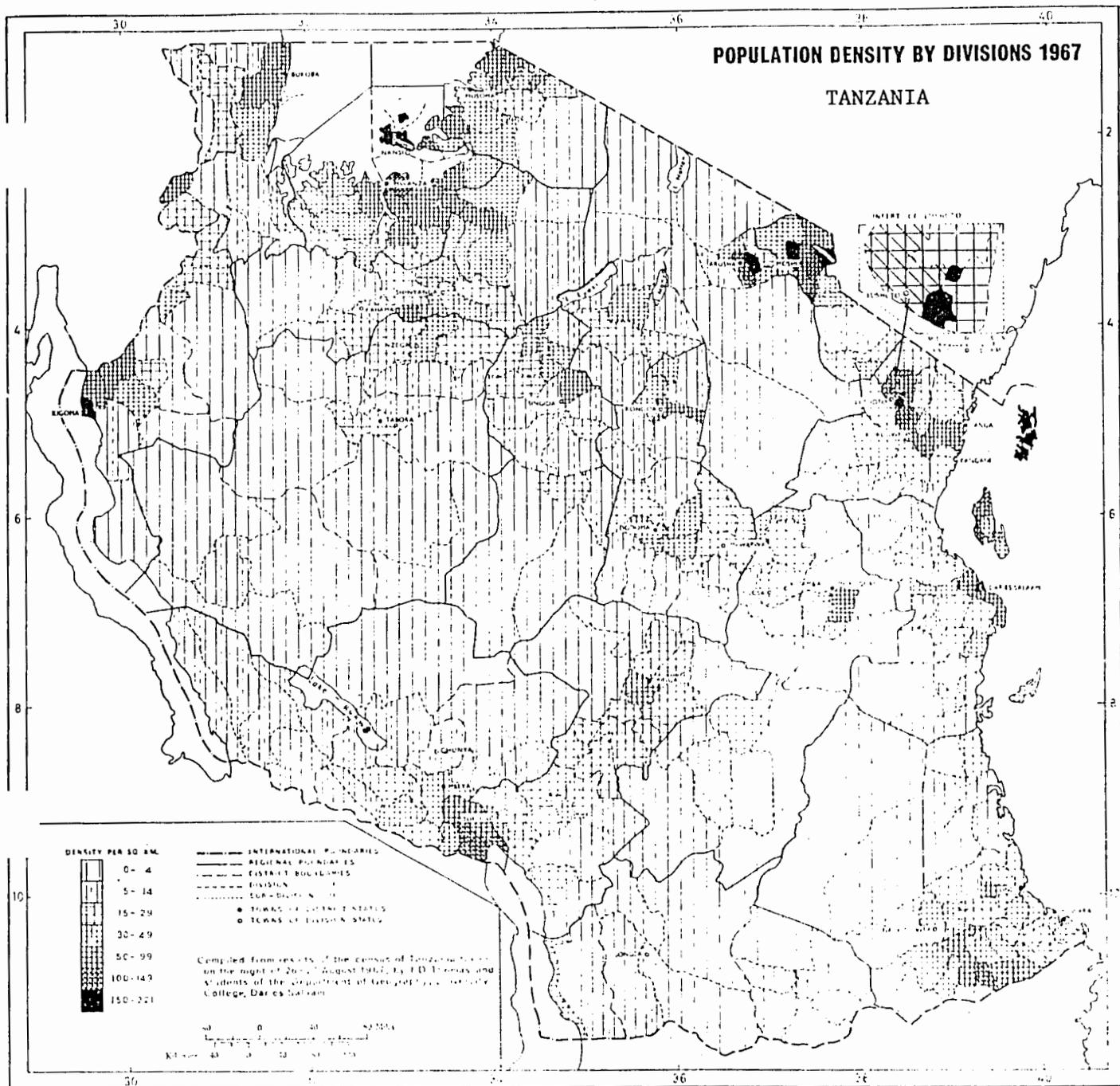
Source : C.Leo Land And Class In Kenya (University of Toronto Press, Toronto, 1984, p.36)

Kenya: Major Ethnic Groups

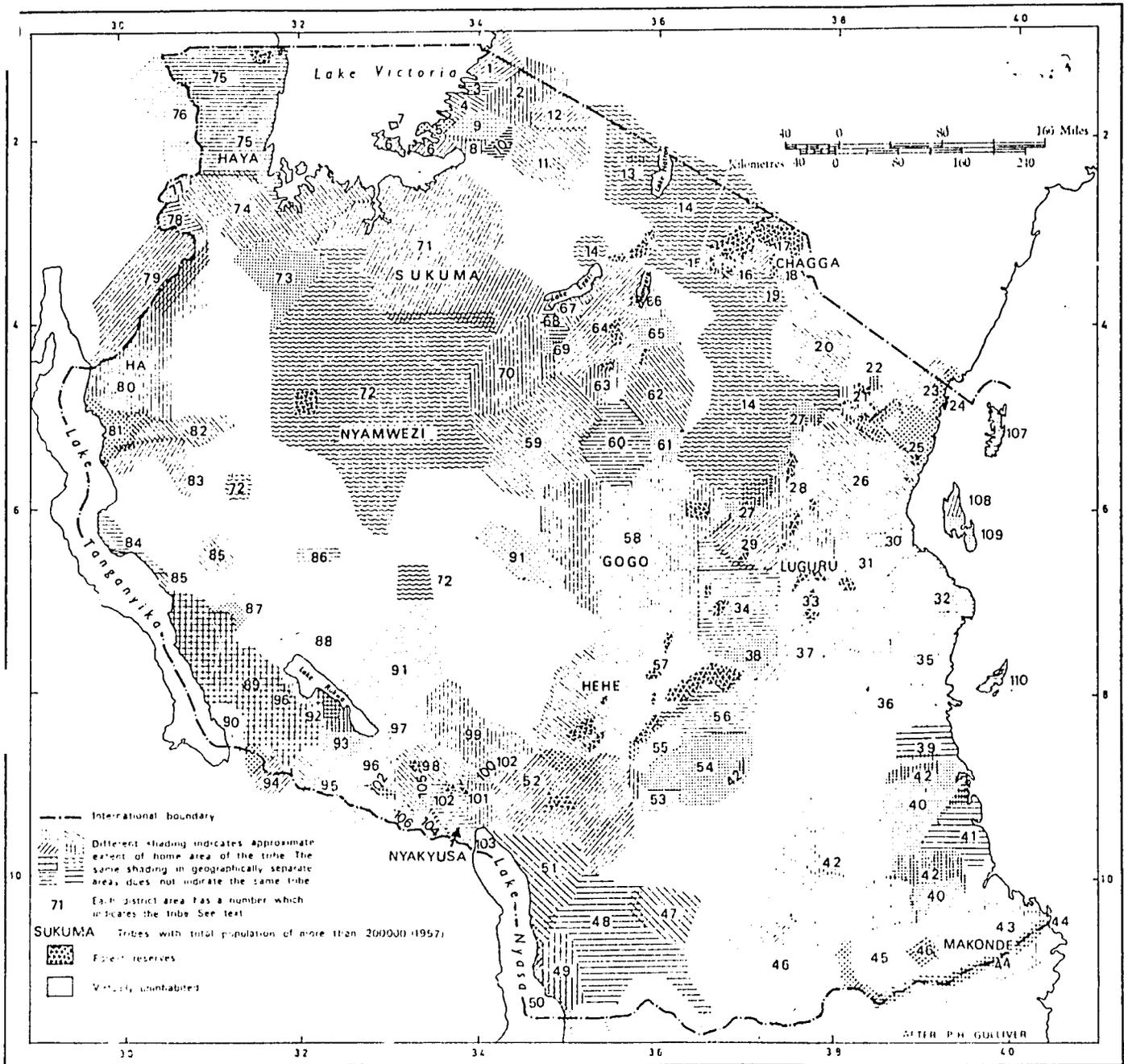


Map 5.1. Lake Victoria region of western Kenya (Nyanza Province: Siaya, Kisumu, South Nyanza, and Kisii districts; Western Province: Bungoma, Busia, and Kakamega districts).

Source: R.E. Downs and S.P. Reyna, eds., Land and Society in Contemporary Africa. Hanover, New Hampshire: University Press of New England. 1988.



Source: L. Berry, Tanzania in Maps.
New York: Africana Publishing, 1971.



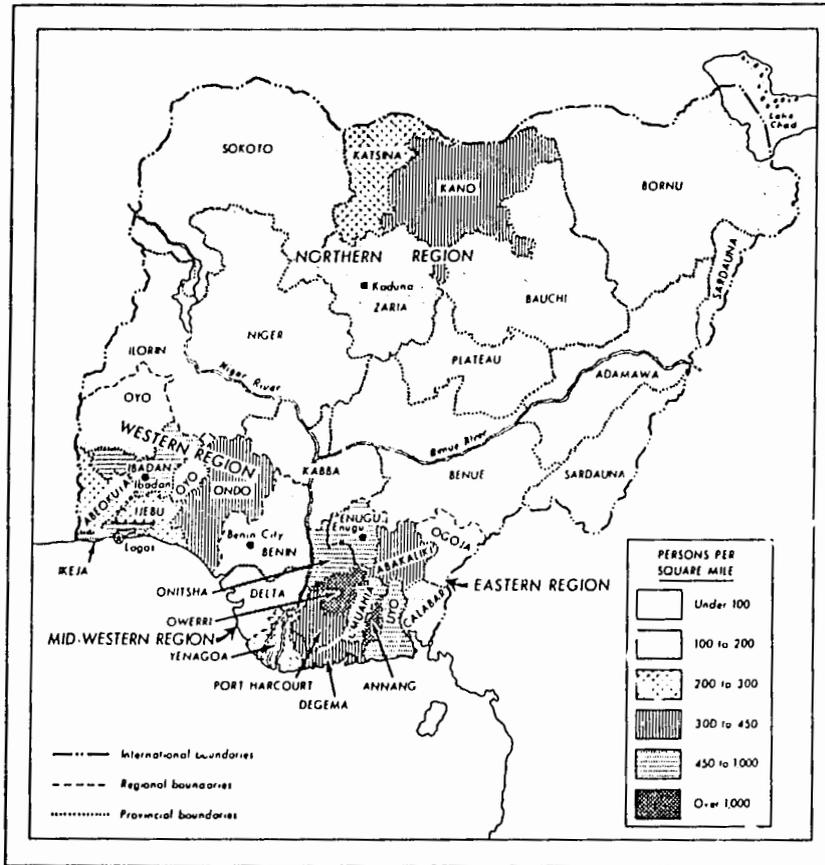
1.11.—8 Source: L. Berry, *Tanzania in Maps*.
New York: Africana Publishing. 1971.

Ethnic Groups of Tanzania
(see key)

1	Luo	39	Matumbi	75	Haya
2	Kuria	40	Mwera	75A	Nyambo
3	Suba	41	Machinga	76	Ruanda
4	Kwaya	42	Ngindo	77	Hangaza
5	Jita	43	Makonde	78	Subi
6	Kerewe	43A	Mawia	79	Rundi
7	Kara	44	Matambwe	80	Ha
8	Shashi	45	Makua	81	Jiji/Rundi and Ha mix
9	Zanaki	46	Yao		
10	Ikizu	47	Ndendeuli	82	Vinza
11	Ikoma	48	Ngoni	83	Tongwe
12	Nguruimi	49	Matengo	84	Holoholo
13	Sonjo	50	Nyasa	85	Bende
14	Masai	51	Pangwa	86	Konongo
15	Arusha	52	Bena	87	Pimbwe
16	Meru	53	Ngoni of wipopo	88	Rungwa
17	Chagga	54	Pogoro	89	Fipa
18	Kahe	55	Ndamba	90	Rungu
19	Arusha Chini (Kuma)	56	Mbunga	91	Kimbu
20	Pare	57	Hehe	92	Nyika
21	Sambaa (Shambala)	58	Gogo	93	Wanda
22	Mbugu	59	Turu	94	Mambwe
23	Digo	60	Sandawe	95	Nyamwanga
24	Segeju	61	Burungi	96	Nyiha
25	Bondei	62	Rangi (and Wasi)	97	Wungu
26	Zigua	63	Barabaig	98	Safwa
27	Kwavi	64	Iraqw	99	Sangu
28	Ngulu	65	Gorowa	100	Wanji
29	Kaguru	66	Mbugwe	101	Kinga
30	Doe	67	Hadzapi (Kindiga or Tindiga)	102	Nyakyusa
31	Kwere	68	Isanzu	103	Kisi
32	Zaramo	69	Iambi	104	Ndali
33	Luguru	70	Iramba	105	Malila
34	Sagara	71	Sukuma	106	Lambia
35	Ndengereko	72	Nyamwezi	107	Pemba
36	Rufiji	73	Sumbwa	108	Tumbatu
37	Kutu	74	Zinza	109	Hadimu
38	Vidunda			110	Swahili/ Shirazi of Mafia

Source: L. Berry, Tanzania in Maps.
New York: Africana Publishing, 1971.

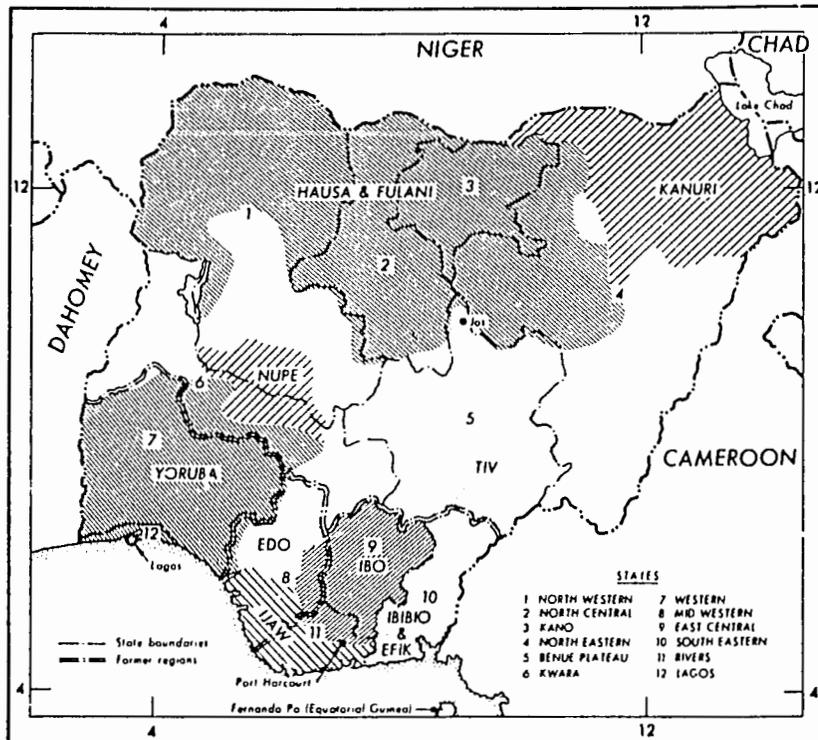
Tanzania: Ethnic Groups
(see map)



Source: Adapted from United Nations Food and Agriculture Organization, *Agricultural Development in Nigeria, 1965-1980*, Rome, 1966.

Figure 7. Population Distribution of Nigeria, 1963

Source: Nelson et al. 1979. *Nigeria: A Country Study*. Washington, D.C.: American University.



Source: Adapted from James L. Gibbs, *Peoples of Africa*, New York, 1965.

Figure 8. Major Ethnic Divisions of Nigeria

104

Source: Harold D. Nelson et al.,
Nigeria: A Country Study.
 Washington, D.C.: American University.

POPULATION

TABLE 2.1 POPULATION OF NIGERIA BY STATE AND PROVINCE

STATE AND PROVINCE	1952/53 Census (a) (thousand)	1963 Census (b) (thousand)	STATE AND PROVINCE	1952/53 Census (a) (thousand)	1963 Census (b) (thousand)
NORTH-EASTERN STATE	4,201	7,793	WESTERN STATE	4,357	9,488
Adamawa	1,181	1,585	Abeokuta	630	975
Bauchi	1,424	2,476	Ibadan	1,651	3,327
Bornu	1,596	2,854	Ijebu	348	576
Sardauna	(c)	878	Ondo	945	2,728
			Oyo	783	1,882
KANO STATE	3,398	5,775	MID-WESTERN STATE	1,492	2,536
Kano	3,398	5,775	Benin	901	1,355
NORTH-WESTERN STATE	3,397	5,734	Delta	591	1,181
Niger	716	1,399	LAGOS STATE	510	1,444
Sokoto	2,681	4,335	Ikeja (Colony)	238	778
NORTH-CENTRAL STATE	2,354	4,098	Lagos	272	665
Katina	1,483	2,545			
Zaria	871	1,553			
BENUE-PLATEAU STATE	2,295	4,009	S U M M A R Y		
Benue	1,468	2,642	STATE	1952/53 Census '000	1963 Census '000
Plateau	827	1,367	NORTH-EASTERN STATE	4,201	7,793
KWARA STATE	1,195	2,399	KANO STATE	3,398	5,775
Ilorin	531	1,119	NORTH-WESTERN STATE	3,397	5,734
Kabba	664	1,280	NORTH-CENTRAL STATE	2,354	4,098
EAST-CENTRAL STATE	4,567	7,228	BENUE-PLATEAU STATE	2,295	4,009
Abakaliki	720	1,004	KWARA STATE	1,195	2,399
Enugu	1,007	1,452	EAST-CENTRAL STATE	4,567	7,228
Onitsha	761	1,492	SOUTH-EASTERN STATE	1,904	3,623
Owerri	1,360	2,310	RIVERS STATE	747	1,545
Umuhia	719	970	WESTERN STATE	4,357	9,488
SOUTH-EASTERN STATE	1,904	3,623	MID-WESTERN STATE	1,492	2,536
Annam	516	796	LAGOS STATE	510	1,444
Calabar	141	267			
Ogoja	363	599	TOTAL	30,417	55,670
Uyo	884	1,961			
RIVERS STATE	747	1,545			
Degema	118	401			
Port-Harcourt	502	834			
Yenagra	127	310			

Source :- Federal Census Office, Lagos.

Notes :- (a) Census dates for each State were: Northern States - July, 1952; West and Mid-Western States - December, 1952, and Eastern States - June, 1953.

(b) 1963 Census was taken in November.

(c) Sardauna Province was part of Adamawa and Bornu Provinces, until 1960.

Detail may not add to total because of rounding.

Source: Nigeria Annual Abstract of Statistics, 1973.

NIGERIA

POPULATION AND DENSITY

REGION:	POPULATION	AREA IN SQ. MILES	PERSONS PER SQ. MILE
NORTHERN	29,808,659	281,782	106
EASTERN	12,394,462	29,484	420
WESTERN	10,265,846	30,454	337
MID-WESTERN	2,535,839	14,922	170
LAGOS	665,246	27	24,639
NIGERIA	55,670,052	356,669	156

Source: Population Census of Nigeria, 1963, Eastern Region,
vol. I.

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